Harmony

Toon Boom Harmony 16.0

Paint Reference Guide

Toon Boom
Bring Your Stories To Life

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Introduction

Harmony has several commands, dialog boxes, and buttons. The Reference section lists all of them along with the matching definition. To understand how to use these functions in a production context, read the User guide.

In the Reference guide, you will learn about the various parameters available in dialog boxes, menus, nodes, toolbars, views, and windows.

The Preferences guide provides additional details about each individual preference.

Chapter 1: Dialog Boxes

Dialog boxes contain controls such as options and lists through which you can carry out a particular command or task. For example, in the Scene Settings dialog box, you must indicate the resolution and alignment. A typical dialog box looks as follows:

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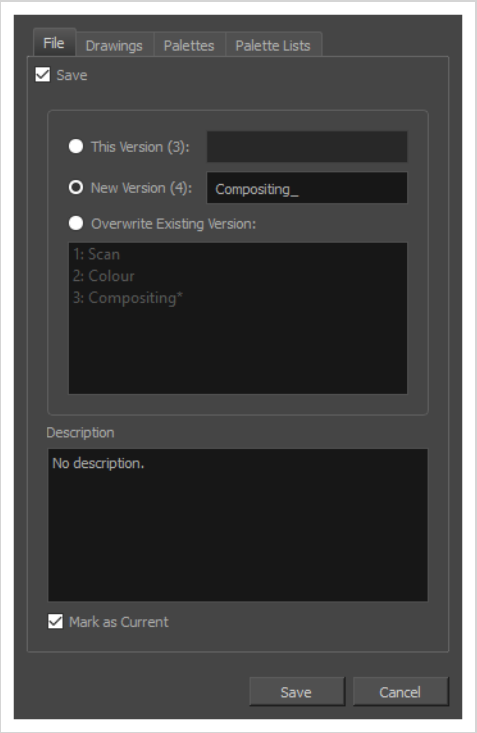
Advanced Save Dialog Box

In Harmony Server, the Advanced Save dialog box lets you save the scene as a new version, overwrite an existing version, set a new current version, display a list of modified drawings, colour palettes, and modified colour palette lists.

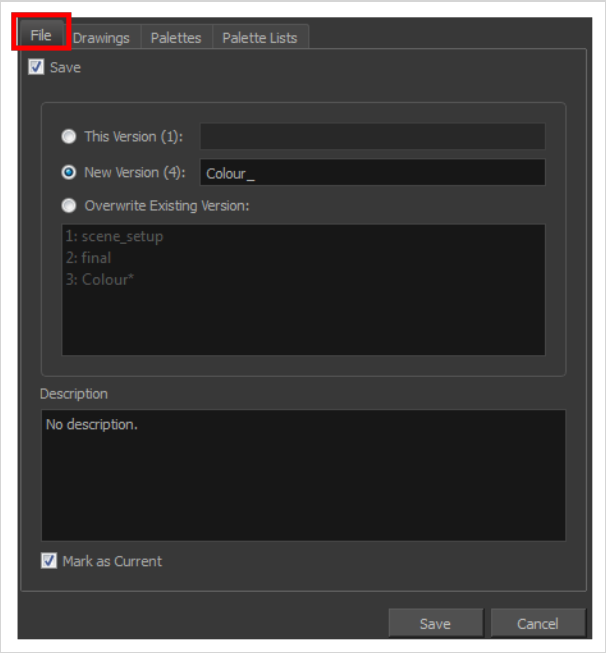


How to access the Advanced Save dialog Box

1. From the top menu, select **File > Save...**.

   The Advanced Save dialog appears.

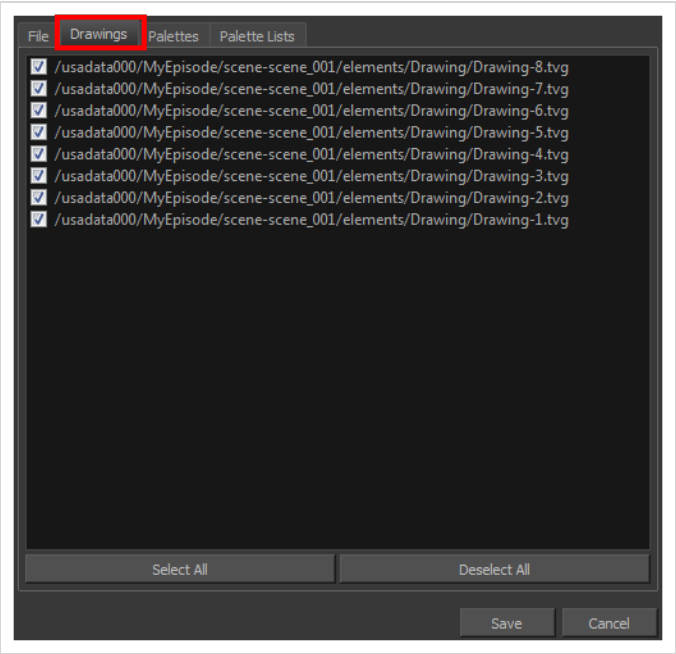
File Tab



Parameter	Description
Save	▸ Enable this option if you want to save the modifications made to the current scene. ▸ Deselect the Save option if you only want to save specific components of your scene listed in the Drawings, Palettes or Palette Lists tabs. This will disable all option in the File tab.
This Version (number)	Saves the current version of the scene. You can rename the current version by typing a new name into the field.
New Version (number)	Saves the current scene as a new version. You can name this new version by typing a name into the field.
Overwrite Existing Version	Lets you select an existing version of your scene from the list to overwrite it.
Description	Use this field to add or edit an existing description for the scene version you want to save.
Mark as Current	Lets you set this scene version as the current one. This version will be automatically selected as the default current version when the scene is selected in the **Database Selector** dialog box

Drawings (Harmony Server only)

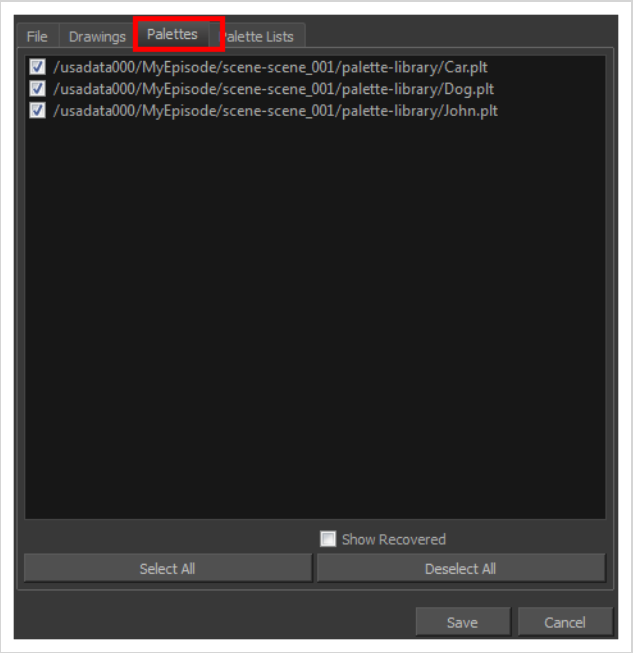
The Drawings tab lists the modified drawings.



Parameter	Description
Drawing list	Lets you select the modified drawings to save, and deselect the ones you do not want to save.
Select All	Selects all modified drawings in list.
Deselect All	Deselects all modified drawings in the list.

Palettes Tab

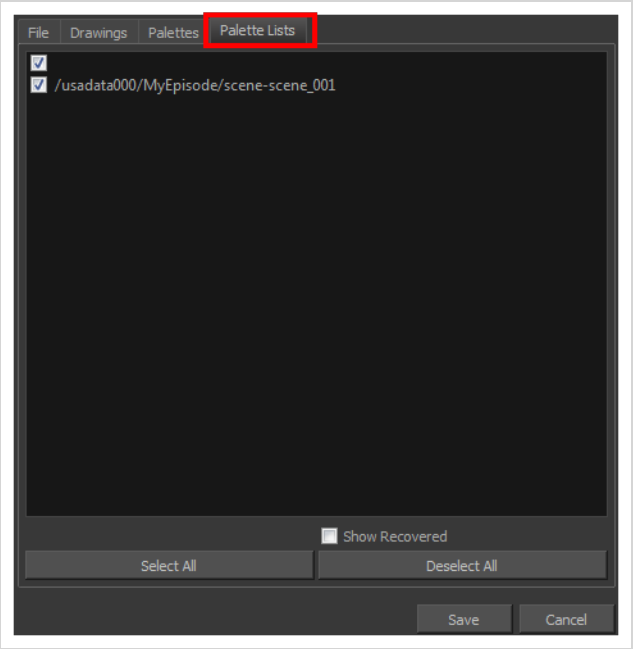
The Palette tab lists the modified colour palettes.



Parameter	Description
Colour Palette list	Lets you select the colour palette to save, and deselect the ones you do not want to save.
Show Recovered	Displays the recovered palettes in the list of modified palettes.
Select All	Selects all modified colour palettes in the palette list.
Deselect All	Deselects all modified colour palettes in the palette list.

Palette Lists Tab

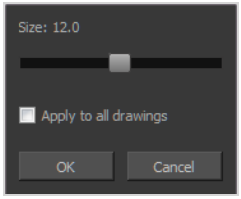
The Palette Lists tab lists all the modified colour palette lists.



Parameter	Description
Palette Lists	Lets you select the modified palette list to save, and deselect the ones you do not want to save.
Show Recovered	Displays the recovered palettes in the list of modified palettes.
Select All	Selects all modified palette lists in the list.
Deselect All	Deselects all modified palette lists in the list.

Close Gaps Dialog Box

The Close Gaps dialog box lets you close up drawing areas that not are closed. This may sometimes happen when painting. You can close small gaps in a drawing by creating small, invisible strokes between the two closest points to close the colour zone. You do not need to trace directly over the gap. You can draw it a few millimeters away. The two closest points automatically close the gap.



How to access the Close Gaps dialog box

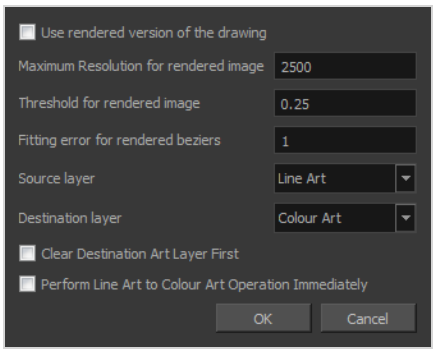
1. Select **View >Show Strokes** or press K to see a preview of the result.
2. To flatten the strokes you draw, click the Auto-Flatten button in the Tool Properties view.
3. Select **Drawing > Close Gaps** or press Shift + F10 (Windows/Linux only).

   The Close Gaps dialog box opens.

Parameter	Description
Size	Lets you set the size of the gap you want to be closed.
Apply to all drawings	Closes all gaps in the drawing of the selected layer.

Configure Line Art to Colour Art Dialog Box

The Configure Line Art to Colour Art dialog box lets you modify settings for the Line Art and Colour Art layers.



How to access the Configure Line Art to Colour Art dialog box

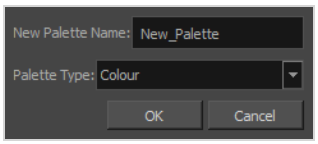
1. In the Tools toolbar, select the Select tool.
2. In the Tool Properties view, hold down the Shift key and click on the Creatre Colour Art from Line Art button.

Parameter	Description
Use rendered version of the drawing	Renders the drawing and vectorize it to calculate the position of the centreline that will produce the colour art stroke.
Maximum Resolution for rendered image	The size of the rendered image.
Threshold for rendered image	The value of grey processed to create the rendered vectorized arts.
Fitting error for rendered Beziers	This value represents how precise the fitting of the colour art zone in relation to the line art will be.
Source layer	Lets you select the layer (Line Art, Colour Art, Underlay or **Overlay**) you want the colour art to be created from.
Destination layer	Lets you select the layer (Line Art, Colour Art, Underlay or **Overlay**) you want the colour art to be created on.
Clear Destination Art Layer First	Deletes the content before the colour art is added. This is useful when you already have artwork on the destination layer.

Perform Line Art to Colour Art Operation Immediately	Performs the **Create Colour Art from Line Art** command when you click OK.

Create Palette Dialog Box

The Create Palette dialog box allows you to create a colour palette for your scene. Palettes created with this dialog box are added to your scene's palette list, and stored in your scene's **`palette-library`** subdirectory.



NOTE

If you have the Advanced Palette Lists preference enabled, the dialog will also have a palette browser, which allows you to decide where the palette is stored and whether to add it to the scene or the element's palette list—see *Palette Browser Dialog Box* on page 25.

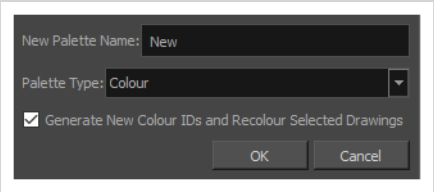
How to access the Create Palette dialog box

1. Do one of the following:
   - In the Colour View, click the New Palette + button over the palette list.
   - From the Colour view menu, select **Palettes > New**

Parameter	Description
New Palette Name	Allows you to type in the name of the palette to create.
Palette Type	Allows you choose the palette type to create: • **Colour:** A colour palette can contain colours, gradients and bitmap textures. • **Pencil Texture:** A pencil texture palette can contain textures to apply as transparency filters to pencil lines, in combination to their line colour, to create various styles of pencil lines.

Create Palette from Selection Dialog Box

The Create Palette from Selection dialog box allows you to create a palette that contains all the colours used by all the drawings in the selected drawing layers.



This can be useful, for example, if the colour design for a character model or rig, a background or another kind of asset was made using several different palettes, and you need to consolidate all of the colours used by the asset into its own dedicated palette.

NOTES

- The Create Palette from Selection dialog uses the colours in all the drawings in the selected layers, even drawings that are not exposed.
- For tasks related to this dialog box, see the User Guide.

How to access the Create Palette from Selection dialog box

1. In the Timeline, Xsheet, Camera or Node view, select one or more drawing layers.
2. In the top-left corner of the Colour view, open the View Menu and select **Palettes > New Palette from Selected Drawings**.

Parameter	Description
New Palette Name	Allows you to type in the name of the palette to create.
Palette Type	Allows you choose one of the type of palette to create: • **Colour:** Creates a palette containing all the colours, gradients and bitmap textures used in the selected drawing layers. • **Pencil Texture:** Creates a palette containing all the pencil textures used in the selected drawing layers.
Generate New Colour IDs and Recolour Selected Drawings	By default, the Create Palette from Selection dialog box generates the palette by copying the colour swatches used in the selected drawings from their original palette into a new palette, along with their colour ID. This means that the colour swatches in the generated palette will use the same colour IDs as the ones in the original palettes.

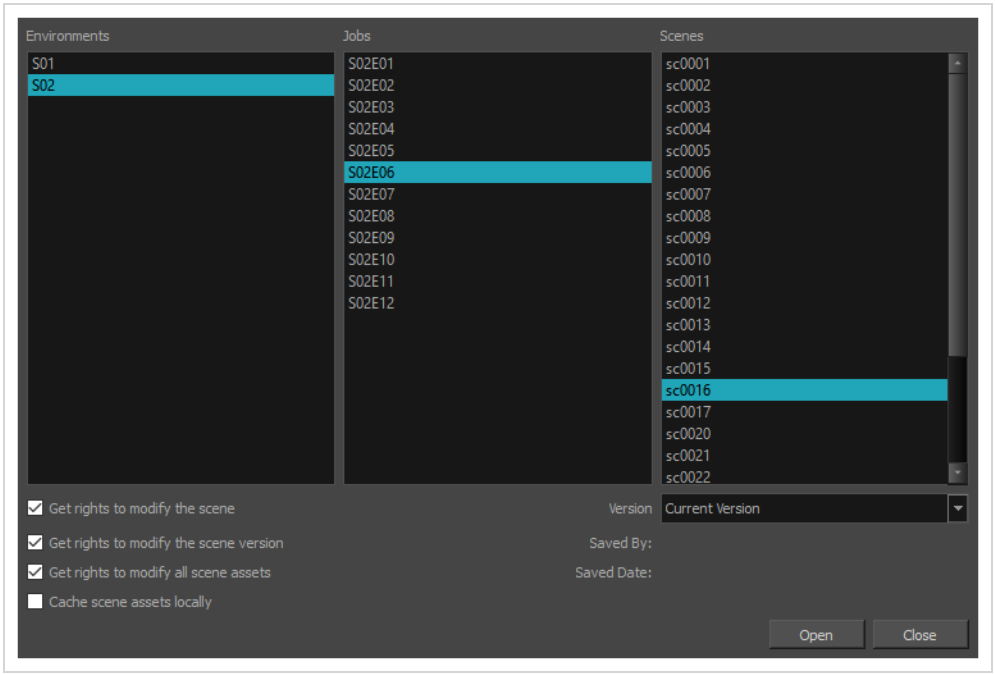
	If you select this option, Harmony will generate a palette with new colour IDs, and will replace the old colour IDs in your artwork with the new ones. This will usually have no visible effect, and will prevent the swatches in the new palette from having the same colour IDs as the swatches you originally used to colour your artwor. When two palettes have a swatch with the same colour ID, Harmony uses the swatch from the top-most palette in the palette list. **NOTE** If your artwork uses Colour-Override effects, the colour IDs used by these Colour-Override will not be replaced with the new colour IDs, making the Colour-Override ineffective unless you reconfigure them manually. Hence, you should avoid using this parameter if you are consolidating the palette of a character rig that uses a lot of Colour-Overrides.

Database Selector Dialog Box

The Database Selector dialog box lets you connect to your studio's central database when working on Harmony Server.

NOTE

When you connect to the database, you cannot create new scenes directly from Harmony. The available scenes must have been already created using the Control Center module.



How to access the Database Selector dialog box

1. Start Paint
2. In the **User Name** field, type in your Harmony Server username.
3. Click on **OK**.

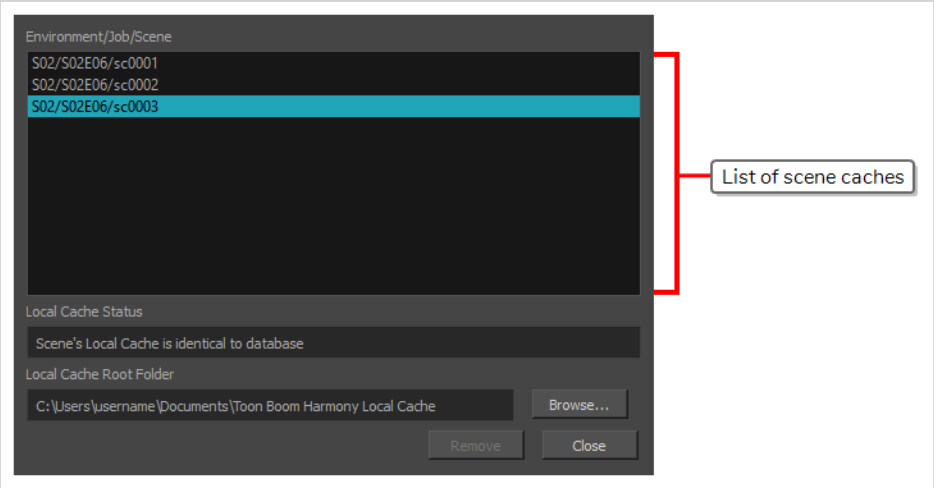
   The Database Selector dialog box opens.

Parameter	Description
Environments	Lets you select the scene's environment (project, movie).
Jobs	Lets you select the scene's job (episode, sequence).

Scenes	Lets you select the scene.
Get rights to modify the scene	Allows you to modify the selected version of the scene as well as to manage and overwrite other versions. Other users will not be able to open a different version of the scene until you close the scene.
Get rights to modify the scene version	Allows you to modify the currently selected scene version only. Unless the **Get rights to modify the scene** option is also checked, you will not be able to change other versions of the scene. This allows other users to modify different versions of the scene while you are working on the selected version.
Get rights to modify all scene assets	Automatically gets the rights to modify all of the scene's assets, locking other users from making changes to them until you close the scene. This means that you will have the rights to modify all the scene's versions, drawings, palettes, its palette list, but not its library folder. If this option is unchecked, drawings and palettes will be locked unless you unlock them manually. This can allow another user to work on the scene's drawings and palettes in Paint while you are working on the scene's timing or staging in Harmony.
Cache scene assets locally	Downloads the scene's drawings to your computer before opening the scene. Harmony will then load the drawings from your computer during the session, instead of loading them from their original location over the network. This can significantly increase performance, especially with resource-heavy scenes. When you save your scene, the updated drawings will be uploaded automatically to the database, so you do not have to re-upload them manually. **NOTE** If this option is checked, it may take a while to download all of the scene's assets when opening a particularly heavy scene.
Version	If you saved different versions of a scene, this lets you select one to open.

Manage Local Cache Dialog Box

The Manage Local Cache dialog box displays a list of all the Harmony Server scenes for which you have cached drawings. In this dialog, you can check if the drawings you have in a scene's cache match the drawings in the database server, you can delete unused caches and you can change the directory in which scene data is cached.



NOTE

A scene's data is cached on your computer when you check the **Cache scene assets locally** option in the Database Selector before opening the scene—see *Database Selector Dialog Box* on page 20.

How to access the Manage Local Cache dialog box

1. In the top menu, select **File > Manage Local Caches**.

   The Manage Local Caches dialog appears.

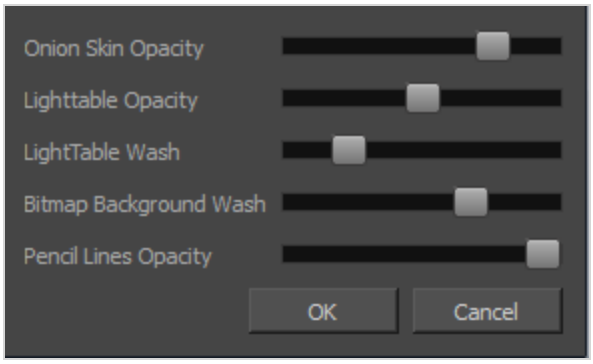
Parameter	Description
List of scene caches	The list of caches stored on your computer. There is one item for each scene for which there is cached data. Each item is identified by the scene's environment, followed by its job, then its name, in this format: Environment/Job/Scene If you select a scene cache in the list, the Manage Local Caches dialog will compare the drawings that are cached on your computer to the drawings in the actual scene in the database, and report if they are identical or not in the **Local Cache Status** field.
Local Cache	If you select a cache, the Manage Local Cache dialog will analyze whether the data in the selected

Parameter	Description
Status	cache matches the data in the actual scene in the Harmony Server database. If it displays **Scene's Local Cache is identical to the database**, then the drawings in the selected cache on your computer are identical to the drawings in the corresponding scene in the database, meaning that your cache and that the database are up to date. If it displays **Scene's Local Cache is different than database**, then some drawings in the selected cache on your computer are different from the drawings in the corresponding scene in the database. This usually means one of the following: • If the selected cache is the cache of the currently opened scene and you just saved your scene, Harmony may still be uploading the updated drawings to the database. In this case, you can close the dialog, wait a few seconds, and reopen it to see if Harmony is done uploading the drawings. If it is, it will report that the cache is identical to the database. • If this is not the cache of the currently opened scene, it is likely that the database scene has been changed by someone else since the last time you opened it. That would mean that the database version is more up to date than your cache. This is not a problem, as next time you open the scene, your cache will be updated.
Local Cache Root Folder	Indicates where scene caches are stored on your computer. By default, scene caches are stored in a folder named Toon Boom Harmony Local Cache, inside your Documents folder.
Browse	Allows you to change the folder where caches are downloaded when you open a scene. **NOTE** The caches that are currently stored on your machine will not be moved to their new location. Hence, when you change the local cache root folder, the list of scene caches will become empty until you open a scene.
Remove	Deletes the selected scene cache from your computer. **NOTE** This button is greyed out if the selected scene cache is for the currently opened scene, as this cache is currently in use by Harmony.
Close	Closes the dialog.

Onion Skin and Light Table Transparency Dialog Box

T-ANIMPA-006-009

This dialog box lets you adjust the Onion Skin and Light table transparency parameters.



How to access the Onion Skin and Light Table Transparency dialog box

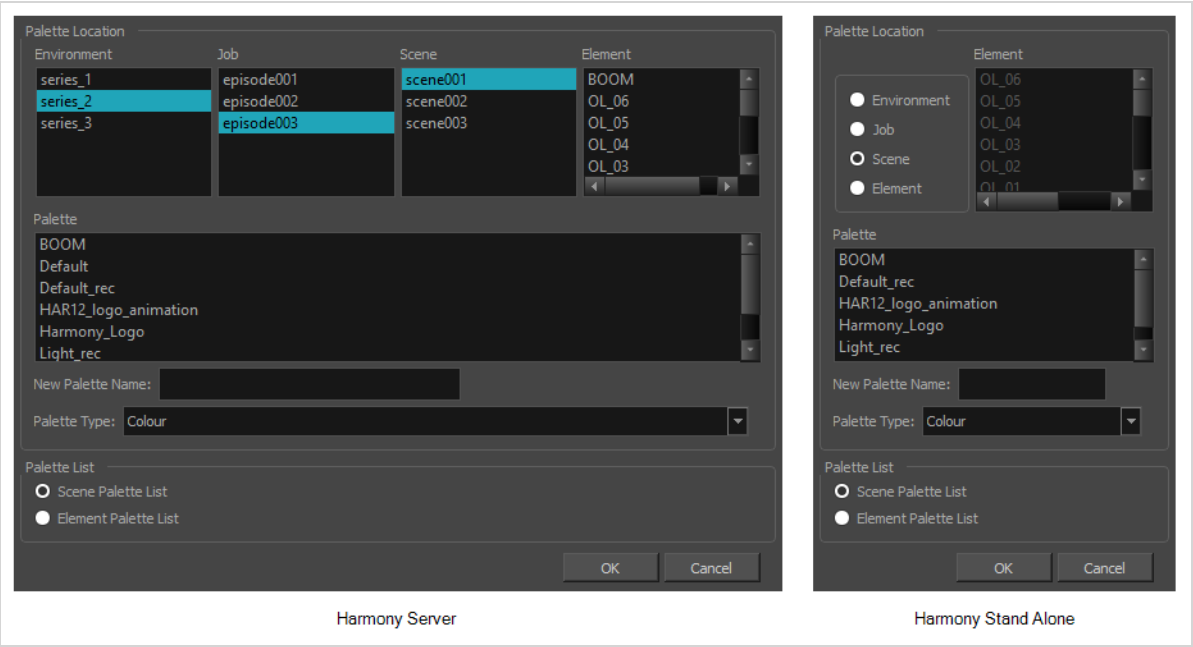
- In the Drawing view toolbar, click on the Top Light button to open the Onion Skin and Light Table Transparency dialog box.

Command	Description
Onion Skin Opacity	Sets the maximum opacity value for the onion skin opacity display. Moving the slider all the way to the left = 0% opacity. Moving the slider all the way to the right = 100% opacity.
Lighttable Opacity	Sets the maximum opacity value for the light table display. Moving the slider all the way to the left = 0% opacity. Moving the slider all the way to the right = 100% opacity.
LightTable Wash	Sets the washed-out value for the light table display. Moving the slider all the way to the left = 0% opacity. Moving the slider all the way to the right = 100% opacity.
Bitmap Background Wash	Sets the maximum opacity value for the background wash. Moving the slider all the way to the left = 0% opacity. Moving the slider all the way to the right = 100% opacity. Only works for bitmap layers.
Pencil Lines Opacity	Sets the maximum opacity value for central vector lines (lines made by the Pencil or Shape tools). Moving the slider all the way to the left = 0% opacity. Moving the slider all the way to the right = 100% opacity.

Palette Browser Dialog Box

The Palette Browser dialog allows you to decide the level of palette list and palette storage to use when you want to create, clone, link to or import a palette.

This dialog only appears if you have the Advanced Palette Lists preference enabled, which is disabled by default. When Advanced Palette Lists mode is disabled, Harmony automatically stores palettes in a scene's palette list, inside the scene's **`palette-library`** subdirectory.



How to access the Palette Browser dialog box

1. Start Paint and log in.
2. Close the Database Selector dialog box.
3. From the top menu, select **Tools > Palette Operations**.

1. In the Palette Operations dialog box that opens, select the palette you want to clone at the location and level in which it was stored.
2. Click **Clone**.

Parameter	Description
Palette Location	This allows you to browse for the physical location of the palette file in your database. If you are using Harmony Stand Alone, you can still select the scene's own job or

	environment as a location. Stand alone scenes have a provisional job and environment storage space inside the scene's directory. The files in these storage spaces can be imported into a database scene's actual job and environment when importing the scene to a Harmony database. If you never intend to use Harmony Server, you should keep your palettes inside your scene or element's palette libraries.
Environment	Stores the palette file in the selected environment's palette library. Environments are typically used to contain a whole production, series or feature film. • In Harmony Server, this stores the palette in **`/USA_DB/environments/[environment name]/palette-library`**. • In Harmony Stand Alone, this stores the palette inside the scene's directory, under **`environments/Digital/palette-library`**.
Job	Stores the palette file in the selected job's palette library. Jobs are typically used to contain episodes in a series, or any set of scenes that is intended to be put in the same sequence. • In Harmony Server **`/USA_DB/jobs/[job name]/palette-library`**. • In Harmony Stand Alone, this stores the palette inside the scene's directory, under **`jobs/Digital/palette-library`**.
Scene	Stores the palette file in the selected scene's palette library, which is the **`palette-library`** subdirectory of the scene's directory.
Element	Stores the palette file inside the selected element's palette library. This library is located inside the scene's directory, under **`elements/[element name]/palette-library`**.
Palette	This lists the existing palettes in the selected location.
New Palette Name	If you are creating or cloning a palette, use this field to enter the palette file's name. The palette will be listed under this name in your palette list. On your file system, it will be named after its palette name, followed by the extension **`.plt`**.
Palette Type	When creating a palette, you can choose between the following palette types: • **Colour:** A colour palette can contain colours, gradients and bitmap textures. • **Pencil Texture:** A pencil texture palette can contain textures to apply as transparency filters to pencil lines, in combination to their line colour, to create various styles of pencil lines.

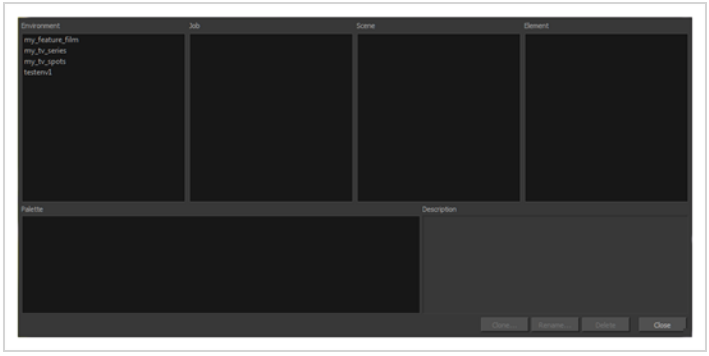
Palette List	This allows you to decide if you want the palette to be added to your scene's palette list, or to the currently selected element's palette list.
Scene Palette List	Adds the palette to the scene's palette list. Palettes in the scene's palette list are available to all the elements in your scene. This is especially useful if you are doing digital animation, where character models can be made of many layers that need to use the same palette.
Element Palette List	Adds the palette to the currently selected element's palette list. Palettes in an element's palette list can only be used by the drawings in this element, and will only be listed in the Colour view when this element is selected. This can be useful if you are doing traditional animation, where each character is usually drawn on a single layer, and you want each layer to have its own palette.

Palette Operations Dialog Box

When you start Toon Boom Harmony connected to the database, you can access the Palette Operations dialog box which lets you clone, rename, or delete palettes in your database, without having to open a scene or browse the database's file system in your operating system's shell.

In Harmony, palettes are individual **`*.plt`** files that can be copied, transferred and stored. When a palette is created from Harmony, it needs to be stored somewhere. By default, the palette file is stored in the scene directory in a palette-library folder unless you specify a different location.

There are four locations where you can find palette-library folders: Element, Scene, Job and Environment.



How to access the Palette Operations dialog box

1. Start Paint and log in.
2. Close the Database Selector dialog box.
3. From the top menu, select **Tools > Palette Operations**.

Parameter	Description
Environment	The production, project, feature film or series.
Job	The episode and sequence from each environment.
Scene	The scenes from each job.
Element	The layers and columns in each scene.
Palette	The scene palettes.

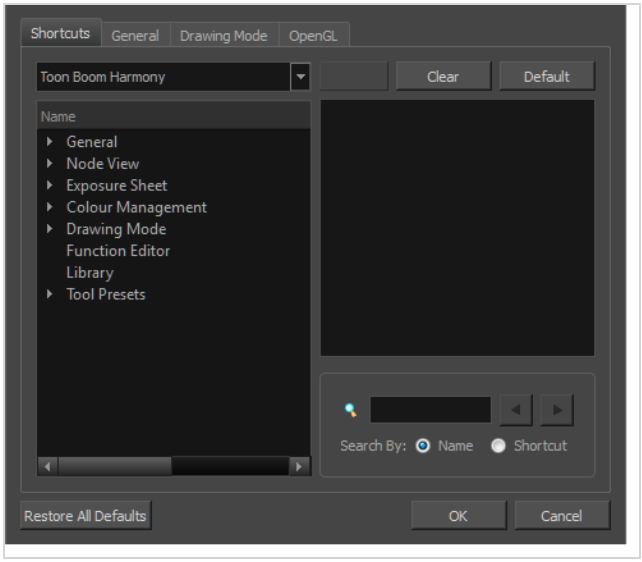
Description	Notes, if any, of the project.
Clone	Opens the Palette Browser dialog box from which you can select the level in which to store the palette file.
Rename	Lets you rename a palette.
Delete	Lets you delete a palette. **NOTE** It is not recommended to disable the warning message that appears when you are attempting to delete a palette as this operation cannot be undone.
Close	Closes the Palette Operations dialog box.

Preferences Dialog Box

The Preferences dialog box lets you adjust preferences to suit your work style, allowing you to work more efficiently.

NOTE

To learn more about the individual preferences, refer to the Preferences guide.



NOTE

Some preferences require you to exit and restart the application, or close a view and reopen it.

How to access the Preferences dialog box

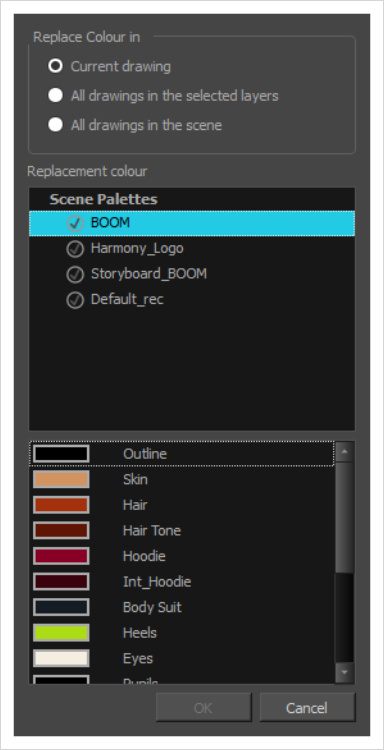
Do one of the following:

- Select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS).
- Press Ctrl + U (Windows/Linux) or ⌘ + U (macOS).

