



**Harmony**  
*Advanced*

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# Toon Boom Harmony Advanced V15.0 Reference Book



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# Reference

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.

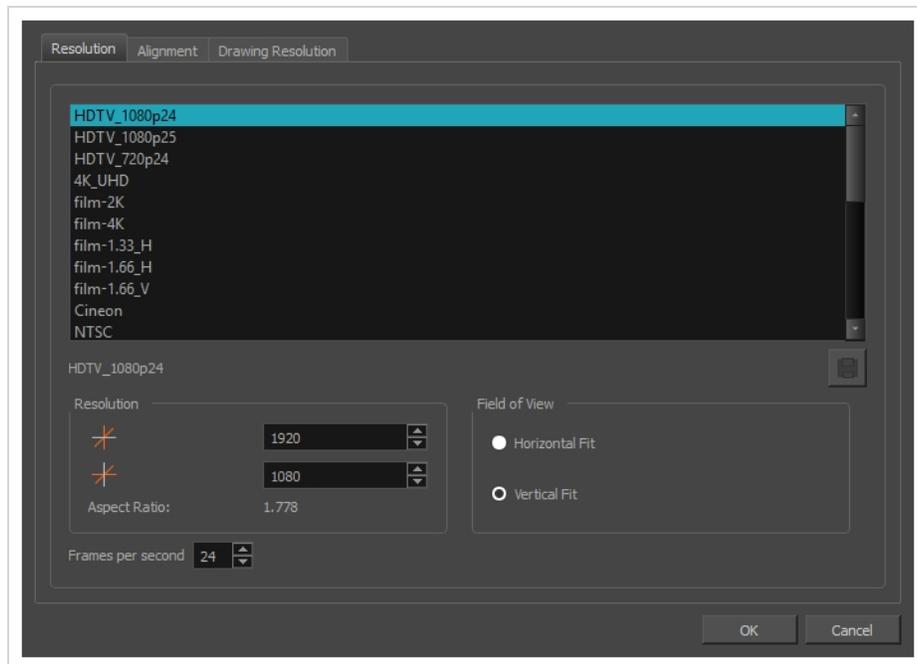
In the Reference guide, you will learn about the various parameters available in dialog boxes, menus, nodes, toolbars, views, and windows.

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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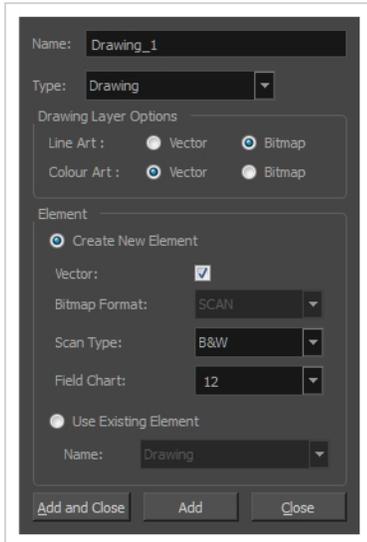
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## Add Column Dialog Box

The Add Column dialog box lets you add a column in the Xsheet view.

By default, when you create a new scene, there is one drawing column in the Xsheet view and one corresponding drawing layer in the Timeline view.

You can add an element for each drawing and it will appear as a column in the Xsheet view, a layer in the Timeline view, and a node in the Node view.



### How to access the Add Column dialog box

- Do one of the following:
  - In the Xsheet menu, select **Columns > Add Columns**.
  - Click the Add Columns + button.
  - Press Shift + C.

Parameter	Description
Name	Lets you give the new column a meaningful name.
Type	Lets you select a type of column to create. Choices include: Drawing, Timing, Sound, 3D Path, 3D Rotation, Bezier Curve, Ease Curve, Expression and Annotation.
Drawing Layer Options	

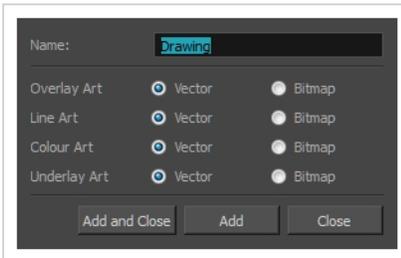
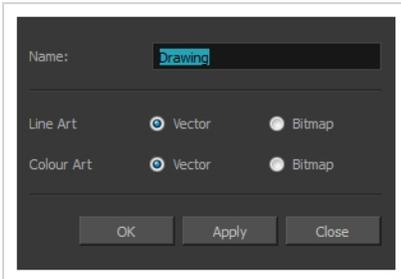
Line Art	Creates a vector or bitmap drawing column in the Line Art layer.
Colour Art	Creates a vector or bitmap drawing column in the Colour Art layer.
Element	
Create New Element	Creates an independent column with its own drawing folder.
Vector	Select this option if you want the layer to contain vector drawings. Deselect this option if you want the layer to contain bitmap images. Most of the time, the Vector option will be enabled.
Bitmap Format	Lets you select the type of bitmap image to insert in the column. Select <b>SCAN</b> from the list if you are planning to scan drawings using the Toon Boom Harmony Scan module.
Scan Type	If you chose <b>SCAN</b> from the Bitmap Format list, select the kind of scanning you want to achieve.
Field Chart	When importing traditional animation, lets you indicate the size of paper on which the animation or background was drawn. If you are not using perforated animation paper, leave the 12 field default value as is.
Use Existing Element	Uses drawings from an existing column in the new column. Both columns will be attached to the same set of drawings, but their timing will remain independent from one another. If you modify one of the drawings, it will be modified in both columns. This is the same principle as the Clone column.
Name	Lets you select the column to which you want to link your new column.
Add and Close	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view and closes the dialog box. The names of the layers/columns are automatically numbered incrementally.
Add	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view. The dialog box remains open for you to add as many layers/columns as needed. The names of the layers/columns are automatically numbered incrementally.
Close	Closes the dialog box.

## Add Drawing Layer Dialog Box

The Add Drawing Layer dialog box lets you add a drawing layer to your project.

By default, when you create a new scene, there is one drawing column in the Xsheet view and one corresponding drawing layer in the Timeline view.

You can add an element for each drawing and it will appear as a column in the Xsheet view, a layer in the Timeline view, and a node in the Node view.



### How to access the Add Drawing Layer dialog box

- Do one of the following:
  - In the Timeline view, click the Add Drawing Layer  button.
  - From the top menu, select **Insert > Drawing**.
  - Press Ctrl + R (Windows/Linux) or ⌘ + R (macOS).

Parameter	Description
Name	Lets you give the new layer a meaningful name.
Overlay Art	Creates a vector or bitmap drawing layer in the Overlay Art layer.
Line Art	Creates a vector or bitmap drawing layer in the Line Art layer.

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Colour Art	Creates a vector or bitmap drawing layer in the Colour Art layer.
Underlay Art	Creates a vector or bitmap drawing layer in the Underlay Art layer.
Add and Close	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view and closes the dialog box. The names of the layers/columns are automatically numbered incrementally.
Add	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view. The dialog box remains open for you to add as many layers/columns as needed. The names of the layers/columns are automatically numbered incrementally.
Close	Closes the dialog box.

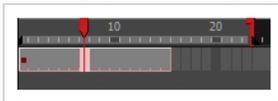
## Add Frames Dialog Box

The Add Frames dialog box lets you add frames anywhere in the middle of the scene—before or after a selection. If you select a frame row in the Xsheet view, Harmony will add the new frames before or after the selection, depending on your choice.

### How to access the Add Frames dialog box

1. In the Timeline or Xsheet view, select a frame or a range of frames.

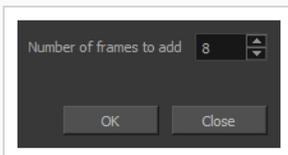
	Drawing_3	Drawing_2	Drawing_1	Drawing
1	13	15	1	1
2	14		2	
3	1		3	
4			4	
5		1	5	1
6		2	6	
7		3		
8	2	4		



2. Do one of the following:

- From the top menu, select **Scene > Frame > Add Frames Before Selection** or **Add Frames After Selection**.
- In the Xsheet view, right-click and select **Frames > Add Frames Before Selection** or **Add Frames After Selection**.
- In the Xsheet toolbar, click the Add Frames  button to add frame after your selection.
- Press **Ctrl + G** (Windows/Linux) or **⌘ + G** (macOS) to add frames before the selection, or **Ctrl + H** to add frames after the selection.

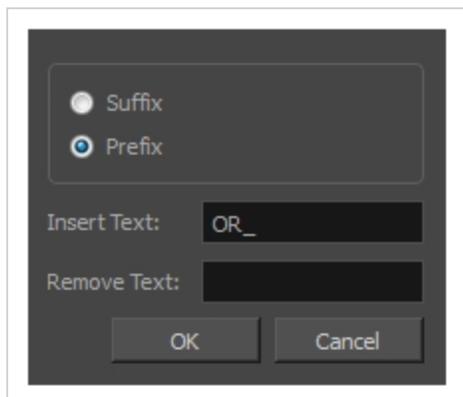
The Add Frames dialog box opens.



Parameter	Description
Number of frames to add	Lets you enter the number of frames needed in the scene.

## Add Prefix or Suffix Dialog Box

The Add Prefix or Suffix dialog box lets you add or remove a prefix or suffix for a multi-layer selection.



### How to access the Add Prefix or Suffix dialog box

1. In the Timeline view, select all the layers to rename or press Ctrl + A (Windows/Linux) or ⌘ + A (macOS).



2. In the Scripting toolbar, click the Add Prefix or Suffix Script  button. If the Scripting toolbar is not visible, you can display it by selecting **Windows > Toolbars > Scripting** from the top menu. If the Add Prefix or Suffix Script  button is not visible in the Scripting toolbar.

The Add Prefix or Suffix dialog box opens.

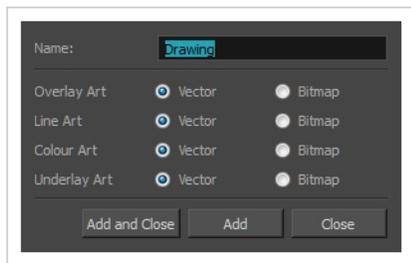
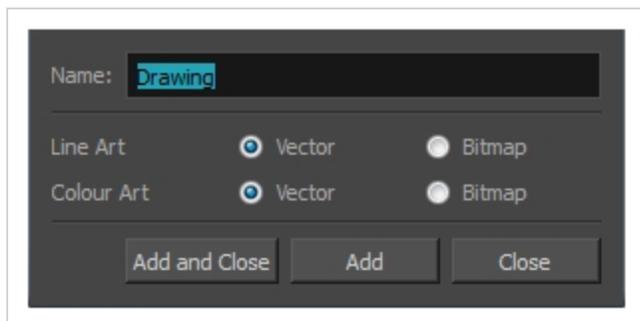
Parameter	Description
Suffix	Allows you put a defined set of characters (letters, numbers, symbols) after the pre-existing layer name.
Prefix	Allows you put a defined set of characters (letters, numbers, symbols) before the pre-existing layer name.
Insert Text	Enter a set of characters to be added to the selected layers.

Remove Text	Enter a set of characters to be removed from the selected layers.
-------------	---

## Add Synced Drawing Layer Dialog Box

The Add Synced Drawing Layer dialog box lets you add a drawing layer to your project that will automatically be synced with the currently selected layer.

Depending on whether the Support Overlay and Underlay Arts option was selected in the Advanced tab of the Preferences panel, the Add Synced Drawing Layer dialog box may look one of two ways.



### How to access the Add Synced Drawing Layer dialog box

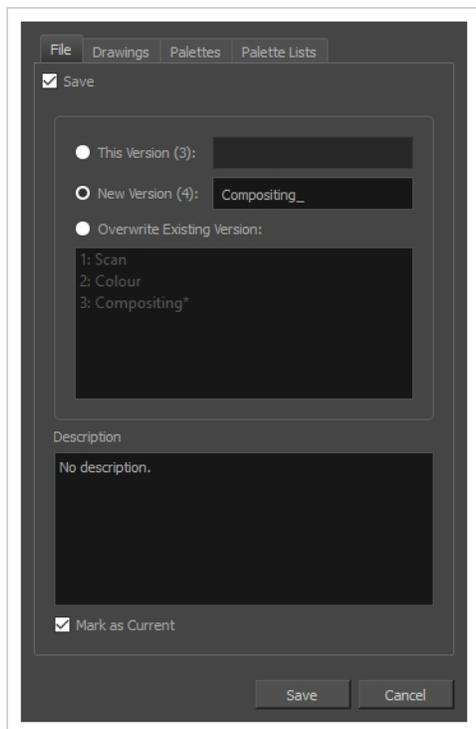
1. In the Timeline view, right-click on the drawing layer you would like to sync with another layer.
2. From the right-click menu, select **Add Synced Drawing Layer**.

Parameter	Description
Name	Lets you give the new layer a meaningful name.
Overlay Art	Creates a vector or bitmap drawing layer in the Overlay Art layer.
Line Art	Creates a vector or bitmap drawing layer in the Line Art layer.
Colour Art	Creates a vector or bitmap drawing layer in the Colour Art layer.
Underlay Art	Creates a vector or bitmap drawing layer in the Underlay Art layer.

Add and Close	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view and closes the dialog box. The names of the layers/columns are automatically numbered incrementally.
Add	Adds the selected type of layers to the Timeline view and corresponding column in the Xsheet view. The dialog box remains open for you to add as many layers/columns as needed. The names of the layers/columns are automatically numbered incrementally.
Close	Closes the dialog box.

## 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.

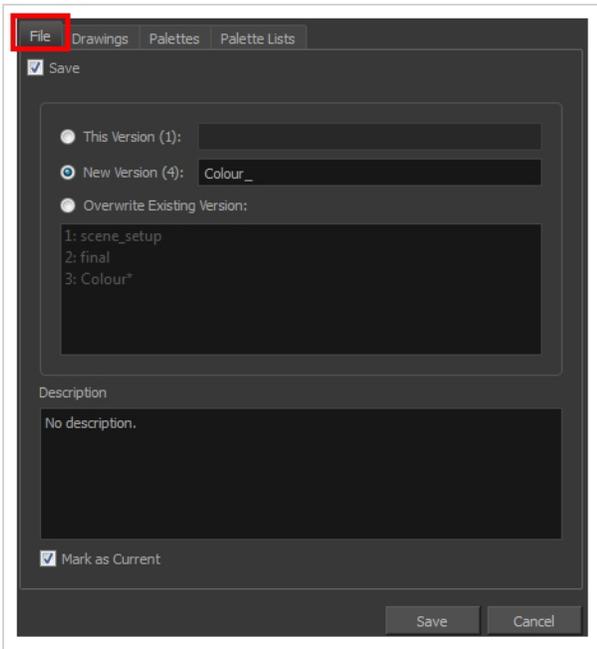


### How to access the Advanced Save dialog Box

1. Make sure that you have the necessary rights to save the current scene version. If you do not, you can acquire the rights by selecting **File > Rights to Modify Scene Version** or **Rights to Modify Scene** from the top menu.
2. From the top menu, select **File > Advanced Save**.

The Advanced Save dialog appears.

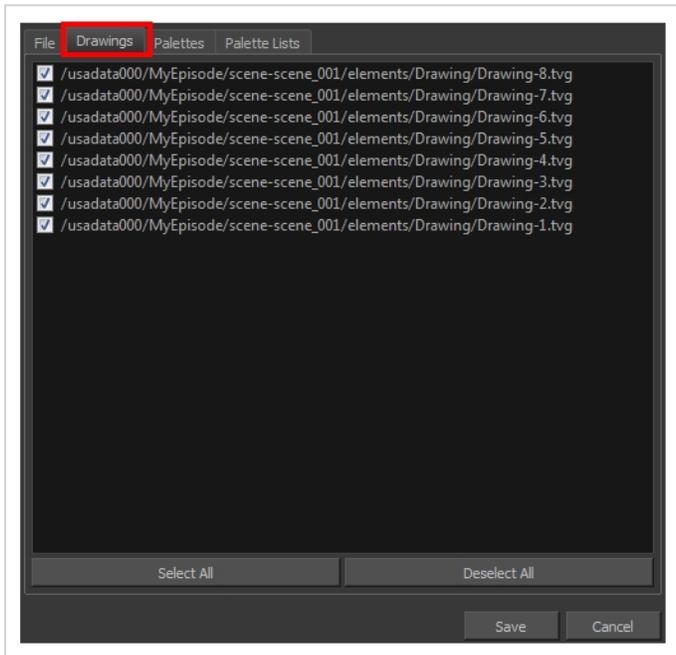
## File Tab



Parameter	Description
Save	<ul style="list-style-type: none"> <li>▶ Enable this option if you want to save the modifications made to the current scene.</li> <li>▶ 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.</li> </ul>
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 <b>Database Selector</b> dialog box

## Drawings (Harmony Server only)

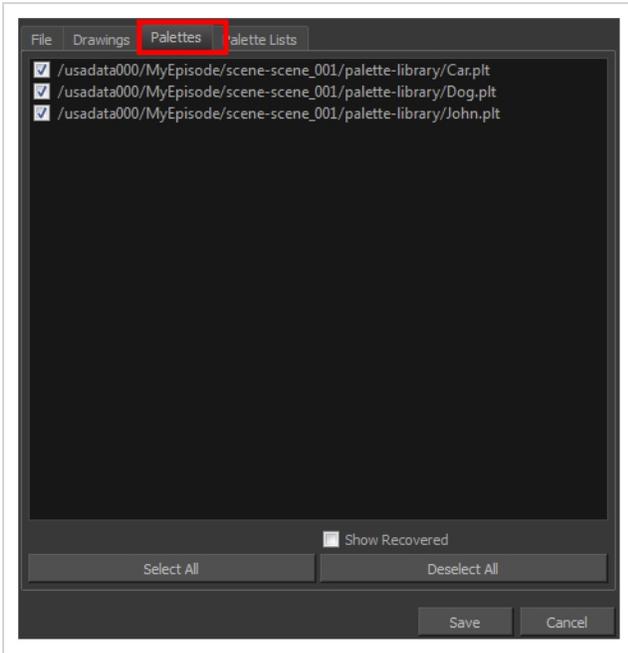
The Drawings tab lists the modified drawings.



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

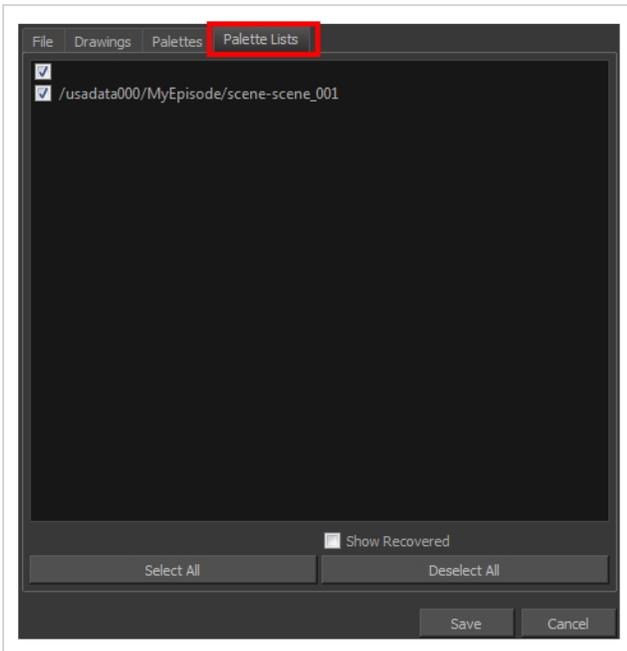
The Palette tab lists the modified colour palettes.



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

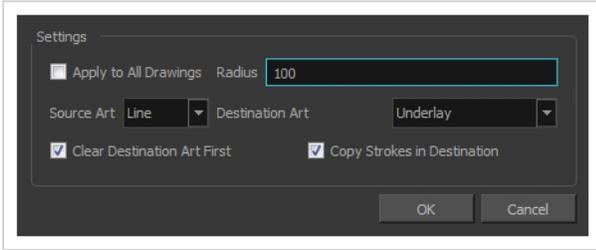
The Palette Lists tab lists all the modified colour palette lists.



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.

## Auto-Matte Dialog Box

The Auto-Matte dialog box lets you generate a matte for a drawing.



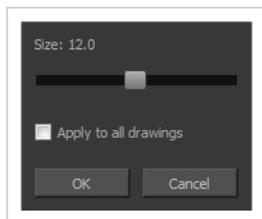
### How to access the Auto Matte dialog box

1. In the Camera or Drawing view, select the drawing you want to create a matte for.
2. Do one of the following:
  - From the top menu, select **Drawing > Generate Auto-Matte**.
  - In the Camera or Drawing menu, select **Drawing > Generate Auto-Matte**.

Parameter	Description
Settings	
Apply to all Drawings	Creates a matte for all the drawings included in layer.
Radius	Lets you increase or decrease the radius value depending on the precision or roughness of your line. Use a lower value, the closer to your lines' contours the matte will be shaped. The higher the value, the looser the matte will be shaped.
Source Art	Lets you select the layer from which you want the matte created: <b>Line ArtColour Art</b> .
Destination Art	Lets you select the layer on which you want the matte to be created: <b>Line ArtColour Art</b> .
Clear Destination Art First	Deletes existing artwork on the destination layer before adding a matte to it.
Copy Strokes in Destination	Copies the contour of your lines as invisible lines in the matte drawing. This is useful if you need to reuse the lines later.

## 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

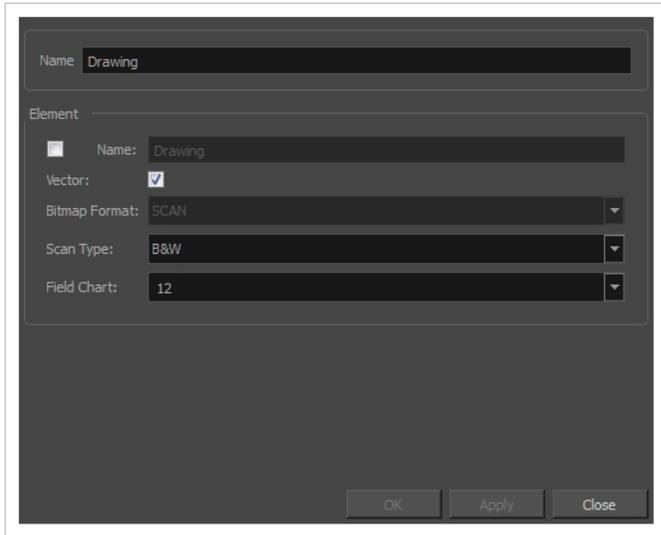
1. Select **View > Show > Show Strokes** or press K to see a preview of the result.
2. To flatten the strokes you draw, click the Auto-Flatten  button in the Tool Properties view.
3. Select **Drawing > Clean Up > Close Gaps** or press Shift + F10 (Windows/Linux only).

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.

## Column Properties Dialog Box

The Column Properties dialog box lets you add, delete or modify elements (drawing folders) in your scene.



### How to access the Drawing dialog box

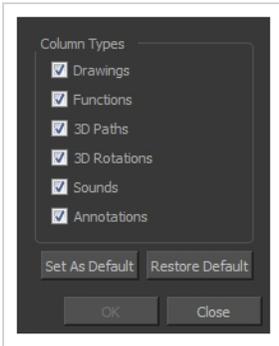
1. In the Xsheet view, double-click on a column name. Do not click on the drawing folder name that the column is linked to (this also appears in the column header just below the column name).

Parameter	Description
Name	Type in a new name in this field to create an element or to rename the selected element.
Element	
Name	Type in a new name in this field to create an element or to rename the selected element.
Vector	Select this option if the new element is a vector drawing or if you want to enable the parameters on the selected element in the Elements list.
Bitmap Format	Lets you select the file format of the bitmap layer.
Scan Type	If you're planning to scan elements with the Toon Boom Harmony Scan module, select the scan type from the list.

Field Chart	If you're importing traditional animation, select the size of the paper on which the animation was drawn.
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## Column Types Dialog Box

The Columns Types dialog box lets you show or hide columns in the exposure sheet.



### How to access the Columns Types dialog box

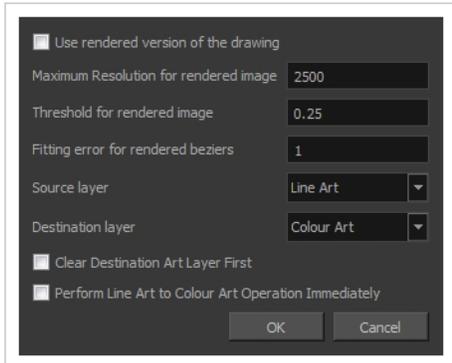
1. In the Xsheet view, select **View > Column Types Manager**.

The Column Types dialog box opens.

Parameter	Description
Column Types	Lets you select the types of columns to display in the Xsheet view.
Save as Default	Makes these new settings the default ones used each time you start Harmony.
Restore Default	Returns the settings to their defaults.

## 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

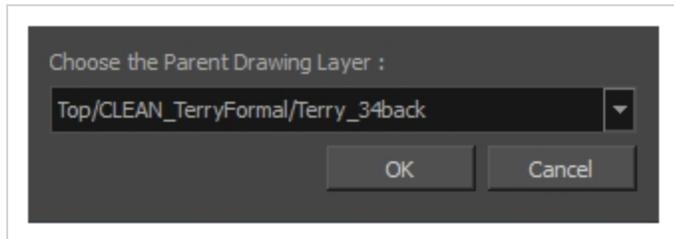
1. In the Tools toolbar, select the Select tool.
2. In the Tool Properties view, hold down the Shift key and click on the Create Colour Art from Line Art button.

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 <b>Overlay</b> ) you want the colour art to be created from.
Destination layer	Lets you select the layer (Line Art, Colour Art, Underlay or <b>Overlay</b> ) you want the colour art to be created on.
Clear Destination Art Layer	Deletes the content before the colour art is added. This is useful when you

First	already have artwork on the destination layer.
Perform Line Art to Colour Art Operation Immediately	Performs the <b>Create Colour Art from Line Art</b> command when you click OK.

## Convert to Synced Drawing Layer Dialog Box

The Sync Layer feature allows for drawings to be separated on different layers, but to have the same timing.



### How to access the Convert to Synced Drawing Layer dialog box

1. right-click on a drawing layer you would like to sync with another layer.
2. From the right-click menu, select **Sync Layers With**.

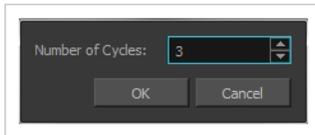
In the Choose the Parent Drawing Layer drop-down list, with the exception of the selected layer, every layer in your scene is listed.

3. To sync a layer with your currently selected layer, from the drop-down list, select a parent drawing layer and click OK. The child layer immediately updates to the parent layer's timing.

## Create Cycle Dialog Box

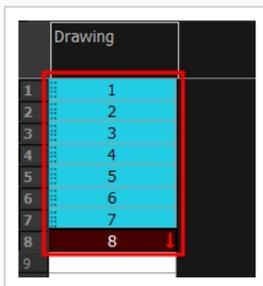
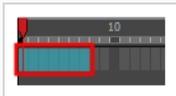
The Create Cycle dialog box lets you create cycles from a series of drawings and exposures.

When you create a drawing cycle, all the repeated drawings are linked to the same original files. When modify, repaint, or correct a drawing named “1” for example, all drawings named “1” are updated simultaneously. In order to modify a drawing independently from its other exposures, you must duplicate the drawing.



### How to access the Create Cycle dialog box

1. In the Timeline or Xsheet view, select the cell range to loop.



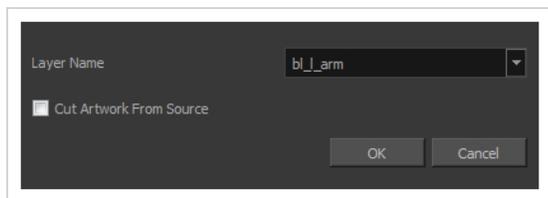
2. In the Timeline toolbar, click the Create Cycle  button (you may have to customize the toolbar to display it).