Recolour Drawings Dialog Box

The Recolour Drawing dialog box allows you to replace all instances of a colour or texture in drawings with a different colour or texture swatch in one of the scene's palettes. This replaces the colours or textures in the drawings without requiring you to modify the palettes. You can use this dialog to perform colour replacement in the current drawing, in all the drawings in one or several layers or in all drawings in your scene.

This dialog will replace the colour or texture that is currently selected in the Colour view with the colour or texture that you select inside the dialog.



How to access the Recolour Drawings dialog

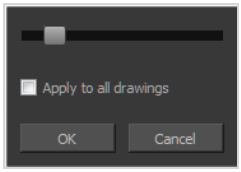
1. In the Colour view, select the colour or texture swatch you want to replace by doing one of the following:
    - Select the palette in which the colour or texture swatch is located, then select the swatch you wish to replace.
    - If the drawing in the Camera or Drawing view contains the colour or texture you want to replace, select the Dropper tool in the Tools toolbar, then click on that colour or texture in the drawing. The Colour view will automatically select that colour or texture's palette as well as that colour or texture's swatch.

2. Do one of the following:
    - Right-click on the swatches list, then select **Recolour Drawings**.
    - Open the Colour view menu ☰, then select **Colours > Recolour Drawings**.

Parameter	Description
Replace Colour In	Allows you to select which drawings will be affected by the colour replacement: • **Current drawing:** Replaces the selected colour in the currently selected drawing only. • **All drawings in the currently selected layers:** Replaces the selected colour in all the drawings in the layer that is currently selected in the Timelime or Xsheet view. **NOTE** This option can work with several drawing layers selected. • **All drawings in the scene:** Replaces the selected colour in every drawing in the current scene.
Replacement Colour	Allows you to select the palette and colour or texture swatch to replace the selected colour or texture with.

Remove Dirt Dialog Box

The Remove Dirt dialog box lets you select small dots and hairs on a drawing for removal.



When paper drawings are passed through a scanner, there can be some hair and dirt scattered across them. These lines and dots need to be cleaned. Harmony provides different tools to help get rid of them quickly.

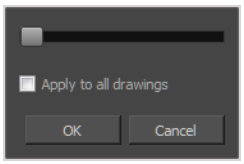
How to access the Remove Dirt dialog box

1. Do one of the following:
    - From the top menu, select **Drawing > Remove Dirt.**
    - Press Shift + D.

Parameter	Description
Slider	Lets you adjust the amount of detail removed from the layer. Raising the Remove Dirt level will select bigger dots. When selecting larger dots, be careful not to lose small details like pupils and nostrils. Once you have chosen the level, you can apply it to the current drawing or the entire animation sequence. This is a quick way to get rid of most dirt and dust. During this process, the dirt that will be removed is highlighted in red.
Apply to all drawings	Applies the operation to all drawings in the layer.

Remove Hair Dialog Box

The Remove Hair dialog box lets you remove any small strokes created in the Colour Art layer from very thick lines or filled zones. Increasing the Remove Hair level value will select larger strokes for removal from the drawing.



When paper drawings are passed through a scanner, there can be some hair and dirt scattered across them. These lines and dots need to be cleaned. Harmony provides different tools to help get rid of them quickly.

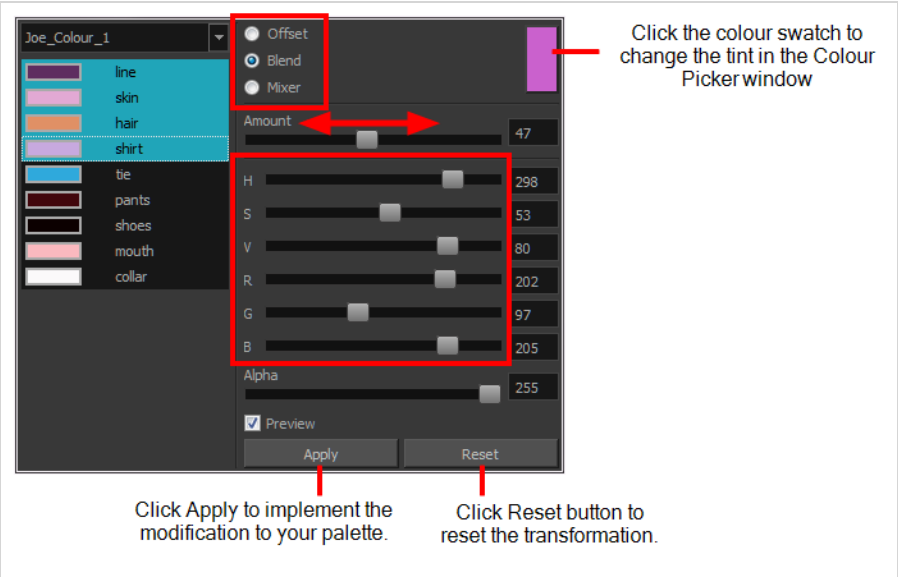
How to access the Remove Hair dialog box

1. Select the drawing containing the drawing to clean.
2. From the top menu, select **View > Show Strokes** to display the invisible lines or press K.
3. In the top menu, select **Drawing > Remove Hair**.

Parameter	Description
Slider	Lets you adjust the number or length of hairs selected.
Apply to all drawings	Applies the operation to all drawings in the layer.

Tint Offset/Blend Dialog Box

You can offset, blend, or mix the colours in a colour palette using the sliders and increasing the Amount value.



How to access the Tint Offset/Blend dialog box

1. From the Colour View menu, select **Palettes > Tint Panel** or right-click and select **Tint Panel**.

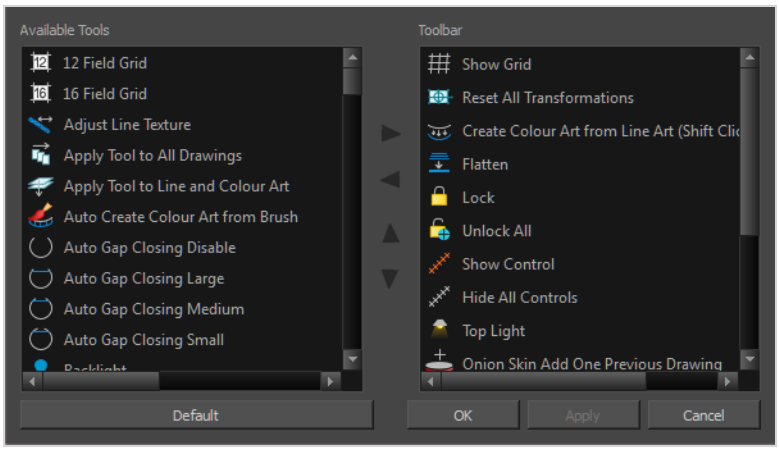
   The Blend/Offset Tint panel opens.

Parameter	Description
Offset	Offsets the selected colours by the adjustments made using the HSB and RGB sliders. Use the Amount slider to adjust the degree of offset. Use the Alpha slider to adjust the opacity of the selected colour.
Blend	Blends the selected colours with the colour swatch in the top-right corner. Use the Amount slider to adjust the degree of blend. A blend of 100% turns the selected colours into the same colour as the swatch. Adjusting the HSB and RGB sliders affect the swatch colour, which in turn affects the selected colours on the left. Use the Alpha slider to adjust the opacity of the swatch.
Mixer	Select a Base and Tint colour to form a third colour swatch. Use the slider just beneath to mix the Base and Tint colours by different amounts. This will affect the mixed swatch whether it is selected or not. Select either the Tint or Base swatch and use the HSB and RGB sliders to adjust its colour. This will affect the mixed

	swatch colour, which in turn affects the selected colours on the left.

Toolbar Manager Dialog Box

The Toolbar Manager dialog box lets you customize the toolbar in any of the views. You can add your favourite tools to a toolbar for an efficient workflow.



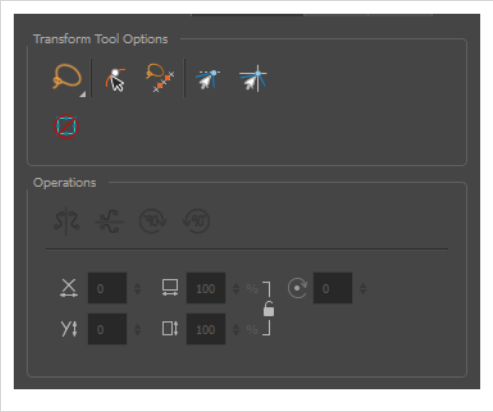
How to access the Toolbar Manager dialog box

1. Right-click on a toolbar in any view and select **Customize**. Note that the menu will not appear if you right-click on a disabled icon.

Parameter	Description
Available Tools	Displays the complete list of tools available for customizing a toolbar.
Toolbar	Displays a list of the tools currently available on the toolbar.
Default	Restores the toolbar with its default items.

Chapter 2: Tools Properties

Harmony has a wide variety of drawing and manipulation tools and each one of them has a series of options and modes available in the Tool Properties view. This section covers these options.



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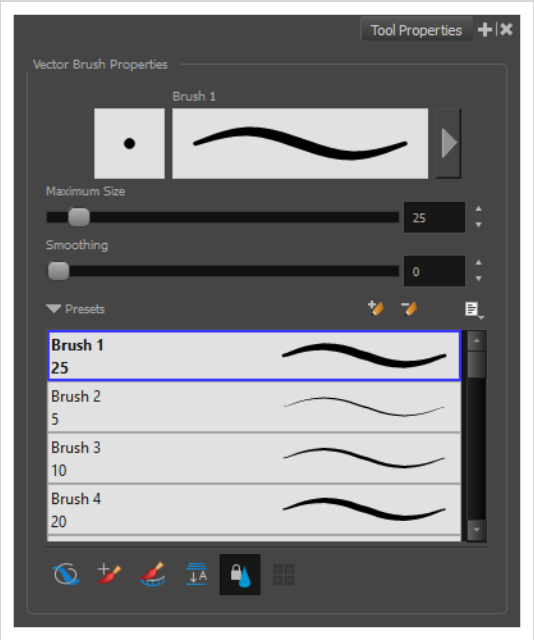
Brush Tool Properties

The Brush tool allows you to draw by creating shapes based on your drawing strokes and filling them with colour or textures. When used with a tablet, it is pressure sensitive, just like a real life brush.

How to access the Brush tool properties

1. In the Tools toolbar, select the Brush tool.

   The tool's properties are displayed in the Tool Properties view.



Brush Properties

The following properties affect the brush's size, smoothing and other properties for the drawing style of your brush. Those properties can be saved into brush presets for later use.

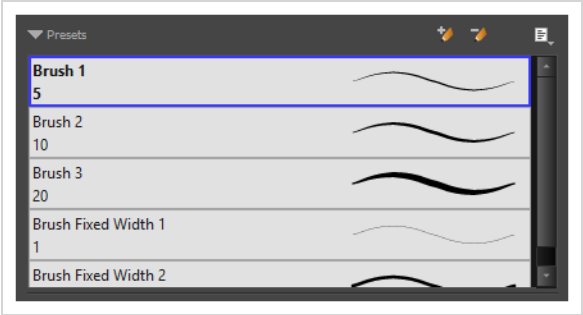
Property	Description
Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.
Brush Properties Dialog	The arrow button right of the preview area opens the Brush Properties dialog.

Property	Description
	 While the Tool Properties view only gives you access to a few of the brush properties, a list of brush presets and other drawing options, the Brush Properties dialog gives you access to all the available options for your brush's tip and texture. For more information on the Brush Properties dialog, see the Brush Properties Dialog section below.
Maximum Size	Defines the maximum width of brush strokes. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line. **NOTE** This option is only available when drawing on a vector layer.
Flow	Lets you set the opacity for each instance of the brush tip that gets printed into your canvas. Contrary to the Opacity parameter, the flow parameter has a cumulative effect. This means that a lower flow will make your brush strokes more transparent towards its extremities and more opaque in its center. Your stroke's flow will also accumulate if you draw over it. By default, your brush's flow varies with the amount of pressure you put on your tablet pen. **NOTE** This option is only displayed in the Tool Properties view when drawing on a bitmap layer.
Opacity	The Opacity parameter are where Lets you set the opacity of your brush strokes. Contrary to the Flow parameter, the Opacity parameter is non-cumulative. Your whole brush stroke's opacity will not exceed the Opacity parameter. By default, the Opacity parameter varies depending on the amount of pressure you put on your tablet pen.

Property	Description
	NOTE This option is only displayed in the Tool Properties view when drawing on a bitmap layer.

Brush Presets

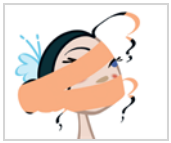
These options allow you to select, create and manage brush presets.

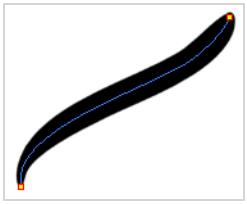
Icon	Property	Description
	Presets list	By default, Harmony has preloaded brush presets. You can also create your own brush presets by configuring your brush, then saving its properties into a new preset. It is also possible to export and import brush presets. 
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush	Deletes the currently selected preset.
	Brush Presets Menu	Open a menu that contains the following options: • **New Brush Preset:** Creates a new preset based on the current tool properties. • **Delete Brush:** Deletes the currently selected preset. • **Rename Brush:** Allows you to rename the currently selected preset. • **Import Brushes:** Allows you to import brush presets exported from Harmony.

		• **Export Brushes:** Allows you to export your brush presets into an `.xml` file. • **Small Thumbnail:** Displays presets in a grid of small thumbnails with a preview of their tip. • **Large Thumbnail:** Displays presets in a grid of big thumbnails, with their name and a preview of their tip. • **Stroke View:** Displays presets in a list, with their name and a preview of a stroke done with each preset.

Drawing Options

These options affect the way your drawing strokes are added to your artwork.

Icon	Property	Description
	Draw Behind	When enabled, your brush strokes will appear behind the existing artwork. **NOTE** Your brush stroke will temporarily appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.
	Repaint Brush	When enabled, your brush strokes will only repaint existing artwork and will not add colour to empty areas. If you repaint semi-transparent artwork, your artwork will not become more opaque than it already is. 
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.

		 **NOTE** This option is only available when drawing on a vector layer.
	Auto-Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork. **NOTE** This option is only available when drawing on a vector layer. When drawing on a bitmap layer, artwork is always flattened.
	Respect Protected Colour	In the Colour view, it is possible to make some of the colours in your palettes protected from change. When enabled, the Respect Protected Colour option will prevent the brush tool from drawing over areas filled with a protected colour. **NOTE** This option is only available when drawing on a vector layer. When drawing on a bitmap layer, colour is not linked to your palettes and cannot be protected.
	Use Stored Colour Gradient	The Use Stored Colour Gradient option can be used when painting with a gradient colour to always position the gradient in the same way it was stored, making it consistent across brush strokes. You can store a gradient by selecting a zone painted with a gradient with the Select tool, then clicking on Store Colour Gradient in the Tool Properties view. **NOTE** This option is only available when drawing on a vector layer.

Brush Properties Dialog

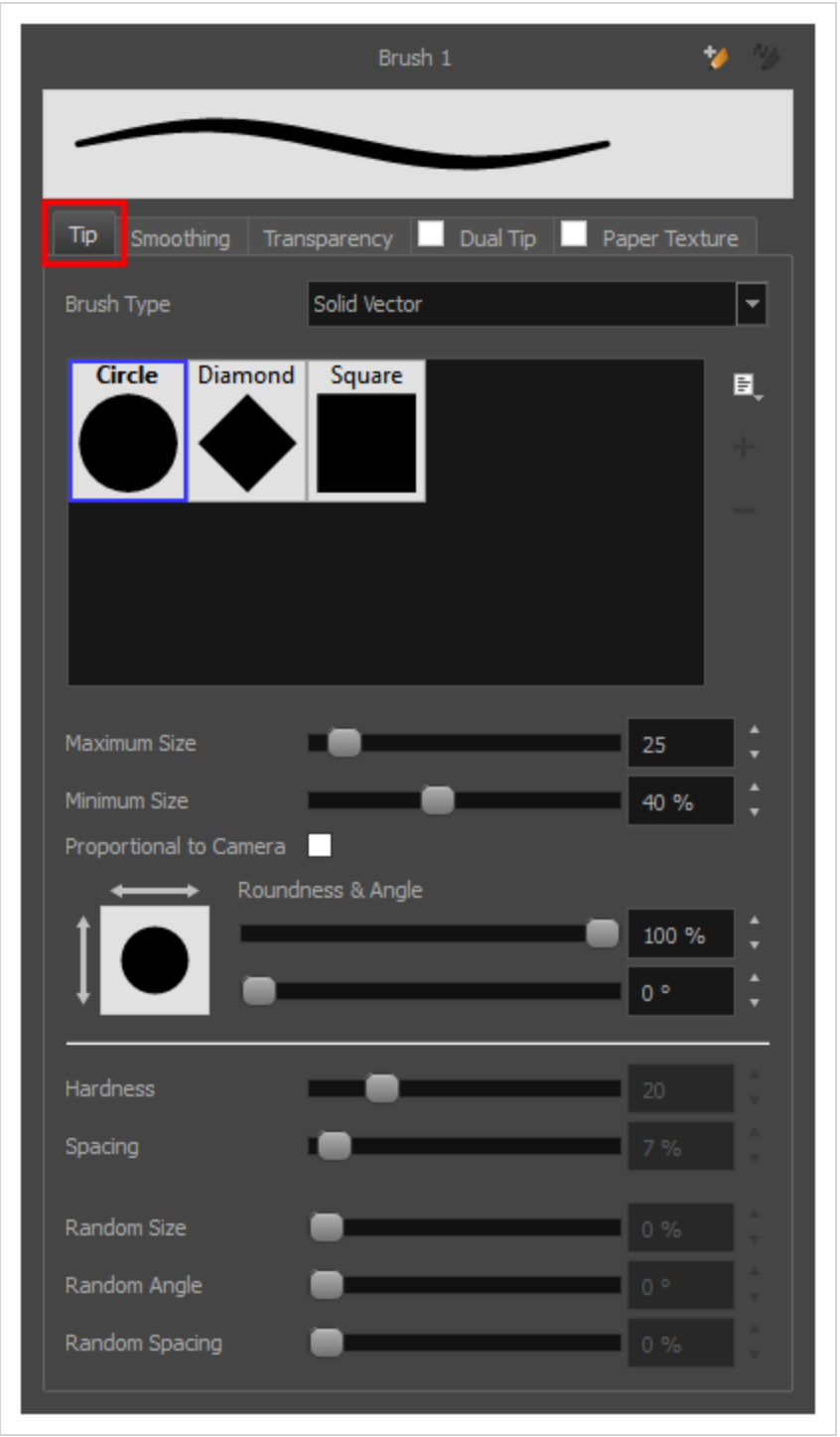
Brushes have an extensive set of options and properties that are not displayed in the Tool Properties view, but rather, in a dialog you can access from it. To open the Brush Properties dialog, click on the arrow button right of the stroke display area.

The Brush Properties dialog has five different tabs, minus the Smoothing tab if you are working on a bitmap layers. Below is detailed information about the options available in each tab:

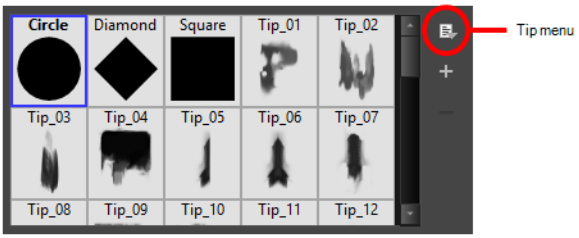
- *Tip Tab* on page 45
- *Smoothing Tab* on page 50
- *Transparency Tab* on page 51
- *Dual Tip Tab* on page 54
- *Paper Texture Tab* on page 58

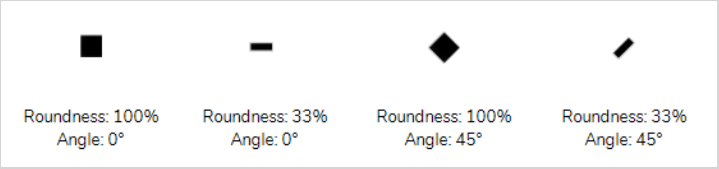
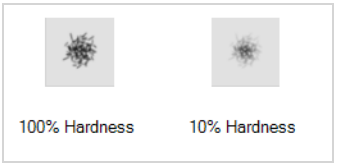
Tip Tab

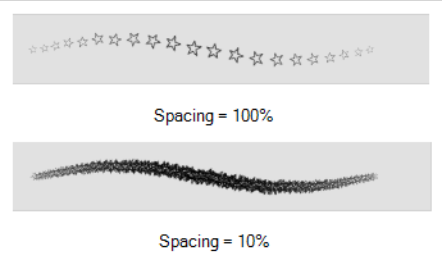
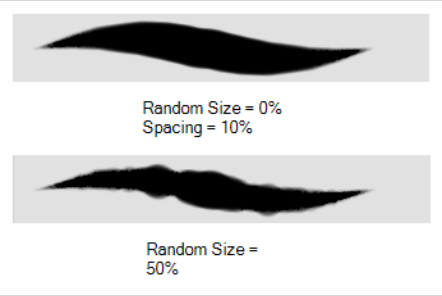
The Tip tab allows you to configure the shape, size, hardness and spacing of your brush tip.

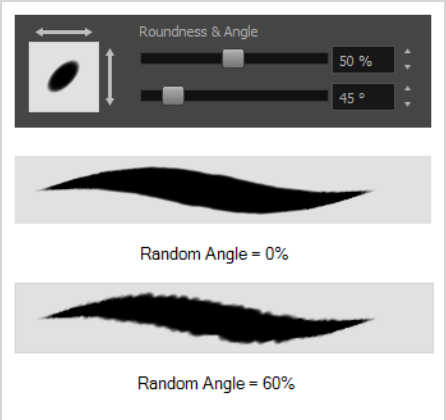
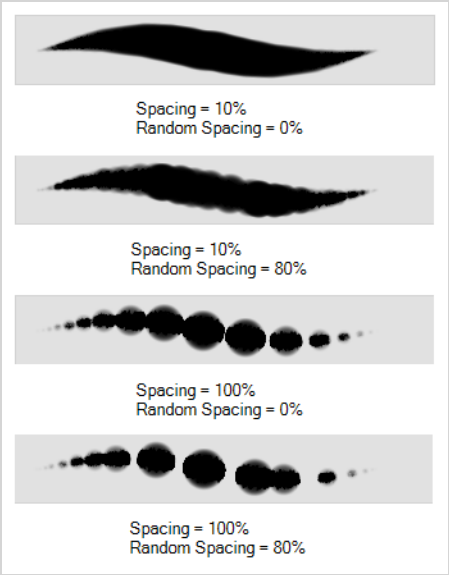


Property	Description
Brush Type	Allows you to select between one of the following brush types: • **Solid Vector Brush:** Creates vector shapes filled with a solid colour. Makes artwork lightweight, scalable and easy to tweak. Since this kind of brush can only create solid colour shapes, solid vector brushes have a

	limited set of options including size, roundness, angle, centerline smoothing and contour smoothing. • **Textured Vector Brush:** Creates vector shapes filled with a texture. This gives you access to bitmap brush tips, paper textures, transparency and several other options. **NOTE** This option is not available when working on a bitmap layer. With bitmap layers, brushes are always textured, and textured brush options are always available.
Brush Tip Library	 This is where you select the shape of the brush tip. By default it is round. Note that some tips are designed to have semitransparent areas, even when the maximum brush opacity is set to 100%. To create a custom brush tip, you must prepare the file ahead of time, either in Harmony or in a third-party software, such as Adobe Photoshop. Colour is not supported and transparency is not supported in the traditional sense. Black appears as 100% opaque, white appears as 100% transparent and all the shades of grey in between appear as varying degrees of semitransparency. A range of file formats are supported—.jpeg, .png, .tif, .psd, .tga to name a few. Alpha channels are disregarded on import. It is recommended that your file be between 100 x 100 pixels and 400 x 400 pixels. You can also import brush tips that you exported from Harmony, so you can share them with colleagues.
Minimum and Maximum Size	The minimum and maximum sizes of your drawing tool produce the thick and thin effect on your stroke. This works with the pressure sensitivity of a pen tablet. • **Maximum Size:** Defines the maximum width of the stroke. • **Minimum Size:** Defines the minimum width of the stroke in relation to and as a percentage of the maximum size.

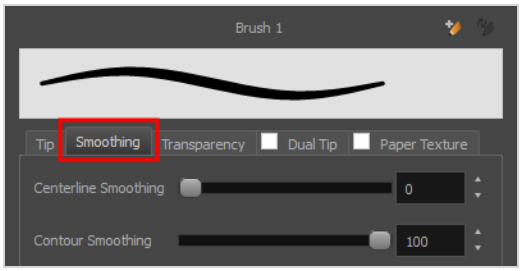
	NOTE Setting the Minimum Size value to 100% eliminates the possibility of creating width variation on your stroke. In other words, you would be forcing a uniform line width using the Maximum Size value.
Proportional to Camera	If you check this option, the size of the brush will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the brush will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the brush will be proportionally bigger.
Roundness and Angle	The Roundness and Angle parameters allow you to change the shape and orientation of the tip. • **Roundness:** The vertical scaling to apply to the tip. Reducing this setting squashes the tip vertically, allowing you to turn round or square tips into flat tips. • **Angle:** The angle at which to rotate the brush tip, counterclockwise. **NOTE** The squashing is not relative to the angle—if the tip is rotated, the squashing will still be done relative to the tip's original orientation. 
Hardness	The hardness value corresponds to the softness of the brush tip's edges. The lower the value, the softer the tip edge. The higher the value, the sharper the tip edge. Be aware that some brush tips are not 100% opaque, so they will always appear somewhat soft, even at 100% hardness. 
Spacing	Defines the amount of space between each stamp of the brush. A value of 100% sets the stamp marks edge to edge, if there is no white space around the shape. The larger the value, the greater the space between marks. A really large value can make the brush stroke appear as a string of individual marks. Conversely, a

	small spacing value will give the appearance of a fluid brush stroke. Spacing is only evident when making a continuous stroke. 
Randomness	The Randomness parameters let you create a varied brush stroke. Refining these options can give your stroke a lovely, non-mechanical look.
Random Size	You can create variation between the thick and thin of your brush stroke just by setting the Maximum and Minimum Size values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.  **NOTE** Setting the Minimum Size to 100% eliminates the possibility of creating width variation on your stroke, whether you are applying randomness or not. Therefore, you would be forcing a uniform line width using the Maximum Size value.
Random Angle	Sets the range for random rotation around the set Angle value. For example, if the Angle is set to 45° and the Random Angle set to 10°, the software will choose values between 40°–50° (plus or minus 5 degrees, equaling a total of 10 degrees).

	
Random Spacing	Sets the range for random spacing around the set Spacing value. For example, if the Spacing is set to 50% and the Random Spacing is set to 10%, then Harmony will choose values between 45%–55% (plus or minus 5 percent, equaling a total of 10 percent). 

Smoothing Tab

The Smoothing tab contains options to configure how Harmony should automatically smooth your brush strokes as you paint.



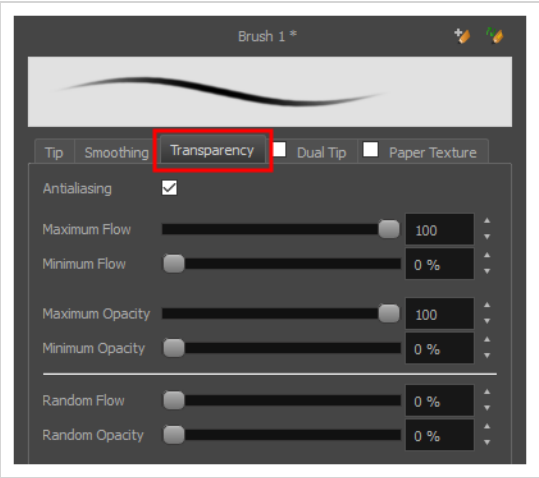
NOTE

The Smoothing tab is only available when working on a vector layer, as bitmap layers do not support smoothing.

Property	Description
Centerline Smoothing	Defines the amount of smoothing Harmony should perform on your brush stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce drawing precision and turn sharp angles into curves.
Contour Smoothing	Defines the amount of smoothing Harmony should perform on outer contour of the brush stroke. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

Transparency Tab

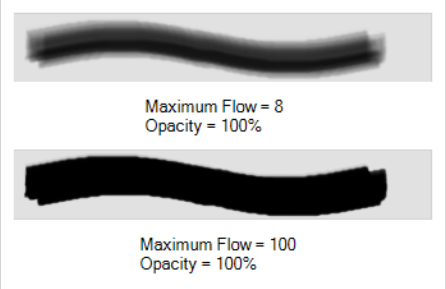
The Transparency tab allows you to decide if your brush has antialiasing as well as to set its flow and opacity settings.

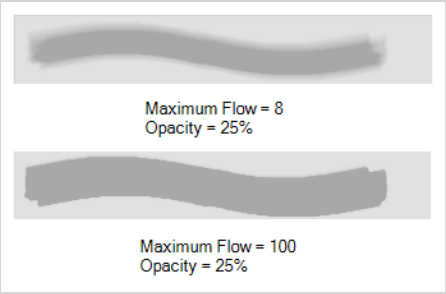
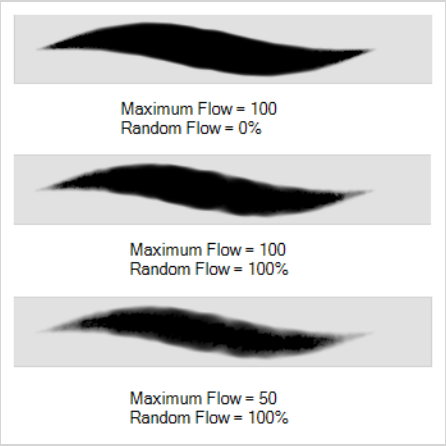


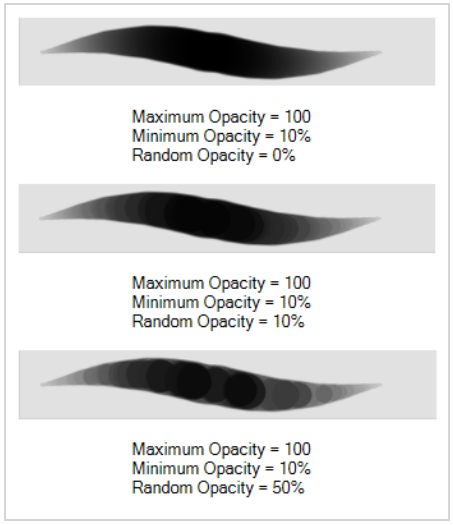
NOTE

The Transparency tab's options are only available on vector layers if the **Brush Type** option of the Tip tab is set to **Textured Vector Brush**. On bitmap layers, those options are always available.

Property	Description
Antialiasing	Enabled by default. This option causes the contours of the brush strokes to

	blend with the surrounding colours, to create an illusion of smoothness otherwise not possible due to the picture resolution. If antialiasing is disabled, the brush's texture will only render fully transparent or fully opaque pixels. Disabling this option can be useful if you need your outlines to be very crisp, if you want to make pixel art or if you need your brush strokes to render in solid colors with no variation, which makes them easier to repaint or process in third party software. **NOTE** When disabled, all other options in the Transparency tab are disabled.
Maximum and Minimum Flow	The Maximum and Minimum Flow parameters let you set the range for the rate at which paint flows from your brush. The analogy works better with a pen. The greater the flow, the more ink comes out, hence the more consistent the colour and texture of the line. If the flow is light, then the colour and texture of the line may look spotty. This feature works with the pressure sensitivity of a pen tablet. • **Maximum Flow:** Sets the maximum rate at which colour and texture are applied as you create a fluid stroke. • **Minimum Flow:** Sets the minimum rate at which colour and texture are applied as you create a fluid stroke. It is defined as a percentage of the Maximum Flow value. If the Minimum Flow value is set to 100%, then tablet pressure sensitivity will no longer be applicable. The flow will be set to the constant rate of the Maximum Flow value. 
Maximum Opacity and Minimum Opacity	The Maximum and Minimum Opacity parameters are where you set the opacity range for a brush mark. This works with the pressure sensitivity of a pen tablet. • **Maximum Opacity:** Sets the transparency limit of the brush mark when the pressure is heavy. • **Minimum Opacity:** Sets the transparency limit of the brush mark when the pressure is very light. It is defined as a percentage of the Maximum Opacity value. If the Minimum Opacity value is set to 100%, then tablet pressure sensitivity will no longer be applicable. The opacity will be set to the constant rate of the Maximum Opacity value.

	
Randomness	Th Randomness parameter lets you set the range for the randomness of the flow and opacity. This works with the pressure sensitivity of a pen tablet.
Randomness Flow	You can create variation in the flow of your brush stroke just by setting the Maximum and Minimum Flow values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.  **NOTE** Setting the Minimum Flow value to 100% eliminates the possibility of creating flow variation on your stroke, whether you are applying randomness or not. That is, you would be forcing a uniform flow using the Maximum Flow value.
Random Opacity	You can create variation in the opacity of your brush stroke just by setting the Maximum and Minimum Opacity values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.



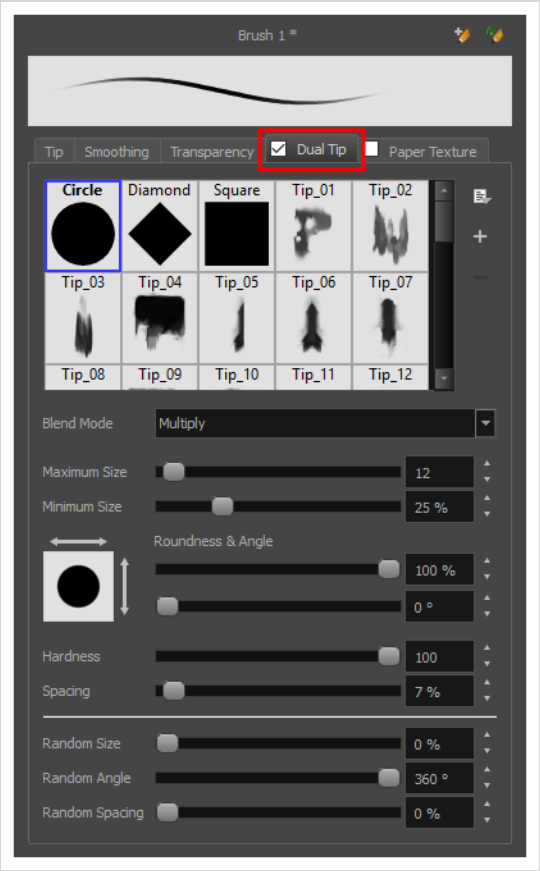
NOTE

Setting the Minimum Opacity value to 100% eliminates the possibility of creating opacity variation on your stroke, whether you are applying randomness or not. That is, you would be forcing a uniform opacity using the Maximum Opacity value.

Dual Tip Tab

The Dual Tip tab lets you set the parameters for creating a dual tip brush. The primary bitmap brush tip and the dual tip always work together. You can set the parameters for the primary tip in the Tip tab and those for the dual tip in the Dual Tip tab. The Blend mode you select determines how the tips are combined.

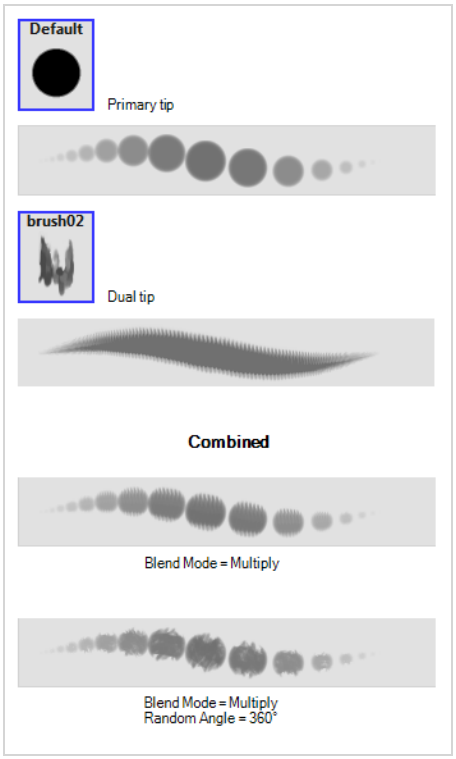
By default, the Blend Mode is set to Multiply and the Random Angle to 360°.

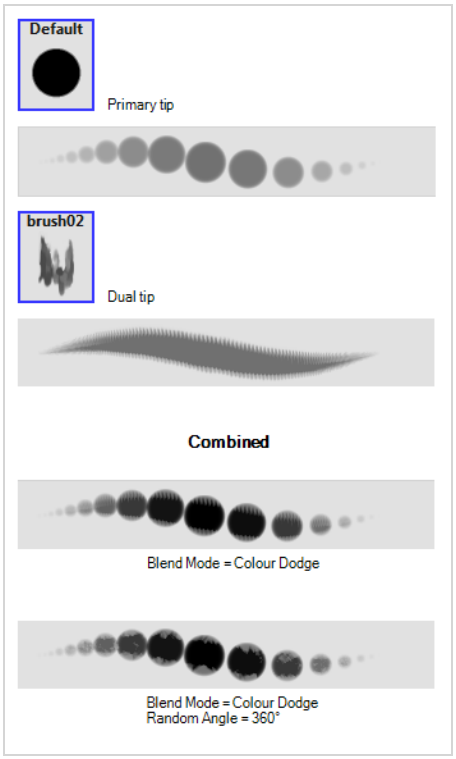


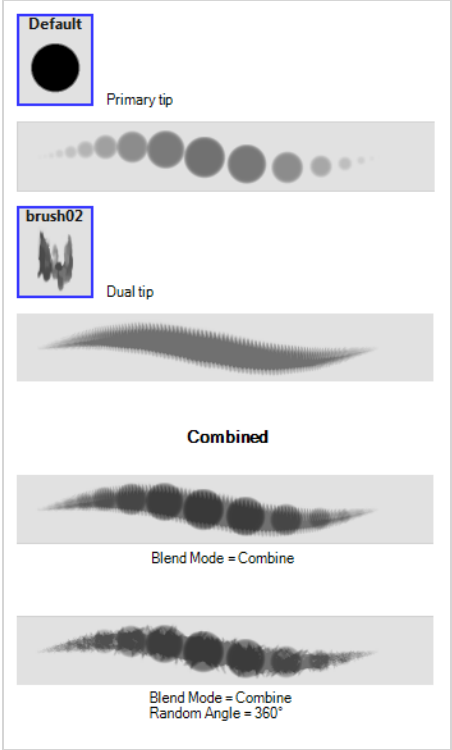
NOTE

To use a Dual Tip, you must enable option by checking the checkbox inside the **Dual Tip** tab. Additionally, if you are working on a vector layer, the **Brush Type** option of the Tip tab must be set to **Textured Vector Brush**.

Property	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your brush uses a dual tip. If this checkbox is unchecked, the options in the Dual Tip tab will be disabled.
Blend Mode	The Blend modes let you decide how the primary tip and the dual tip are combined.
Multiply	This is the default blend mode. When the two brush tips are combined in this mode, they essentially cut each other out in overlapping areas, where one or both tips have an area of 100% transparency. The less opaque the brush tips are, the lighter their combination.

Property	Description
	
Colour Dodge	In this mode, the primary tip cuts out the shape of the dual tip. Where the tip shapes overlap, within the boundaries of the primary shape, the colour and opacity appear darker.

Property	Description
	
Combine	This mode treats the two tips as two different and separate brushes that have the same colour and follow the same path.

Property	Description
	

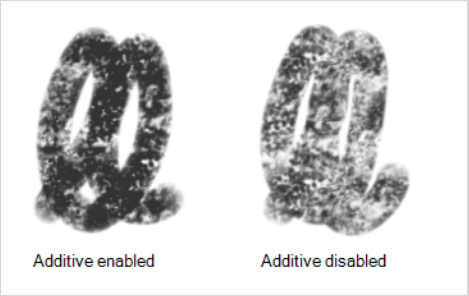
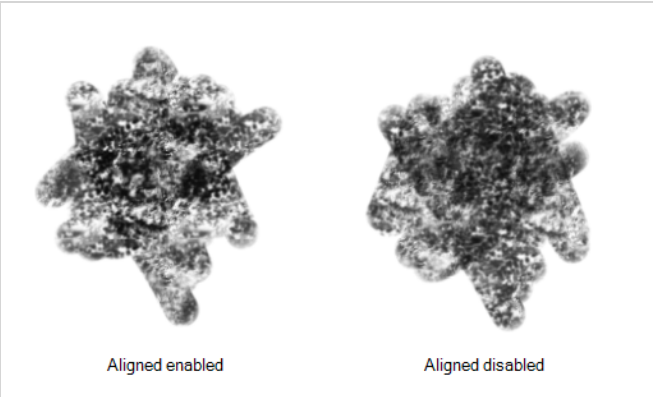
Paper Texture Tab

The Paper Texture tab lets you configure a paper-like texture for your brush. You can also add textures by importing image files, or import paper textures that were previously exported from Harmony.

NOTE

To use a Paper Texture, you must enable option by checking the checkbox inside the **Paper Texture** tab. Additionally, if you are working on a vector layer, the **Brush Type** option of the Tip tab must be set to **Textured Vector Brush**.

Property	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your brush uses a paper texture. If this checkbox is unchecked, the options in the Paper Texture tab will be disabled.
Texture Scale	Increase or decreases the size of the paper texture.
Additive	This option layers the texture on top of itself as you scribble overlapping lines in one continuous stroke. If this option is turned off, areas of overlapping lines from a single, continuous stroke will appear the same, in terms of darkness and texture, as non-overlapping areas.

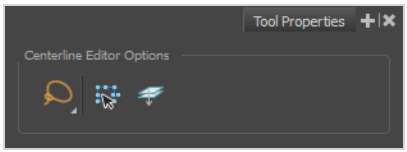
Property	Description
	
Aligned	This option defines the way separate, overlapping strokes behave. If this option is enabled, the paper texture's position does not change with each sweep of the brush. If this option is disabled, each sweep of the brush produces a different texture position. The texture orientation always stays the same. 

Centerline Editor Tool Properties

The Centerline Editor tool allows you to edit brush strokes by their centreline rather than by their contour. This makes it easier to tweak the tips, curves and corners of brush strokes. The purpose of this tool is to make it as easy to edit brush strokes as it is to edit pencil lines with the Contour Editor tool.

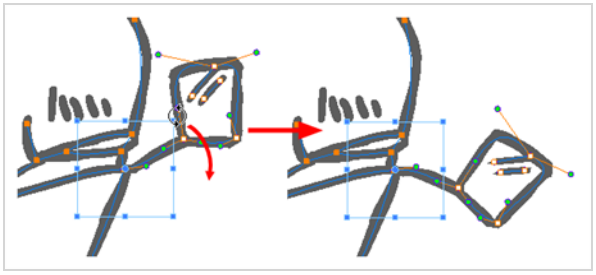
How to access the Centerline Editor tool properties

1. In the Tools toolbar, select the Centerline Editor tool.
2. The tool's properties are displayed in the Tool Properties view.



Tool Options

Icon	Property	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.
	Show Centerline Editor Controls	When enabled, selecting several control points will make a manipulator bounding box appear. You can use this manipulator to scale and rotate the selection of points.

Icon	Property	Description
		
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.

Close Gap Tool Properties

The paint tool requires the area you attempt to fill to be closed in order to know exactly what area of your artwork must be filled. However, it is common for artists to accidentally leave small gaps in their artwork.

The Close Gap tool allows you to quickly close small gaps in a shape by creating an invisible stroke connecting two extremities of the gap. You can then fill the area using the Paint tool, as this invisible stroke will be taken in account to determine the outline of the shape to fill.

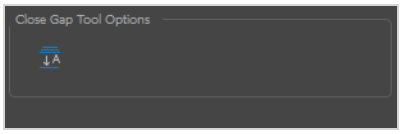
TIP

You do not need to use the Close Gap tool with precision. If you draw a crude stroke near the gap you want to close, the tool will automatically detect the two closest line extremities and will draw an invisible straight line connecting them. closing the gap between them.

How to access the Close Gap tool properties

1. In the Tools toolbar, select the Close Gap tool.

   The tool's properties are displayed in the Tool Properties view.



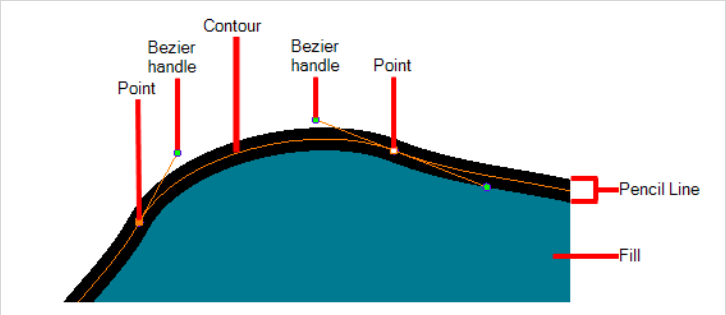
Tool Options

Icon	Property	Description
	Auto Flatten	The Close Gap tool creates an invisible drawing stroke to close the shape. Enabling this option will merge the stroke into the artwork instead of adding the stroke on top of it. **NOTE** The area you close with the Close Gap tool will be fillable regardless of whether or not this option is enabled.

Contour Editor Tool Properties

The Contour Editor lets you reshape vector shapes, brush strokes and lines in your drawings.

Artwork in Harmony is made of vector shapes. Vector shapes are defined by points, the lines joining the points together (contours) and the curve vectors, represented by Bezier handles, which make the curve of said lines.

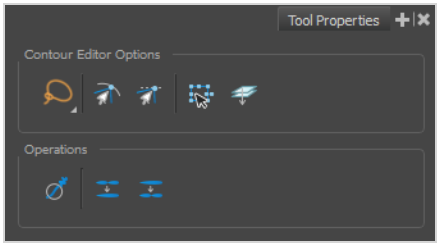


The Contour Editor tool allows you to select a contour or point, and change the position of points, add and remove points from the shape, rotate, lengthen and shorten curve handles to influence the curve of contours between those points, or drag contours between points to change their curve directly.

How to access the Contour Editor tool properties

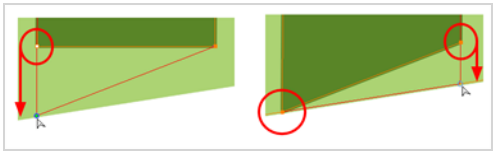
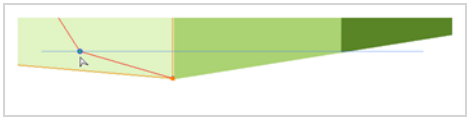
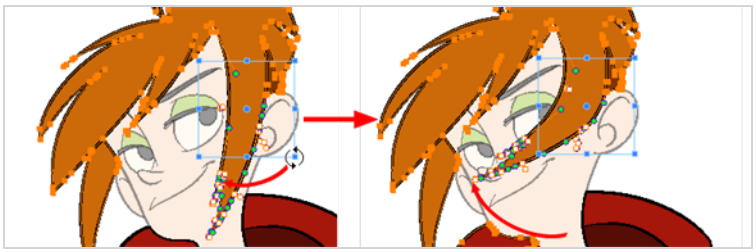
1. In the Tools toolbar, select the Contour Editor tool.

   The tool's properties are displayed in the Tool Properties view.



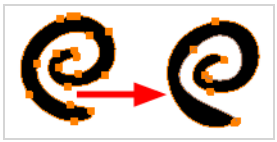
Tool Modes

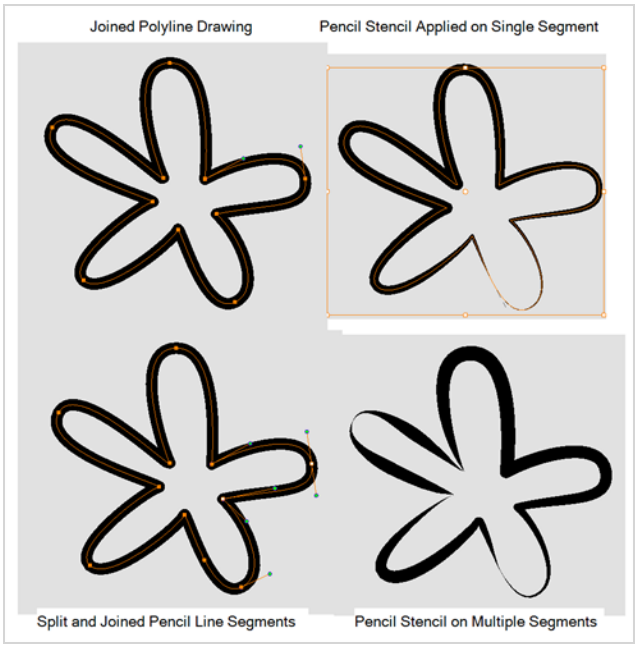
Icon	Property	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to

Icon	Property	Description
		its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.
	Snap to Contour	Snaps your selection or point to any line you position it on. As soon as you move it close enough to another line, your point or selection will snap to it. 
	Snap and Align	Snaps the selected anchor point to any existing line while displaying temporary rulers as a guide that you can also snap your anchor point to. 
	Show Contour Editor Controls	When enabled, selecting several control points will make a manipulator bounding box appear. You can use this manipulator to scale and rotate the selection of points. 
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.

Icon	Property	Description
		NOTE If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.

Operations

Icon	Property	Description
	Smooth Selection	The Smooth operation lets you smooth out selected drawing strokes and remove extra points.  **TIP** You can also smooth the selection by selecting **Selected > Smooth** from the top menu or by pressing Alt + Shift + S.
 	Split Pencil Line Join Pencil Lines	When drawing with the Polyline tool, your drawing has an even line thickness. You can use the Pencil Editor to adjust the thickness point by point, but if you want to adjust it quicker, you can use the Split Pencil Line and Point Pencil Lines options to create segments and apply a pencil stencil to your drawing. Note that if you did not join the pencil lines on your polyline stroke, the segments between the points will act as separated segments.

Icon	Property	Description
		

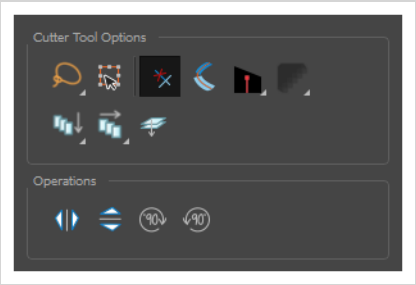
Cutter Tool Properties

The Cutter tool lets you cut out part of a drawing so that you can transform it, copy it or delete it.

How to access the Cutter tool properties

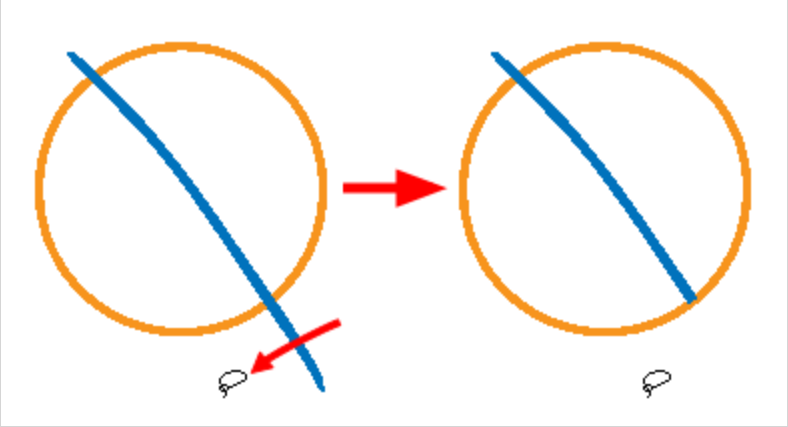
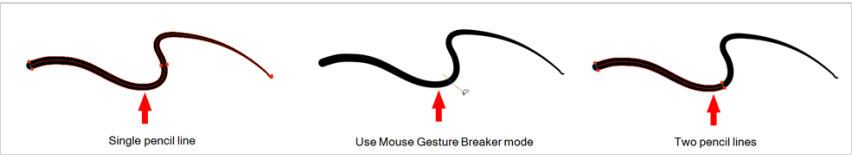
1. In the Tools toolbar, select the Cutter tool.

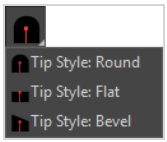
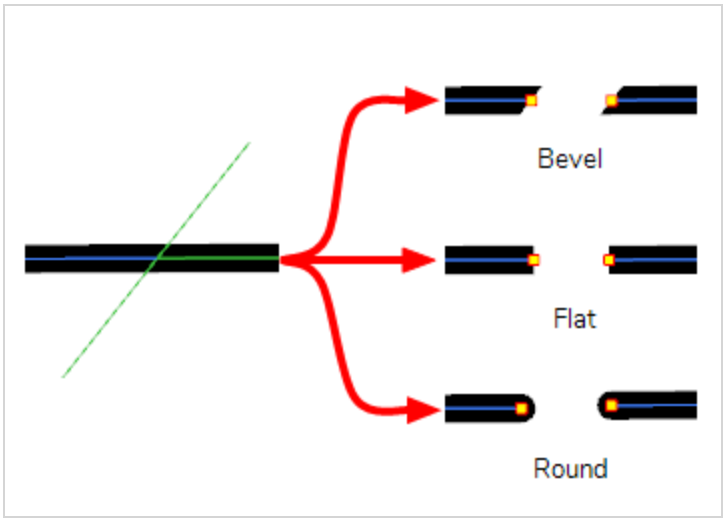
   The tool's properties are displayed in the Tool Properties view.



Tool Options

Icon	Property	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.
	Easy Drag	When enabled, you can drag the selection by clicking anywhere inside its bounding box. By default, you must click on the artwork in the selection to be able to drag it.
	Use Mouse Gesture	When this option is enabled along with the Lasso selection type, quickly drawing a line with the Cutter tool over a line segment in your artwork will instantly delete it. This can be useful if you want to use the Cutter tool to

Icon	Property	Description
		quickly clean up your artwork.  **NOTE** This option will only work when using the Cutter tool on separate brush or pencil strokes. Hence, it is important not to flatten your artwork if you intend to use this option to clean up your drawings. This option has no effect on bitmap layers as the artwork in bitmap layers is always flattened.
	Use Mouse Gesture Breaker Mode	When using the Lasso selection type, the Use Mouse Gesture Breaker Mode option lets you draw an invisible stroke on a pencil line to cut it in two individual objects. Once a pencil line is cut with this option, you will be able to select the two portions independently with either the Cutter tool, Pencil Editor tool or Select tool.  **NOTE** This option only works with pencil lines.
	Tip Style	When cutting through pencil lines, this option decides what kind of pencil line tips to put at the extremities of the remaining pencil line segments, where they were cut.

Icon	Property	Description
		 By default, this is set to Bevel, which will leave the tip of the pencil line cut at the same angle as your cutter stroke. If you prefer, you can make pencil lines that you split with the Cutter tool have Flat or Round tips instead. 
	Antialiasing	When working on bitmap artwork, enabling this will smooth the edges of the artwork you cut out, so that they do not appear pixelated. **NOTE** This option is only available with bitmap layers.
	Apply to Visible Drawing Layers	This option allows you to select which layers the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the currently selected layers. If several layers are selected, the tool will work on all these layers simultaneously. • **Apply to Visible Drawing Layers:** The tool will work on all the visible layers in the Camera view. • **Apply to Synced Drawing Layers**: If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer.

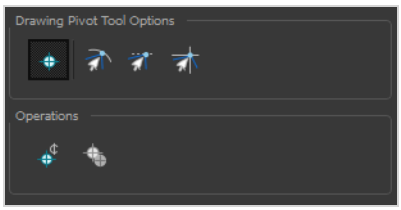
Icon	Property	Description
		NOTE This option only works in the Camera view.
	Apply to All Frames	This option allows you to determine which drawings in the current layer the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the drawing in the current frame. • **Apply to All Frames:** The tool will work on every exposed drawing in the selected layer simultaneously. • **Apply to Onion Skin Range:** The tool will work on every drawing displayed in the Onion Skin. Onion Skin must be enabled for this option to work.
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.

Operations

Icon	Property	Description
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current selection vertically.
	Rotate 90 Degrees CW	Rotates the current selection 90 degrees clockwise.
	Rotate 90 Degrees CCW	Rotates the current selection 90 degrees counter-clockwise.

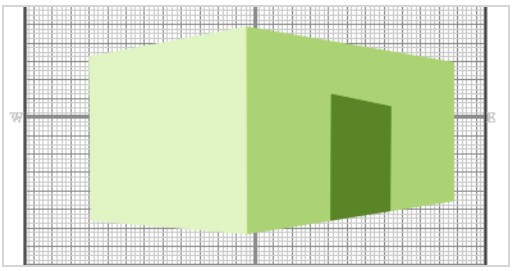
Drawing Pivot Tool Properties

The Drawing Pivot tool lets you set the pivots on your character. You can set the drawing pivots on drawings and symbols.



Tool Options

Icon	Property	Description
	Setting the Drawing Pivot for Symbols on All Frames	The Set the Pivot for Symbol on All Frames option is enabled by default. When you set a drawing pivot on a symbol, all of its cells use the same drawing pivot. This means you do not have to set a drawing pivot on all frames. Once you set it, it is done. If you prefer to set a different drawing pivot for a series of cells, you can deselect the option and set your pivots on each cell or cell range. **NOTE** If you have already set several different pivots on your symbol's cells and selected the Set the Pivot for Symbol on All Frames option, once you set a new pivot on the same symbol, all of its pivots will be reset and will use your new pivot.
	Snap to Contour	Snaps your selection or point to any line you position it on. As soon as you move it close enough to another line, your point or selection will snap to it.
	Snap and Align	Snaps the selected anchor point to any existing line while displaying temporary rulers as a guide that you can also snap your anchor point to.
	Snap to Grid	Snaps your selection following the currently enabled grid.

		
	Reset Pivot	When you click the Reset Pivot option, the drawing pivot of the selected drawing or symbol is reset to the centre of the Camera view.
	Copying Pivot on Parent Symbol	When you import new extra drawings, such as hands and mouths, you can use the drawing pivot that was set on your drawings and report them to the symbol's cells. Use the Copy Pivot to Parent Symbol command for this. **NOTE** When you copy drawing pivots to the parent symbol, there is no link between the drawings' pivots and the symbol's pivots. If you modify the drawing pivot later, it will not link to the symbol. You would need to perform the operation again. If you need to modify the symbol's pivots, you can do it directly on the symbol's cells.

Dropper Tool Properties

The Dropper tool allows you to pick a colour from your drawing without going to the Colour view.

NOTE

The following options will only have an effect when picking colours from a bitmap layer, as they affect the colour that gets picked. When working on a vector layer, you can only pick colours that are available in one of the palettes in your scene. Therefore, the colour you pick will always be exactly the colour that was used to fill the shape or stroke you clicked on.

How to access the Dropper tool properties

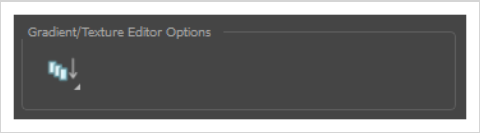
1. In the Tools toolbar, select the Dropper tool.

   The tool's properties are displayed in the Tool Properties view.

Icon	Property	Description
	Sample All Layers	By default, the Dropper tool picks the colour from the active drawing layer only. This means that if the colour is semi-transparent, it will still only take the colour from the active layer, along with its transparency, and ignore the colours from layers behind it. With this option enabled, the Dropper tool will pick the colour as it appears on the screen instead, allowing you to pick colours that are the result of several layers composited together.
	Do Not Pick Transparency	By default, the Dropper tool picks the colour's alpha value as well as its colour values. When enabled, the colour picked will always have an alpha value of 255.

Edit Gradient/Texture Tool Properties

The Edit/Gradient Texture tool allows you to move, rotate and scale a gradient or texture fill within the shape it fills, without modifying the shape itself.



How to access the Edit Gradient/Texture tool properties

1. In the Tools toolbar, select the Edit Gradient/Texture tool.

   The tool's properties are displayed in the Tool Properties view.

Tool Options

Icon	Property	Description
	Apply to Visible Drawing Layers	This option allows you to select which layers the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the currently selected layers. If several layers are selected, the tool will work on all these layers simultaneously. • **Apply to Visible Drawing Layers:** The tool will work on all the visible layers in the Camera view. • **Apply to Synced Drawing Layers**: If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer. **NOTE** This option only works in the Camera view.

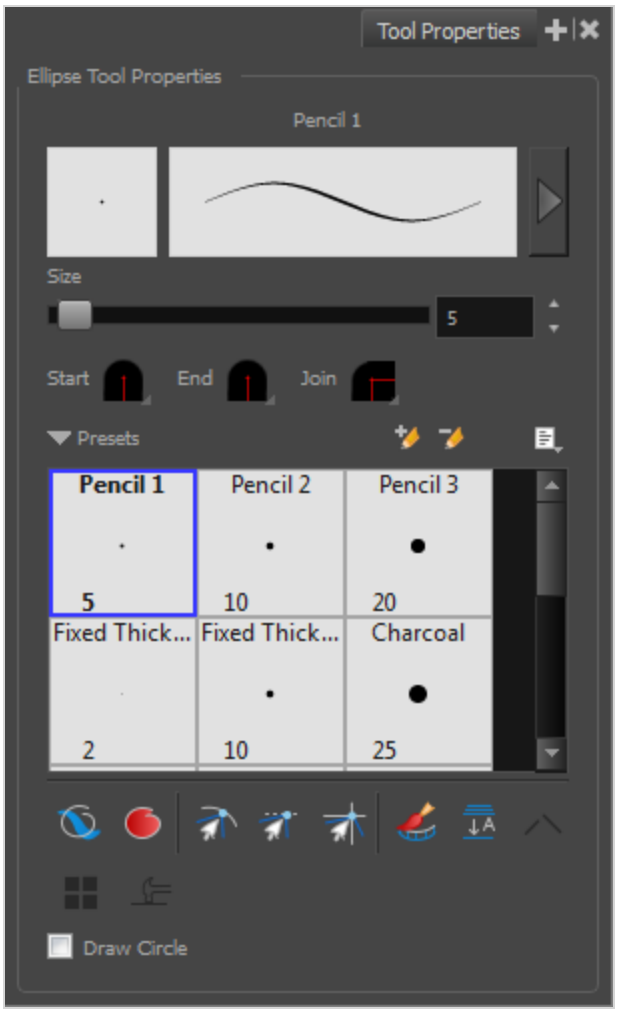
Ellipse Tool Properties

The Ellipse tool allows you to quickly draw an ellipse or a circle.

How to access the Ellipse tool properties

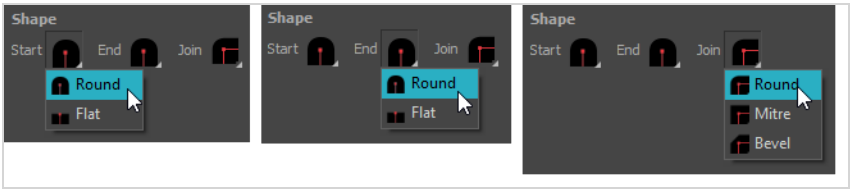
1. In the Tools toolbar, select the Ellipse tool.

   The tool's properties are displayed in the Tool Properties view.



Pencil Properties

Just like other shape tools, this tool creates pencil lines. Hence, its tool properties are similar to the ones of the Pencil tool and it can be used with pencil presets.

Property	Description
Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.
Pencil Properties Dialog	The arrow button right of the preview area opens the Pencil Properties dialog. While the Tool Properties view only gives you access to a few of the pencil properties, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the *Pencil Properties Dialog* on page 81 section below.
Size	Defines the width of the pencil line used to draw the shape.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Pencil Presets

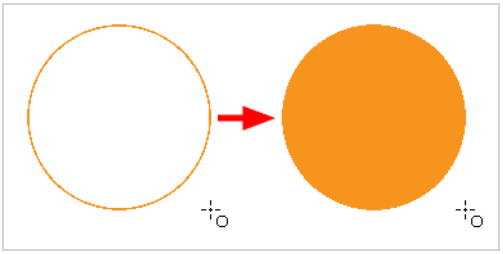
These options allow you to select, create and manage pencil presets.

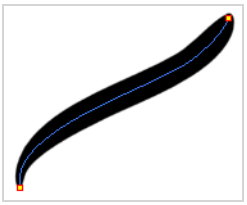
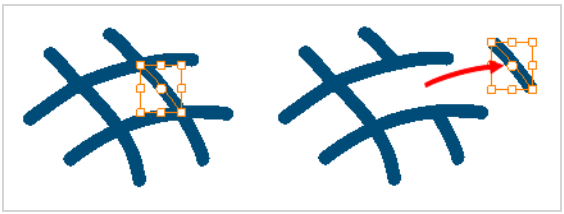
Icon	Property	Description
	Presets list	Harmony provides a variety of pencil presets and thickness stencils and

Icon	Property	Description
		also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw for efficiency and consistency. A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards. You also have the possibility to apply different textures to your lines by either using the default presets or to import your own. You can export the pencil presets that you have created and import those that others have created. This is a good way for you and project collaborators to keep a consistent look for the project.
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush Preset	Deletes the currently selected preset.
	Brush Presets Menu	Open a menu that contains the following options: • **New Brush Preset:** Creates a new preset based on the current tool properties. • **Delete Brush:** Deletes the currently selected preset. • **Rename Brush:** Allows you to rename the currently selected preset. • **Import Brushes:** Allows you to import brush presets exported from Harmony. • **Export Brushes:** Allows you to export your brush presets into an `.xml` file. • **Small Thumbnail:** Displays presets in a grid of small thumbnails with a preview of their tip. • **Large Thumbnail:** Displays presets in a grid of big thumbnails, with their name and a preview of their tip. • **Stroke View:** Displays presets in a list, with their name and a preview of a stroke done with each preset.

Drawing Options

These options affect the way your shape is added to your artwork.

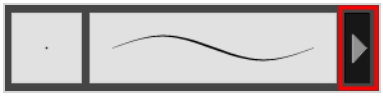
Icon	Property	Description
	Draw Behind	When enabled, your brush strokes will appear behind the existing artwork. **NOTE** Your brush stroke will temporarily appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.
	Auto Fill	When enabled, the shape you draw is automatically filled with the selected colour. By default, drawing a shape only creates its outlines.  **TIP** By default the pencil line and its fill will be the same colour. If you want to select different colours for the pencil line and its fill, you can click on the Unlock Three Colours button in the Colour view, then select different colours for Brush strokes, Pencil lines and Paint fills.
	Snap to Contour	When enabled, while you're drawing, the mouse cursor will snap to the nearby contours of the artwork in your drawing.
	Snap and Align	When enabled, while you're drawing, the mouse cursor will automatically align to the rectangular bounding boxes of other strokes and shapes in your drawing.
	Snap to Grid	When enabled, while you're drawing, the mouse cursor will snap against the intersecting points of the grid.

Icon	Property	Description
		TIP To display the grid, select **View > Grid > Show Grid** from the top menu or press Ctrl + '.
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer. 
	Auto Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.  **NOTE** Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode are essentially cut into segments by the overlap and can be treated as individual lines.
	Use Stored Colour Gradient	The Use Stored Colour Gradient option can be used when painting with a gradient colour to always position the gradient in the same way it was stored, making it consistent across brush strokes. You can store a gradient by selecting a zone painted with a gradient with the Select tool, then clicking on Store Colour Gradient in the Tool Properties view.
	Draw Circle	When checked, the shape you draw will be of equal width and height, making it a perfect circle.

Icon	Property	Description
		TIP You can also draw a circle by holding the Shift key while drawing.

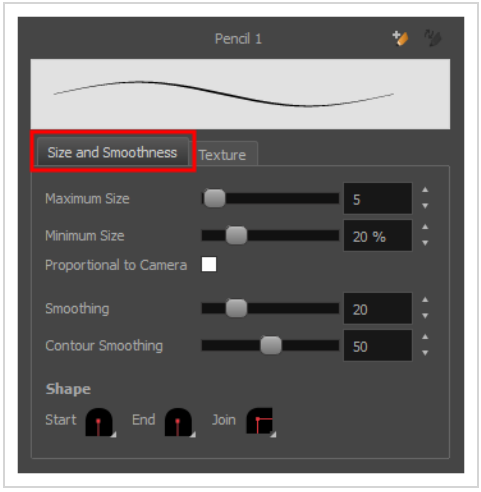
Pencil Properties Dialog

The Ellipse tool draws the same type of line as the Pencil tool. Hence, you can configure the Ellipse tool's lines using the Pencil Properties dialog, which you can open by clicking on the arrow button right of the stroke display area in the Tool Properties view.

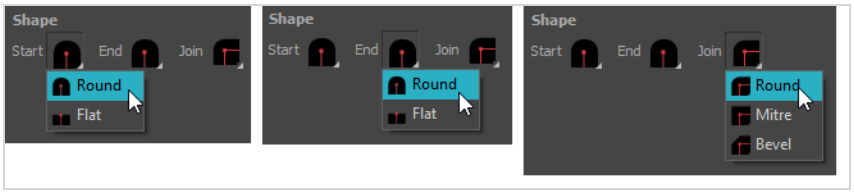


Size and Smoothness Tab

The Size and Smoothness tab allows you to select your pencil's size, its smoothing parameters as well as the shape of its tips and corners.