The Create Cycle dialog box opens.

Parameter	Description
Number of Cycles	Lets you specify the number of cycles, including the current selection.

## Create Drawing from Drawing Selection Dialog Box

The Create Drawing from Drawing Selection dialog box lets you cut a part of a drawing and send it to a new or existing layer.



### How to access the Create Drawing from Drawing Selection dialog box

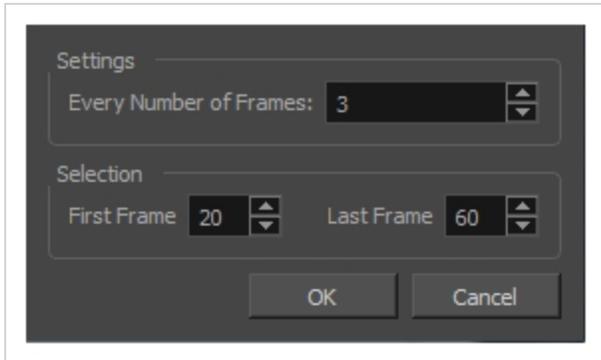
1. From the top menu, select **Edit > Create Drawing From Drawing Selection** or press F9 (Windows/Linux) or  $\text{⌘} + \text{F9}$  (macOS).

The Create Drawing From Drawing Selection dialog box opens.

Parameter	Description
Layer Name	Lets you enter a name for the layer using the naming convention you established.
Cut Artwork From Source	Lets you cut the selected artwork from the model.

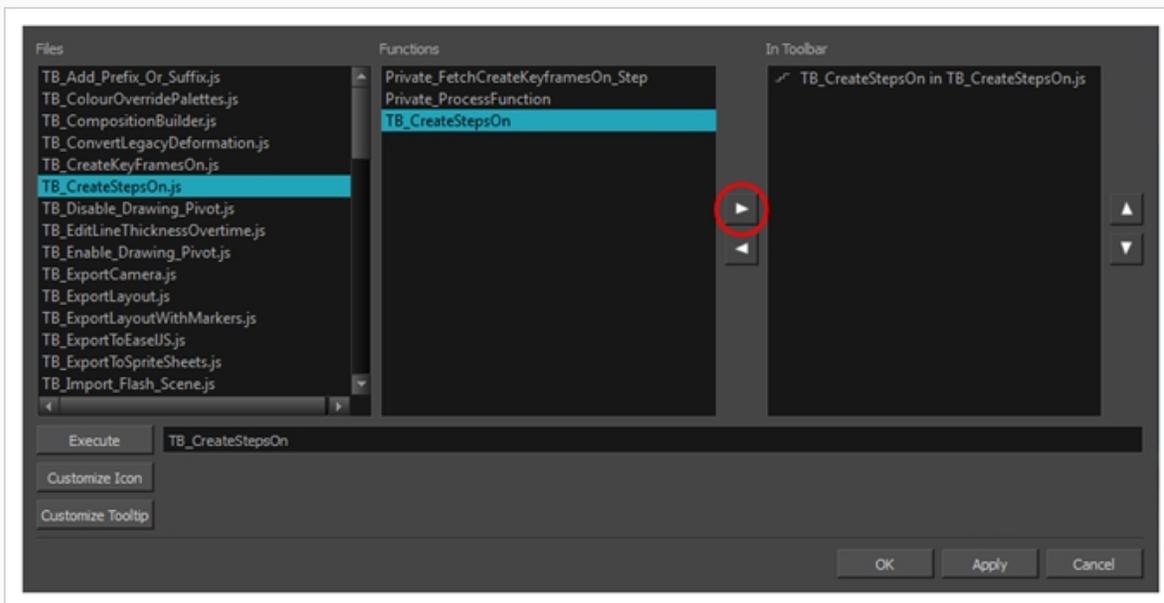
## Create Function Step On Dialog Box

The Create Function Step On dialog box lets you hold the same value over a selected number of frames for multiple parameters (pos x, scale y, etc.). This works well when you are animating drawings on 2s or 3s, for example, and you want to hold the same value for a function over those two or three frames.



### How to access the Create Function Step On dialog box

1. Add the Scripting toolbar to your interface:
  - Go to the top menu and select **Windows > Toolbars > Scripting**.
  - right-click on the empty space near the top of the interface and from the quick-access menu selecting **Scripting**.
  - right-click on the empty space near the top of a view and from the quick-access menu selecting **Scripting**.
2. In the Scripting toolbar, click on the Manage Scripts  button to open the Scripts Manager window.
3. In the Scripts Manager, in the Files section, select the file **TB\_CreateStepsOn.js**.  
The functions associated with that file appear in the Functions section.
4. In the Functions section, select **TB\_CreateStepsOn**.  
The Add script to toolbar  button becomes active.

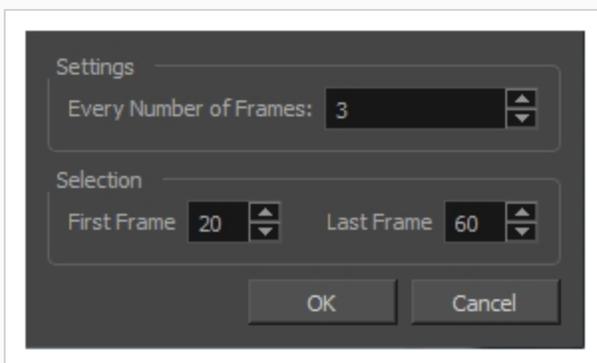


- Click on the Add script to toolbar  $\triangleright$  button.

The TB\_CreateStepsOn script  $\checkmark$  button is added to the Scripting toolbar.

- Click **Apply**.
- Click **OK**.
- In the Timeline view, select the layer whose parameter values you would like to hold.
- In the Scripting toolbar, click on the TB\_CreateStepsOn script  $\checkmark$  button.

The Create Function Step On dialog box appears.



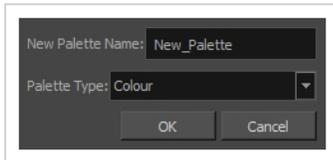
Parameter	Description
Settings	

Every Number of Frames	Enter in the number of frames you would like to hold your functions.
Selection	
First Frame	Enter in the frame number of where you would like the stepped holds to start. The playhead location determines the lowest value you can enter for the first frame. You need to move the playhead to frame one if you would like to set frame one as the lowest possible starting value.
Last Frame	Enter in the frame number of where you would like the stepped holds to stop.

## 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.

The Create Palette dialog box is used by default to create palettes. If you have the Advanced Palette Lists preference enabled, the Palette Browser dialog will open instead, which allows you to decide the level of palette list and storage desired for your palette—see [Palette Browser Dialog Box](#).



### 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	Lets you enter a name for the new palette.
Palette Type	Lets you choose one of the following palette types: <ul style="list-style-type: none"> <li>• <b>Colour:</b> A colour palette can contain colours, gradients and bitmap textures.</li> <li>• <b>Pencil Texture:</b> 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.</li> </ul>

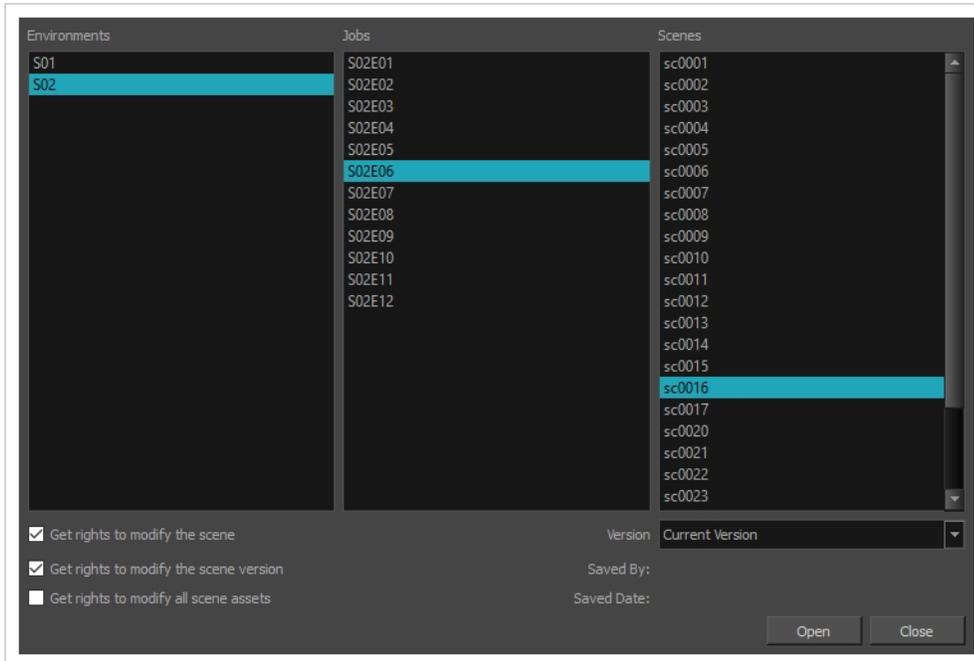
## Database Selector Dialog Box

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 Harmony
2. In the log-in dialog, select **Connect to Database**.
3. In the **User Name** field, type in your Harmony Server username.
4. Click on **OK**.

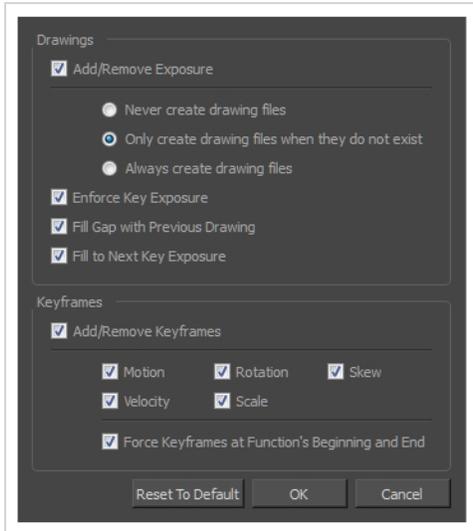
The Database Selector dialog box opens.

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 <b>Get rights to modify the scene</b> 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 Harmony Paint while you are working on the scene's timing or staging in Harmony.
Version	If you saved different versions of a scene, this lets you select one to open.

## Edit Default Paste Preset Dialog Box

The Edit Default Paste Preset dialog box lets you modify settings for the keyframe and exposure paste presets, as well as setting the defaults.



### How to access the Edit Default Paste Preset dialog box

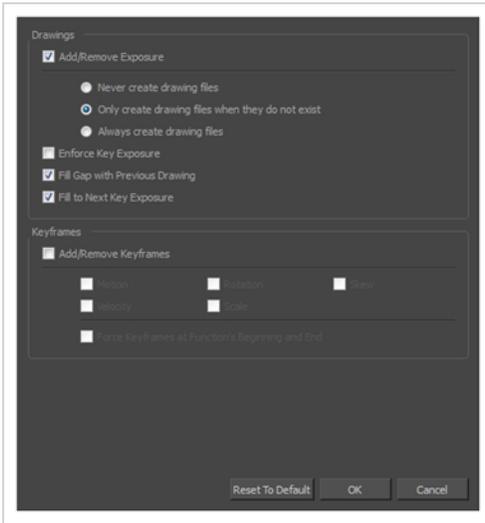
1. From the Timeline menu, select **Edit > Modify Paste Presets > All** or **Key Frame** or **Exposure**.

Parameter	Description
Drawings	
Add/Remove Exposure	<b>Never create drawing files:</b> When adding exposures to a drawing layer, drawing files will not be created.
	<b>Only create drawing files when they do not exist:</b> When adding exposures to a drawing layer, new drawings will be created only when drawings with the same name do not already exist in the destination.
	<b>Always create drawing files:</b> When adding exposures to a drawing layer, new drawings will always be created. If drawing files with the same name already exist, Harmony will create a new name for the drawing.
Enforce Key Exposure	If there are key exposures that exist on copied drawings, they are preserved when pasting. No key exposures are added. This is the default behavior when pasting.

Fill Gap with Previous Drawing	Fills selected area in the Xsheet or Timeline view with the previous drawing.
Fill to Next Key Exposure	Fills selected area till the next key exposure.
Keyframes	
Add/Remove Keyframes	<b>Motion:</b> Copies the properties of the selected motion keyframe to the new frame.
	<b>Velocity:</b> Copies the properties of the selected velocity keyframe to the new frame.
	<b>Rotation:</b> Copies the properties of the selected rotation keyframe to the new frame.
	<b>Scale:</b> Copies the properties of the selected scale keyframe to the new frame.
	<b>Skew:</b> Copies the properties of the selected skew keyframe to the new frame.
	<b>Force Keyframes at Function's Beginning and End:</b> Adds a keyframe to the beginning and end of the pasted function, reproducing the source function.

## Edit Exposure Paste Preset Dialog Box

The Edit Exposure Paste Preset dialog box lets you reuse key exposures as you animate.



### How to access the Edit Exposure Paste Preset dialog box

1. From the Timeline view menu, select **Edit > Modify Paste Presets > Exposure**.

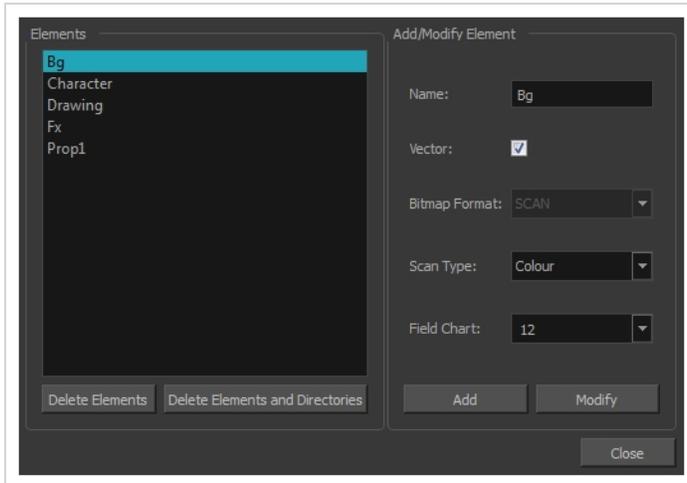
The Edit Exposure Paste Preset dialog box opens.