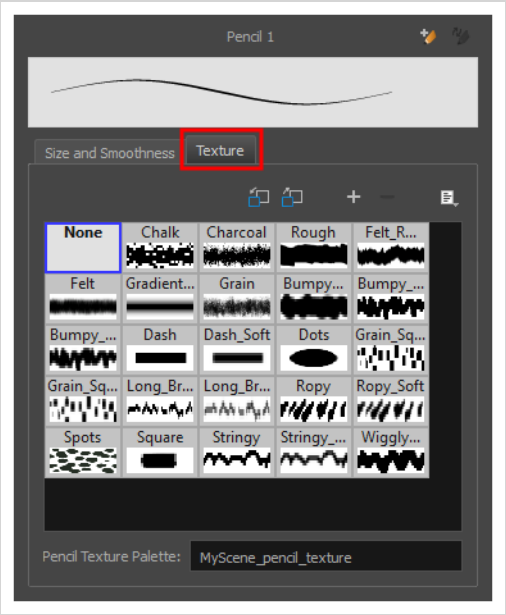
Property	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Minimum Size	Defines the minimum size of your stroke as a percentage of the maximum size. If you

Property	Description
	do not have pressure sensitivity from a pen table, the minimum size value will be ignored.
Proportional to Camera	If you check this option, the size of the pencil will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the pencil will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the pencil will be proportionally bigger.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Contour Smoothing	Defines the number of points on the contour share of your stroke. This will smooth out the bumps and waves on tour contour shape of your brush strokes.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Texture Tab

In the Pencil Properties view, the Texture tab allows you to select a pencil texture from the currently selected pencil texture palette to use with the Pencil tool. You can also add, remove or rename textures, save the current pencil texture palette as the default one, or import the pencil texture palette into your scene.

The pencil texture palette used in the Texture tab of the Pencil Properties dialog is the one selected in the Colour view. You can select a pencil texture palette by selecting it from the pencil texture palette list in the Colour view—see Colour View on page 199.

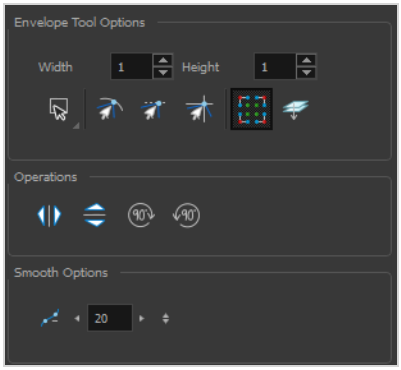


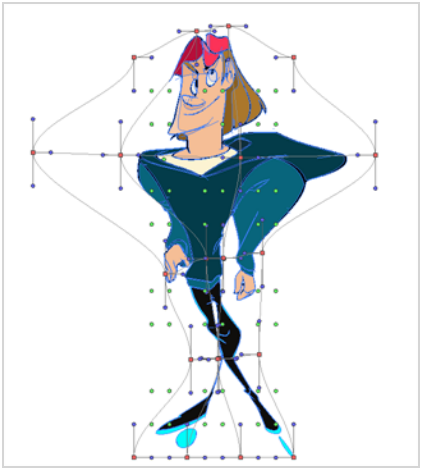
Icon	Property	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Allows you to import an image file into a new pencil texture swatch in the current pencil texture palette. The pencil texture's effect on your pencil line will be based on the image's transparency channel, and will follow your pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selectedpencil texture palette, for

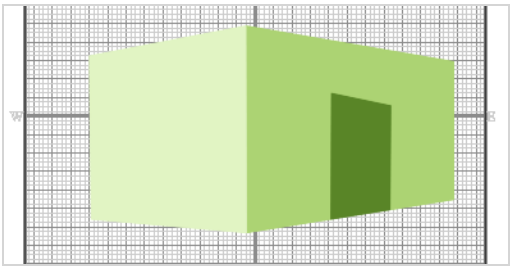
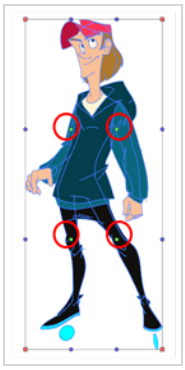
Icon	Property	Description
		reference. To select a different pencil texture palette, you must select it in the Colour view—see Colour View on page 199.

Envelope Tool Properties

Selecting the Envelope tool displays its properties and options in the Tool Properties view.



Icon	Tool Name	Description
	Width and Height	Increase the width and height values to add more columns and rows to the deformation grids. 
	Lasso	Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them. **TIP** When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.
	Marquee	Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.

		TIP When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.
	Snap to Contour	Snaps your selection or point to any line you position it on. As soon as you move it close enough to another line, your point or selection will snap to it.
	Snap and Align	Snaps the selected anchor point to any existing line while displaying temporary rulers as a guide that you can also snap your anchor point to.
	Snap to Grid	Snaps your selection following the currently enabled grid. 
	Show Advanced Controls	To display more controls,you can click on the Show Advanced Controls button. 
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.

		NOTE If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current selection vertically.
	Rotate 90 Degrees CW	Rotates the current selection 90 degrees clockwise.
	Rotate 90 Degrees CCW	Rotates the current selection 90 degrees counter-clockwise.
	Smooth	You can modify the central line smoothness of your line using this option. This parameter smooths the deformed lines. Increasing the value will result in a smoother line with fewer control points. The more you increase the value, the less details and curves you will get. Use the left and right arrows to increment the value by one full unit. Use the Up - Down slider to quickly increment the value.

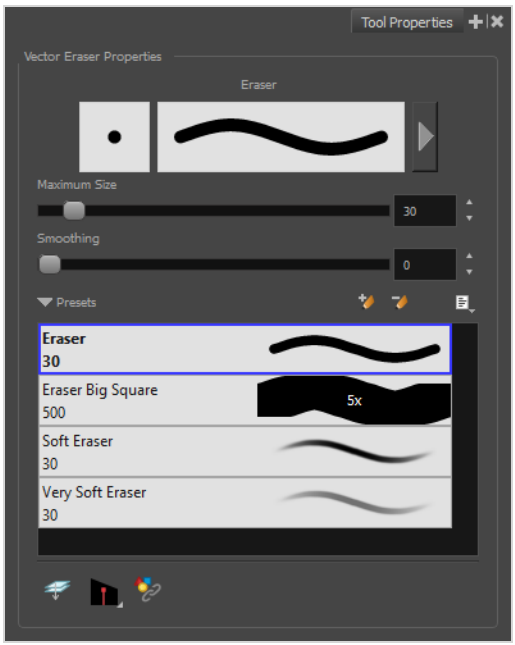
Eraser Tool Properties

The Eraser tool allows you to erase artwork by drawing eraser strokes over it. When using the Eraser tool with a tablet, it is pressure sensitive, like with the Brush and Pencil tool.

How to access the Eraser tool properties

1. In the Tools toolbar, select the Eraser tool.

   The tool's properties are displayed in the Tool Properties view.



Eraser Properties

The way the Eraser tool is configured is almost identical to the way the Brush tool is configured.

Property	Description
Stroke Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.
Eraser Properties Dialog	The arrow button right of the display area opens the Eraser Properties dialog, which gives you access to all the parameters and options for your eraser. The Tool Properties view only gives you access to a few of the eraser properties, a list of eraser presets and options for the Eraser tool that are not related to the eraser properties. For more

Property	Description
	information on the Eraser Properties dialog, see the Eraser Properties Dialog section below.
Maximum Size	Defines the maximum size of the eraser. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Flow	Lets you set the opacity for each instance of the eraser tip that gets erased from your artwork. Contrary to the Opacity parameter, the flow parameter has a cumulative effect. This means that a lower flow will make your eraser strokes less effective towards its extremities and more effective in its center. Your stroke's flow will also accumulate if you draw over it. By default, your eraser's flow varies with the amount of pressure you put on your tablet pen. **NOTE** This option is only displayed in the Tool Properties view when drawing on a bitmap layer.
Opacity	The Opacity parameter are where Lets you set the opacity of your brush strokes. Contrary to the Flow parameter, the Opacity parameter is non-cumulative. Your whole brush stroke's opacity will not exceed the Opacity parameter. By default, the Opacity parameter varies depending on the amount of pressure you put on your tablet pen. **NOTE** This option is only displayed in the Tool Properties view when drawing on a bitmap layer.

Eraser Presets

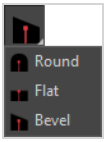
These options allow you to select, create and manage eraser presets.

Icon	Property	Description
	Presets list	By default, Harmony has preloaded eraser presets. You can also create your own eraser presets by configuring your eraser, then saving its properties into a new preset. It is also possible to export and import eraser presets.
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush	Deletes the currently selected preset.
	Rename Brush	Allows you to rename the currently selected preset.
	Import Brushes	Allows you to import brush presets exported from Harmony.
	Export Brushes	Allows you to export your brush presets into an `.xml` file.
	Small Thumbnail	Displays presets in a grid of small thumbnails with a preview of their tip.
	Large Thumbnail	Displays presets in a grid of big thumbnails, with their name and a preview of their tip.
	Stroke View	Displays presets in a list, with their name and a preview of a stroke done with each preset.

Erasing Options

These options affect the way your eraser strokes are applied to your artwork.

Icon	Property	Description
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.

Icon	Property	Description
	Tip Style	If you erase the end of a pencil line or erase a pencil line through the centre, new line tips are created. Use the Tip Style option to customize the shape of the tips of the pencil lines that are trimmed by the Eraser tool.  By default, this option is set to **Bevel**, which will leave the end of the pencil line cut at the same angle as the eraser stroke
	Apply to Synced Drawing Layers	If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer.

Eraser Properties Dialog

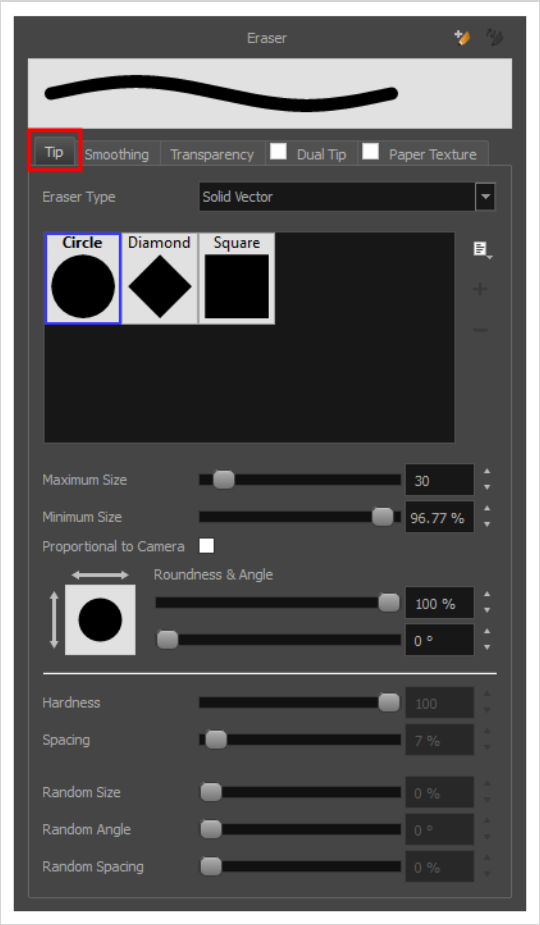
Erasers have an extensive set of options and properties that are not displayed in the Tool Properties view, but rather, in a dialog you can access from it. To open the Eraser Properties dialog, click on the arrow button right of the stroke display area.

The Eraser Properties dialog has five different tabs, minus the Smoothing tab if you are working on a bitmap layers. Below is detailed information about the options available in each tab:

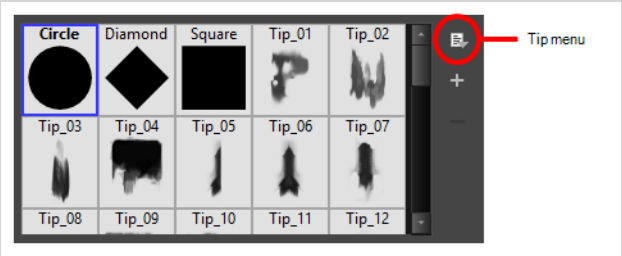
- *Tip Tab* on page 91
- *Smoothing Tab* on page 96
- *Transparency Tab* on page 97
- *Dual Tip Tab* on page 100
- *Paper Texture Tab* on page 104

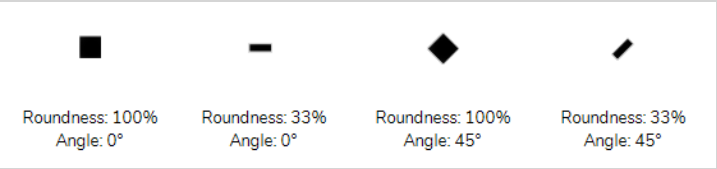
Tip Tab

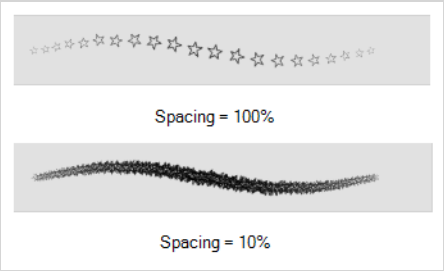
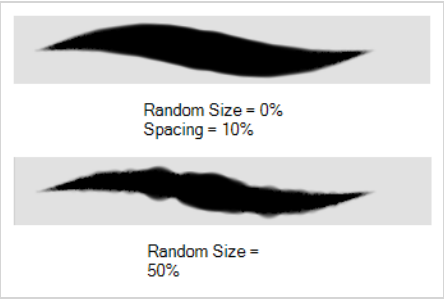
The Tip tab allows you to configure the shape, size, hardness and spacing of your eraser tip.

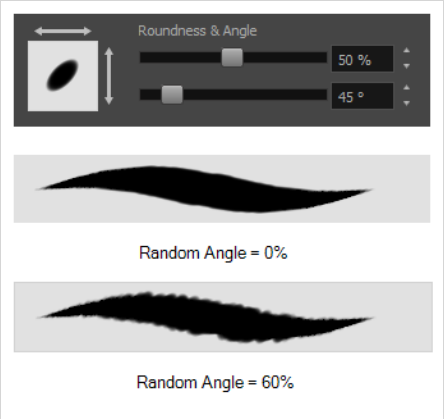
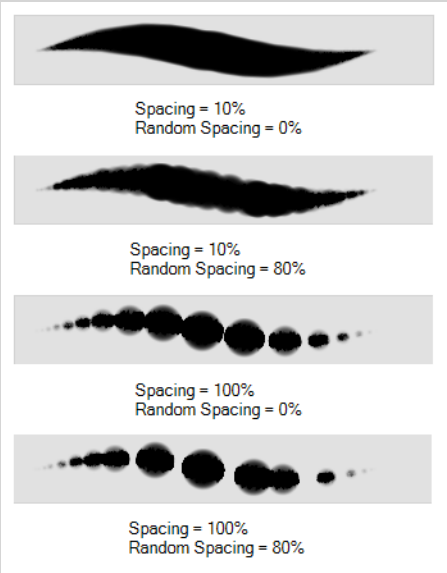


Property	Description
Eraser Type	Allows you to select between one of the following eraser types: • **Solid Vector:** Simply cuts out the eraser stroke's shape from the vector artwork. A solid vector eraser always completely erase the artworks leaving hard seams. • **Textured Eraser:** Allows to configure the eraser with the same options as with a textured brush. A textured eraser will decrease the opacity of bitmap textures in textured brush strokes if it doesn't completely erase it. If it completely erases a brush stroke, it will cut out the erased part from the vector artwork. • **Textured, Preserve Vector:** Like a Textured Eraser, except that it will not cut out from the vector shapes, even if it fully erases pixels in a textured brush stroke's texture.

Property	Description
	NOTE Textured erasers only work as expected on textured brush strokes. Using a Textured eraser on a solid vector brush stroke or on a pencil line will only cut the eraser stroke's shape out of it. If you use a Textured, Preserve Vector type eraser on a solid vector shape or on a pencil line, the eraser will not erase anything. **NOTE** This option is not available when working on a bitmap layer. With bitmap layers, erasers are always textured, and textured eraser options are always available.
Eraser Tip Library	 This is where you select the shape of the eraser tip. By default, it is round. Note that some tips are designed to have semitransparent areas, even when the maximum eraser opacity is set to 100%. To create a custom eraser tip, you must prepare the file ahead of time, either in Harmony or in a third-party software, such as Adobe Photoshop. Colour is not supported and transparency is not supported in the traditional sense. Black appears as 100% opaque, white appears as 100% transparent and all the shades of grey in between appear as varying degrees of semitransparency. A range of file formats are supported—.jpeg, .png, .tif, .psd, .tga to name a few. Alpha channels are disregarded on import. It is recommended that your file be between 100 x 100 pixels and 400 x 400 pixels. You can also import eraser tips that you exported from Harmony, so you can share them with colleagues.
Minimum and Maximum Size	The minimum and maximum sizes of your drawing tool produce the thick and thin effect on your stroke. This works with the pressure sensitivity of a pen tablet. • **Maximum Size:** Defines the maximum width of the stroke. • **Minimum Size:** Defines the minimum width of the stroke in relation to and as a percentage of the maximum size.

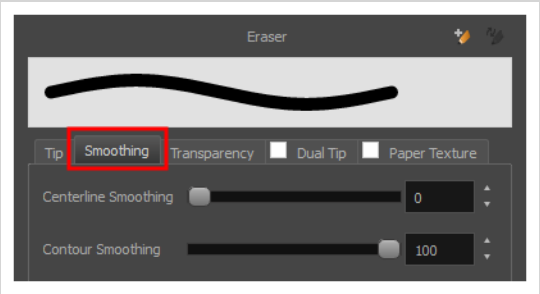
Property	Description
	NOTE Setting the Minimum Size value to 100% eliminates the possibility of creating width variation on your stroke. In other words, you would be forcing a uniform line width using the Maximum Size value.
Proportional to Camera	If you check this option, the size of the eraser will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the eraser will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the eraser will be proportionally bigger.
Roundness and Angle	The Roundness and Angle parameters allow you to change the shape and orientation of the tip. • **Roundness:** The vertical scaling to apply to the tip. Reducing this setting squashes the tip vertically, allowing you to turn round or square tips into flat tips. • **Angle:** The angle at which to rotate the brush tip, counterclockwise. **NOTE** The squashing is not relative to the angle—if the tip is rotated, the squashing will still be done relative to the tip's original orientation. 
Hardness	The Hardness and Spacing parameters allow you to change the softness and spacing of the marks made by the eraser tip. You can preview the hardness and spacing at the top of the Eraser Properties window, stroke preview area. The hardness value corresponds to the softness of the eraser tip's edges. The lower the value, the softer the tip edge. The higher the value, the sharper the tip edge. Be aware that some eraser tips are not 100% opaque, so they will always appear somewhat soft, even at 100% hardness.

Property	Description
Spacing	Defines the amount of space between each stamp of the eraser. A value of 100% sets the stamp marks edge to edge, if there is no white space around the shape. The larger the value, the greater the space between marks. A really large value can make the eraser stroke appear as a string of individual marks. Conversely, a small spacing value will give the appearance of a fluid brush stroke. Spacing is only evident when making a continuous stroke. 
Randomness	The Randomness parameters let you create a varied bitmap eraser stroke. Refining these options can give your stroke a lovely, non-mechanical look.
Random Size	You can create variation between the thick and thin of your eraser stroke just by setting the Maximum and Minimum Size values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.  **NOTE** Setting the Minimum Size to 100% eliminates the possibility of creating width variation on your stroke, whether you are applying randomness or not. Therefore, you would be forcing a uniform line width using the Maximum Size value.
Random Angle	Sets the range for random rotation around the set Angle value. For example, if the

Property	Description
	Angle is set to 45° and the Random Angle set to 10°, the software will choose values between 40°–50° (plus or minus 5 degrees, equaling a total of 10 degrees). 
Random Spacing	Sets the range for random spacing around the set Spacing value. For example, if the Spacing is set to 50% and the Random Spacing is set to 10%, then Harmony will choose values between 45%–55% (plus or minus 5 percent, equaling a total of 10 percent). 

Smoothing Tab

The Smoothing tab contains options to configure how Harmony should automatically smooth your eraser strokes as you paint.



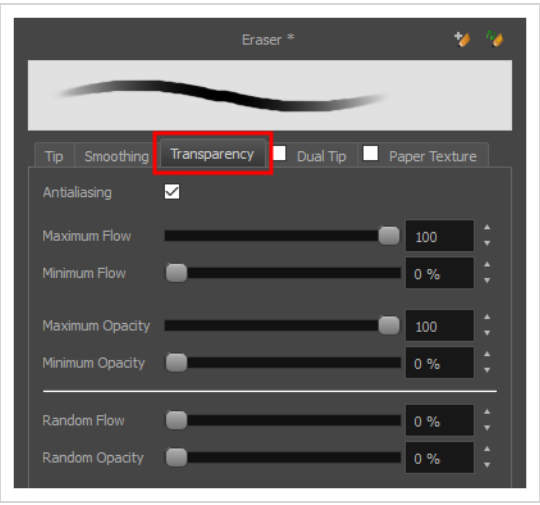
NOTE

The Smoothing tab is only available when working on a vector layer, as bitmap layers do not support smoothing.

Property	Description
Centerline Smoothing	Defines the amount of smoothing Harmony should perform on your eraser stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce drawing precision and turn sharp angles into curves.
Contour Smoothing	Defines the amount of smoothing Harmony should perform on outer contour of the eraser stroke. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

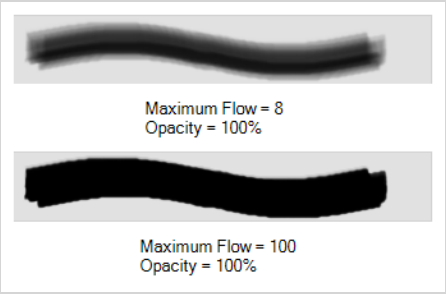
Transparency Tab

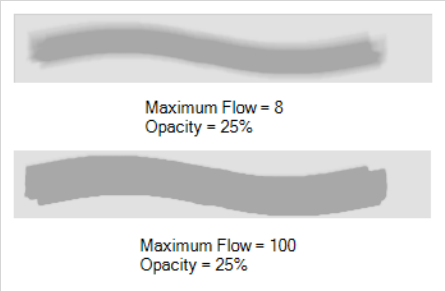
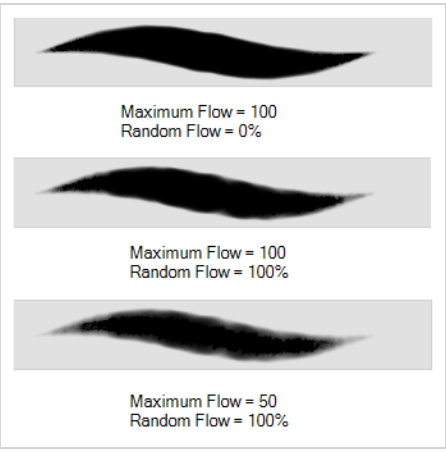
The Transparency tab allows you to decide if your eraser has antialiasing as well as to set its flow and opacity settings.

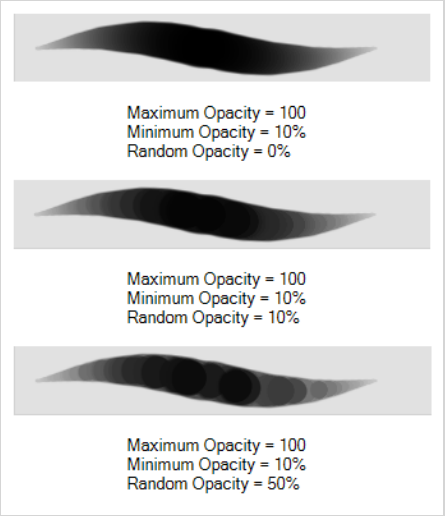


NOTE

The Transparency tab's options are only available on vector layers if the **Eraser Type** option of the Tip tab is set to **Textured Vector** or **Textured, Preserve Vector**.. On bitmap layers, those options are always available.

Property	Description
Antialiasing	Enabled by default. This option causes the contours of the eraser strokes to blend with the surrounding colours, to create an illusion of smoothness otherwise not possible due to the picture resolution. If antialiasing is disabled, the eraser will either fully erase pixels or leave them intact. **NOTE** When disabled, all other options in the Transparency tab are disabled.
Maximum and Minimum Flow	The Maximum and Minimum Flow parameters let you set the range for the rate at which your eraser's effect flows. The greater the flow, the more consistent the effect is. If the flow is light, then the effect may look spotty. This feature works with the pressure sensitivity of a pen tablet. • **Maximum Flow:** Sets the maximum rate at which colour and texture are applied as you create a fluid stroke. • **Minimum Flow:** Sets the minimum rate at which colour and texture are applied as you create a fluid stroke. It is defined as a percentage of the Maximum Flow value. If the Minimum Flow value is set to 100%, then tablet pressure sensitivity will no longer be applicable. The flow will be set to the constant rate of the Maximum Flow value. 
Maximum Opacity and Minimum Opacity	The Maximum and Minimum Opacity parameters are where you set the opacity range for a eraser mark. This works with the pressure sensitivity of a pen tablet. • **Maximum Opacity:** Sets the transparency limit of the eraser mark when the pressure is heavy.

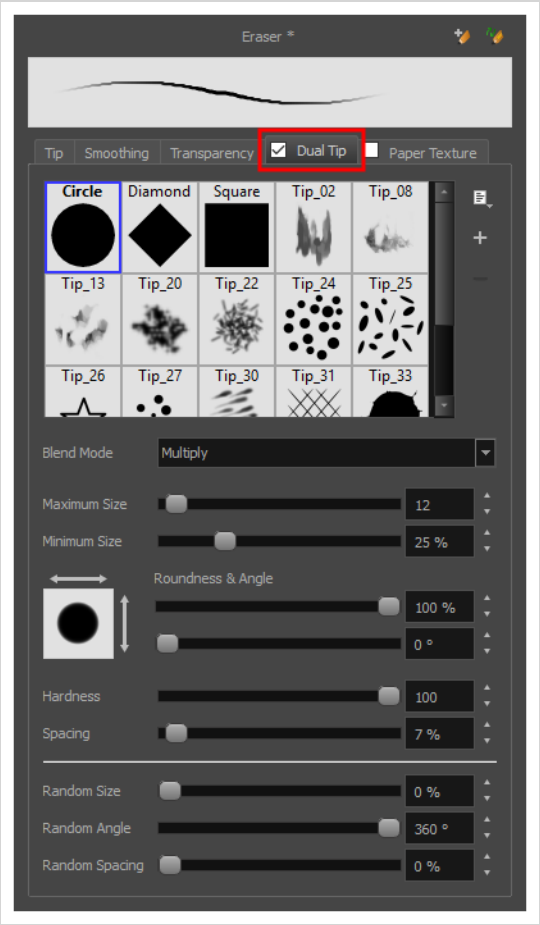
Property	Description
	• **Minimum Opacity:** Sets the transparency limit of the eraser mark when the pressure is very light. It is defined as a percentage of the Maximum Opacity value. If the Minimum Opacity value is set to 100%, then tablet pressure sensitivity will no longer be applicable. The opacity will be set to the constant rate of the Maximum Opacity value. 
Randomness	Th Randomness parameter lets you set the range for the randomness of the flow and opacity. This works with the pressure sensitivity of a pen tablet.
Randomness Flow	You can create variation in the flow of your eraser stroke just by setting the Maximum and Minimum Flow values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.  **NOTE** Setting the Minimum Flow value to 100% eliminates the possibility of creating flow variation on your stroke, whether you are applying randomness or not. That is, you would be forcing a uniform flow using the Maximum Flow value.

Property	Description
Random Opacity	You can create variation in the opacity of your eraser stroke just by setting the Maximum and Minimum Opacity values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.  **NOTE** Setting the Minimum Opacity value to 100% eliminates the possibility of creating opacity variation on your stroke, whether you are applying randomness or not. That is, you would be forcing a uniform opacity using the Maximum Opacity value.

Dual Tip Tab

The Dual Tip tab lets you set the parameters for creating a dual tip eraser. The primary bitmap eraser tip and the dual tip always work together. You can set the parameters for the primary tip in the Tip tab and those for the dual tip in the Dual Tip tab. The Blend mode you select determines how the tips are combined.

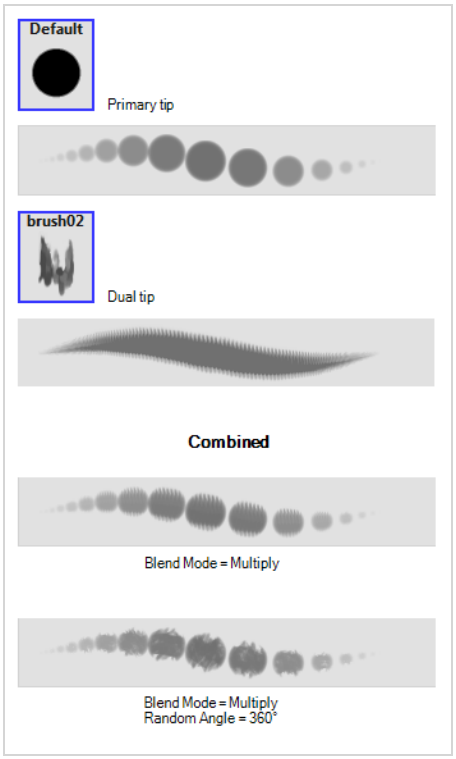
By default, the Blend Mode is set to Multiply and the Random Angle to 360°.

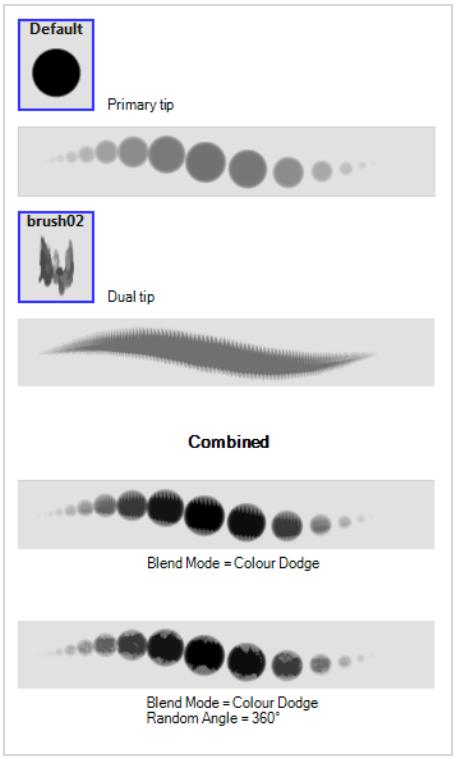


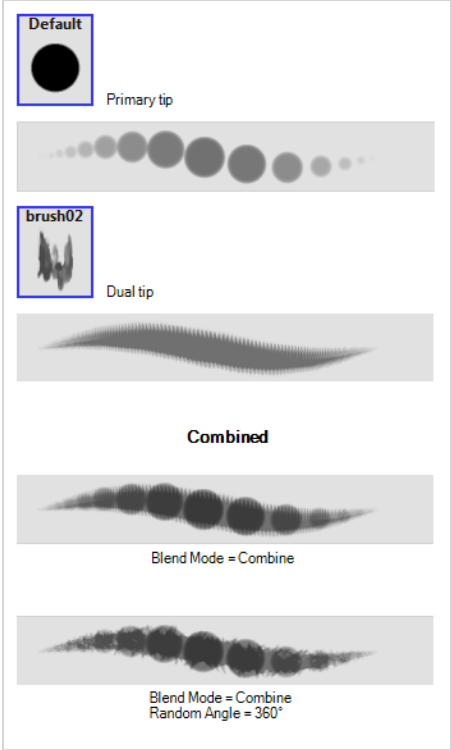
NOTE

To use a Dual Tip, you must enable option by checking the checkbox inside the **Dual Tip** tab. Additionally, if you are working on a vector layer, the **Eraser Type** option of the Tip tab must be set to **Textured Vector** or **Textured, Preserve Vector**.

Tool Name	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your eraser uses a dual tip. If this checkbox is unchecked, the options in the Dual Tip tab will be disabled.
Blend Mode	The Blend modes let you decide how the primary tip and the dual tip are combined.
Multiply	This is the default blend mode. When the two eraser tips are combined in this mode, they essentially cut each other out in overlapping areas, where one or both tips have an area of 100% transparency. The less opaque the eraser tips are, the lighter their combination.

Tool Name	Description
	
Colour Dodge	In this mode, the primary tip cuts out the shape of the dual tip. Where the tip shapes overlap, within the boundaries of the primary shape, the colour and opacity appear darker.

Tool Name	Description
	
Combine	This mode treats the two tips as two different and separate erasers that have the same colour and follow the same path.

Tool Name	Description
	

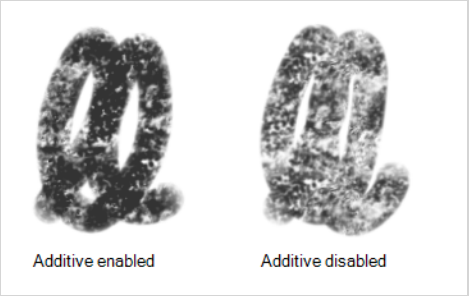
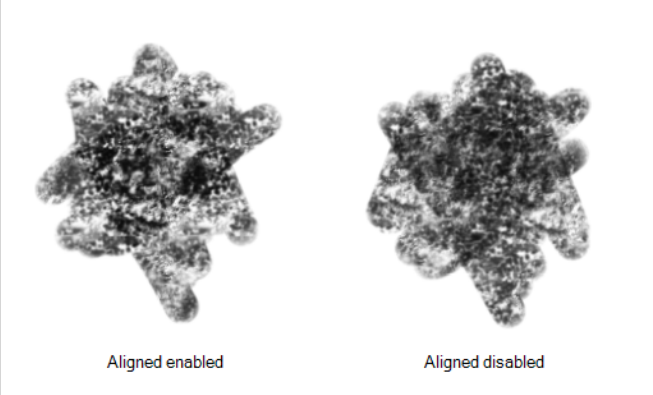
Paper Texture Tab

The Paper Texture tab lets you configure a paper-like texture for your eraser. You can also add textures by importing image files, or import paper textures that were previously exported from Harmony.

NOTE

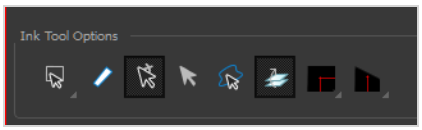
To use a Paper Texture, you must enable option by checking the checkbox inside the **Paper Texture** tab. Additionally, if you are working on a vector layer, the **Eraser Type** option of the Tip tab must be set to **Textured Vector** or **Textured, Preserve Vector**.

Property	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your eraser uses a paper texture. If this checkbox is unchecked, the options in the Paper Texture tab will be disabled.
Texture Scale	Increase or decreases the size of the paper texture.
Additive	This option layers the texture on top of itself as you scribble overlapping lines in one continuous stroke. If this option is turned off, areas of overlapping lines from a single, continuous stroke will appear the same, in terms of darkness and texture, as non-overlapping areas.

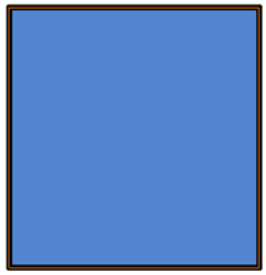
Property	Description
	
Aligned	This option defines the way separate, overlapping strokes behave. If this option is enabled, the paper texture's position does not change with each sweep of the eraser. If this option is disabled, each sweep of the eraser produces a different texture position. The texture orientation always stays the same. 

Ink Tool Properties

When you select the Ink tool, its properties and options appear in the Tool Properties view.



Icon	Tool Name	Tool
	Lasso	Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them. **TIP** When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.
	Marquee	Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them. **TIP** When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.
	Show Inkable Lines	Highlights all pencil lines (no brush strokes) on the selected layer. Pencil line segments that are already inked with the selected swatch colour from the colour palette are also not highlighted.
	Be Smart on Connecting Lines	As you hover and move the cursor across intersecting pencil lines, the path that you create will be highlighted. When you click on your mouse or stylus the highlighted segments are inked. With this option disabled, all the intersecting segments that your cursor comes near will be highlighted and become part of the selection, even if they were not situated in the direction of the chosen path.

		NOTE This option only works if the Ink tool is in Hover mode.
	Select Mode	Use this mode instead of the Hover Mode. In the Hover Mode, any potentially inkable pencil line will have its central vector line highlighted as the Ink tool's cursor hovers over it. Use Ctrl (Windows/Linux) or ⌘ (macOS) to toggle between the two modes.
	Select Newly Painted, Repainted, and Unpainted Contours/Lines	In the Paint tool properties, this option keeps a selection highlighted around the latest painted zone after using the Paint, Repaint, Unpaint, or Paint Unpainted tool. 
	Raise	As you ink the pencil line, the segment will be moved on top of the other intersecting strokes. Disable this option for the line to be sent behind. Hold down the Alt key to perform the opposite operation as you ink.
	Mitre	As you hover over two perpendicular or nearly perpendicular segments, a highlighted path with a corner is created. Clicking on these highlighted segments inks both segments and makes them appear as a single stroke with a corner or bend. Options include: As Is, Round, Miter, and Bevel.
	Tip Style	Lets you customize the edge of the Ink tool. Options include: Round, Flat, and Bevel.

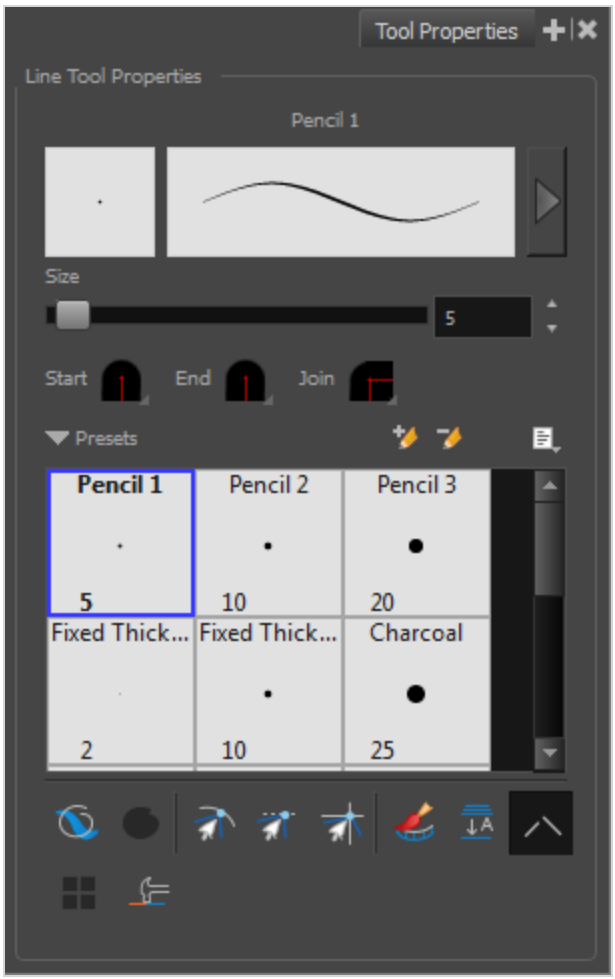
Line Tool Properties

The Line tool allows you to quickly draw a line segment by dragging the mouse from its starting point to its end point.

How to access the Line tool properties

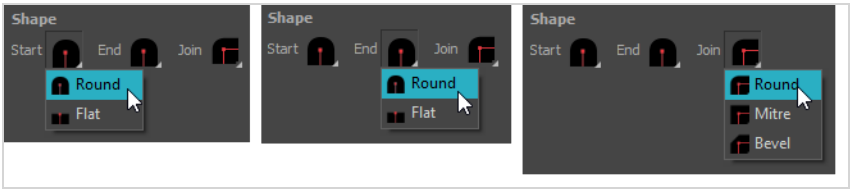
1. In the Tools toolbar, select the Line tool.

   The tool's properties are displayed in the Tool Properties view.



Pencil Properties

Just like other shape tools, this tool creates pencil lines. Hence, its tool properties are similar to the ones of the Pencil tool and it can be used with pencil presets.

Tool Name	Description
Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.
Pencil Properties Dialog	The arrow button right of the preview area opens the Pencil Properties dialog. While the Tool Properties view only gives you access to a few of the pencil properties, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the Pencil Properties Dialog section below.
Size	Defines the width of the pencil line used to draw the line.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Pencil Presets

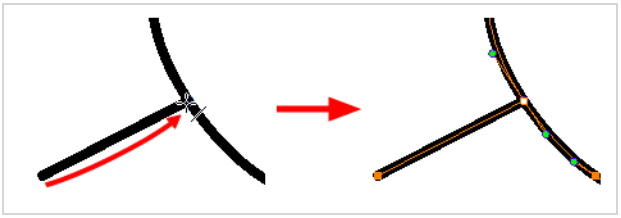
These options allow you to select, create and manage pencil presets.

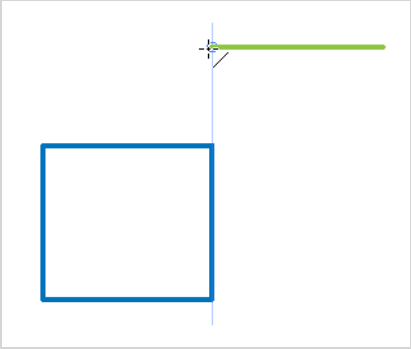
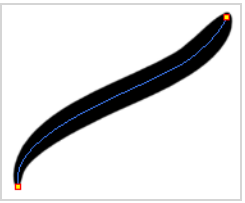
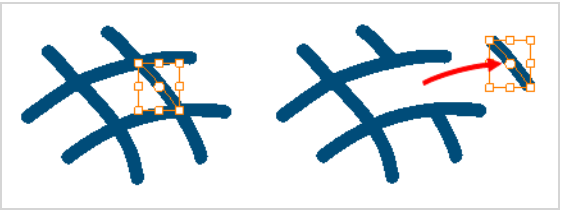
Icon	Property	Description
	Presets list	Harmony provides a variety of pencil presets and thickness stencils and

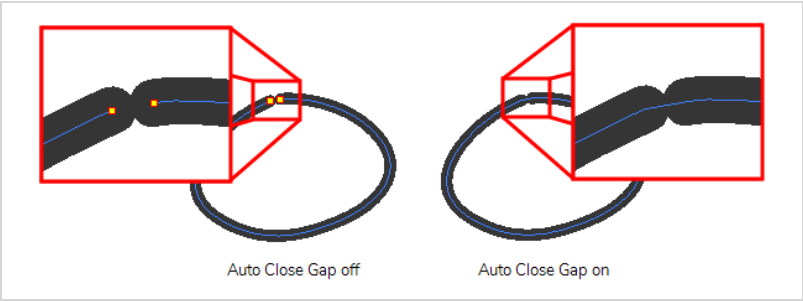
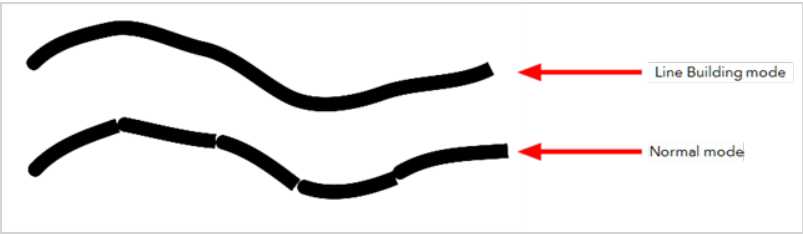
Icon	Property	Description
		also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw for efficiency and consistency. A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards. You also have the possibility to apply different textures to your lines by either using the default presets or to import your own. You can export the pencil presets that you have created and import those that others have created. This is a good way for you and project collaborators to keep a consistent look for the project.
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush Preset	Deletes the currently selected preset.
	Brush Presets Menu	Open a menu that contains the following options: • **New Brush Preset:** Creates a new preset based on the current tool properties. • **Delete Brush:** Deletes the currently selected preset. • **Rename Brush:** Allows you to rename the currently selected preset. • **Import Brushes:** Allows you to import brush presets exported from Harmony. • **Export Brushes:** Allows you to export your brush presets into an `.xml` file. • **Small Thumbnail:** Displays presets in a grid of small thumbnails with a preview of their tip. • **Large Thumbnail:** Displays presets in a grid of big thumbnails, with their name and a preview of their tip. • **Stroke View:** Displays presets in a list, with their name and a preview of a stroke done with each preset.

Drawing Options

These options affect the way your drawing strokes are added to your artwork.

Icon	Tool Name	Description
	Draw Behind	When enabled, your brush strokes will appear behind the existing artwork. **NOTE** Your brush stroke will temporarily appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.
	Snap to Contour	When enabled, while you're drawing, the mouse cursor will automatically snap to the nearby contours of existing artwork, allowing you to draw shapes that connect with other parts of your drawing.  **NOTE** If you draw a line with the Line tool and make its tip snap to a contour or another control point in your artwork, they will be locked together. You can then manipulate both simultaneously using the Contour Editor tool. You can also separate two drawing strokes that have been snapped together by selecting one of them with the Select tool and moving it away.
	Snap and Align	When enabled, while you're drawing, the mouse cursor will automatically align with the edges of strokes and shapes in your artwork, allowing you to draw shapes that align with parts of your drawing.

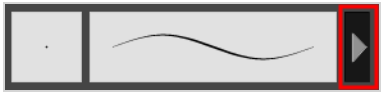
Icon	Tool Name	Description
		
	Snap to Grid	When enabled, while you're drawing, the mouse cursor will snap against the intersecting points of the grid. **TIP** To display the grid, select **View > Grid > Show Grid** from the top menu or press Ctrl + '.
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer. 
	Auto-Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork. 

Icon	Tool Name	Description
		NOTE Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode are essentially cut into segments by the overlap and can be treated as individual lines.
	Auto-Close Gap	When enabled, small gaps between the pencil lines you draw will be closed by an invisible stroke to make sure your shapes are closed and that they can be filled with the Paint tool. When drawing contours with pencil lines, the centreline is used to determine whether or not the contour is closed, but the visible tips of the pencil line will extend a bit beyond the tips of its centreline, making it possible to have shapes that appear closed, but are not really. This can prevent the shape from being filled with the Paint tool. Enabling this option when drawing with the Pencil or Line tool will prevent you from leaving invisible gaps in your contours. 
	Line Building Mode	The Line Building mode is very useful when drawing long lines and curves in small increments with pencil lines or the Line tool. As the pencil lines are central vector lines, it may be difficult to align the line tips perfectly to create a uniform stroke and close all gaps. In this mode, you can draw lines in small increments and the tips are merge into one single stroke. 

Icon	Tool Name	Description
		NOTE This mode only works with pencil lines or the line tool.
	Use Stored Colour Gradient	The Use Stored Colour Gradient option can be used when painting with a gradient colour to always position the gradient in the same way it was stored, making it consistent across brush strokes. You can store a gradient by selecting a zone painted with a gradient with the Select tool, then clicking on Store Colour Gradient in the Tool Properties view.

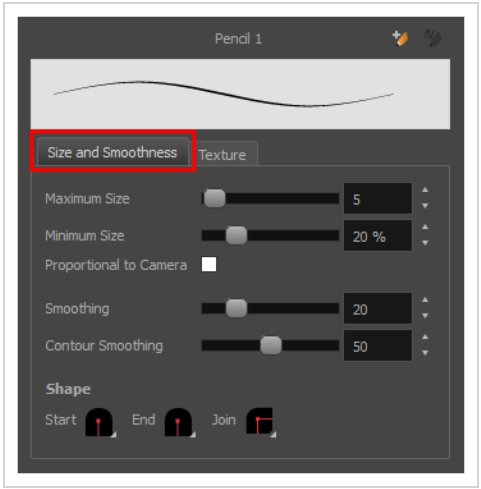
Pencil Properties Dialog

Since the Line tool draws pencil lines, you can use the Pencil Properties dialog to customize the type of lines it draws. To open the Pencil Properties dialog, click on the arrow button right of the stroke display area.

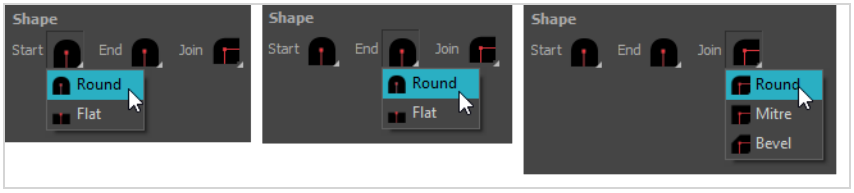


Size and Smoothness Tab

The Size and Smoothness tab allows you to select your pencil's size, its smoothing parameters as well as the shape of its tips and corners.



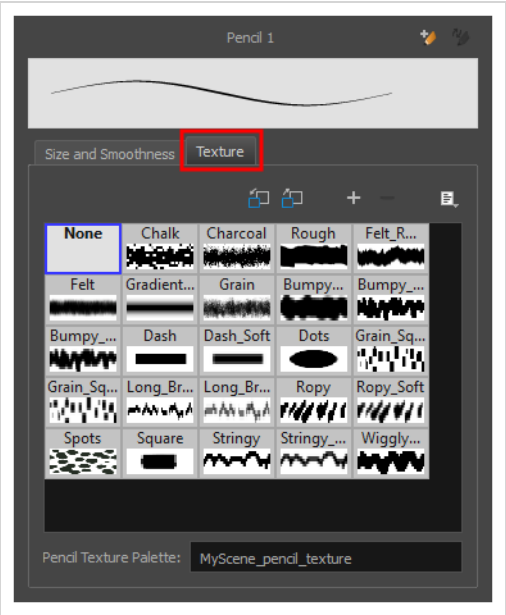
Property	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure

Property	Description
	sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Minimum Size	Defines the minimum size of your stroke as a percentage of the maximum size. If you do not have pressure sensitivity from a pen table, the minimum size value will be ignored.
Proportional to Camera	If you check this option, the size of the pencil will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the pencil will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the pencil will be proportionally bigger.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Contour Smoothing	Defines the number of points on the contour share of your stroke. This will smooth out the bumps and waves on tour contour shape of your brush strokes.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Texture Tab

In the Pencil Properties view, the Texture tab allows you to select a pencil texture from the currently selected pencil texture palette to use with the Pencil tool. You can also add, remove or rename textures, save the current pencil texture palette as the default one, or import the pencil texture palette into your scene.

The pencil texture palette used in the Texture tab of the Pencil Properties dialog is the one selected in the Colour view. You can select a pencil texture palette by selecting it from the pencil texture palette list in the Colour view—see Colour View on page 199.



Icon	Property	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Allows you to import an image file into a new pencil texture swatch in the current pencil texture palette. The pencil texture's effect on your pencil line will be based on the image's transparency channel, and will follow your pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.

Icon	Property	Description
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selectedpencil texture palette, for reference. To select a different pencil texture palette, you must select it in the Colour view—see Colour View on page 199.

Paint Tool Properties

The Paint tool allows you to fill closed areas of your drawing with the selected colour.

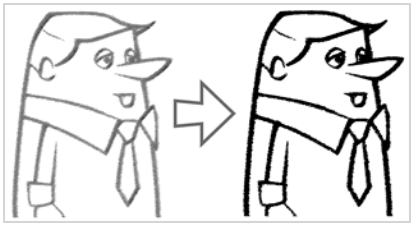
How to access the Paint tool properties

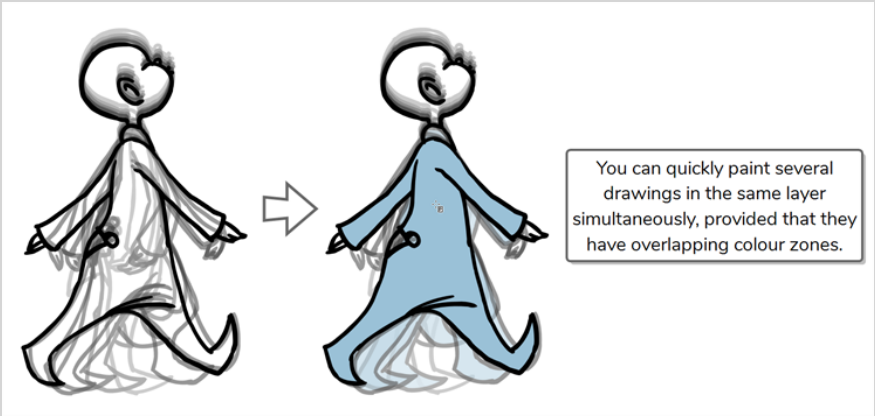
1. In the Tools toolbar, select the Paint , Paint Unpainted , Repaint or Unpaint tool.

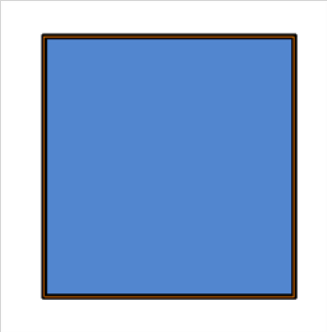
   The tool's properties are displayed in the Tool Properties view.

Paint Tool Options

Icon	Property	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.

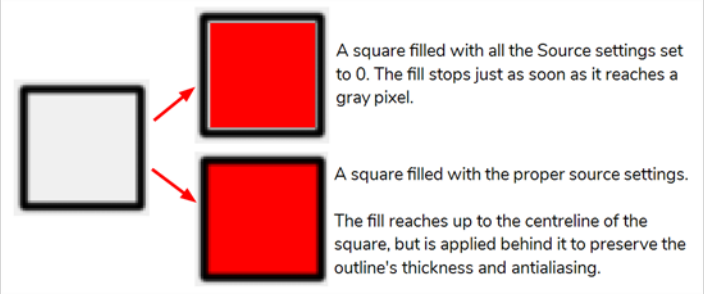
Icon	Property	Description
	Paint Mode	The Paint tool has four different modes: • **Paint:** Paints or repaints selected zones, whether or not they are already filled. • **Paint Unpainted:** Only paints empty zones, and does not repaint zones that are already filled with colour. • **Repaint:** Only paints zones that are already filled with colour, and does not fill empty zones. • **Unpaint:** Removes colour from the selected zone, replacing it with transparency.
	Paint and Remove Textures	The Paint and Remove Texture option is used when you vectorized images as greyscale texture style. An image vectorized as texture is a mix of bitmap filling encapsulated in a vector-based frame. Painting a textured zones with the Paint tool will change the tint of the textured lines. Painting the textured zones using the Paint and Remove Texture option transforms the bitmap filling into a 100% vector based zone and fills it with a solid colour. 
	Apply to Visible Drawing Layers	This option allows you to select which layers the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the currently selected layers. If several layers are selected, the tool will work on all these layers simultaneously. • **Apply to Visible Drawing Layers:** The tool will work on all the visible layers in the Camera view. • **Apply to Synced Drawing Layers**: If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer. **NOTE** This option only works in the Camera view.

Icon	Property	Description
	Apply to All Frames	This option allows you to determine which drawings in the current layer the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the drawing in the current frame. • **Apply to All Frames:** The tool will work on every exposed drawing in the selected layer simultaneously. • **Apply to Onion Skin Range:** The tool will work on every drawing displayed in the Onion Skin. Onion Skin must be enabled for this option to work. 
	Respect Protected Colour	The Respect Protected Colour option is enabled by default. In your Colour view, you can protect some colour swatches to avoid repainting or unpainting the zones linked to that swatch. If you disable this option the Paint tool will not follow the protect colour rule and will repaint or unpaint the protected colours on your drawings until you enable the option again.
	Use Stored Colour Gradient	When you paint a zone with a gradient or textured colour swatch, the gradient or texture's position is set relative to the size of the zone you are painting. If you want the Paint tool to use a particular size and position, you must first store your desired position and size using the Select tool and then enable the Use Stored Colour Gradient option in the Paint tool properties.

Icon	Property	Description
	Select Newly Painted, Repainted, and Unpainted Contours/Lines	In the Paint tool properties, this option keeps a selection highlighted around the latest painted zone after using the Paint, Repaint, Unpaint, or Paint Unpainted tool. 
	Close Gap	By default, if you attempt to fill a shape that has a small gap in its contour, the Paint tool will not be able to fill the shape. This option allows you to make the Paint tool automatically add a stroke to close the shape when it detects a small gap between two strokes in the shape. The Close Gap setting can be set to a value between 0 and 10. This determines the maximum size of a gap to close, in pixels. You can also use one of the following presets: • **No Close Gap:** Sets the Close Gap setting to 0, disabling the feature. • **Close Small Gap:** Sets the Close Gap setting to 2, making the Paint tool close gaps that are barely visible. • **Close Medium Gap:** Sets the Close Gap setting to 4, making the Paint tool close gaps that are somewhat visible. • **Close Large Gap:** Sets the Close Gap setting to 8, making the Paint tool close gaps that are easy to notice.

Bitmap Options

Since bitmap drawings are made of pixels instead of shapes, and that the outlines of shapes in bitmap drawings are often feathered, it can be complicated to figure out exactly the area the Paint tool must fill when trying to fill a zone in a bitmap drawing. For example, if the Paint tool only replaces pixels with the exact same colour as the one you click on with the selected colour, it will leave a small gap near the outlines of the shape.



The following settings determine how the Paint tool figures out the area it must fill. When any of these settings are increased, the Paint tool's tolerance for colour or alpha differences increases and it will a bigger area that it otherwise would.

Icon	Property	Description
	Source	Allows you to select which art layer to use in order to determine the fillable zone. By default, this is set to Current Art, which means the layer you are filling will be used to determine the fillable zone. However, if you want to keep your colour art on the Colour Art layer and the line art on the Line Art layer, you can set the Source to Line Art, and then use the Paint tool on the Colour Art layer. The Paint tool will use the artwork in the Line Art layer to determine the area to fill with colour, but will still add this colour to the Colour Art layer. This property has the following options: • **Current Art:** Bases the zone to fill on the current art layer. • **Line Art:** Bases the zone to fill on the Line Art layer, regardless of which layer you are painting on. • **Colour Art:** Bases the zone to fill on the Colour Art layer, regardless of which layer you are painting on.
--	Alpha	The alpha threshold that separates opaque and transparent zones. When filling a "transparent" zone, the paint tool will apply the colour under semi-transparent pixels, making them opaque. Then filling an "opaque" zone, the paint tool will replace the colour of semi-transparent pixels without affecting their transparency. If you want to repaint lineart or shapes that have no outlines, you can do

Icon	Property	Description
		so by decreasing this setting completely. This will make it fill any pixel that isn't 100% transparent, so it will paint your outlines completely. However, if you're using this method to repaint outlines, they must not be filled yet for this method to work. If you want to paint transparent zones that have dirt or semi-transparent spots, you can increase this setting to make the Paint tool paint behind them instead of around them. **NOTE** Raising this setting too high may cause the paint tool to ignore outlines that are not 100% opaque, which can cause it to think the shape is not closed. Hence, it might fail to find a zone to fill and not do anything.
--	Colour Tolerance	The amount of tolerance the paint tool has for changes in colour when filling an area. Raising this setting will allow the paint tool to fill over areas that have some variations in colour, but may cause it to fill beyond the areas you meant to paint.
--	Maximum Overlap	The maximum amount of pixels beyond the fillable zone that the Paint tool can fill. When this setting is set to any value above zero, the paint tool will fill the zone until it finds a pixel that is a different colour, value or transparency as the one you clicked on. Then, it will start filling pixels beyond that point, up until it filled the amount of pixels in the Maximum Overlap setting. If it lands outside of a fillable zone before it reached the maximum overlap, it will stop filling at that point. However, if it lands into another fillable zone before reaching its maximum overlap, it will fill that zone as well. Therefore, if you're filling shapes inside other shapes, you have to set this setting to the approximate width of your outlines. Setting it higher will make the colour spill beyond the zone you clicked on and fill the zone outside of it, and setting it lower is liable to leave a small gap between the fill and the outlines.

Icon	Property	Description
		NOTE When you fill a zone with overlap, Harmony tries to detect and preserve the outlines of your shape. This is easy to do when filling a transparent shape, or when repainting a shape made of solid outlines and a solid fill. However, if you are trying to repaint an already painted zone, it may fail to detect your outlines and may repaint over them if the colour of your outlines or inside the shape isn't consistent. Therefore, it is highly recommended to avoid repainting painted zones as much as possible when working with bitmap layers.
	Antialiasing	When enabled, the outlines of the fill will be smoothed so that they do not look pixelated. **NOTE** The effect of this setting will not be visible if you fill all the way to the outlines, as the Paint tool will preserve the antialiasing of existing outlines when filling up to them.

Pencil Tool Properties

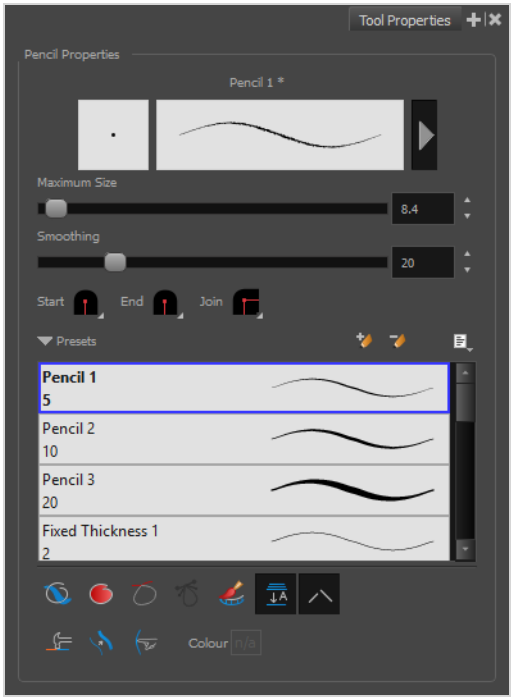
The Pencil tool allows you to draw simple contour lines that are defined by their centerline and their thickness.

When you select the Pencil tool, the Tool Properties view displays the different Pencil modes that control how the pencil line is drawn.

How to access the Pencil tool properties

1. In the Tools toolbar, select the Pencil tool.

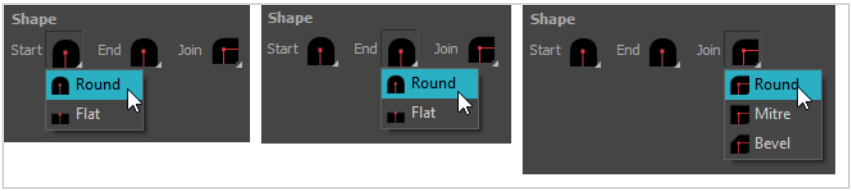
   The tool's properties are displayed in the Tool Properties view.



Pencil Properties

The following properties affect the pencil's size, smoothing, shape and other properties for the drawing style of your pencil. Those properties can be saved into pencil presets for later use.

Property	Description
Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.

Property	Description
Pencil Properties Dialog	The arrow button right of the preview area opens the Pencil Properties dialog. While the Tool Properties view only gives you access to a few of the pencil properties, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the Pencil Properties Dialog section below.
Maximum Size	Defines the maximum width of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

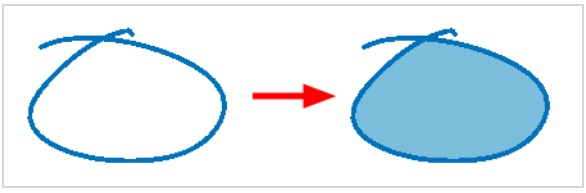
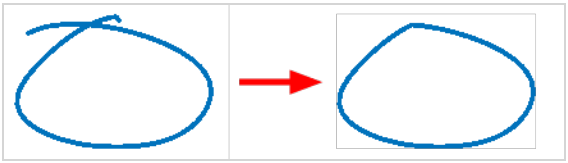
Pencil Presets

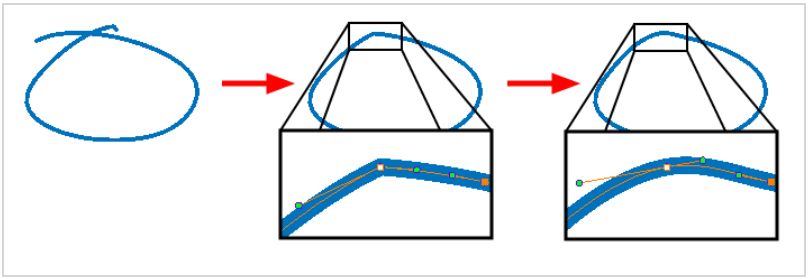
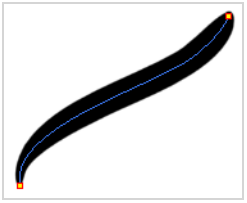
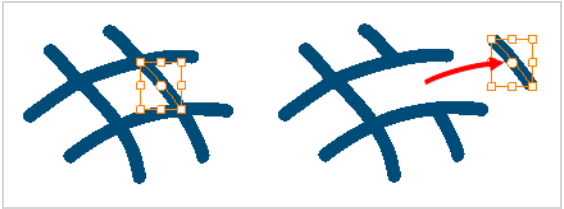
These options allow you to select, create and manage pencil presets.

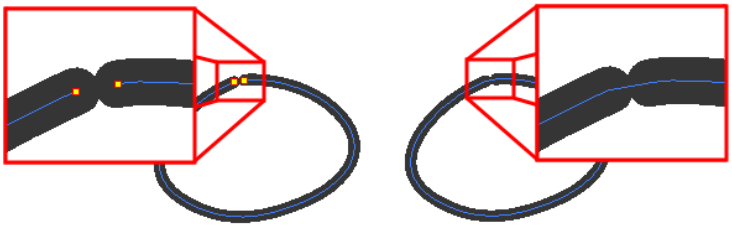
Icon	Property	Description
	Presets list	Harmony provides a variety of pencil presets and thickness stencils and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw for efficiency and consistency. A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards. You also have the possibility to apply different textures to your lines by either using the default presets or to import your own. You can export the pencil presets that you have created and import those that others have created. This is a good way for you and project collaborators to keep a consistent look for the project.
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush Preset	Deletes the currently selected preset.
	Brush Presets Menu	Open a menu that contains the following options: • **New Brush Preset:** Creates a new preset based on the current tool properties. • **Delete Brush:** Deletes the currently selected preset. • **Rename Brush:** Allows you to rename the currently selected preset. • **Import Brushes:** Allows you to import brush presets exported from Harmony. • **Export Brushes:** Allows you to export your brush presets into an `.xml` file. • **Small Thumbnail:** Displays presets in a grid of small thumbnails with a preview of their tip. • **Large Thumbnail:** Displays presets in a grid of big thumbnails, with their name and a preview of their tip. • **Stroke View:** Displays presets in a list, with their name and a preview of a stroke done with each preset.

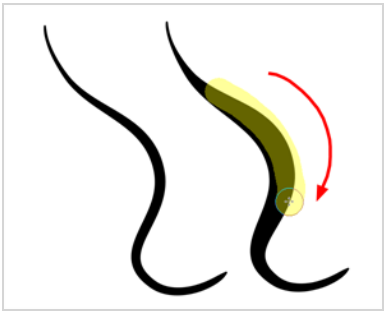
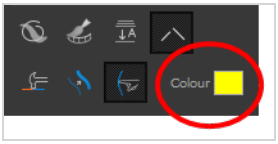
Drawing Options

These options affect the way your drawing strokes are added to your artwork.

Icon	Property	Description
	Draw Behind	When enabled, your brush strokes will appear behind the existing artwork. **NOTE** Your brush stroke will temporarily appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.
	Auto Fill	When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour.  **TIP** By default the pencil line and its fill will be the same colour. If you want to select different colours for the pencil line and its fill, you can click on the Unlock Three Colours button in the Colour view, then select different colours for Brush strokes, Pencil lines and Paint fills.
	Trim Extra Lines	When enabled, drawing a closed shape will automatically remove the outstanding lines. 

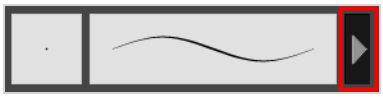
Icon	Property	Description
	Align Handles After Trim	When the Trim Extra Lines option is enabled, enable this option to make the point where the beginning and end of the stroke meet into a smooth curve rather than a hard corner. 
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer. 
	Auto Flatten	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.  **NOTE** Using the Select tool, you can select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode are essentially cut into segments by the overlap and can be treated as individual lines.
	Auto-Close Gap	When enabled, small gaps between the pencil lines you draw will be closed by an invisible stroke to make sure your shapes are closed and that they can be filled with the Paint tool.

Icon	Property	Description
		When drawing contours with pencil lines, the centreline is used to determine whether or not the contour is closed, but the visible tips of the pencil line will extend a bit beyond the tips of its centreline, making it possible to have shapes that appear closed, but are not really. This can prevent the shape from being filled with the Paint tool. Enabling this option when drawing with the Pencil or Line tool will prevent you from leaving invisible gaps in your contours. 
	Line Building Mode	The Line Building mode is very useful when drawing long lines and curves in small increments with pencil lines or the Line tool. As the pencil lines are central vector lines, it may be difficult to align the line tips perfectly to create a uniform stroke and close all gaps. In this mode, you can draw lines in small increments and the tips are merge into one single stroke. **NOTE** This mode only works with pencil lines or the line tool.
	Auto Adjust Thickness	The Auto Adjust Thickness tool is useful when you want to render a portion of a line thicker. When tracing a drawing on paper, you will often go back to a section of a curve to make it thicker to add dynamism to the line. Using the Auto Adjust Thickness tool, you can draw highlight strokes over the section to make thicker. Once you release the pen or mouse, the line becomes thicker following the shape and curve of the original stroke. This way is much faster and smoother than using the Pencil Editor tool.