Parameter	Description
Drawings	
Add/Remove Exposure	<b>Never create drawing files:</b> When adding exposures to a drawing layer, drawing files will not be created.
	<b>Only create drawing files when do they do not exist:</b> When adding exposures to a drawing layer, new drawings will be created only when drawings with the same name do not already exist in the destination.
	<b>Always create drawing files:</b> When adding exposures to a drawing layer, new drawings will always be created. If drawing files with the same name already exist, Harmony will create a new name for the drawing.
Enforce Key Exposure	Creates a key exposure on the same drawing.
Fill Gap with Previous	Fills selected area in the Xsheet or Timeline view with the previous drawing.

Drawing	
Fill to Next Key Exposure	Fills selected area till the next key exposure.
Keyframes	
Add/Remove Keyframes	<b>Motion:</b> Copies the properties of the selected motion keyframe to the new frame.
	<b>Velocity:</b> Copies the properties of the selected velocity keyframe to the new frame.
	<b>Rotation:</b> Copies the properties of the selected rotation keyframe to the new frame.
	<b>Scale:</b> Copies the properties of the selected scale keyframe to the new frame.
	<b>Skew:</b> Copies the properties of the selected skew keyframe to the new frame.
	<b>Force Keyframes at Function's Beginning and End:</b> Adds a keyframe to the beginning and end of the pasted function, reproducing the source function.
Reset to Default	Return all values to their defaults.

## Element Manager Dialog Box

The Element Manager window lets you Open the Element Manager window where you can add, delete or modify elements (drawing folders) in your scene. If you have drawing folders that are not linked to a column in your scene, use the Element Manager to delete them if needed. See [xref Reference > Windows > Element Manager](#).



### How to access the Element Manager window

1. From the top menu, select **Scene > Element Manager**.

Parameter	Description
Elements	
Delete Elements	Deletes the selected elements.
Delete Elements and Directories	Deletes the selected layer and its directories (drawing folder).
Add/Modify Element	
Name	Type in a new name in this field to create an element or to rename the selected element.
Vector	Select this option if the new element is a vector drawing or if you want to enable the parameters on the selected element in the Elements list.

Bitmap Format	Lets you select the file format of the bitmap layer.
Scan Type	If you're planning to scan elements with the Toon Boom Harmony Scan module, select the scan type from the list.
Field Chart	If you're importing traditional animation, select the size of the paper on which the animation was drawn.
Add	Creates a new element with the current parameters entered in the <b>Add/Modify Element</b> section.
Modify	Applies the parameter changes made to the selected element.

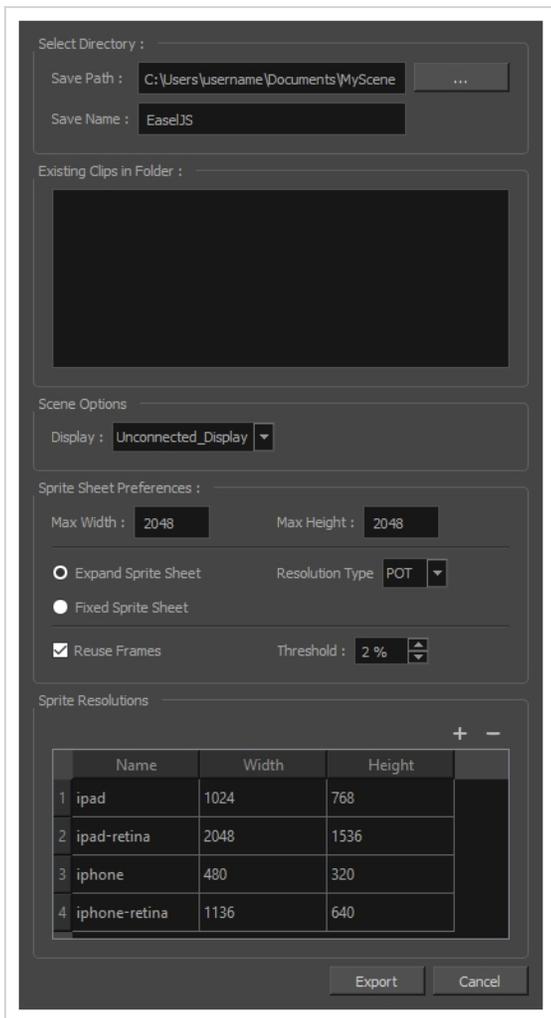
## Export to Easel JS Dialog Box

The Export to Easel JS dialog allows you to export your game character as a sprite sheet, in which each animation frame in your scene is rendered as an individual sprite.

Since the Export to Easel JS dialog renders each frame in your scene, there will not be any visible difference between the way your character is rendered by Harmony and how it is rendered in your game engine.

However, the Export to Easel JS dialog has the following important limitations:

- Contrary to the Export to Sprite Sheet dialog, the Export to Easel JS only outputs a sprite sheet and an XML document delimiting each sprite in the sheet. Hence, they cannot be imported into Unity using the Harmony Game SDK package. You must program the logic to import those sprite sheets into your game engine yourself.
- The Export to Easel JS dialog does not export anchors and props.
- To export to Easel JS, you must separate your animation clips using scene versions. The Export to Easel JS dialog will not export separate animation clips if you have separated them using scene markers.
- Fully rendered sprite sheets are much heavier in size than rigged sprite sheets, which is what the Export to Sprite Sheet dialog exports.



## How to access the Export to Easel JS window

1. Do one of the following:

- In the top menu, select **Windows > Toolbars > Game**.
- Right-click on any existing toolbar and select **Game**.



2. Click the **Export to Easel JS** button.

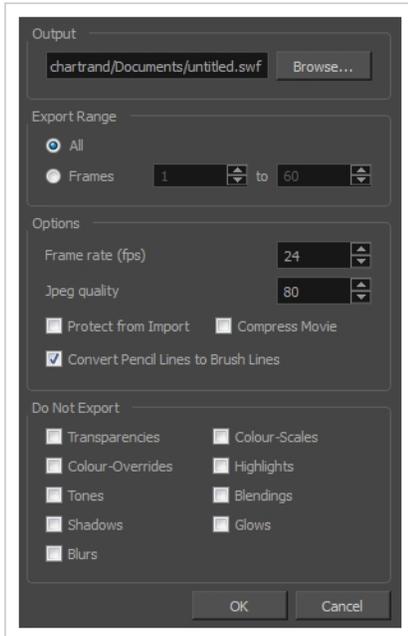
Parameter	Description
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<b>Select Directory</b>	
Save Path	The target directory in which to export your sprite sheets.
Save Name	The name of the folder in which the spritesheet and its metadata will be saved. This folder will be located inside the Save Path folder. If it does not exist, it will be created. This will also be the name of your asset in Unity.
<b>Existing Clips in Folder</b>	
Existing Clips List	If you already exported clips for this character, this will display the list of clips that already exist in the target directory.
<b>Scene Options</b>	
Display	<p>The Display from which to render your character. If the Unconnected_Display option is selected, all of the visual information in your scene will be rendered.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <p><b>NOTE</b> You can only create Displays in Harmony Premium.</p> </div>
<b>Sprite Sheet Preferences</b>	
Max Width	The maximum width, in pixels, of the exported sprite sheets.
Max Height	The maximum height, in pixels, of the exported sprite sheets.
Expand Sprite Sheet	Creates sprite sheets in the smallest possible size to contain all the sprites, up until it reaches the maximum width and height.
Fixed Sprite Sheet	Creates a texture of the specified size (Max Width and Max Height) even if it does not fill it up completely by all the drawings in your scene.
Resolution Type	<p>Allows you to choose between one of these two resolution types:</p> <ul style="list-style-type: none"> <li>• <b>POT</b>: Exports to sprite sheets with sizes that are a power of 2. For example: 1024 x 1024. This is optimized for many graphics cards, but consumes more memory.</li> <li>• <b>NPOT</b>: Some game engines are optimized specifically to render to non powers of two, so that it will avoid those numbers. Example: 1000 x 1000.</li> </ul>

Reuse Frames	This option works in tandem with the Threshold option. The export will compare the drawings in your project to reuse a maximum of similar drawings and reduce the amount of information found in the sprite sheet, making it lighter. The export will omit the creation of new drawings if the difference is less than the threshold percentage.
Threshold	Calculates the differences between multiple drawings. A 2% threshold will prevent the creation of a new drawing if the drawing is too similar to an existing drawing. For instance, with a 2% threshold, and my drawing is 100 pixels big, only 2 of those pixels need to be different from my other drawing in order to create a new one. The higher the threshold, the fewer similar drawings you will have.
<b>Sprite Resolutions</b>	
Add Resolution	Allows you to add a resolution in which to export your sprite sheets.
Remove Resolution	Removes the selected resolution from the resolutions list.
Resolutions List	The list of resolutions in which the sprite sheet will be exported. The whole sprite sheet will be rendered once for each resolution in the list.

## Export to Flash Movie Dialog Box

The Export to Flash Movie dialog box lets you export your animation as a Flash (.swf) movie.



### How to access the Export to Flash Movie dialog box

1. From the top menu, select **File > Export > SWF**.

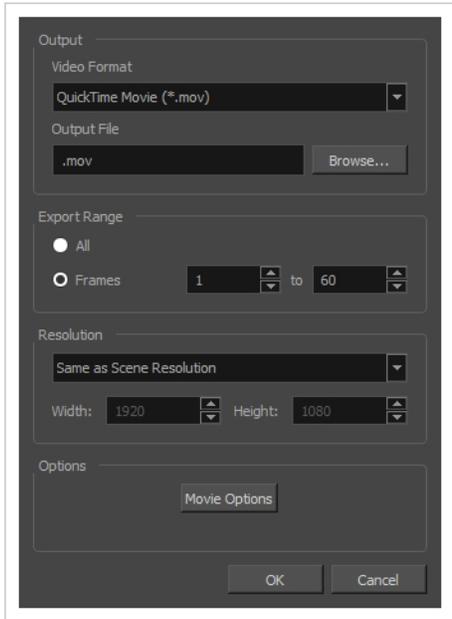
The Export to Flash Movie (.swf) dialog box opens.

Parameter	Description
Output	Lets you specify the location in which the file will be exported.
Export Range	
All	Exports all the frames of your movie.
Frames	Export a frame range which you specify
Options	
Frame Rate	Lets you enter a Frame rate (fps). By default, it will be set to match the fps of your Harmony project. If you choose a lower frame rate, your export playback will be

	faster than your actual project. The reverse is also true for a higher frame rate.
Jpeg Quality	<p>Lets you select a JPEG quality:</p> <ul style="list-style-type: none"> <li>▶ 100 = Full quality</li> <li>▶ 50 = Average quality at about 1/5th of the size.</li> <li>▶ 25 = Medium quality where loss of high image resolution starts to occur.</li> <li>▶ 10 = Low quality where “macro-blocking” or large pixelation become obvious.</li> <li>▶ 1 = Lowest quality where there is extreme loss of colour and detail and the image becomes nearly unrecognizable.</li> </ul>
Protect from Import	Prevents the movie from being imported into another application.
Convert Pencil Lines to Brush Lines	Retains the thickness of pencil lines.
Compress Movie	Compresses the movie for a lighter format. The movie may lose some quality, but the file will be lighter.
Do Not Export	<p>Lets you select the effects you do <b>NOT</b> want to be rendered in the SWF movie.</p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b>  Certain Harmony effects are not listed in this section as they are not compatible and therefore not available for SWF export. These effects will not appear in the SWF render.</p> </div>

## Export to Video Dialog Box

The Export to Video dialog box lets you export your animation as a movie file.



### How to access the Export to QuickTime Movie dialog box

1. From the top menu, select **File > Export > Movie**.

Parameter	Description
Output	
Video Format	<p>Choose among the following output formats:</p> <ul style="list-style-type: none"> <li>• <b>Quick Time Movie (*.mov)</b>: Available on Windows, macOS and GNU/Linux.</li> <li>• <b>Windows Media Video (*.wmv)</b>: Available on Windows only.</li> </ul> <div data-bbox="597 1577 1425 1808" style="border: 1px solid green; padding: 5px;"> <p> <b>NOTE</b> On Windows and macOS, <a href="#">Apple QuickTime</a> must be installed in order to export QuickTime movies. On GNU/Linux, Harmony uses a more limited, open source QuickTime-compatible library which does not require additional software.</p> </div>

Output file	The full path and file name of the movie file to export.
Browse	Opens a dialog allowing you to browse to the desired export directory and enter the desired filename.
Export Range	
All	Exports all the frames in your scene.
Frames	Lets you specify the frame range to export using the two input fields to the right. The first input field is for specifying the first frame to export, and the second one is for specifying the last frame to export. All the frames in-between, including the ones specified, will be exported.
Resolution	
Resolution list	<p>Lets you specify a resolution to export in relative to your scene's actual resolution:</p> <ul style="list-style-type: none"> <li>• <b>Same as Scene Resolution:</b> Exports a movie in the same resolution as your scene's resolution.</li> <li>• <b>3/4 of Scene Resolution:</b> Exports a movie at 75% of the scene's width and height.</li> <li>• <b>1/2 of Scene Resolution:</b> Exports a movie at 50% of the scene's width and height.</li> <li>• <b>1/4 of Scene Resolution:</b> Exports a movie at 25% of the scene's width and height.</li> <li>• <b>Custom:</b> Lets you specify the preferred resolution of your exported video file in the <b>Width</b> and <b>Height</b> fields below.</li> </ul>
Width / Height	Lets you specify the width and height of video file you wish to export, in pixels. To preserve your scene's aspect ratio, changing the value of the Width or Height field will automatically update the other field with a proportional value.
Options	
Movie Options	Opens the movie settings dialog box for your selected video format, in which you can set the video and audio compression settings for your video file—see <a href="#">QuickTime Movie Settings Dialog Box</a> and <a href="#">Windows Media Video Settings Dialog Box</a> .