Icon	Property	Description
		You do not have to add extra points and adjust the position and Bezier handles.  The default overlay colour is light yellow. If this colour is difficult to see because of the background or drawing colour, you can adjust the colour.
	Line Pushing Mode	The Line Pushing Mode option lets you draw highlight strokes over existing pencil lines. You can reshape the curves. Depending how you draw the pushing stroke over your line, the highlighted section will be reshaped in one direction or the other. The default overlay colour is light yellow. If this colour is difficult to see because of the background or drawing colour, you can adjust the colour.
	Colour	You can change the colour of the temporary strokes that appear in the drawing space when using the Line Pushing Mode or the Auto Adjust Thickness option by clicking on the Colour swatch and selecting a new colour in the Colour Picker dialog. 

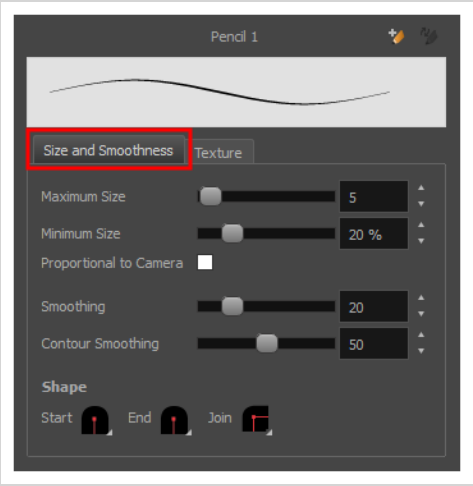
Pencil Properties Dialog

Pencils have extra parameters which are not accessible from the Tool Properties view. To open the Pencil Properties dialog, click on the arrow button right of the stroke display area.

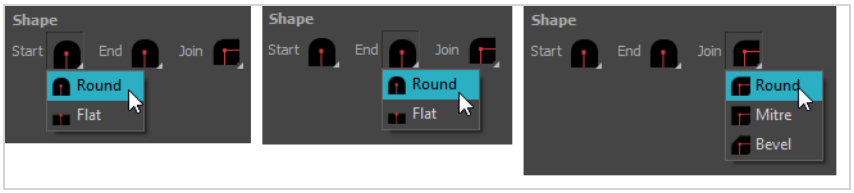


Size and Smoothness Tab

The Size and Smoothness tab allows you to select your pencil's size, its smoothing parameters as well as the shape of its tips and corners.



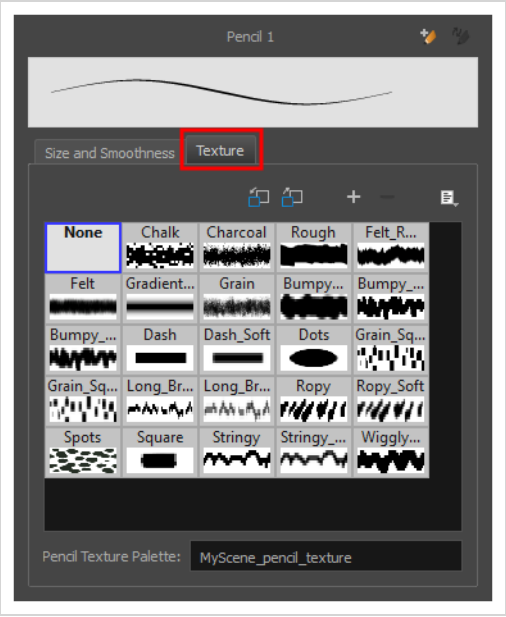
Property	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Minimum Size	Defines the minimum size of your stroke as a percentage of the maximum size. If you do not have pressure sensitivity from a pen table, the minimum size value will be ignored.
Proportional to Camera	If you check this option, the size of the pencil will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the pencil will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the pencil will be proportionally bigger.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Contour Smoothing	Defines the number of points on the contour share of your stroke. This will smooth out the bumps and waves on tour contour shape of your brush strokes.
Shape	You can adjust the start, end, and join style of a pencil line.

Property	Description
	 • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Texture Tab

In the Pencil Properties view, the Texture tab allows you to select a pencil texture from the currently selected pencil texture palette to use with the Pencil tool. You can also add, remove or rename textures, save the current pencil texture palette as the default one, or import the pencil texture palette into your scene.

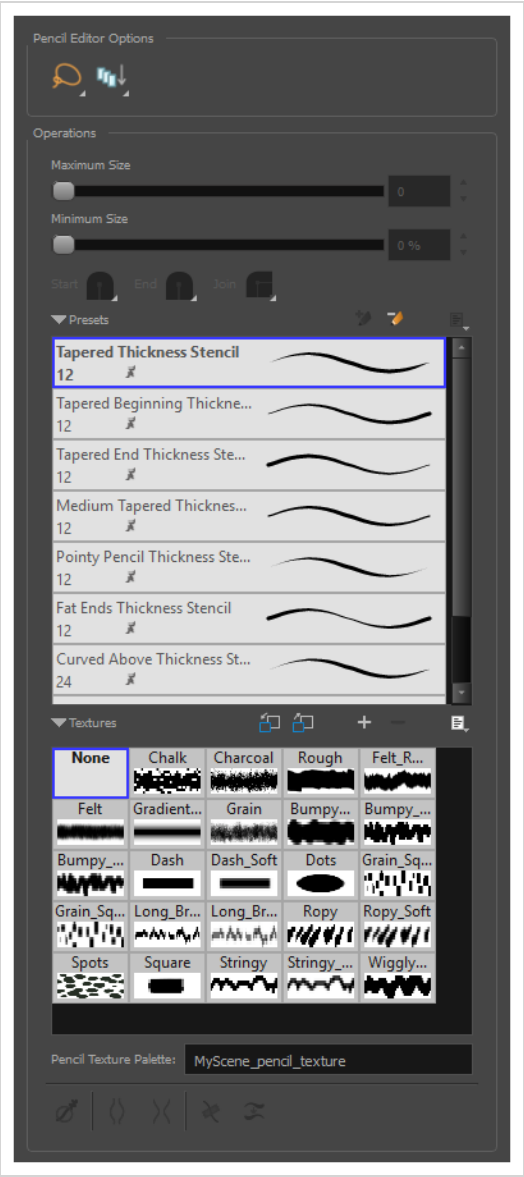
The pencil texture palette used in the Texture tab of the Pencil Properties dialog is the one selected in the Colour view. You can select a pencil texture palette by selecting it from the pencil texture palette list in the Colour view—see Colour View on page 199.



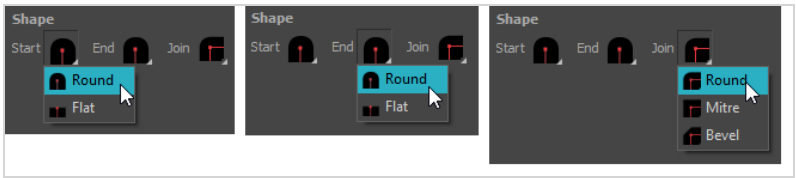
Icon	Property	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Allows you to import an image file into a new pencil texture swatch in the current pencil texture palette. The pencil texture's effect on your pencil line will be based on the image's transparency channel, and will follow your pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selectedpencil texture palette, for reference. To select a different pencil texture palette, you must select it in the Colour view—see Colour View on page 199.

Pencil Editor Tool Properties

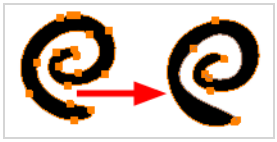
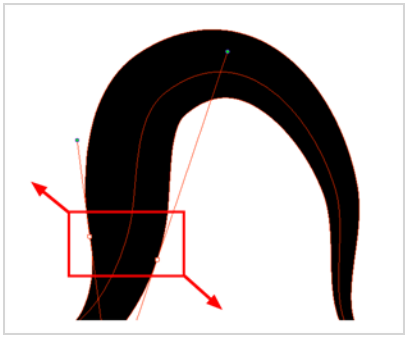
When you select the Pencil Editor tool, its properties and options appear in the Tool Properties view.

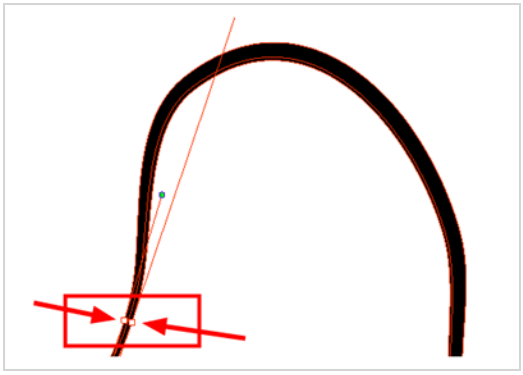
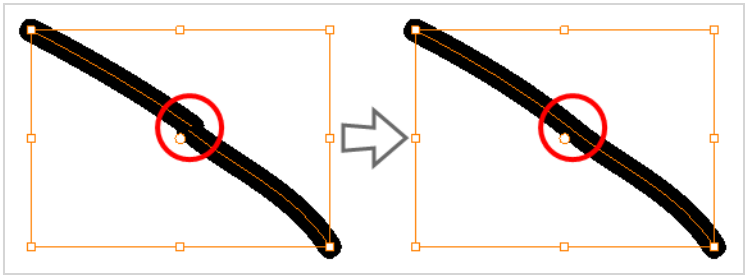
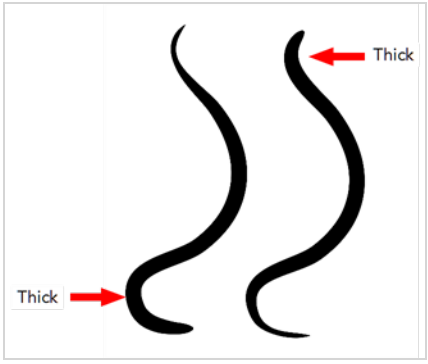


Icon	Tool Name	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want.

		TIP You can press and hold the Alt key to temporarily use the other selection mode.
	Apply to Visible Drawing Layers	This option allows you to select which layers the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the currently selected layers. If several layers are selected, the tool will work on all these layers simultaneously. • **Apply to Visible Drawing Layers:** The tool will work on all the visible layers in the Camera view. • **Apply to Synced Drawing Layers**: If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer. **NOTE** This option only works in the Camera view.
	Maximum Size	Defines the maximum width of the pencil line. If the pencil line has a constant size, this will define the width of the pencil line all over. If the pencil line has a varying size, this will define the width of its larger areas. Areas that are in-between the maximum and minimum size will be resized proportionally.
	Minimum Size	Defines the minimum width of the pencil line. If the pencil line has a varying size, this will define the width of its smaller areas. Areas that are in-betwen the maximum and minimum size will be resized proportionally.
	Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.

		• **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.
	Presets	Harmony provides a variety of pencil presets and thickness stencils and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw for efficiency and consistency. A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards. You also have the possibility to apply different textures to your lines by either using the default presets or to import your own. You can export the pencil presets that you have created and import those that others have created. This is a good way for you and project collaborators to keep a consistent look for the project.
	New Brush	Allows to create a new preset from the selected pencil line.
	Delete Brush	Deletes the currently selected preset.
	Rename Brush	Allows you to rename the currently selected preset.
	Small Thumbnail, Large Thumbnail, and Stroke View	Allows you to display the presets as small square thumbnails, large square thumbnails or a list of stroke preview.
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Adds a new custom pencil texture to the list.
	Delete Texture	Deletes a texture preset from the list.

	Rename Texture	Renames the selected texture to keep the list organized.
	Presets	Harmony provides a variety of pencil texture presets and also lets you create and save your own.
	Pencil Texture Palette	Displays the colour palette assigned to hold the pencil textures. Use the Colour View menu to assign a new palette.
	Smooth Selection	The Smooth operation lets you smooth out selected drawing strokes and remove extra points.  **TIP** You can also smooth the selection by selecting **Selected** > **Smooth** from the top menu or by pressing Alt + Shift + S.
	Pump Pencil Pressure	The Pump Pencil Pressure option is used to increase the line thickness of a selected area on a pencil line. 
	Deflate Pencil Pressure	The Deflate Pencil Pressure option is used to decrease the line thickness of a selected area on a pencil line.

		
	Merge Pencil Lines	Because pencil lines are defined by their centre lines, two pencil lines that brush against each other may not actually make a closed shape, even if they appear closed. If you select several pencil lines that are close together, you can use this button to close the small gaps between these pencil lines and make them into a single pencil line. 
	Reverse Pencil Thickness	The Reverse Pencil Thickness option inverts the thick and thin section on a selected pencil line. This option will take the thickest size on the line and apply it to the thinnest, and it will apply the thinnest to the thickest. 

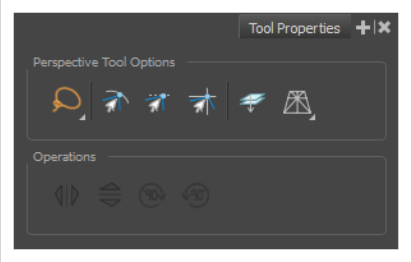
Perspective Tool Properties

The perspective tool allows you to deform artwork by creating a rectangular bounding box around it and allowing you to manipulate any of the four corners. The selected artwork will be deformed to fit the shape you make by simulating a perspective effect.

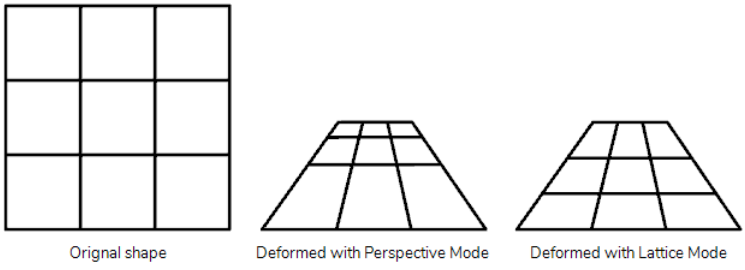
How to access the Perspective tool properties

1. In the Tools toolbar, select the Perspective tool.

   The tool's properties are displayed in the Tool Properties view.



Icon	Tool Name	Description
Perspective Tool Options		
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.
	Snap to Contour	When enabled, while moving a selection, the mouse cursor (along with the selection) will snap against the nearby points and contours of your artwork, allowing you to snap parts of your artwork together.

Icon	Tool Name	Description
	Snap and Align	When enabled, while moving a selection, the rectangular bounding box of the selection will snap to the rectangular bounding box of any other drawing stroke in the drawing, allowing you to align drawing strokes laterally.
	Snap to Grid	When enabled, while moving a selection, the mouse cursor will snap against the intersecting points of the grid. **TIP** To display the grid, select **View > Grid > Show Grid** from the top menu or press Ctrl + '.
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.
	Deformation Mode	Allows you to select between one of the two following deformation modes: • **Perspective:** Deforms the selection by simulating a perspective effect. • **Lattice:** Deforms the selection by simply making the artwork fit the bounding box, without applying a perspective effect. The difference between both modes becomes easier to understand if you apply a transformation to a drawing of a grid to make it look like it's laid down on a surface: 

Icon	Tool Name	Description
Operations		
	Flip Horizontal	Flips the selection horizontally.
	Flip Vertical	Flips the selection vertically.
	Rotate 90 CW	Rotates the selection 90° clockwise.
	Rotate 90 CCW	Rotates the selection 90° counterclockwise.

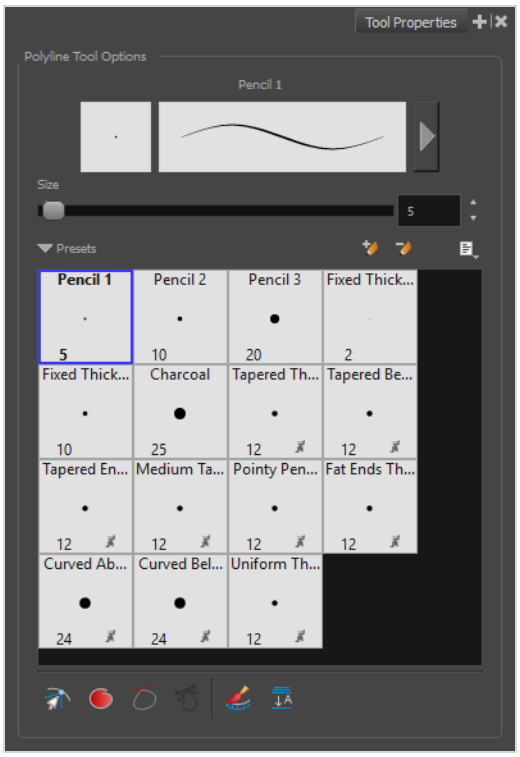
Polyline Tool Properties

The Polyline tool allows you to draw complex lines or shapes by defining each point and their Bezier handles one by one.

How to access the Polyline tool properties

1. In the Tools toolbar, select the Polyline tool.

   The tool's properties are displayed in the Tool Properties view.



Pencil Properties

Just like other shape tools, this tool creates pencil lines. Hence, its tool properties are similar to the ones of the Pencil tool and it can be used with pencil presets.

Icon	Property	Description
	Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.

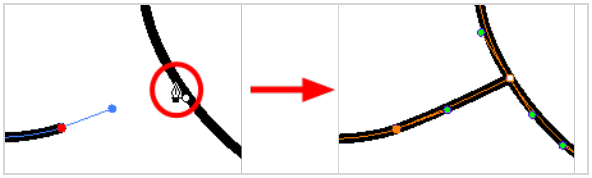
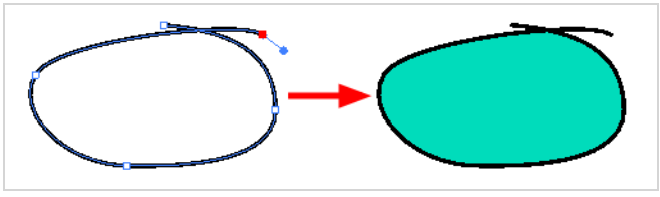
	Pencil Properties Dialog	The arrow button right of the preview area opens the Pencil Properties dialog. While the Tool Properties view only gives you access to the pencil size, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the Polyline Tool Properties section below.
	Size	Defines the width of the pencil line used to draw the shape.

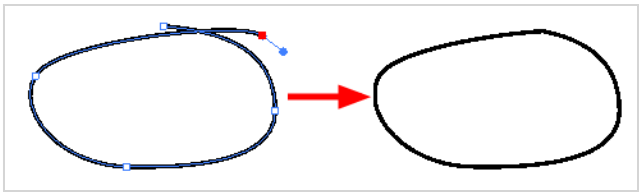
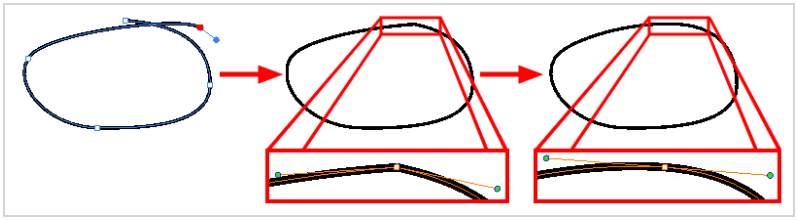
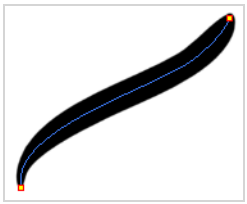
Pencil Presets

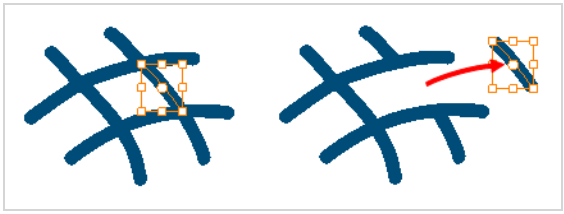
Icon	Property	Description
	Presets list	Harmony provides a variety of presets and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw and design for efficiency and consistency. All tools using pencil lines share the same preset list. Therefore, the Polyline, Line, Rectangle, Ellipse, and Pencil tools share the same preset list.
	New Preset	Creates a new preset based on the current tool properties.
	Delete Preset	Deletes the currently selected preset.
	Presets Menu	Gives access to more options for managing presets.
	Rename Brush	Allows you to rename the currently selected preset.
	Import Brushes	Allows you to import brush presets exported from Harmony.
	Export Brushes	Allows you to export your brush presets into an `.xml` file.
	Small Thumbnail	Displays presets in a grid of small thumbnails with a preview of their tip.

	Large Thumbnail	Displays presets in a grid of big thumbnails, with their name and a preview of their tip.
	Stroke View	Displays presets in a list, with their name and a preview of a stroke done with each preset.

Drawing Options

Icon	Property	Description
	Snap to Contour	When this option is enabled, clicking close to a contour in your drawing will add the point to that contour. The line you are building will be linked to that contour.  If this option is disabled, attempting to click on existing contours will always create a point very close to that contour, but not exactly on it. Therefore, it is necessary to enable this mode if you want to create lines that branch from into existing contours in your drawing. **NOTE** If you draw a line with the Line tool and make its tip snap to a contour or another control point in your artwork, they will be locked together. You can then manipulate both simultaneously using the Contour Editor tool. You can also separate two drawing strokes that have been snapped together by selecting one of them with the Select tool and moving it away.
	Auto Fill	When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour. 

		TIP By default the pencil line and its fill will be the same colour. If you want to select different colours for the pencil line and its fill, you can click on the Unlock Three Colours button in the Colour view, then select different colours for Brush strokes , Pencil lines and Paint fills .
	Trim Extra Lines	When enabled, drawing a closed shape will automatically remove the outstanding lines. 
	Align Handles After Trim	When the Trim Extra Lines option is enabled, enable this option to make the point where the beginning and end of the stroke meet into a smooth curve rather than a hard corner. 
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer. 
	Auto-Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.

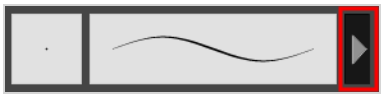


NOTE

Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode are essentially cut into segments by the overlap and can be treated as individual lines.

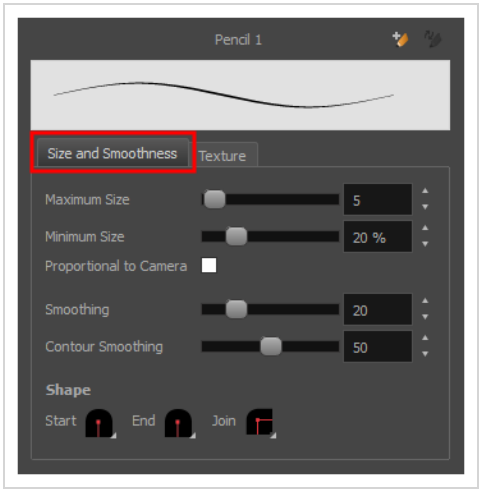
Pencil Properties Dialog

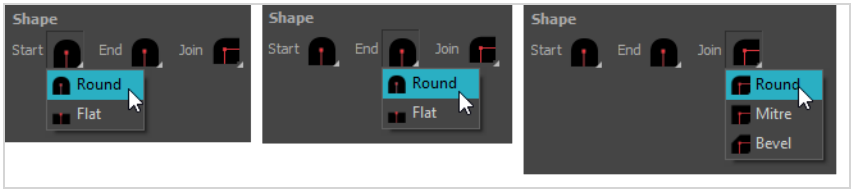
The Polyline tool draws the same type of line as the Pencil tool. Hence, you can configure the Polyline tool's lines using the Pencil Properties dialog, which you can open by clicking on the arrow button right of the stroke display area in the Tool Properties view.



Size and Smoothness Tab

The Size and Smoothness tab allows you to select your pencil's size, its smoothing parameters as well as the shape of its tips and corners.

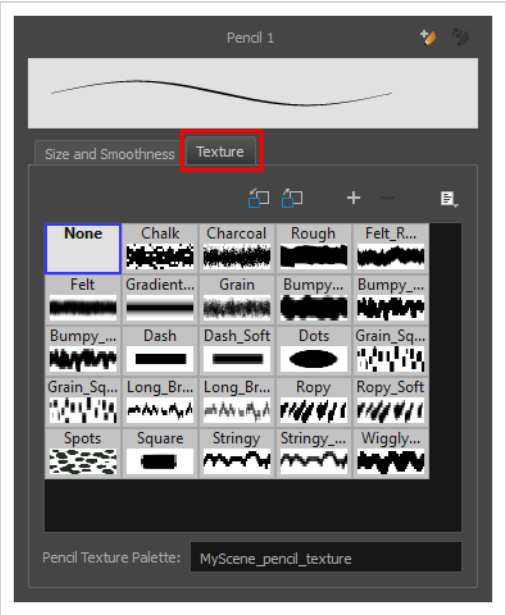


Property	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Minimum Size	Defines the minimum size of your stroke as a percentage of the maximum size. If you do not have pressure sensitivity from a pen table, the minimum size value will be ignored.
Proportional to Camera	If you check this option, the size of the pencil will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the pencil will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the pencil will be proportionally bigger.
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Contour Smoothing	Defines the number of points on the contour share of your stroke. This will smooth out the bumps and waves on tour contour shape of your brush strokes.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Texture Tab

In the Pencil Properties view, the Texture tab allows you to select a pencil texture from the currently selected pencil texture palette to use with the Pencil tool. You can also add, remove or rename textures, save the current pencil texture palette as the default one, or import the pencil texture palette into your scene.

The pencil texture palette used in the Texture tab of the Pencil Properties dialog is the one selected in the Colour view. You can select a pencil texture palette by selecting it from the pencil texture palette list in the Colour view—see Colour View on page 199.



Icon	Property	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Allows you to import an image file into a new pencil texture swatch in the current pencil texture palette. The pencil texture's effect on your pencil line will be based on the image's transparency channel, and will follow your pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.

Icon	Property	Description
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selectedpencil texture palette, for reference. To select a different pencil texture palette, you must select it in the Colour view—see Colour View on page 199.

NOTE

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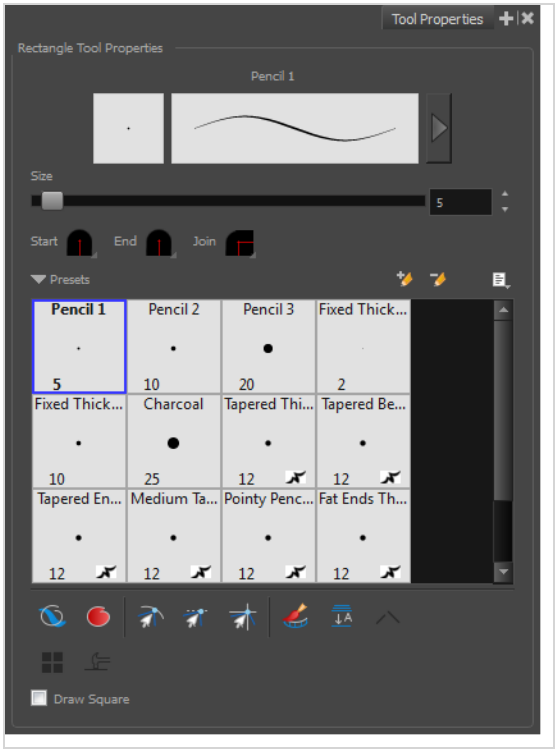
Rectangle Tool Properties

The Rectangle tool allows you to quickly draw a rectangle or a square.

How to access the Rectangle tool properties

1. In the Tools toolbar, select the Rectangle tool.

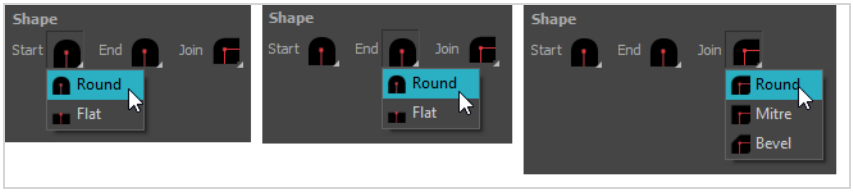
   The tool's properties are displayed in the Tool Properties view.



Pencil Properties

Just like other shape tools, this tool creates pencil lines. Hence, its tool properties are similar to the ones of the Pencil tool and it can be used with pencil presets.

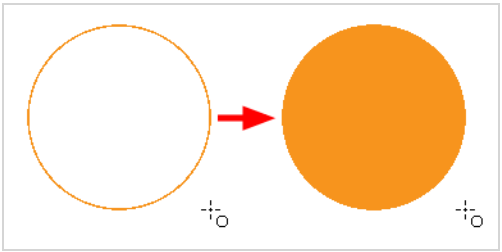
Property	Description
Preview Area	The Preview area lets you see a preview of the stroke your drawing tool will make.
Pencil Properties	The arrow button right of the preview area opens the Pencil Properties dialog.

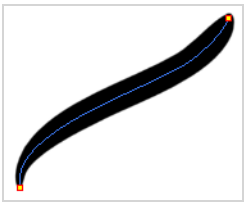
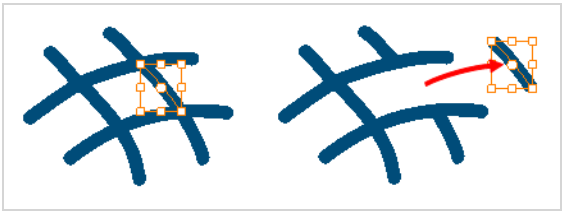
Property	Description
Dialog	 While the Tool Properties view only gives you access to a few of the pencil properties, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the Pencil Properties Dialog on page 157 section below.
Size	Defines the width of the pencil line used to draw the shape.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Drawing Options

These options affect the way your shape is added to your artwork.

Icon	Property	Description
	Draw Behind	When enabled, your brush strokes will appear behind the existing artwork.

Icon	Property	Description
		NOTE Your brush stroke will temporarily appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.
	Auto Fill	When enabled, the shape you draw is automatically filled with the selected colour. By default, drawing a shape only creates its outlines.  **TIP** By default the pencil line and its fill will be the same colour. If you want to select different colours for the pencil line and its fill, you can click on the Unlock Three Colours button in the Colour view, then select different colours for Brush strokes, Pencil lines and Paint fills.
	Snap to Contour	When enabled, while you're drawing, the mouse cursor will snap to the nearby contours of the artwork in your drawing.
	Snap and Align	When enabled, while you're drawing, the mouse cursor will automatically align to the rectangular bounding boxes of other strokes and shapes in your drawing.
	Snap to Grid	When enabled, while you're drawing, the mouse cursor will snap against the intersecting points of the grid. **TIP** To display the grid, select **View > Grid > Show Grid** from the top menu or press Ctrl + '.
	Automatically Create Colour Art	As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.

Icon	Property	Description
		
	Auto Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.  **NOTE** Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode are essentially cut into segments by the overlap and can be treated as individual lines.
	Use Stored Colour Gradient	The Use Stored Colour Gradient option can be used when painting with a gradient colour to always position the gradient in the same way it was stored, making it consistent across brush strokes. You can store a gradient by selecting a zone painted with a gradient with the Select tool, then clicking on Store Colour Gradient in the Tool Properties view.
	Draw Square	When checked, the shape you draw will be of equal width and height, making it a perfect square. **TIP** You can also draw a square by holding the Shift key while drawing.

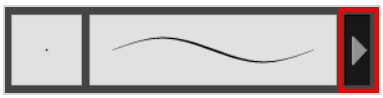
Pencil Presets

These options allow you to select, create and manage pencil presets.

Icon	Property	Description
	Presets list	Harmony provides a variety of pencil presets and thickness stencils and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw for efficiency and consistency. A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards. You also have the possibility to apply different textures to your lines by either using the default presets or to import your own. You can export the pencil presets that you have created and import those that others have created. This is a good way for you and project collaborators to keep a consistent look for the project.
	New Brush Preset	Creates a new preset based on the current tool properties.
	Delete Brush Preset	Deletes the currently selected preset.
	Brush Presets Menu	Open a menu that contains the following options: • **New Brush Preset:** Creates a new preset based on the current tool properties. • **Delete Brush:** Deletes the currently selected preset. • **Rename Brush:** Allows you to rename the currently selected preset. • **Import Brushes:** Allows you to import brush presets exported from Harmony. • **Export Brushes:** Allows you to export your brush presets into an `.xml` file. • **Small Thumbnail:** Displays presets in a grid of small thumbnails with a preview of their tip. • **Large Thumbnail:** Displays presets in a grid of big thumbnails, with their name and a preview of their tip. • **Stroke View:** Displays presets in a list, with their name and a preview of a stroke done with each preset.

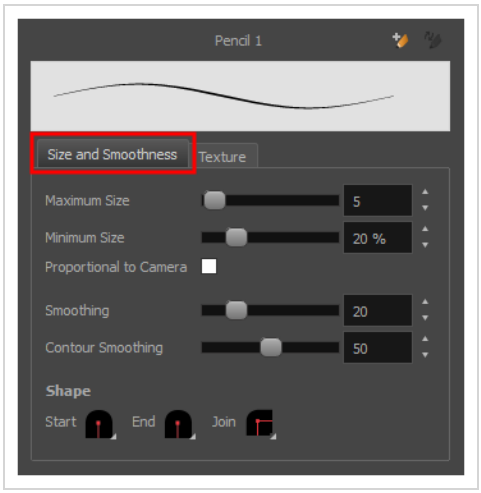
Pencil Properties Dialog

The Rectangle tool draws the same type of line as the Pencil tool. Hence, you can configure the Rectangle tool's lines using the Pencil Properties dialog, which you can open by clicking on the arrow button right of the stroke display area in the Tool Properties view.

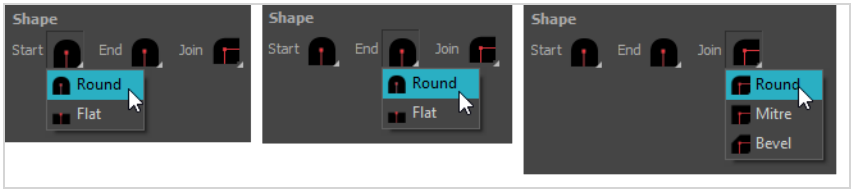


Size and Smoothness Tab

The Size and Smoothness tab allows you to select your pencil's size, its smoothing parameters as well as the shape of its tips and corners.



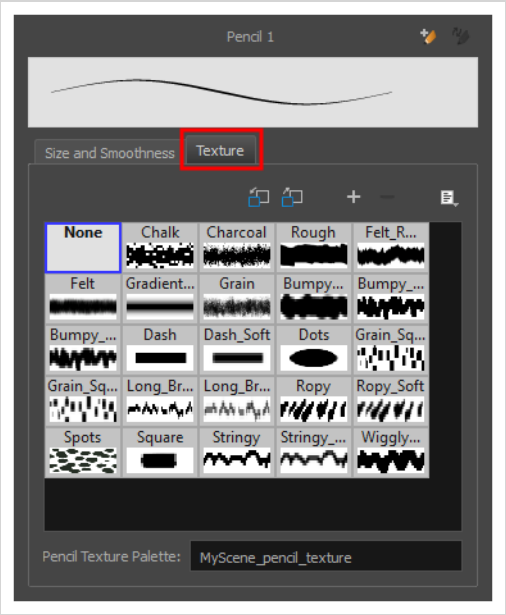
Property	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke will always be its maximum size.
Minimum Size	Defines the minimum size of your stroke as a percentage of the maximum size. If you do not have pressure sensitivity from a pen table, the minimum size value will be ignored.
Proportional to Camera	If you check this option, the size of the pencil will be adjusted to the position of the camera on the z-axis. This means that if the camera is zoomed in on the scene, the pencil will be proportionally smaller so that it appears the same size in the rendered image. Likewise, if the camera is zoomed out, the pencil will be proportionally bigger.