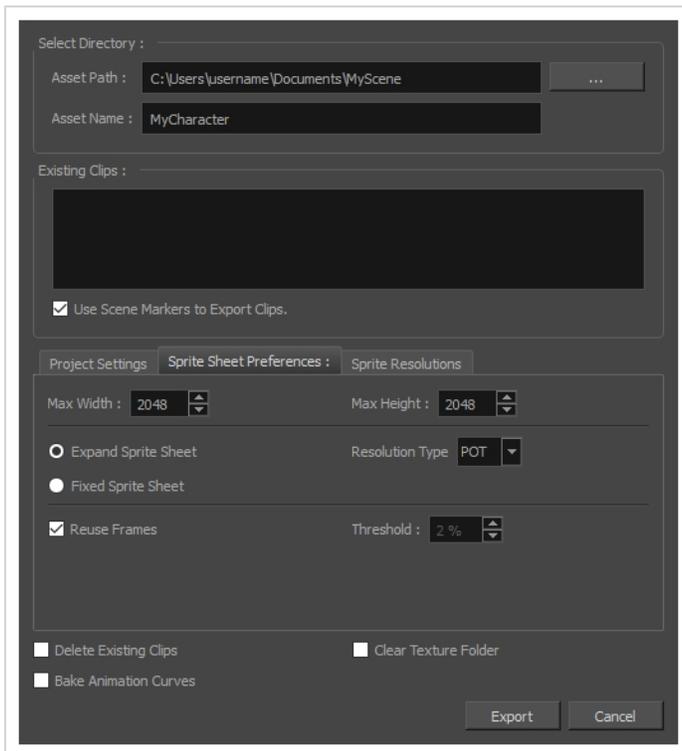
	<div data-bbox="597 191 1430 327" style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTE</b> This button is available on Windows and macOS only.</p> </div>
<p>Video Options</p>	<p>Opens the video settings dialog box, which allows you to set the video compression settings for your video file—see <a href="#">OpenQuickTime Video Options Dialog Box</a>.</p> <div data-bbox="597 520 1430 657" style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTE</b> This button is available on GNU/Linux only.</p> </div>
<p>Sound Options</p>	<p>Opens the audio settings dialog box, which allows you to set the audio compression settings for your video file—see <a href="#">OpenQuickTime Sound Options Dialog Box</a>.</p> <div data-bbox="597 846 1430 982" style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTE</b> This button is available on GNU/Linux only.</p> </div>

## Export to Sprite Sheet Dialog Box

The Export to Sprite Sheets dialog allows you to export your rig into a sprite sheet and its animation into animation metadata, in a package that can be directly imported into Unity using the Harmony package for Unity.

If you created the different animation clips in the same scene and separated with scene markers, all you need to do is open the Export to Sprite Sheet dialog and export your sprite sheet and animations once.

However, if you separated your animation clips by saving them in different scene versions, you will need to start by exporting the sprite sheet from your base scene, then open each scene version and export their animation clip one by one.



### How to access the Export to Sprite Sheets window

1. Do one of the following:
  - In the top menu, select **Windows > Toolbars > Game**.
  - Right-click on any existing toolbar and select **Game**.



2. Click the  **Export to Sprite Sheets** button.

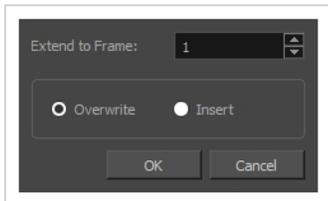
Parameter	Description
<b>Select Directory</b>	
Asset Path	The target directory in which to export your sprite sheets.
Asset Name	The name of the folder in which the spritesheet and its metadata will be saved. This folder will be located inside the Save Path folder. If it does not exist, it will be created. This will also be the name of your asset in Unity.
<b>Existing Clips</b>	
Existing Clips List	If you already exported clips for this character, this will display the list of clips that already exist in the target directory.
Use Scene Markers to Export Clips	Uses scene markers to define the export range, instead of exporting the entire scene.
<b>Project Settings</b>	
Unit Scale	Lets you change the scale when exporting to Unity to accommodate the size of the export without it affecting the Harmony scene. This helps you resize assets properly for Unity without having to resize them in Harmony. The basic scale is one Animation Field for one Unity unit.
Preset	Lets you select the unit conversion from Harmony to Unity, by selecting one of 4 presets. Note: a field is a unit of measure in traditional animation grid.
<b>Sprite Sheet Preferences</b>	
Max Width	The maximum width, in pixels, of the exported sprite sheets.
Max Height	The maximum height, in pixels, of the exported sprite sheets.

Parameter	Description
Expand Sprite Sheet	Creates sprite sheets in the smallest possible size to contain all the sprites, up until it reaches the maximum width and height.
Fixed Sprite Sheet	Creates a texture of the specified size (Max Width and Max Height) even if it does not fill it up completely by all the drawings in your scene.
Resolution Type	Allows you to choose between one of these two resolution types: <ul style="list-style-type: none"> <li>• <b>POT</b>: Exports to sprite sheets with sizes that are a power of 2. For example: 1024 x 1024. This is optimized for many graphics cards, but consumes more memory.</li> <li>• <b>NPOT</b>: Some game engines are optimized specifically to render to non powers of two, so that it will avoid those numbers. Example: 1000 x 1000.</li> </ul>
Reuse Frames	This option works in tandem with the Threshold option. The export will compare the drawings in your project to reuse a maximum of similar drawings and reduce the amount of information found in the sprite sheet, making it lighter. The export will omit the creation of new drawings if the difference is less than the threshold percentage.
Threshold	Calculates the differences between multiple drawings. A 2% threshold will prevent the creation of a new drawing if the drawing is too similar to an existing drawing. For instance, with a 2% threshold, and my drawing is 100 pixels big, only 2 of those pixels need to be different from my other drawing in order to create a new one. The higher the threshold, the fewer similar drawings you will have.
<b>Sprite Resolutions</b>	
Add Resolution	Allows you to add a resolution in which to export your sprite sheets.
Remove Resolution	Removes the selected resolution from the resolutions list.
Resolutions List	The list of resolutions in which the sprite sheet will be exported. The whole sprite sheet will be rendered once for each resolution in the list.
Delete Existing Clips	Select this option to delete clips that you already exported in the export directory.
Bake Animation Curves	Instead of saving your character's animation as interpolations, this bakes them into frame-by-frame geometric transformations. This can help increase

Parameter	Description
	performance in your game, as your game engine will not have to interpolate your character's animations on its own. It will however create a heavier package.
Clear Texture Folder	When creating the sprite sheet, Harmony creates temporary files in a folder named texture inside the scene directory. Check this option to automatically delete this folder after exporting your sprite sheets.

## Extend Exposure Dialog Box

The Extend Exposure dialog box lets you extend the exposure of a selected cell in the Timeline or Xsheet.



### How to access the Extend Exposure dialog box

1. Select a cell and do one of the following:
  - From the top menu, select **Animation > Cell > Extend Exposure**.
  - Press F5.

The Extend Exposure dialog box opens.

Parameter	Description
Extend to Frame	Lets you enter the frame up to which you want to extend the exposure. You can expose the drawing in the frames and replace the drawings that were originally there or move the subsequent frames forward in time.
Overwrite	Lets you expose the drawing in the frames and replace the drawings that were orginally there.
Insert	Lets you expose the drawing in the frames and move the subsequent frames forward in the Timeline view.

## Fill Cells Randomly Dialog Box

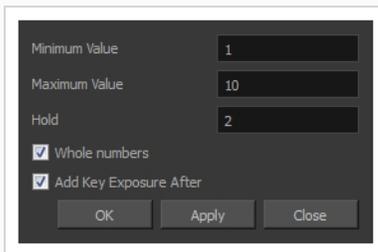
The Fill Cells Randomly dialog box lets you fill in random values over a selection. You can give a maximum and a minimum value and create a range for Harmony to choose the random values from. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.

### How to access the Fill Cells Randomly dialog box

1. Do one of the following:

- Select **Animation > Cell > Fill Cells Randomly**.
- In the Xsheet view, click the Fill Cells Randomly  button (you may have to customize the toolbar to display it).

The Fill Cells Randomly dialog box opens.



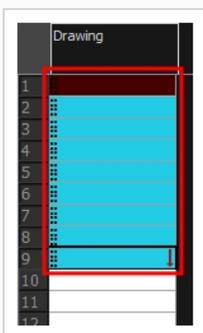
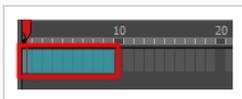
Parameter	Description
Minimum Value	The lowest value to be used in the randomized exposure or keyframe value.
Maximum Value	The highest value to be used in the randomized exposure or keyframe value.
Hold	The exposure holding value.
Whole Numbers	If you are applying this to a drawing column, this option lets you avoid having decimal points.
Add Key Exposure After	Inserts a key exposure on the frame following the last cell of the selection.

## Fill Selection Dialog Box

The Fill Selection dialog box lets you fill the same value over an entire selection. The selection can be over one cell, a cell range in one column, a cell range over many columns, an entire column, or many columns. You can use numbers, words, letters, or any alphanumeric value.

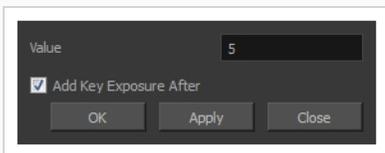
### How to access the Fill Selection dialog box

1. In the Timeline or Xsheet view, select a cell range.



1. Do one of the following:
  - From the top menu, select **Animation > Cell > Fill Selection**.
  - In the Xsheet toolbar, click the Fill Selection  button. Note that you may have to add this button to your toolbar by right-clicking on it and selecting **Customize**.
  - Press Ctrl + T (Windows/Linux) or ⌘ + T (macOS).

The Fill Selection dialog box opens.



Parameter	Description
Value	This is the value to be used in the filled selection.
Add Key Exposure After	Inserts a key exposure on the frame following the last cell of the selection.

# Import Images Dialog Box

T-HFND-007-011

The Import Images dialog box lets you import bitmap images and vectorize them, making the images editable. Then you can use a variety of drawing tools to edit the image. Or you can always keep the original bitmap image as is.

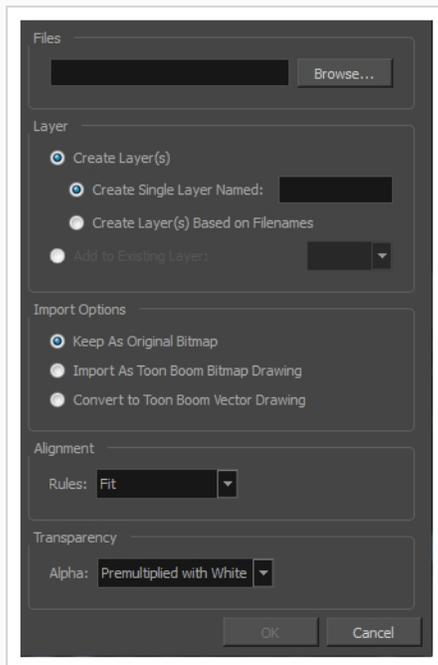
Also, you can choose to import bitmap images on bitmap or vector layers depending on your project..

## How to open the Import Images dialog box

1. Do one of the following:

- From the top menu, select **File > Import > Images**.
- In the File toolbar, click the Import Images  button.
- In the Xsheet view, right-click anywhere in the frame area and select **Import > Images**.

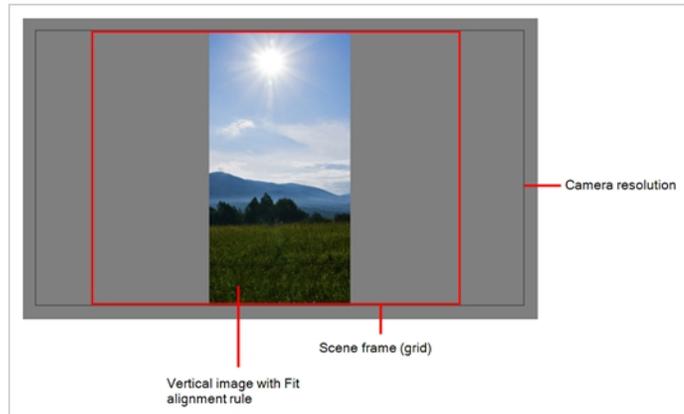
The Import Images dialog box opens.



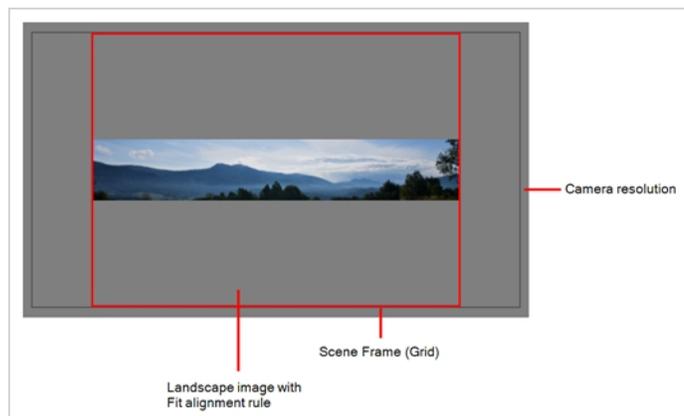
Parameter	Description
Files	

Browse	Lets you find and select images on your computer.
Layer	
Create Layers(s)	Create layers for imported images.
Create Single Layer Named	Creates a new layer with the specified name and imports the images into it.
Create Layer(s) Based on Filenames	Creates a layer based on each unique filename prefix. For example, if you import three files named a-1.tga, a-2.tga and b-1.tga, this will create two layers, one named "a" and one named "b". Layer "a" will contain the two first images and "b" will contain the third one.
Add to Existing Layer	Imports the images into the specified layer. Note that you can only import into layers that are compatible with your import options. For example, if you're importing images as vector drawings, you can only import them into vector drawing layers.
Import Options	Depending on how you choose to import images, the Alignment section offers different options.
Keep as Original Bitmap	Retains an imported image as a bitmap. In the Alignment section, decide on the size and placement of your image within the camera frame. Depending on the Scene Settings (the height and width in pixels that you chose for your project), an image that you import may get scaled to the point where all its individual pixels become visible.
Import as Toon Boom Bitmap Drawing	Imports a drawing into a vector layer where you can edit the image using the drawing tools.
Convert to Toon Boom Vector Drawing	Imports a drawing and converts it to a Toon Boom vector drawing.
Alignment (Keep As Original Bitmap)	
Rules	<p><b>Fit:</b></p> <p>Adjusts the image's size to fit completely within the scene's field, both vertically and horizontally, making sure the entire image is visible.</p> <p>If the image's orientation is portrait, then it will adjust the image's height to fit the</p>

field's height, without affecting the image's aspect ratio:



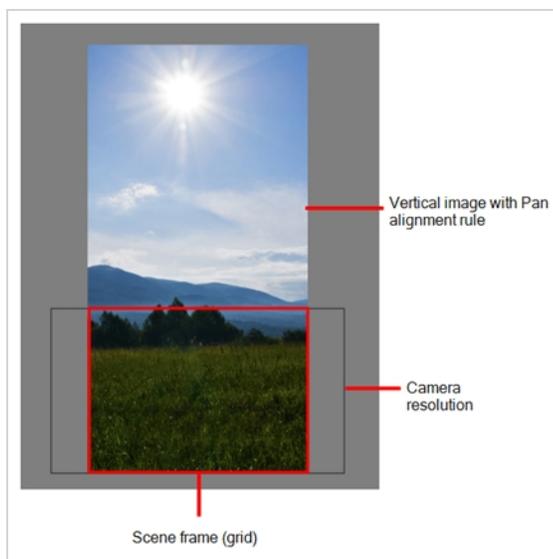
If the image orientation is landscape, then it will adjust the image's width to fit the field's width, without affecting the image's aspect ratio:



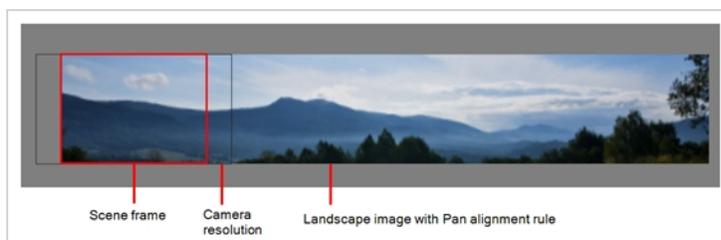
**Pan:**

This has the opposite effect to the fit parameter. The image's smallest dimension will be made to fit the scene frame's matching dimension, and the image's largest dimension will be adjusted proportionally, making the image fill the entire scene field, and bleed past its boundaries if its aspect ratio does not match the field's aspect ratio. This option can be used to import a panning background image, also referred to as a pan.

If the image's orientation is portrait, it will adjust the image's width to fit the field's width, without affecting its aspect ratio:



If the image's orientation is landscape, it will adjust the image's height to fit the field's height, without affecting its aspect ratio:



This has the opposite effect to the fit parameter. The image's smallest dimension will be made to fit the scene frame's matching dimension, and the image's largest dimension will be adjusted proportionally, making the image fill the entire scene field, and bleed past its boundaries if its aspect ratio does not match the field's aspect ratio. This option can be used to import a panning background image, also referred to as a pan.

If the image's orientation is portrait, it will adjust the image's width to fit the field's width, without affecting its aspect ratio:

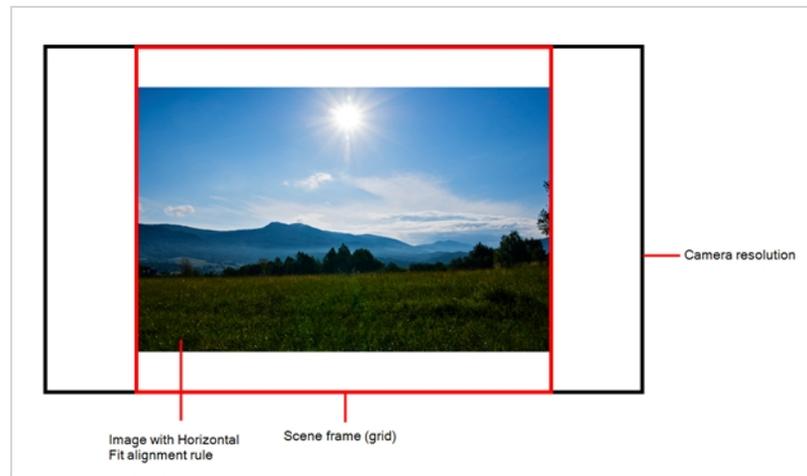
**Project Resolution:** Scales the image to fit the scene's resolution, making each pixel in the image take one pixel in the scene's field. For example, if the image's dimensions in pixels are half of the scene's resolution in pixels, then the image's dimensions will appear to be half of the scene field's dimensions.

Alignment (Import as Toon Boom Bitmap Drawing)

Rules

**Horizontal Fit:**

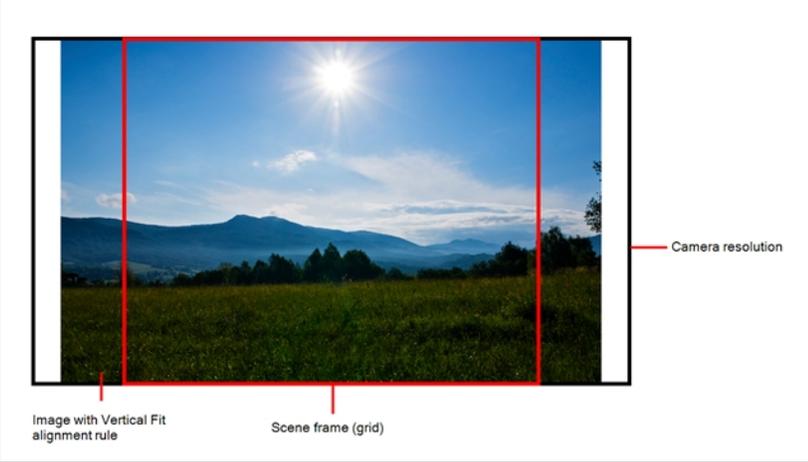
Adjusts the image's size so that its width matches the scene's width, without affecting its aspect ratio.



**Vertical Fit:**

Adjusts the image's size so that its height matches the scene's height, without affecting its aspect ratio.

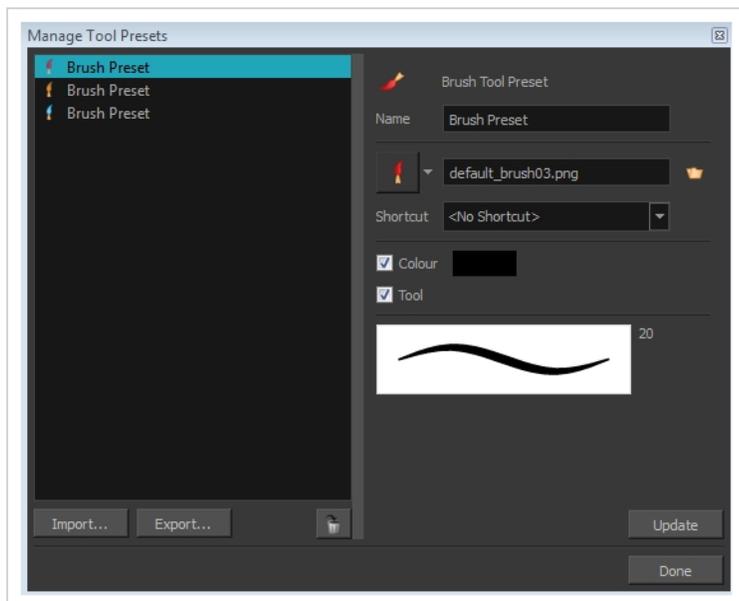
This has the opposite effect to the fit parameter. The image's smallest dimension will be made to fit the scene frame's matching dimension, and the image's largest dimension will be adjusted proportionally, making the image fill the entire scene field, and bleed past its boundaries if its aspect ratio does not match the field's aspect ratio. This

	 <p><b>Actual Size:</b> Imports the image in its actual size, without adjusting its size relative to the scene's resolution. For example, if the image's dimensions in pixels are half of the scene's resolution in pixels, then the image's dimensions will appear to be half of the scene field's dimensions.</p>
<p>Transparency</p>	
<p>Alpha</p>	<p><b>Premultiplied with White:</b> Individual pixels at the edge of an image are blended with white.</p>
	<p><b>Premultiplied with Black:</b> Pixels at the edge of an image are blended with black.</p>
	<p><b>Straight:</b> Pixels at the edge of an image are blended with black, white and greys.</p>
	<p><b>Clamp Colour to Alpha:</b> Premultiplies the colour value with the alpha value. When the colour is clamped to the alpha, the colour value cannot be higher than the alpha value. It calculates the real colour value faster. When the RGB values are multiplied with the alpha value, that is to say, if you have a pixel of value R=247, G=188, B=29 and the alpha is 50% or the image has a 50% transparency, then the actual RGB values that are output would be half of the amounts listed above.</p>
<p>Vectorization</p>	
<p>Black and White</p>	<p>Vectorizes drawings with a solid black line. This creates a 100% vector-based drawing and paints it with the Vectorized Line colour swatch from your scene's palette.</p>
<p>Grey</p>	<p>Vectorizes the image as a mix of vector contour and greyscale bitmap filling. Lines keep the texture from the scan, and the white of the paper becomes transparent.</p>

New Preset	Lets you create a new preset.
Delete Preset	Lets you delete any preset in the list.
Edit Preset	Lets you edit the vectorization parameters for the selected preset.

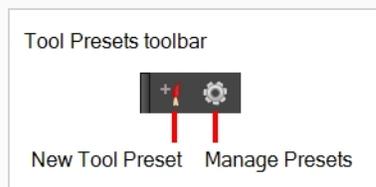
## Manage Tool Presets Dialog Box

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



### How to access the Manage Tool Presets window

- Do one of the following:
  - From the top menu, select **Windows > Toolbars > Tool Presets**.
  - Right-click an empty area below the top menu and select **Tool Presets**.



- In the Tool Presets toolbar, click the Manage Presets button.

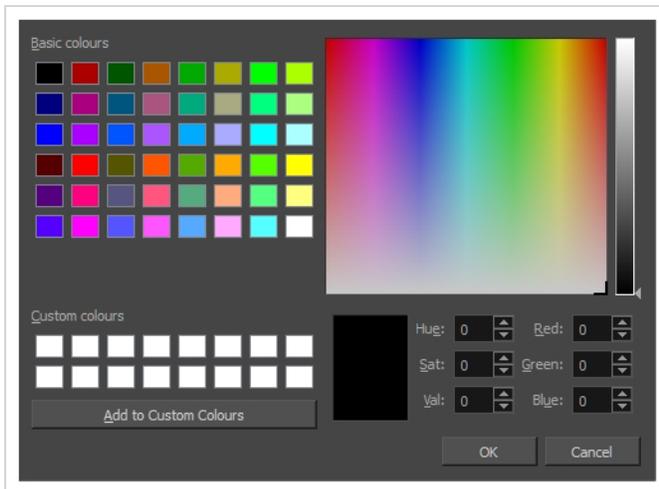
Parameter	Description
Icon	Lets you select a preset to manage.
Import	Lets you import an existing preset.
Export	Lets you export a preset for use in other projects.

Delete	Removes the preset from the list of tool presets.
Name	Lets you change the name of the preset.
Icon list	Lets you select an icon for the preset.
Folder icon	Lets you select an image for the preset.
Shortcut	Lets you assign a keyboard shortcut to the new preset.
Colour	Saves the current colour into the tool preset.
Tool	If you disable this option, only the colour will be associated. You could, for example, set three different colours with shortcuts not associated with any tool. The colour preset would then work on any selected tool. Selecting the brush tool was only a vehicle to get into the New Tool Preset dialog box.
Update	After adjusting the settings for a preset, the current properties are applied to the presets, as well as any other changes you made in the Manage Tool Presets window.

## Marker Colour Dialog Box

The Marker Colour dialog box lets you set the colour of scene markers that are displayed at the top of the Timeline view (in the frame counter area). Using colours for scene markers helps to differentiate them visually, making them easy to identify in the Timeline view.

You can select a colour by choosing from a basic set of colours, using the colour wheel or by specifying the HSV or RGB values. Once you have selected a colour, you can adjust its intensity and save it as a custom colour that you can reuse.



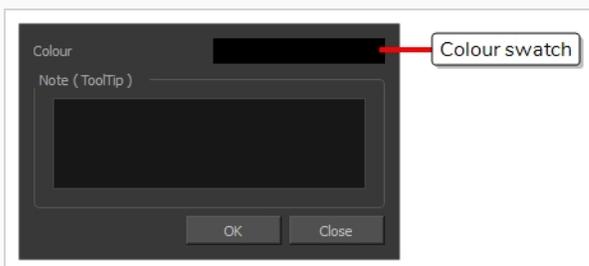
### How to access the Marker Colour dialog box

1. In the frame counter area of the Timeline view, select a frame range to mark.



2. Right-click and select **Create Scene Marker**.

The Timeline Scene Marker dialog box opens. The Colour box displays a black colour swatch, or the colour of the last scene marker you created.



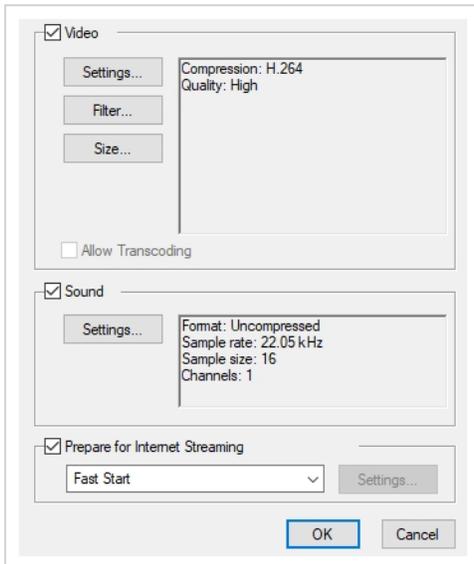
3. Click the colour swatch.

The Marker Colour dialog box opens.