Property	Description
Smoothing	Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.
Contour Smoothing	Defines the number of points on the contour share of your stroke. This will smooth out the bumps and waves on tour contour shape of your brush strokes.
Shape	You can adjust the start, end, and join style of a pencil line.  • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.

Texture Tab

In the Pencil Properties view, the Texture tab allows you to select a pencil texture from the currently selected pencil texture palette to use with the Pencil tool. You can also add, remove or rename textures, save the current pencil texture palette as the default one, or import the pencil texture palette into your scene.

The pencil texture palette used in the Texture tab of the Pencil Properties dialog is the one selected in the Colour view. You can select a pencil texture palette by selecting it from the pencil texture palette list in the Colour view—see Colour View on page 199.

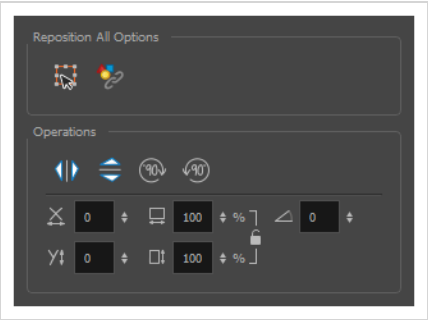


Icon	Property	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, so it will be added to your new scenes in the exact state it is when you make it the default pencil texture palette.
	Reload Default Texture Palette	Imports the default pencil texture palette as a new pencil texture palette into your scene's palette list, and selects it as the current pencil texture palette.
	New Texture	Allows you to import an image file into a new pencil texture swatch in the current pencil texture palette. The pencil texture's effect on your pencil line will be based on the image's transparency channel, and will follow your pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selectedpencil texture palette, for

Icon	Property	Description
		reference. To select a different pencil texture palette, you must select it in the Colour view—see Colour View on page 199.

Reposition All Drawings Tool Properties

When you use the Reposition All Drawings tool, its properties and options appear in the Tool Properties view.

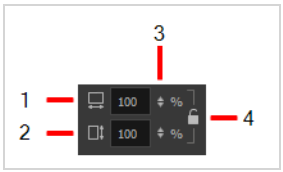
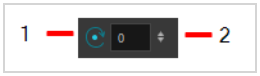


Tool Options

Icon	Option	Description
	Easy Drag	When enabled, you can drag the selection by clicking anywhere inside its bounding box. By default, you must click on the artwork in the selection to be able to drag it.
	Apply to Synced Drawing Layers	If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer.

Operations

Icon	Option	Description
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current selection vertically.
	Rotate 90 Degrees CW	Rotates the current selection 90 degrees clockwise.
	Rotate 90 Degrees CCW	Rotates the current selection 90 degrees counter-clockwise.
	Offset X and Y	Use the Offset X and Offset Y operation fields to enter specific values and precisely reposition the selected shape.

Icon	Option	Description
		 1. **X**: Type a value in this field to reposition your selection along the X-axis. 2. **Y**: Type a value in this field to reposition your selection along the Y-axis. 3. **Up/Down arrows:** Use the up and down arrows to modify the value in the X or Y value field.
	Width and Height	Use the Width and Height operation fields to enter specific values to resize the selected shape with precision.  1. **Width**: Type a value in this field to resize the width of your selection. 2. **Height**: Type a value in this field to resize the height of your selection. 3. **Up/Down arrows:** Use the up and down arrows to modify the value in the Width or Height fields. 4. **Lock icon**: Click the lock icon to lock or unlock the ratio between the Width and Height values.
	Angle	The Angle operation lets you to enter specific values and accurately rotate the selected shape.  1. **Angle**: Type a degree value in this field to rotate your selection. 2. **Up/Down arrows:** Use the up and down arrows to modify the value in the Angle value field.

Select Tool Properties

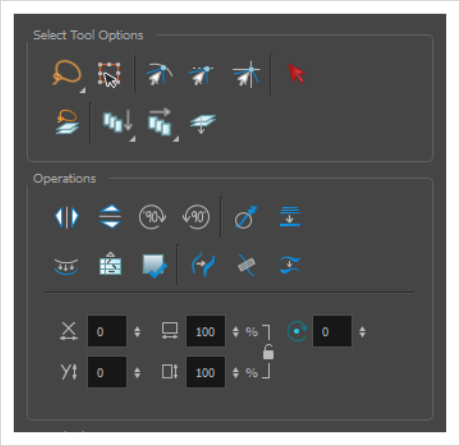
The Select tool lets you select strokes and apply basic transformations such as repositioning, rotating, scaling or skewing, using the different handles of the bounding box.

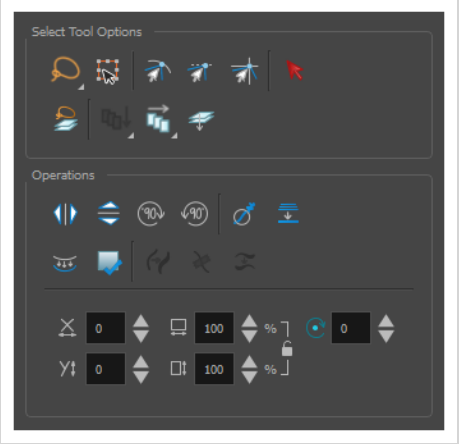
If you have text or pencil lines selected with the Select tool, their properties will display in the Tool Properties view, allowing you to make changes to your selection.

How to access the Select tool properties

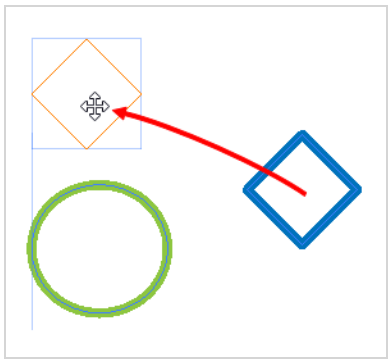
1. In the Tools toolbar, select either the Select tool.

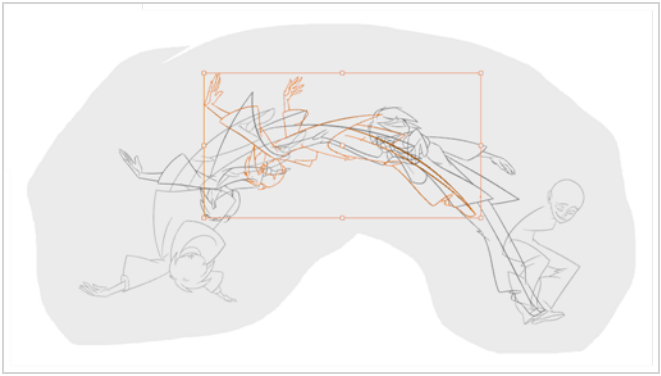
   The tool's properties are displayed in the Tool Properties view.



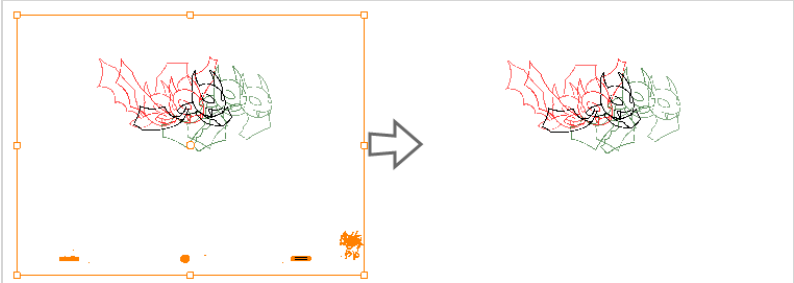


Tool Options

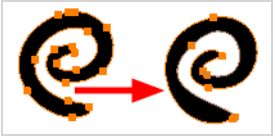
Icon	Property	Description
	Selection Mode	Allows you to choose the method to visually select multiple elements: • **Lasso:** Allows you to select multiple elements by drawing a lasso around them with your mouse. • **Marquee:** Allows you to select multiple elements by drawing a rectangle around them. This is faster, as you only need to drag your mouse from one corner of the rectangle to its opposite corner, but it may not be as precise as you want. **TIP** You can press and hold the Alt key to temporarily use the other selection mode.
	Easy Drag	When enabled, you can drag the selection by clicking anywhere inside its bounding box. By default, you must click on the artwork in the selection to be able to drag it.
	Snap to Contour	When enabled, while moving a selection, the mouse cursor (along with the selection) will snap against the nearby points and contours of your artwork, allowing you to snap parts of your artwork together.
	Snap and Align	When enabled, while moving your selection, the rectangular bounding box of the selection will align with the rectangular bounding boxes of other strokes and shapes in your artwork. 
	Snap to Grid	When enabled, while moving a selection, the mouse cursor will snap against the intersecting points of the grid.

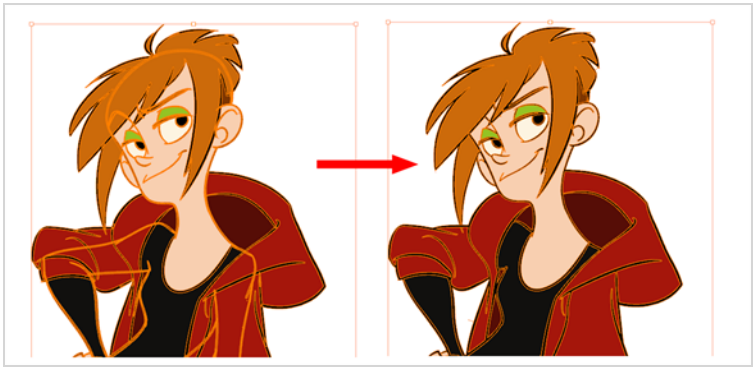
Icon	Property	Description
		TIP To display the grid, select **View > Grid > Show Grid** from the top menu or press Ctrl + '.
	Select by Colour	When enabled, clicking on a coloured zone in your artwork will instantly select all the zones that are filled with the same colour. **NOTE** Only the zones painted with the **same colour swatch** in your palette will be selected. If another zone is coloured with the exact same colour, but not the same colour swatch, it will not be selected.
	Permanent Selection	Allows you maintain a selection while editing multiple drawings. Once this option is enabled, the selection zone made using the Select tool will remain as you navigate through drawings of the same layer and drawings from other drawing layers. 

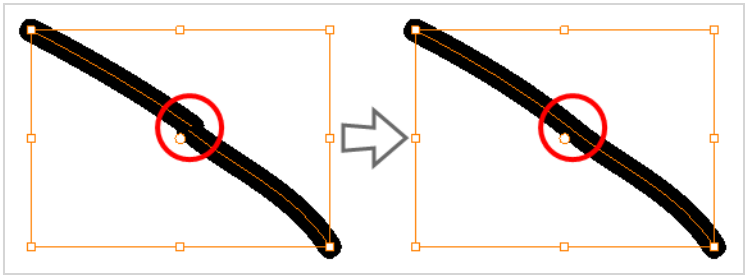
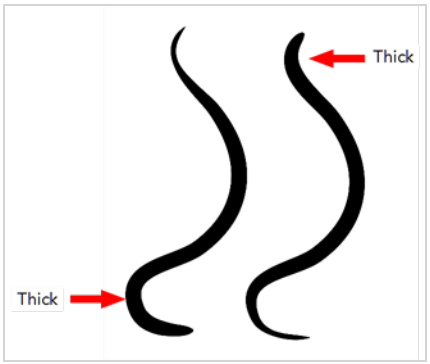
Icon	Property	Description
	Apply to Visible Drawing Layers	This option allows you to select which layers the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the currently selected layers. If several layers are selected, the tool will work on all these layers simultaneously. • **Apply to Visible Drawing Layers:** The tool will work on all the visible layers in the Camera view. • **Apply to Synced Drawing Layers**: If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer. **NOTE** This option only works in the Camera view.
	Apply to All Frames	This option allows you to determine which drawings in the current layer the tool should affect. It can be toggled on or off. When toggled on, it has two different modes. You can select a mode by clicking and holding on the button. • **Off:** When this button is toggled off, the tool only works on the drawing in the current frame. • **Apply to All Frames:** The tool will work on every exposed drawing in the selected layer simultaneously. • **Apply to Onion Skin Range:** The tool will work on every drawing displayed in the Onion Skin. Onion Skin must be enabled for this option to work.

Icon	Property	Description
		 Using the Apply to All Frames option, you can quickly remove the peg holes from a series of scanned drawings.
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.

Operations

Icon	Property	Description
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current selection vertically.
	Rotate 90 Degrees CW	Rotates the current selection 90 degrees clockwise.
	Rotate 90 Degrees CCW	Rotates the current selection 90 degrees counter-clockwise.
	Smooth	Smooth out selected drawing strokes and remove extra points. 

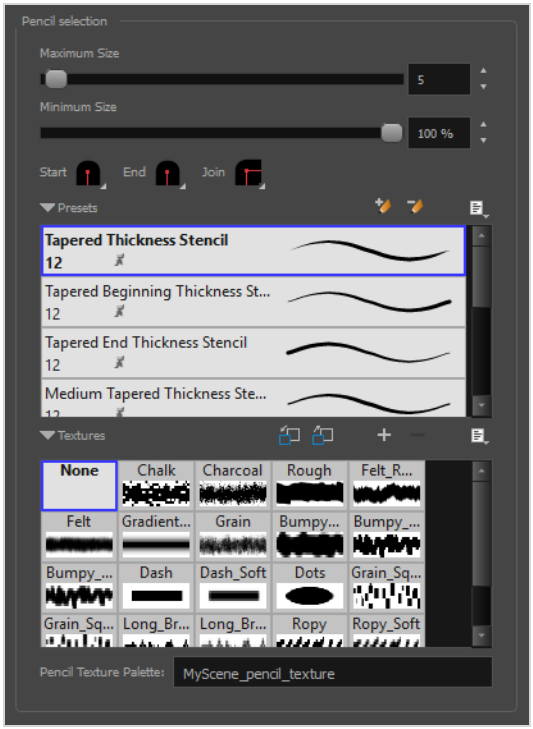
Icon	Property	Description
	Flatten	Merges drawing objects and brush strokes into a single layer. If you draw new lines to fix a drawing or line with many brush strokes, it can be useful to flatten them all into a single shape. By default, lines are drawn one on top of each other. If you intend to repaint the lines or modify their shape, it will be easier if they are flattened. 
	Create Colour Art from Line Art	Lets you use the outline you traced on one of the four embedded layers (line art, colour art, overlay, underlay) and create invisible strokes to paint your drawings on separate layers. This provides more inking and painting flexibility. You can also configure this option to create the invisible strokes on any of the four embedded layers.
	Store Colour Gradient	Use the Store Colour Gradient operation to record the selected gradient's position. This reuses the stored position of the gradient when drawing new brush lines or painting colour zones. Enable the Use Stored Colour Gradient option in the Paint or Brush Tool Properties view to do this.
	Pencil to Brush	Converts the selected centre line pencil strokes into contour strokes brush lines.
	Merge Pencil Lines	Because pencil lines are defined by their centre lines, two pencil lines that brush against each other may not actually make a closed shape, even if they appear closed. If you select several pencil lines that are close together, you can use this button to close the small gaps between these

Icon	Property	Description
		pencil lines and make them into a single pencil line.  **NOTE** Points must be close enough to be merged. If there is a large gap between the lines, they will not be merged.
	Reverse Pencil Thickness	The Reverse Pencil Thickness option inverts the thick and thin section on a selected pencil line. This option will take the thickest size on the line and apply it to the thinnest, and it will apply the thinnest to the thickest. 
	Offset X	Lets you enter a value to reposition the selection along the X-axis.
	Offset Y	Lets you enter a value to reposition the selection along the Y-axis.
	Width	Lets you enter a value to resize the width of the selection.
	Height	Lets you enter a value to resize the height of the selection.
	Lock	Locks or unlocks the ratio between the Width and Height values.

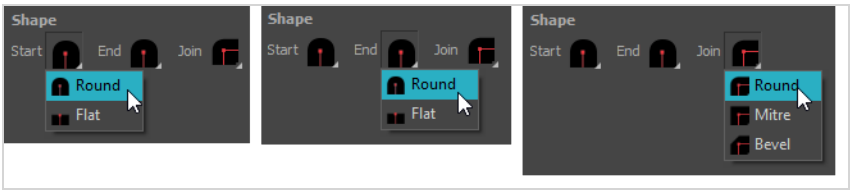
Icon	Property	Description
	Angle	Lets you enter specific values to rotate the selection. A positive value rotates the selection counter clockwise and a negative value rotates the selection clockwise.

Pencil Selection

If the selection contains pencil lines, the Pencil Selection section appears at the bottom of the Tool Properties view, allowing you to adjust the properties of those pencil lines.



Property	Description
Maximum Size	Adjusts the size of the parts of the pencil lines that are the thickest. Parts of the pencil lines that are between the minimum and maximum sizes will be adjusted proportionally.
Minimum Size	Adjusts the size of the parts of the pencil lines that are the thinnest. Parts of the pencil lines that are between the minimum and maximum sizes will be adjusted proportionally.
Pencil Line Shape	You can adjust the start, end, and join style of a pencil line.

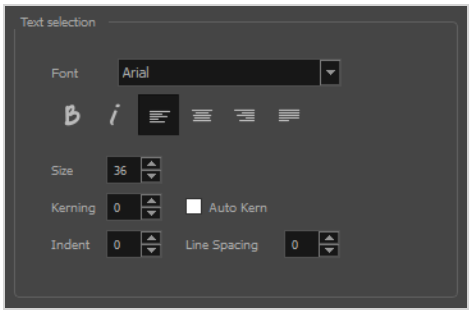
Property	Description
	 • **Start**: Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style. • **End**: Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style. • **Join:** Lets you select the joint style. The joints are where the line curves abruptly. You could also define the Join style as the corner style. You can choose between Round, Mitre and Bevel style.
Pencil Stencils	Allows you to apply one of the available line thickness stencils to the selected pencil lines. Stencils set the width of a pencil lines all along its length. You can use one of the preloaded presets, or create your own pencil stencils.
Adding Texture to a Pencil Line	Pencil lines support texture. Once a pencil line is drawn, you can apply a preset texture or load your own. Textures are independent from pencil stencils.

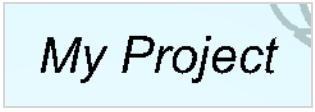
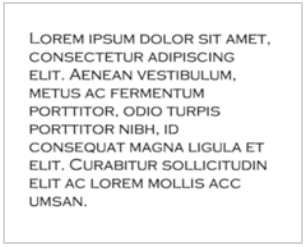
Text Selection

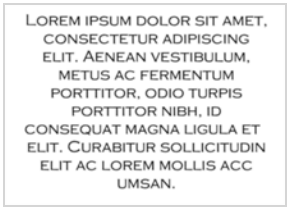
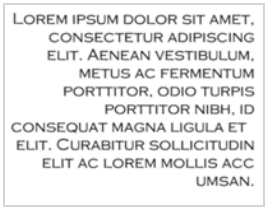
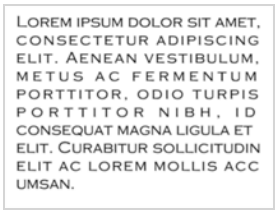
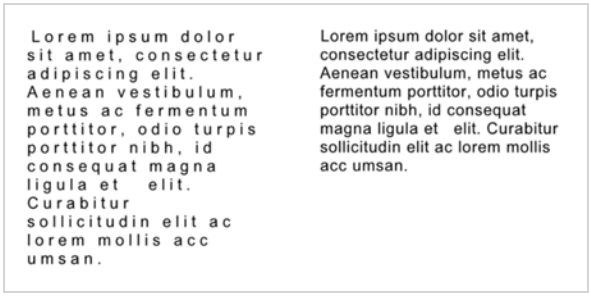
If your selection include text boxes created with the Text tool, a Text Selection section will appear at the bottom of the Tool Properties view, allowing you to adjust the formatting of the whole text box.

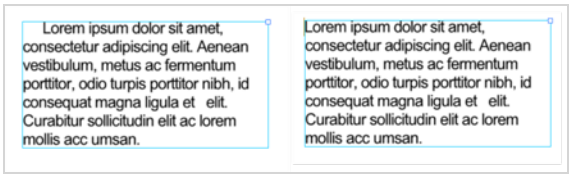
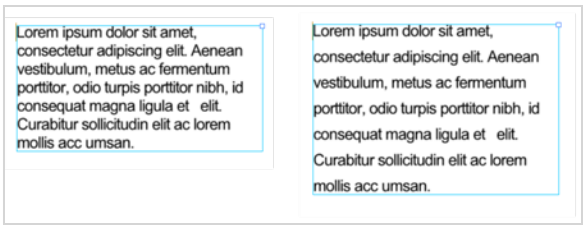
TIP

You can also adjust the formatting of parts of the text in the text box using the Text tool—see *Text Tool Properties* on page 182.



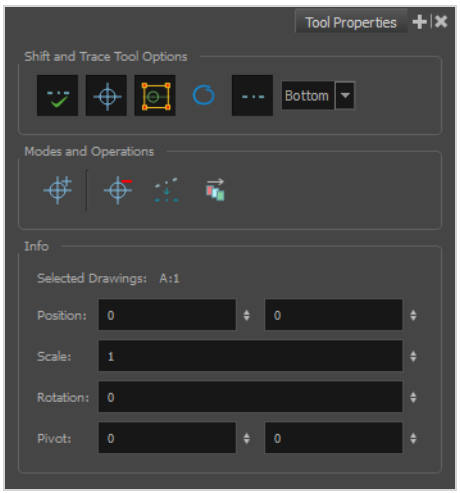
Icon	Property	Description
	Font	Lets you select the font in which to display the text.
	Bold	Makes the selected text bold.
	Italic	Makes the selected text italic. 
	Align Left	Aligns the text in the selected text box to the left. 
	Align Center	Aligns the text in the selected text box to the centre.

Icon	Property	Description
		
	Align Right	Aligns the text in the selected text box to the right. 
	Justify	Makes the text in the selected text box take all the horizontal space by adjusting the spacing between each word. Text that use a single line and text in the last line of a paragraph is aligned to the left. 
	Size	Allows you to set the size of the selected text.
	Kerning	Allows you to increase or decrease the spacing between each character. 

Icon	Property	Description
	Auto Kern	Sets the kerning automatically based on the font's predefined standard.
	Indent	Allows you to increase or decrease the indentation of the first line of text in each paragraph. 
	Line Spacing	Increases or decreases the space between each line of text. 

Shift and Trace Tool Properties

The Shift and Trace tool allows you to temporarily move, rotate and scale drawings, then trace over them in other drawings, using Onion Skin to keep the outlines of the shifted drawings in your drawing space. Contrary to Shift and Trace with the Drawing Desk, you can use the Shift and Trace tool in the Camera view.

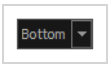


How to access the Shift and Trace Tool Properties

1. Do one of the following:
   - In the Tools toolbar, double-click on the Hand tool and select Shift and Trace in the pop-up menu.
   - In the top menu, select **Drawing > Drawing Tools > Shift and Trace**.

   The Shift and Trace tool properties appear in the Tool Properties view.

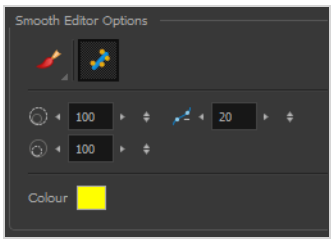
Icon	Tool Name	Description
Shift and Trace Tool Options		
	Enable/Disable Shift and Trace	Enabled by default. When disabled, drawings that were repositioned, rotated or scaled with the Shift and Trace tool appear in their original position.
	Display Cross Hair	Enabled by default. When disabled, cross hairs added with the Shift and Trace tool are invisible.
	Show manipulators for shift and	Enabled by default. This displays the manipulator allowing you to rotate and scale drawings for Shift and Trace, as well as to re-position their pivot point. When hidden, you can only shift drawings laterally.

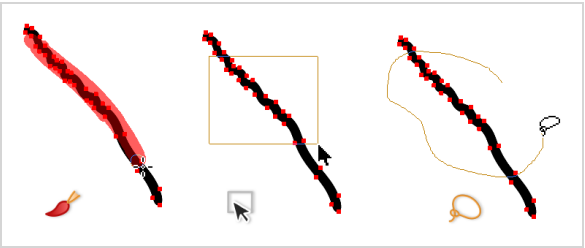
Icon	Tool Name	Description
	trace	
	Show the outline of the selected shift and trace drawing	When enabled, the contours of each brush stroke for the current drawing will appear highlighted in cyan.
	Show/Hide Pegs	Enabled by default. When using the Shift and Trace tool, peg holes are displayed at the bottom of every drawing to help keep track of how offset drawings are from their original position and from each other. You can also click and drag on the left or right peg hole of a drawing to rotate it around the centre peg hole. When disabled, those peg holes are hidden.
	Peg Position	Allows you to select on which edge of the drawings to display peg holes. By default, they are displayed at the bottom of the drawings.
Modes and Operations		
	Set Add Cross Hair Mode	When selected, clicking on the drawing will add a cross hair where you click. Cross hairs are marks that appear on the same location on every drawing in the current layer and which move when you offset a drawing with the Shift and Trace tool, and they appear in the Onion Skin rendition of neighbouring drawings as well. This allows you to keep track of how offset each drawing is.
	Remove All Cross Hair	Removes all the cross hairs created for shift and trace.
	Reset Selected Drawings Shift Position	Undoes all transformations done with the Shift and Trace tool on the selected drawings, resetting them to their original position, angle and scale.
	Reset All Drawings Shift Position	Undoes all transformations done with the Shift and Trace tool on all drawings, resetting them to their original position, angle and scale.
Info		
Selected Drawings		The element name and drawing name of the currently selected drawing.

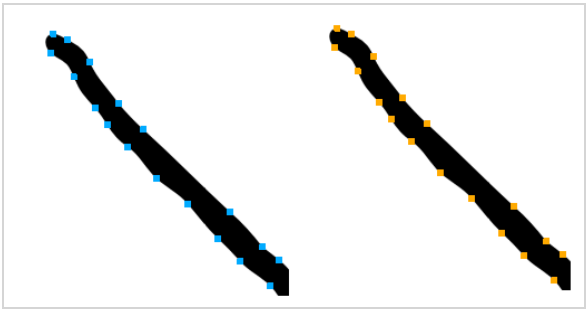
Icon	Tool Name	Description
Position		The offset of the current drawing from its original position on the x and y axes, in fields, when moved with the Shift and Trace tool.
Scale		The Shift and Trace scale factor of the currently selected drawing, when scaled with the Shift and Trace tool.
Rotation		The Shift and Trace rotation angle of the currently selected drawing, in degrees, counterclockwise, when rotated with the Shift and Trace tool.
Pivot		The offset, in fields, of the current drawing's pivot point from its centre, on the x and y axes. The pivot point is the point from which drawings are rotated and scaled.

Smooth Editor Tool Properties

When you select the Smooth Editor tool, its properties and options appear in the Tool Properties view.

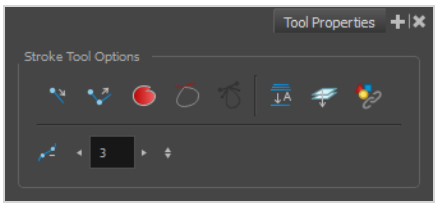


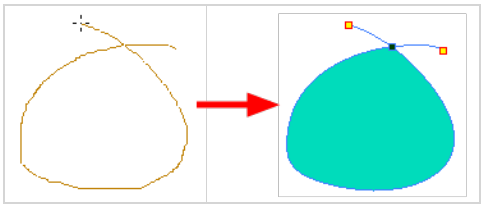
Icon	Tool Name	Description
	Smoothing Style	The Smoothing Style options allow you to smooth a portion of your drawing by tracing a smoothing stroke over the zone to optimize or by selecting an area of the drawing with the Marquee or Lasso. Note that by default, the Smooth Editor tool colour is yellow, it was changed to orange for screen grab clarity. 
	Show Control Points	The Show Control Points option allows you to show or hide the Bezier points around lines. When the Bezier points are displayed, you can see the result of your smoothing and the number of points left on the curve. When it is turned off, only the original artwork is displayed.
	Minimum Size and Maximum Size	This is where you set the minimum and maximum sizes of your drawing tool which will produce the thick and thin effect on your stroke. This works with the pressure sensitivity of a pen tablet. This options is available while using the Brush Smoothing style. • **Maximum and Minimum Size:** Defines the

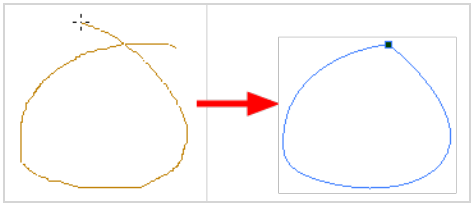
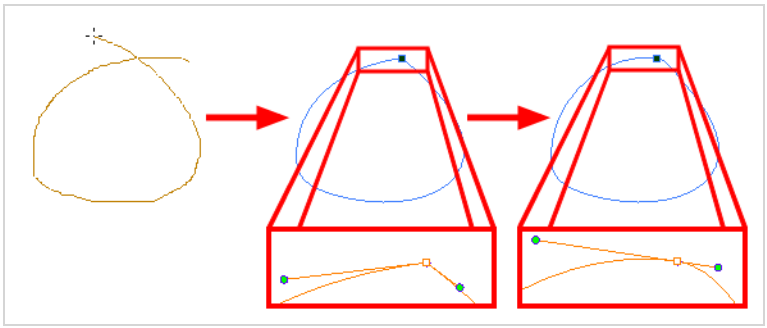
		maximum and minimum width of the stroke. • **Up/Down arrows:** Use the up and down arrows to set the minimum and maximum size value.
	Smoothness	The Smoothness impacts the strength of the smoothing result. The higher the value, the more points are removed and the smoother the curve. The Smoothness range is from 0 to 100; the default value is 20.
	Colour	You can modify the colour of the control points displayed on the artwork while working with the Smooth Editor tool by double-clicking on the colour swatch. 

Stroke Tool Properties

When you select the Stroke tool, its properties and options appears in the Tool Properties view.



Icon	Tool Name	Description
	Draw Stroke as Straight Lines	Enable the Draw Stroke as Straight Lines option if you want the new strokes you draw to be a perfect straight line. Disable the option if you want the stroke to follow the mouse gesture.
	Connect Line Ends	Enable the Connect Line Ends option if you want the start or end point of your new stroke to connect to your existing strokes to make sure no gaps are left in your drawing.
	Auto Fill	When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour.  **TIP** By default the pencil line and its fill will be the same colour. If you want to select different colours for the pencil line and its fill, you can click on the Unlock Three Colours button in the Colour view, then select different colours for Brush strokes, Pencil lines and Paint fills.
	Trim Extra Lines	When enabled, drawing a closed shape will automatically remove the outstanding lines.

		
	Align Handles After Trim	When the Trim Extra Lines option is enabled, enable this option to make the point where the beginning and end of the stroke meet into a smooth curve rather than a hard corner. 
	Auto-Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.
	Apply to Line and Colour Art	Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously. **NOTE** If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.
	Apply to Synced Drawing Layers	If the currently selected layer is synced with another layer, the tool will work on both the current layer and its synced layer.
	Smoothness	You can modify the central line smoothness of your line using this option. This parameter smooths the initial movement of your line. Increasing the value will result in a smoother line with fewer control points. Use the left and right arrows to increment the value by one full unit. Use the Up - Down slider to quickly increment the value.

Text Tool Properties

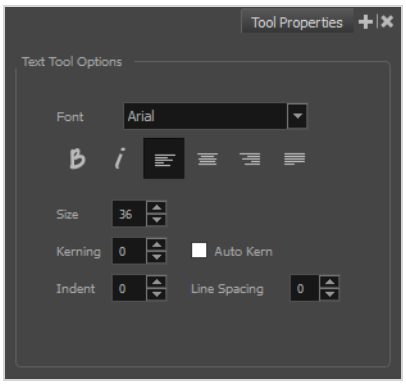
The Text tool lets you add text fields to your project, in which you can type text, then adjust its formatting using various fonts and text attributes.

With the Text tool selected, you can select text within text boxes you created and change the formatting of the selection. You can also select and manipulate text boxes using the Select tool, and change the formatting of the entire text box in the Select tool properties.

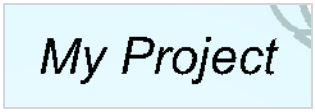
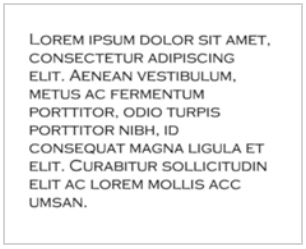
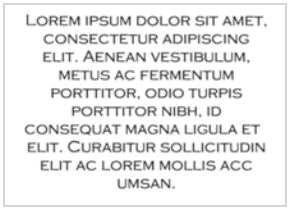
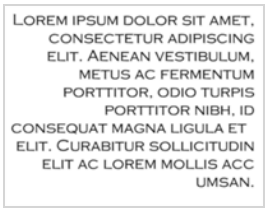
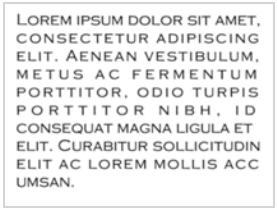
How to access the Text tool properties

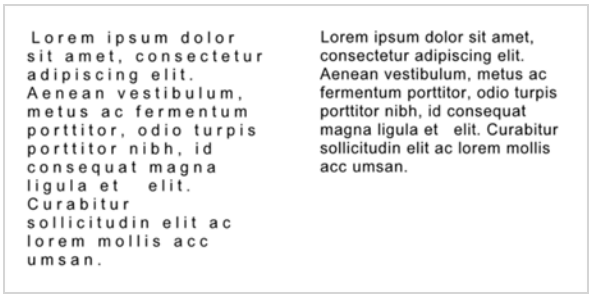
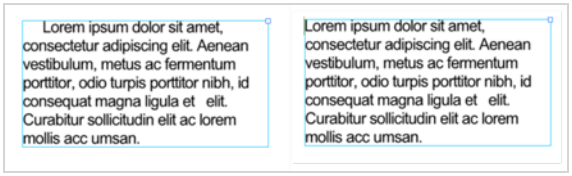
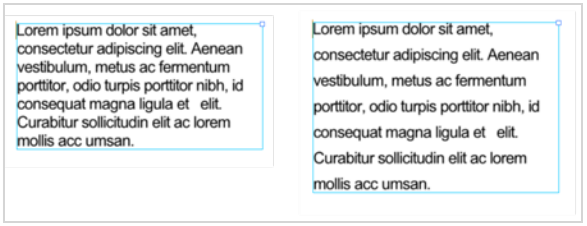
- In the Tools toolbar, select the Text T tool.

  The tool's properties are displayed in the Tool Properties view.



Icon	Property	Description
	Font	Lets you select the font in which to display the text.
	Bold	Makes the selected text bold.
	Italic	Makes the selected text italic.