<b>Parameter</b>	<b>Description</b>
Basic colours	A basic set of colours to choose from.
Custom colours	Displays the custom colours you previously stored using the Add to Custom Colours button.
Add to custom colours	Lets you add the selected colour to the Custom colours list above.
Colour wheel	Lets you select a colour by dragging the T-shaped pointer.
Value slider	Once you select a colour, you can drag the slider to change the intensity and see it previewed in the Colour Preview window below..
Colour Preview	Displays the colour you are currently selecting. To apply the colour, click OK.
Hue, Saturation, Value	Lets you set the hue (colour), saturation (amount of colour) and brightness (value) of the colour.
Red, Green, Blue	Lets you set the red, green and blue values.

## QuickTime Movie Settings Dialog Box

The Movie Settings dialog box lets you set the compression settings for the movie you will export.



### NOTE

This dialog can only be accessed on Windows and macOS. On Windows, [Apple QuickTime](#) must be installed to be able to export QuickTime Movie (.mov) files.

### How to access the Movie Settings dialog box

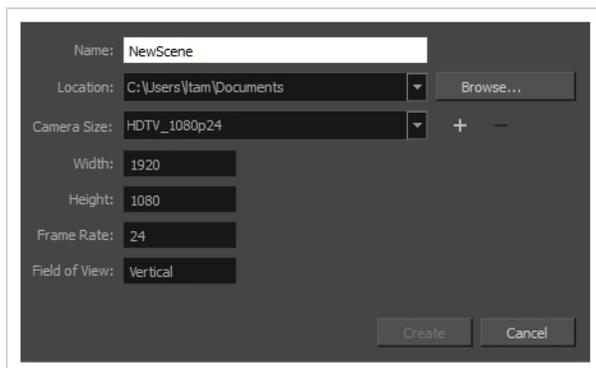
1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **QuickTime Movie (\*.mov)**.
3. Click on the **Movie Settings** button.

Parameter	Description
Video	
Settings	Opens the Standard Video Compression Settings dialog box. This is where you can set the video compression settings for the movie you will export—see <a href="#">QuickTime Standard Video Compression Settings Dialog Box on page 131</a> .
Filter	Opens the Choose Video Filter dialog box, where you can select from a range of

	filters to apply to your video export.
Size	Opens the Export Size Settings dialog box. This dialog is available because of the way the Apple QuickTime interface is designed, but its settings are not taken in account by Harmony. The size of the exported video is determined by Harmony.
Sound	
Settings	Opens the Sound Settings dialog box. This is where you can you set the sound compression settings for the movie you will export—see <a href="#">QuickTime Sound Settings Dialog Box</a> on page 129.
Prepare for Internet Streaming	<p>If this option is enabled, the video will be optimized to start playing while it is downloading, as videos do in web browsers and web-based streaming applications.</p> <ul style="list-style-type: none"> <li>• <b>Fast Start:</b> The video plays as soon as enough data required to start playback has been downloaded.</li> <li>• <b>Fast Start - Compressed Header:</b> Same as Fast Start, except the header is compressed for an even faster start. Requires QuickTime 3.0 or later.</li> <li>• <b>Hinted Streaming:</b> Allows you to optimize the movie file for streaming through QuickTime Server Software. Click on the Settings button to configure how hints are created in your movie file.</li> </ul>

## New Scene Dialog Box

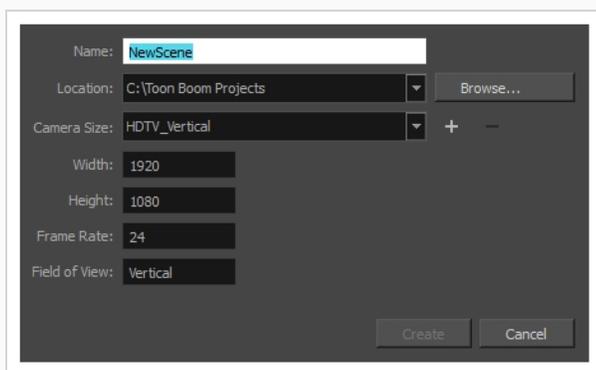
The New Scene window lets you create a new scene.



### How to access the New Scene window

1. Do one of the following:
  - From the top menu, select **File > New**.
  - In the File toolbar, click the New  button.
  - Press **Ctrl + N** (Windows/Linux) or **⌘ + N** (macOS).

The New Scene dialog box opens.



Parameter	Description
Name	Lets you type in a name for the new scene.
Location	Lists the locations you used most frequently for storing scenes.
Browse	Opens a browser in which you can specify a location for the new scene that

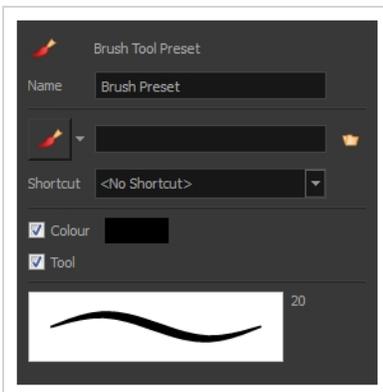
	is not listed in the Location list.
Camera Size	Opens a list of resolutions.
+ (Create Custom Resolution)	Opens the New Resolution window in which you can create a custom resolution that is added to the Camera Size list.
- (Delete Custom Resolution)	Lets you remove a custom resolution from the Camera Size list.
Width	Indicates the width of the resolution you chose from the Camera Size list.
Frame Rate	Indicates the frame rate of the resolution you chose from the Camera Size list.

## New Tool Preset Dialog Box

The New Tool Preset dialog box lets you create new tool presets and manage them.

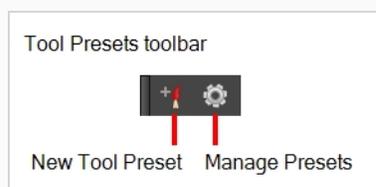
Tool presets let you save a variety of settings and are very efficient for accessing the tools you use most often. That way, the tool is already set with the desired properties, such as colour, line thickness, whether to enable Draw Behind or Auto Flatten mode, and so on. You can create presets for these tools and many more: Brush, Pencil, Eraser, Rectangle, Ellipse, and Line.

The difference between a tool preset and a brush preset is that when you save a tool preset, you have the option of saving the colour and assigning a shortcut, which you cannot do with brush presets.



### How to access the New Tool Preset dialog box

- Do one of the following:
  - From the top menu, select **Windows > Toolbars > Tool Presets**.
  - Right-click an empty area below the top menu and select **Tool Presets**.



- In the Tool Presets toolbar, click the New Tool Preset button.

Parameter	Description
Name	Lets you give the preset a meaningful name.
Icon list	Lets you select an icon for the preset.

Folder icon	Lets you select an image for the preset.
Shortcut	Lets you assign a keyboard shortcut to the preset.
Colour	Saves the current colour into the tool preset.
Tool	If you disable this option, only the colour will be associated. You could, for example, set three different colours with shortcuts not associated with any tool. The colour preset would then work on any selected tool. Selecting the brush tool was only a vehicle to get into the New Tool Preset dialog box.

## 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

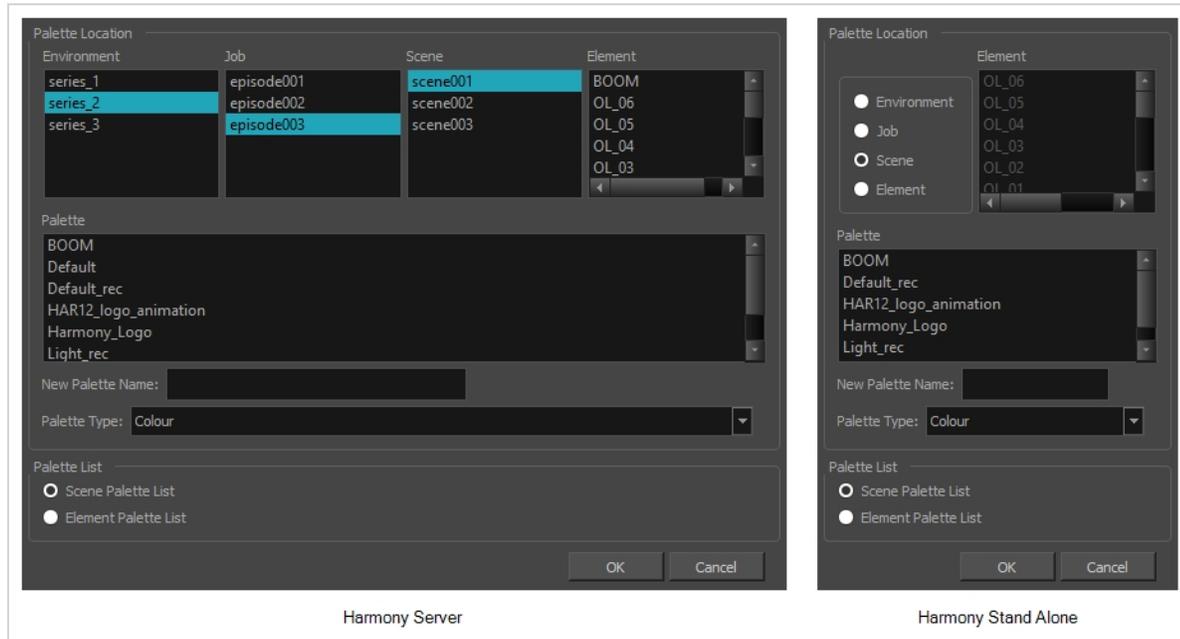
- In the Drawing view toolbar, click on the Top Light  button to open the Onion Skin and Light Table Transparency dialog box.

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 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

	<p>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.</p>
Environment	<p>Stores the palette file in the selected environment's palette library. Environments are typically used to contain a whole production, series or feature film.</p> <ul style="list-style-type: none"> <li>• In Harmony Server, this stores the palette in <code>/USA_DB/environments/[environment name]/palette-library</code>.</li> <li>• In Harmony Stand Alone, this stores the palette inside the scene's directory, under <code>environments/Digital/palette-library</code>.</li> </ul>
Job	<p>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.</p> <ul style="list-style-type: none"> <li>• In Harmony Server <code>/USA_DB/jobs/[job name]/palette-library</code>.</li> <li>• In Harmony Stand Alone, this stores the palette inside the scene's directory, under <code>jobs/Digital/palette-library</code>.</li> </ul>
Scene	<p>Stores the palette file in the selected scene's palette library, which is the <b>palette-library</b> subdirectory of the scene's directory.</p>
Element	<p>Stores the palette file inside the selected element's palette library. This library is located inside the scene's directory, under <code>elements/[element name]/palette-library</code>.</p>
Palette	<p>This lists the existing palettes in the selected location.</p>
New Palette Name	<p>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 <code>.plt</code>.</p>
Palette Type	<p>When creating a palette, you can choose between the following palette types:</p> <ul style="list-style-type: none"> <li>• <b>Colour:</b> A colour palette can contain colours, gradients and bitmap textures.</li> <li>• <b>Pencil Texture:</b> 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.</li> </ul>

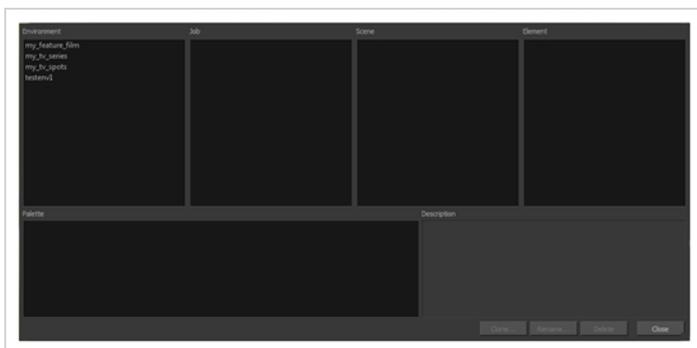
Palette List	This allows you to decide if you want the palette to be added to your scene's palette list, or to the currently selected element's palette list.
Scene Palette List	Adds the palette to the scene's palette list. Palettes in the scene's palette list are available to all the elements in your 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

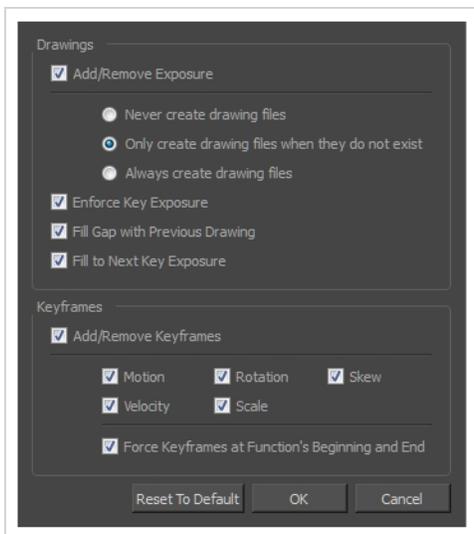
1. Start and log in.
2. Close the Database Selector dialog box.
3. From the top menu, select **Tools > Palette Operations**.

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. <div data-bbox="565 562 1430 730" style="border: 1px solid #90EE90; padding: 10px;"> <b>NOTE</b> 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.</div>
Close	Closes the Palette Operations dialog box.

## Paste Preset Dialog Box

When pasting key frames and exposures, you can modify the existing presets to your liking. There are three presets you can modify: the default presets for both key frames and exposures, key frames only and exposures only.



Parameter	Description
Drawings	
Add/Remove Exposure	<b>Never create drawing files:</b> When adding exposures to a drawing layer, drawing files will not be created.
	<b>Only create drawing files when they do not exist:</b> When adding exposures to a drawing layer, new drawings will be created only when drawings with the same name do not already exist in the destination.
	<b>Always create drawing files:</b> When adding exposures to a drawing layer, new drawings will always be created. If drawing files with the same name already exist, Harmony will create a new name for the drawing.
Enforce Key Exposure	If there are key exposures that exist on copied drawings, they are preserved when pasting. No key exposures are added. This is the default behavior when pasting.
Fill Gap with Previous Drawing	Fills selected area in the Xsheet or Timeline view with the previous drawing.
Fill to Next Key	Fills selected area till the next key exposure.