Icon	Property	Description
		
	Align Left	Aligns the text in the selected text box to the left. 
	Align Center	Aligns the text in the selected text box to the centre. 
	Align Right	Aligns the text in the selected text box to the right. 
	Justify	Makes the text in the selected text box take all the horizontal space by adjusting the spacing between each word. Text that use a single line and text in the last line of a paragraph is aligned to the left. 

Icon	Property	Description
	Size	Allows you to set the size of the selected text.
	Kerning	Allows you to increase or decrease the spacing between each character. 
	Auto Kern	Sets the kerning automatically based on the font's predefined standard.
	Indent	Allows you to increase or decrease the indentation of the first line of text in each paragraph. 
	Line Spacing	Increases or decreases the space between each line of text. 

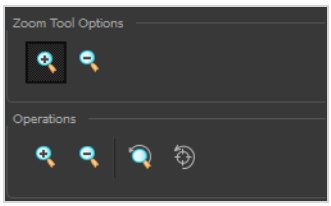
Zoom Tool Properties

The Zoom tool lets you zoom in and out of the Camera, Drawing, Side and Top views. You can also use it to reset the zoom level.

How to access the Zoom tool properties

1. In the Tools toolbar, select the Zoom tool.

   The tool's properties are displayed in the Tool Properties view.



Tool Options

Icon	Parameter	Description
	Zoom In Mode	Use the mouse cursor to zoom in to the Camera or Drawing view.
	Zoom Out Mode	Use the mouse cursor to zoom out of the Camera or Drawing view.

Operations

Icon	Parameter	Description
	Perform Zoom In	Zoom in the Camera or Drawing view. The keyboard shortcut is 2.
	Perform Zoom Out	Zoom out the Camera or Drawing view. The keyboard shortcut is 1.
	Reset Zoom	Restores the current zoom level to 100%.
	Reset View	Restores the original display by resetting any pan, rotation or zoom actions.

Chapter 3: Toolbars

Harmony contains toolbars which, by default, are located at the top of the interface. Some views also have a toolbar which you can reposition to suit your work style. You can show or hide toolbars, as well as customize it with the tools you use most often and hide the ones you don't.

Top Toolbars 187
Edit Toolbar 188
File Toolbar 189
Tool Presets Toolbar 190
Tools Toolbar 191
Workspace Toolbar 196
View Toolbars 197

Top Toolbars

Harmony has a series of toolbars that are added by default at the top of the interface. These toolbars can be moved on the sides of the interface as well as within specific views.

All top toolbars can be added through the top menu **Windows > Toolbars > *desired toolbar***.

Edit Toolbar **188**

File Toolbar **189**

Tool Presets Toolbar **190**

Tools Toolbar **191**

Workspace Toolbar **196**

Edit Toolbar

The Edit toolbar contains common operations such as Copy, Paste, Cut, Undo and Redo. These options can also be found in the Edit menu.

How to access the Edit toolbar

1. Select **Windows > Toolbars > Edit**.

Icon	Tool Name	Description
	Undo	Removes the last change made to your project. Harmony supports multiple undo, so you can undo changes you made in the order you made them.
	Redo	Redoes an operation you have undone. This command is active only after you use the Undo command.
	Cut	Removes selected objects. You can then paste the object or its properties to another object.
	Copy	Copies selected objects and properties.
	Paste	Places an object you cut or copied into the location you select in a view.
	Create Symbol	Creates a symbol from selected drawing elements in the Drawing or Camera view or a layer or cells in the Timeline view.

File Toolbar

The File toolbar contains the common file operations such as New, Save and Open. These options can also be found in the File menu.

How to access the File toolbar

1. Select **Windows > Toolbars > File**.

Icon	Tool Name	Description
	Open	Displays the Open Scene dialog box where you can browse for a scene file. You can open a new scene from the current one and the previous scene will close.
	Save	Saves all changes made to the opened scene, drawings, palettes, and palette lists.
	Load Background File	Allows you to select an image to temporarily add as a background to your drawings, for reference. This background will not be in the scene.

Tool Presets Toolbar

The Tool Presets toolbar lets you create new tool presets and manage them.

How to access the Tool Presets toolbar

1. Select **Windows > Toolbars > Tool Presets**.

Icon	Tool Name	Description
	New Tool Preset	Creates a new tool preset from the current tool settings.
	Manage Presets	Opens the Manage Tool Preset dialog box where you can update, organize, and delete existing presets.

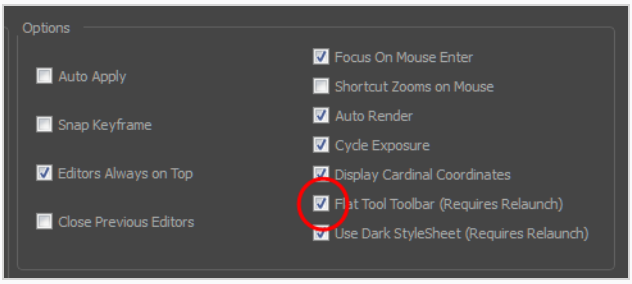
Tools Toolbar

The Tools toolbar contains the main tools you need to work in Harmony. In the default workspace, this toolbar located on the left-most side of the interface. A small triangle at the lower-right corner of a tool indicates that additional tools can be selected in a pop-up menu. To access these tools, either click and hold on the tool button, or select the tool then click on it again.

By default, the Tools toolbar displays several of its tools in pop-up menus that must be opened. It is possible to make the Tools toolbar display every tool in its individual button instead by enabling the Flat Tools Toolbar preference. This makes the selection of tools quicker. However, because there is not enough vertical space to display all tools, some tools will be hidden from the Tools toolbar by default. Which tools are displayed in the Tools toolbar when Flat Tools Toolbar is enabled can be customized. The order in which tools are listed in Flat Tools Toolbar mode can also be customized.

How to make every tool in the Tools toolbar display in buttons rather than pop-up menus

1. Do one of the following:
   - Select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS).
   - Press Ctrl + U (Windows/Linux) or ⌘ + U (macOS).
2. Select the **General** tab.
3. In the Options section, select the **Flat Tool Toolbar** option.

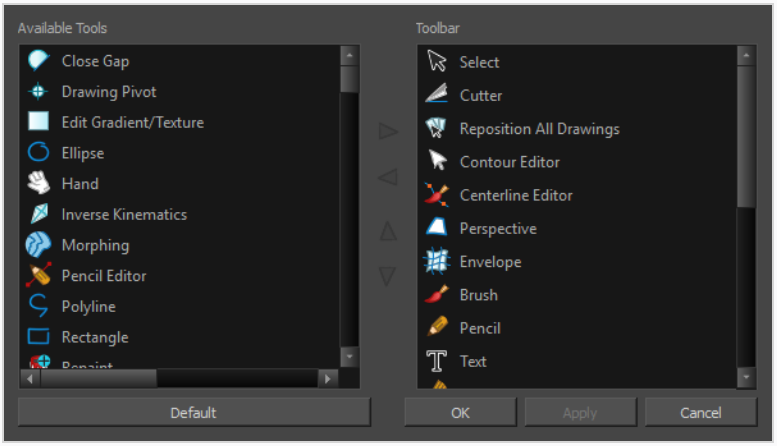


4. Click **OK** and restart Harmony.

How to customize which tools are displayed in the Tools toolbar when it is in Flat mode

1. Right-click on the Tools toolbar and select **Customize**.

   The Toolbar Manager dialog appears.



2. In the Available Tools list, select each tool that you want to add to the Tools toolbar, then click on the Add the selected tool to the toolbar ▷ button.
3. In the Toolbar list, select each tool that you want to remove from the Tools toolbar, then click on the Remove the selected tool from the toolbar ◁ button.

Tool Name	Icon	Description
Select		Allows you to select and reposition, scale, rotate and skew brush strokes, pencil lines, shapes and other parts of your artwork.
Cutter		Allows you to cut a part of your artwork, then reposition, scale, rotate and skew it.
Reposition All Drawings		Allows you to reposition, scale, rotate and skew all drawings in the current layer.
Contour Editor		Allows you to edit the vector contours of brush strokes, pencil lines and shapes in your artwork. You can add, remove, tweak and move vector points, move the Bezier handles of the vector points as well as deform vector outlines.
Centerline Editor		Allows you to tweak and deform a brush stroke by manipulating the points at the centre of its line rather than its contour.
Pencil Editor		Allows you to adjust the thickness of a pencil line at its different points and corners, tweak the shape of its extremities and scale its texture.
Smooth Editor		Allows you to optimize contours and lines by removing its extra points, making them easier to edit.

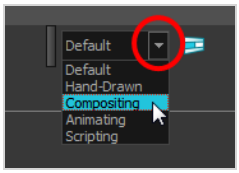
Perspective		Allows you to deform artwork by applying a perspective effect on it.
Envelope		Allows you to deform and warp artwork by moving points and tweaking lines in a grid.
Edit Gradient/Texture		Allows you to adjust the position, angle and size of gradients and textures in a colour zone.
Brush		A pressure-sensitive tool for creating a contour shape with a thick and thin line effect, as if created with a paint brush.
Pencil		A pressure-sensitive tool for drawing outlines. Pencil lines are made of central vector lines, making them easier to tweak and edit than brush strokes.
Text		Allows you to add text and to format it.
Eraser		A pressure-sensitive tool for erasing parts of a drawing.
Paint		Allows you to fill colour zones with a colour or texture.
Ink		Allows you to recolour pencil lines with precision by changing the colour of one segment at a time.
Paint Unpainted		Allows you to quickly fill empty zones in your artwork with a colour or texture, leaving filled zones unchanged.
Repaint		Allows you to quickly repaint painted zones in your artwork. Empty zones will remain empty.
Unpaint		Allows you to empty filled colour zones of their colour and texture.
Stroke		Allows you to create invisible lines that can serve as colour zones that can be filled, or close the gaps in existing colour zones.
Close Gap		Allows you to close open shapes so that they can be filled with the Paint tool. By drawing a stroke near a small gap in a shape, this tool will create

		a small invisible stroke connecting the two closest points around the gap.
Line		Draws a straight line segment going from one point to the other.
Rectangle		Draws a rectangle.
Ellipse		Draws an ellipse.
Polyline		Allows you to draw shapes, segmented lines or complex curved lines by clicking to create each point in the sequence of line segments.
Dropper		Allows you to select a colour by clicking on a colour in your artwork.
Drawing Pivot		Allows you to position the pivot on a drawing layer by clicking where you want its location to be.
Morphing		Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
Hand		Allows you to pan the Camera and Drawing views.
Zoom		Allows you zoom in and out of the Camera and Drawing views.
Rotate View		Lets you rotate the Camera and Drawing views just like with a real animation disc.
Shift and Trace		Allows you to temporarily move drawings so you can trace over them in other drawings using Onion Skin.
Animate Current Frame		When this option is selected, every time you use the Transform or Advanced Animation tools to manipulate an element in your scene, the position of the element will be stored in a keyframe at the current frame. This allows you to animate elements in your scene without creating keyframes manually.

Animate Onion Skin Range		When this option is selected, if you use the Transform or Advanced Animation tools to make transformations to an element in your scene, the transformations will be stored as keyframes at the beginning and at the end of the current Onion Skin range, as well as on every existing keyframe in-between. This can be useful if you want to reposition an element that you have already animated, but only during a specific range of frames, which you can define by enabling Onion Skin and setting the Onion Skin range to cover that range of frames.
Animate Off		When this option is selected, if you use the Transform or Advanced Animation tools to make transformation to an element in your scene, the transformations will affect the element throughout the whole scene. This can be useful if you want to reposition an element after you have already animated it.
Transform		Allows you to select drawing layers and position, rotate, scale and skew them.
Onion Skin		Displays the previous and next frames of an animation. Useful when animating cut-out characters.
Advanced Onion Skin		Enables Advanced Onion Skin, a more flexible kind of Onion Skin that can be easily configured using the Onion Skin view.

Workspace Toolbar

The Workspace toolbar lets you load other workspaces. The first time you start Harmony, the default workspace is loaded. Other workspaces are available such as the Hand-Drawn Animation and Compositing workspaces; these display different views and toolbars. You can access these workspaces and any you create, from the Windows menu and the Workspace toolbar.



How to access the Workspace toolbar

1. Select **Windows > Toolbars > Workspace**.

Icon	Tool Name	Description
	Workspace List	Allows you to select an existing workspace.
	Workspace Manager	Opens the Workspace Manager where you can organize, display, and remove workspace from your list.
	Save Workspace	When the Automatically Save Workspace preference is disabled, the Save Workspace button becomes available. This allows you to manually save your new workspace configuration.

View Toolbars

Harmony has a series of view specific toolbars that are only available in a given view. These toolbars can be moved only within their view.

All view toolbars can be added, as long as the view is visible, through the top menu **Windows > Toolbars > *desired toolbar***.

Chapter 4: Views

The Harmony interface is composed of different views, each one designed for a specific purpose. You can modify the location of the views by adding a new view as a tab or as a window. You can also swap the location of a view.

When a view is active, a red rectangle appears around the view. Keyboard shortcuts and top menu options are associated with the active view. If a menu option is greyed out, it means it does not apply to the layer, drawing or other type of selection or the option does not apply to the active view.

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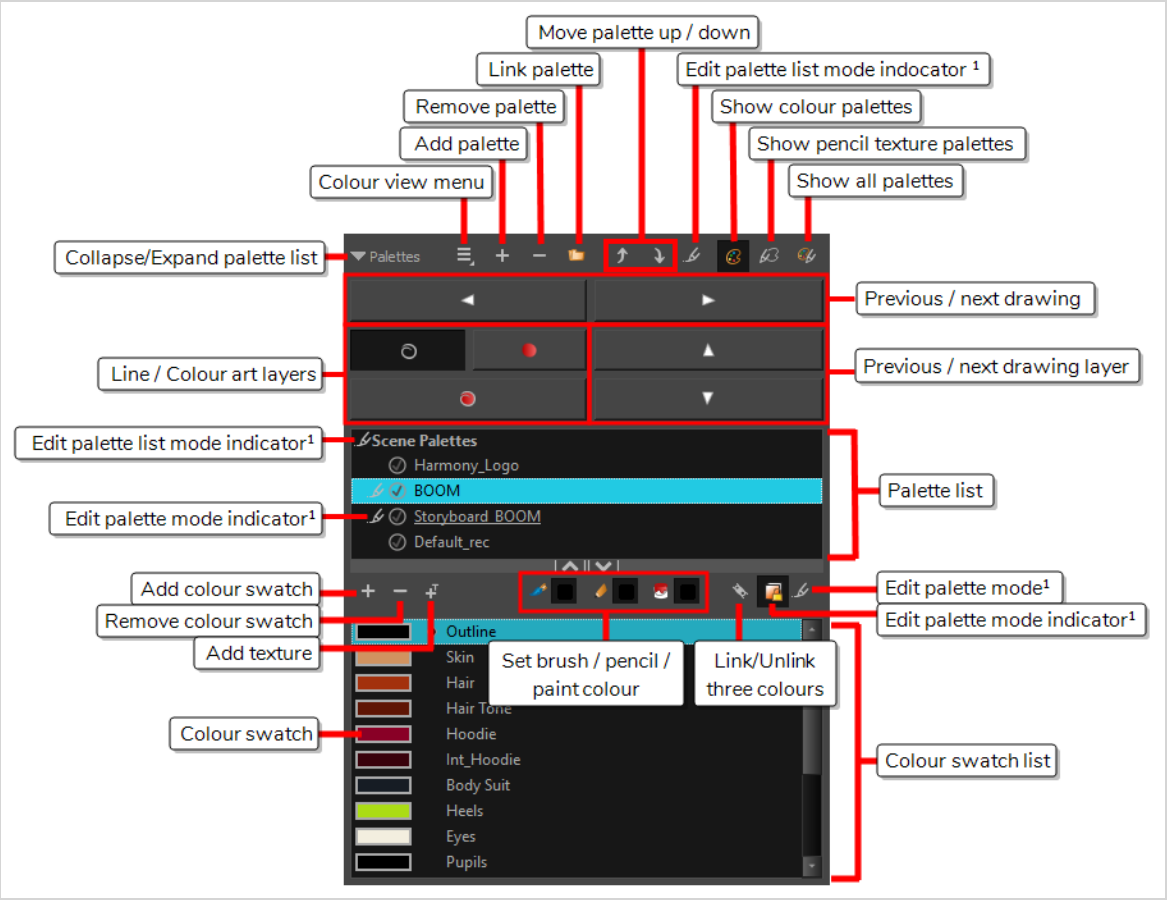
Colour View

The Colour view is where you create colours and palettes and import existing palettes into your project. The Colour view is also necessary for drawing, painting and creating colour styling.



How to access the Colour view

Do one of the following:

- From the top menu, select **Windows > Colour**.
- From any of the other views, click the Add View + button and select **Colour**.

Palette List Panel

Icon	Option	Description
	View Menu	The View menu contains all the commands and options that you can use in the Colour view to manage colours and palettes.

	Collapse/Expand Palette List	Allows you to show or hide your palette list and its options. By default, the palette list is displayed, but you may want to hide it if you are working with a single palette and want to allow more vertical space for the colour swatch list.
	Add Palette	Allows you to create a new palette.
	Remove Palette	Deletes the currently selected palette. If the colour swatch is used in your project, zones painted with colour swatches which have been deleted will turn red, easily identifying them so you can repaint them with another colour swatch.
	Link Palette	Allows you to add a palette from a different location, be it in a scene, job, environment or even an element to your palette list. The palette will be linked to its original location rather than copied to your scene's folder. Hence, if you make changes to the original palette, it will affect the colour of elements in your scene. If you want to import a palette as a copy into your scene's palette library, right-click on your palette list and select **Import**. You can also link to a palette in any location on your machine or network by selecting **Link to External**.
	Order Palette List	Moves palettes further up or down the palette list. If a palette has been cloned, the highest palette among the original palette and its clone(s) will be used by Harmony.
	Edit Palette List Mode Indicator	In Harmony Server, this icon appears when you have the modifying rights on your scene's palette list. While several users can work on a scene at the same time, only one user may have the right to modify a palette list at any given time.

		NOTE In Harmony Stand Alone, you can always modify your scene's palette list. On Harmony Server, you must unlock your palette list before making modifications to it.
	Show Colour Palettes	Shows only colour palettes in the palette list. This is the default option.
	Show Pencil Texture Palettes	Shows only pencil texture palettes in the palette list.
	Show All Palettes	Shows both colour and pencil texture palettes in the palette list.

Palette List

Icon	Description
	In Harmony Server, this indicates that you have the rights to modify the palette.
	Indicates that the palette is stored at the same level as its palette list. For example, a palette that is stored in the scene's palette library and which is listed in the scene's palette list, or a palette that is stored in an element's palette library and which is listed in that same element's palette list.
	Indicates that the palette file is stored in an external location, such as a different scene, an element in a different scene, a job other than the scene's job, or an environment other than the scene's environment. This means the palette is liable to be missing if it is moved from its original location, or if the scene is exported from the database into an offline scene or to a different database.
	This indicates that the palette is stored at a higher level than its palette list, making it a shared palette. For example, a palette in your scene's palette list that is stored in the palette library of the scene's job or environment, or a palette in an element's palette list that is stored in the palette library of the scene.
	Indicates a potentially dangerous situation. For example, a palette file that is stored in one of the scene's element folders, but which is added to your scene's palette list. The whole scene can use the palette, but since it's stored inside an element, deleting that element will make your whole scene lose access to that palette.

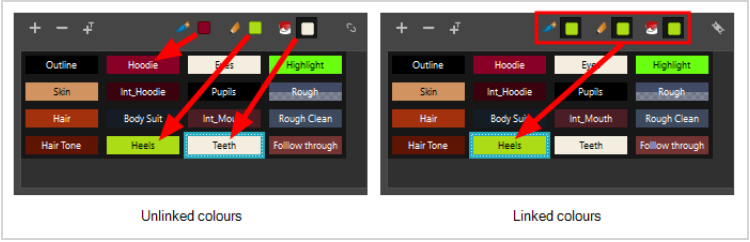
Navigation Panel

Icon	Option	Description
	Previous Drawing	Navigates to the previous drawing in the loaded drawings list.
	Next Drawing	Navigates to the next drawing in the loaded drawings list.
	Previous Column	Switches to the previous column in the loaded columns.
	Next Column	Switches to the next column in the loaded columns.
	Line Art	View and edit the drawing's line art layer.
	Colour Art	View and edit the drawing's colour art layer.
	Preview Line Art and Colour Art	If enabled, both the drawing's line art and colour art layers will be visible. If disabled, only the art layer you are currently working on will be visible.

Colour Swatch List Panel

Icon	Option	Description
	Add Colour	Adds a new colour swatch to the bottom of your colour list.
	Remove Colour	The Remove Colour button lets you delete the currently selected colour swatches. If the colour swatch is used in your project, and confirmation dialog will appear prompting you to confirm that you want to delete the colour. Zones painted with colour swatches which have been deleted will turn red, easily identifying them so you can repaint them with another colour swatch.

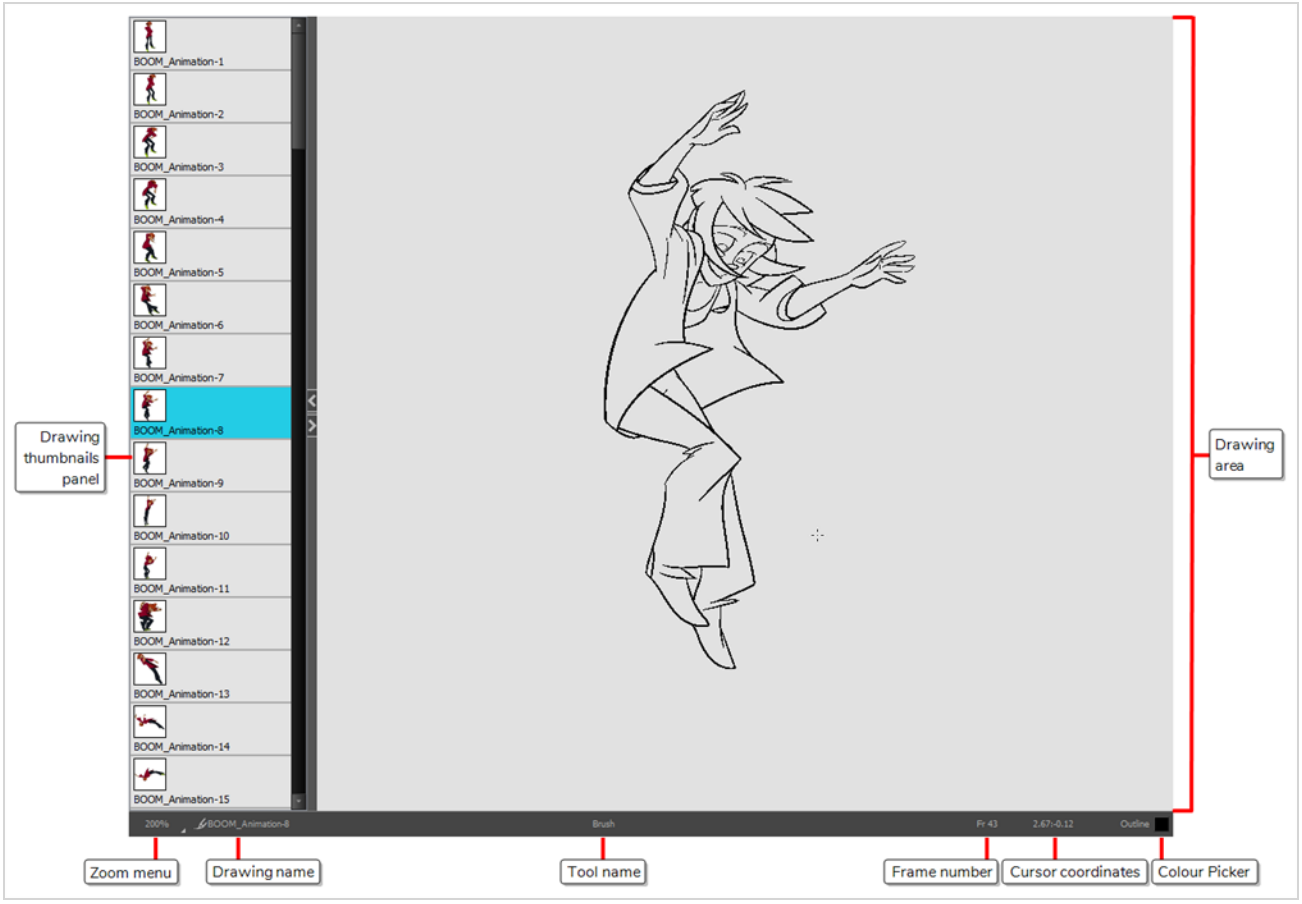
	Add Texture	Allows you to import a bitmap image as a texture, which can be painted with just like a colour. When used with the Brush or Paint tools, bitmap textures are tiled inside the shape they fill. The scaling and position of the texture inside their shape can be tweaked with the Edit Gradient/Texture tool. When used with the Pencil tool or one of the Shape tools, a bitmap texture will follow the pencil line's direction.
	Set Current Brush Colour	When enabled, the colour you select in the colour view will be selected for the Brush tool.
	Set Current Pencil Colour	When enabled, the colour you select in the colour view will be selected for the Pencil tool, as well as other tools that create pencil lines, such as the Line, Rectangle, Ellipse and Polyline tools.
	Set Current Paint Colour	When enabled, the colour you select in the colour view will be selected for the Paint tool.
	Link/Unlink Three Colours	When enabled, the colour you select will be selected for all drawing

		tools. When disabled, you can select individual colours for the Brush, Pencil and Paint tools. 
	Edit Palette Mode	In Harmony Server, this allows you to get the modifying rights to the selected palettes. Since several people can work on any given scene at the same time, and a palette can be shared between scenes, palettes may be loaded in read-only mode when opening a scene on a Harmony database. Then, an user would only be able to edit a palette by first activating Edit Palette Mode. This prevents several users from making changes on the palette at the same time, since a user cannot activate Edit Palette Mode on a palette that is already being edited by someone else. This also prevents users from accidentally making modifications on important palettes.
	Edit Palette Mode Indicator	In Harmony Server, this icon appears when you have the modifying rights on the currently selected palette. **NOTE** In Harmony Stand Alone, you can always modify your palettes.
	Colour Swatch Name	Each colour swatch available in the Colour view can have its own name, making it easy to identify which colour is used to paint what part of your character or background. **NOTE** Two colours can have the same name. Harmony identifies colours by an identification number.
	Colour Swatch	Also referred to as *colour pots*, the colour swatch is the actual colour

		information for a colour in your palette. It is represented by a rectangle displaying the colour in the list.

Drawing View

Only the selected drawing is displayed by default in the Drawing view. You can use features, such as the light table to display the current drawing of all the enabled layers of your scene in washed-out colours, or the Onion Skin to display the previous and next drawings of the currently selected drawing layer.

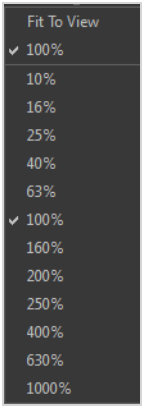


How to access the Drawing view

Do one of the following:

- From the top menu, select **Windows > Drawing** .
- From any of the other views, click the Add View ➕ button and select **Drawing**.

Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use in the Drawing view to draw, animate and paint.

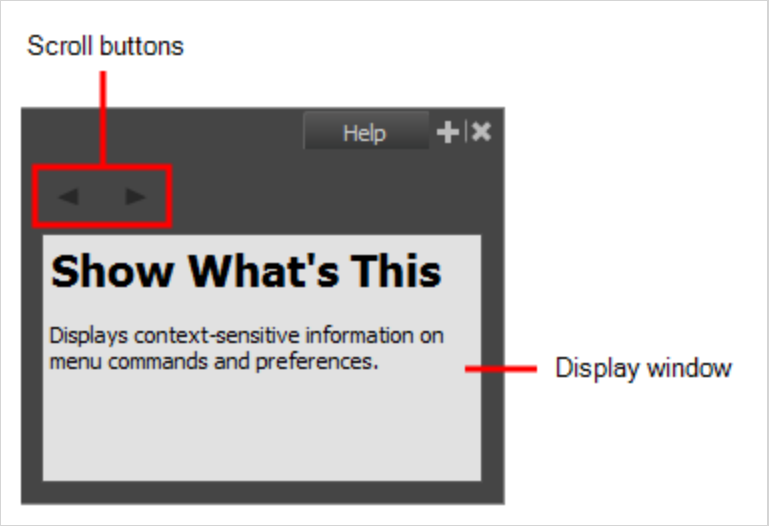
	Drawing Area	This is the main space in the Drawing view. It is where you draw and where the drawings are displayed.
	Zoom Menu	The Zoom menu lets you enlarge or reduce the Camera or Drawing view display. To make the camera frame size always match the size of your view, select the **Fit to View** option. Click the drop-down arrow and select a zoom level or press 1 and 2. 
	Drawing Name	The Drawing Name field displays the name of the selected drawing, as well as the layer containing it. If the cell does not contain any drawing, an **`Empty Cell`** text is shown in the field.
	Tool Name	The Tool Name field displays the name of the selected tool. If you temporarily override a drawing tool using a keyboard shortcut, the tool's name will be highlighted in red. You can temporarily override a tool by holding its keyboard shortcut without the Alt key. For example, the Select tool shortcut is Alt + S. If you hold down the S key, you will switch to the Select tool. When you release the key, you will return to the tool you were using.
	Frame Number	This field displays the current frame of the animation you are working on.
	Cursor Coordinates	This indicates the position of the your pointer in the drawing area.
	Colour Picker	The Colour Picker allows you to select a colour for

		drawing.
	Drawing Thumbnails Panel	The Drawing Thumbnails panel displays a list with thumbnails of the loaded drawings. The highlighted drawing is the one displayed in the drawing area. You can select the drawing you want to paint directly from this list.

Integrated Help View

Use the Integrated Help when you are unsure about what a certain menu item is or the function of a specific preference in the Preferences panel.

If you keep the Integrated Help window open for the entire duration of your work session, then you can use the forward and backward arrows to scroll through a history of the help information that you called up during your session.



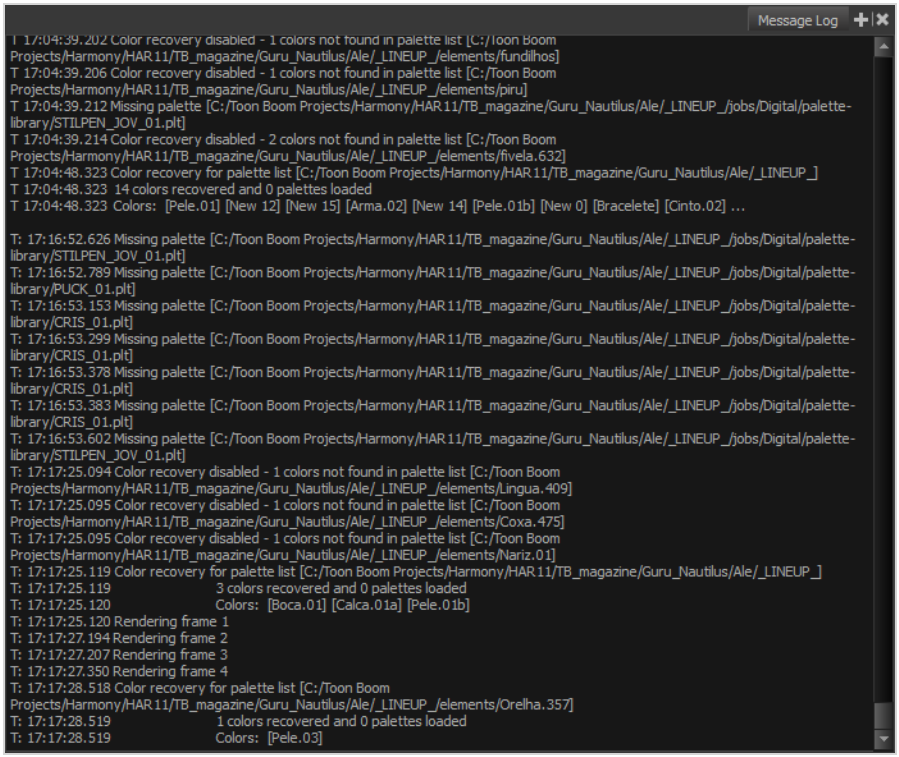
How to access the Integrated Help view

1. Do one of the following:

- From the top menu, select **Windows > Integrated Help**.
- From any of the other views, click the Add View ➕ button and select **Integrated Help**.

Message Log View

The Message log view displays information gathered during a render task, such as which frames and at what time they were each rendered. The view also contains a list of the colour recovery operations.



How to access the Message Log view

Do one of the following:

- From the top menu, select **Windows > Message Log**.
- From any of the other views, click the Add View ➕ button and select **Message Log**.

Model View

T-ANIMPA-004-004

Once you have a fully painted drawing, you can use it as a colour model and load it in the Model view. This drawing can be used and loaded in any of your Harmony scenes.

Once a drawing is loaded in the Model view, you can use the Dropper tool to select a colour from the model and use it to paint in the Camera or Drawing view without having to pick the colour from the colour palette.

Erik, Di-Gata Defenders © Nelvana Limited, Corus® Entertainment Inc.

How to access the Model view

Do one of the following:

- From the top menu, select **Windows > Model**.
- From any of the other views, click the Add View button and select **Model**.

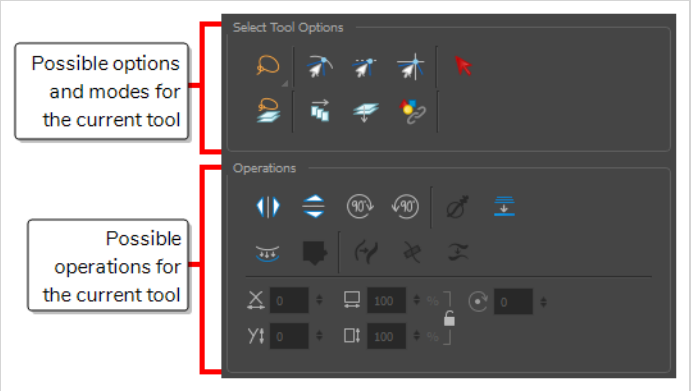
Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to manage models.
	Model View Toolbar	The Model View toolbar contains all the tools and options you can use in the Model view to navigate through and manage models.

Tool Properties View

T-HFND-004-002

The Tool Properties view contains the most common options and operations related to the currently selected tool. When you select a tool from the Tools toolbar, the Tool Properties view updates.

For example, if you choose the Select tool, the Tool Properties view will display the options and operations related to it, such as Snap to Contour, Apply to All Drawings, Flip Horizontal, and Flatten.



NOTE

To learn more about the options appearing in the Tool Properties view, see Tools Properties on page 38.

How to access the Tool Properties view

Do one of the following:

- From the top menu, select **Windows > Tool Properties**.
- From any of the other views, click the Add View ➕ button and select **Tool Properties**.