Exposure	
Keyframes	
Add/Remove Keyframes	<b>Motion:</b> Copies the properties of the selected motion keyframe to the new frame.
	<b>Velocity:</b> Copies the properties of the selected velocity keyframe to the new frame.
	<b>Rotation:</b> Copies the properties of the selected rotation keyframe to the new frame.
	<b>Scale:</b> Copies the properties of the selected scale keyframe to the new frame.
	<b>Skew:</b> Copies the properties of the selected skew keyframe to the new frame.
	<b>Force Keyframes at Function's Beginning and End:</b> Adds a keyframe to the beginning and end of the pasted function, reproducing the source function.

## Paste Special Dialog Box

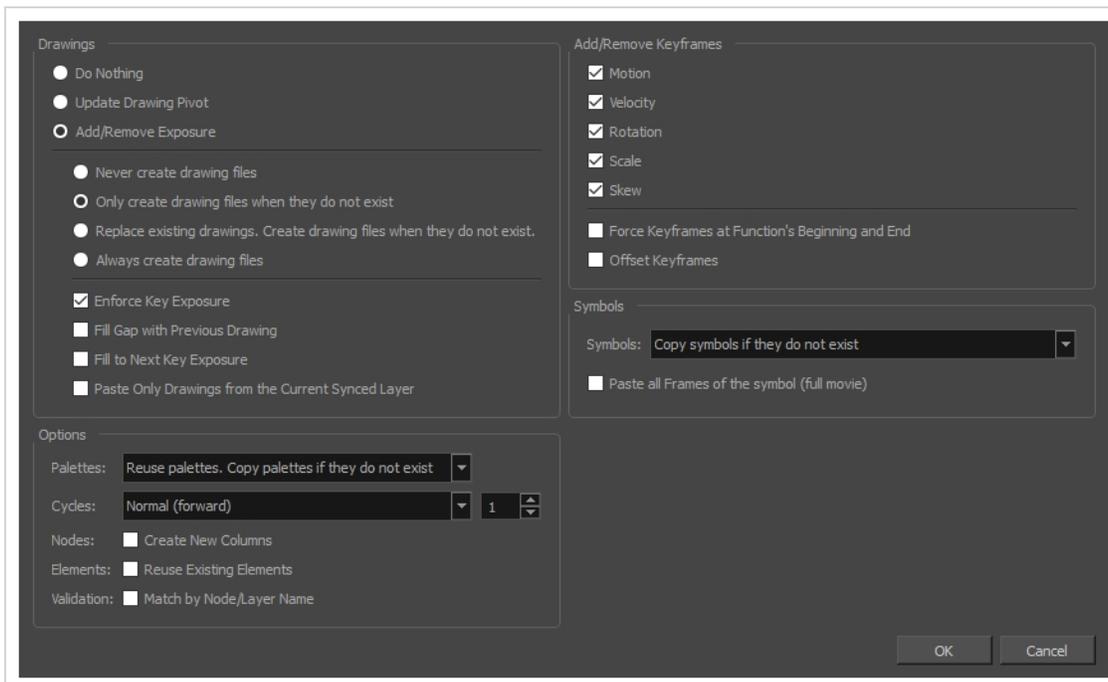
The Paste Special dialog box lets you determine how templates and symbols are imported in the Timeline view.

When you import a template in the Timeline view, all layers are created as well as drawings and keyframes. You can choose to import only the keyframes without the drawings or import only the drawings that are not already in your layers. You can adjust the behaviour using the Paste Special dialog box. When you import a symbol in your scene, its full length is exposed by default. If you import a symbol in the Timeline view's left side, all the frames will be exposed. However, if you import it into an existing layer, you can use the Paste Special dialog box to adjust the import behaviour to fit your requirements. Once you set the parameters, Harmony will reuse them each time you import a symbol in the Timeline view's right side until you set new parameters.

### How to access the Paste Special dialog box

1. In the Library view, select the symbol or template to import.
2. Do one of the following:
  - While holding down the Alt key, click and drag on the template, then drop it on the Timeline view, over the layer and at the frame where you want to paste it.
  - Press Ctrl + C (Windows/Linux) or ⌘ + C (macOS). Then, in the Timeline view, click on the frame where you want to paste the template and press Ctrl + B (Windows/Linux) or ⌘ + B (macOS)

The Paste Special dialog box opens.



Parameter	Description
Drawings	
Do Nothing	Does not create or overwrite drawings.
Update Drawing Pivot	Revises the drawing pivot in the destination to use the same drawing pivot as the first drawing in the template. If you have a range of drawings selected in the destination, the pivot points of all selected drawings will be updated.
Add/Remove Exposure	<p><b>Never create drawing files:</b> When adding exposures to a drawing layer, drawing files will not be created.</p>
	<p><b>Only create drawing files when they do not exist:</b> When adding exposures to a drawing layer, new drawings will be created only when drawings with the same name do not already exist in the destination.</p>
	<p><b>Replace existing drawings. Create drawing files when they do not exist:</b> Replace drawings with the same names to update a scene with new modified drawings and preserve the animation.</p> <p><b>Tip:</b> If you don't want to lose the existing animation when pasting a template, such as when placing new drawings after the animation, then delete the template's animation. It will still have updated the drawings but not override the existing animation.</p>
	<p><b>Always create drawing files:</b> When adding exposures to a drawing layer, new drawings will always be created. If drawing files with the same name already exist, Harmony will create a new name for the drawing.</p>
	<p><b>Enforce Key Exposure:</b> If there are key exposures that exist on copied drawings, they are preserved when pasting. No key exposures are added. This is the default behavior when pasting.</p>
	<p><b>Fill Gap with Previous Drawing:</b> Fills selected area in the Xsheet or Timeline view with the previous drawing.</p>
	<p><b>Fill to Next Key Exposure:</b> Fills selected area till the next key exposure.</p>
	<p><b>Paste all frames of the symbol (full movie):</b> When enabled, the Paste Special command exposes all the symbol's frames instead of only the first one.</p>

Symbols	
Copy symbols if they do not exist	This is the default setting for this operation and will prevent Symbols in an Action template from being copied.
Duplicate symbols	Creates a duplicate of the symbol instead of linking the Symbol instance to the original one. The new Symbol is created in the Library.
Paste all Frames of the symbol (full movie)	When enabled, the Paste Special command exposes all the symbol's frames instead of only the first one.
Add Remove/Keyframes	
Motion	Copies the properties of the selected motion keyframe to the new frame.
Velocity	Copies the properties of the selected velocity keyframe to the new frame.
Rotation	Copies the properties of the selected rotation keyframe to the new frame.
Scale	Copies the properties of the selected scale keyframe to the new frame.
Skew	Copies the properties of the selected skew keyframe to the new frame.
Force Keyframes at Function's Beginning and End	Adds a keyframe to the beginning and end of the pasted function, reproducing the source function.
Offset Keyframes	When pasting functions, offsets keyframes from the function's last frame value by the values in the pasted function. This will continue the progression of a function instead of repeating the values.
Options	
Palettes	<p><b>Do nothing:</b> Does not create, overwrite, merge or link palettes.</p> <p><b>Reuse palettes. Copy palettes if they do not exist:</b> Palettes in the destination drawings are left as they are.</p> <p><b>Copy and overwrite existing palettes:</b> Overwrites destination palettes with the palettes from the source drawings.</p>

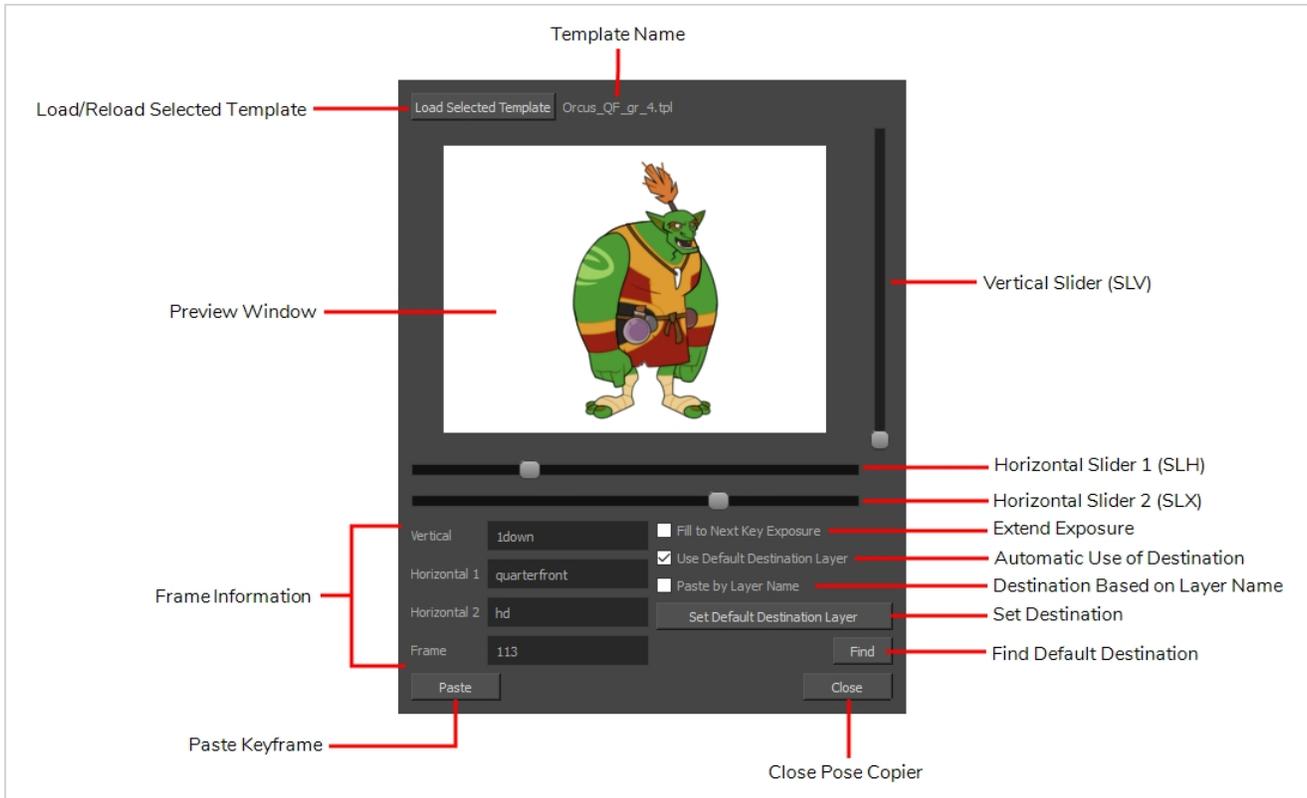
	<p><b>Copy and create new palette files:</b> Creates new palette files, placing them at the same relative environment and scene level as the source. If the palettes in the templates were stored at the environment level of the source scene, the paste operation will place the palettes in the environment level of the destination scene.</p> <p><b>Copy and create new palette files in element folder:</b> Creates new palette files in the element folders of the destination scene, rather than in the same relative job or environment.</p> <p><b>Copy palette and merge colours. Add new colours only:</b> Adds new colours to the destination palettes and ignores colours that are the same in the two palettes.</p> <p><b>Copy palettes and update existing colours:</b> Adds new colours to the destination palette and updates duplicate colours in the destination with colour values from the source.</p> <p><b>Link to original palettes (colour model):</b> Links the colour palettes in the destination scene to the palettes in the source. Use this to link drawings to the palettes in a colour model.</p> <p><b>Copy scene palettes and merge colours. Add new colours only:</b> Adds new colours to the destination scene palettes and ignores colours that are the same in the two palettes.</p> <p><b>Copy scene palettes and update existing colours:</b> Adds new colours to the destination scene palette and updates duplicate colours in the destination with the colour values from the source.</p>
Cycles	<p><b>Normal (forward):</b> Pastes your selection as is, starting with the first cell and ending with the last.</p> <p><b>Reverse:</b> Pastes your selection in reverse, starting with the last cell and ending with the first.</p> <p><b>Forward &gt; Reverse:</b> Pastes your selection as a yo-yo, starting with the first cell, going to the last one and ending with the first cell.</p> <p><b>Reverse &gt; Forward:</b> Pastes your selection as a reverse yo-yo, starting with the last cell, going to the first one and ending with the last cell.</p>
Nodes	<p><b>Create New Columns:</b> A new column is created when you copy and paste nodes from the layer in the Timeline view. If the layers are linked to function curves, the function curves, drawings and timing will be duplicated.</p>
Elements	<p><b>Reuse existing elements:</b> Lets you paste existing elements without creating new ones. This should be used only when pasting within versions of the same scene.</p>
Validation	<p><b>Match by Node/Layer Name:</b> When pasting a template with a hierarchy onto another hierarchy, this option looks to match the pasting elements with the same layer or node name, rather than the same hierarchical structure. This means that</p>

	<p>even if the two hierarchies are different, a new pose of a character's body part will still be pasted on the correct body part layer, as long as both layers are named the same.</p>
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# Pose Copier Dialog Box

T-RIG3-007-007

The pose copier contains many buttons and other information to facilitate the insertion of poses in the animation.



Parameter	Description
Preview Window	Based on master template's generated thumbnails, previews currently selected frames.
Load Selected Template	Updates the template with the newly selected template.
Template Name	Name of the currently selected template.
Vertical Slider (SLV)	Linked to the slv- node of the node system.
Horizontal Slider 1 (SLH)	Linked to the slh- node of the node system. Default slider for the pose copier if no guide layers are created.

Horizontal Slider 2 (SLX)	Linked to the slx- node of the node system.
Fill to Next Key Exposure	Having this option checked will automatically extend the exposure of the pasted frame up to the next key.
Use Default Destination Module	When enabled, the pasted keys will automatically refer to the destination defined in the option Set Default Destination Module.
Paste by Layer Name	When this option is checked the pasted layers will look for the individual layer name instead of matching the hierarchy of the template.
Set Default Destination Module	Instead of selecting the destination every time, the layer set as default destination will automatically paste the keys onto those layers.
Find	This will center on the default destination in the timeline.
Paste	Paste the current position of the pose copier onto the destination.
Vertical	Currently selected frame on the vertical slider. (based on frame name in slv-node)
Horizontal 1	Currently selected frame on the horizontal slider 1. (based on frame name in slh-node)
Horizontal 2	Currently selected frame on the horizontal slider 2. (based on frame name in slx-node)
Frame	Frame number of the selected frame within the master template.

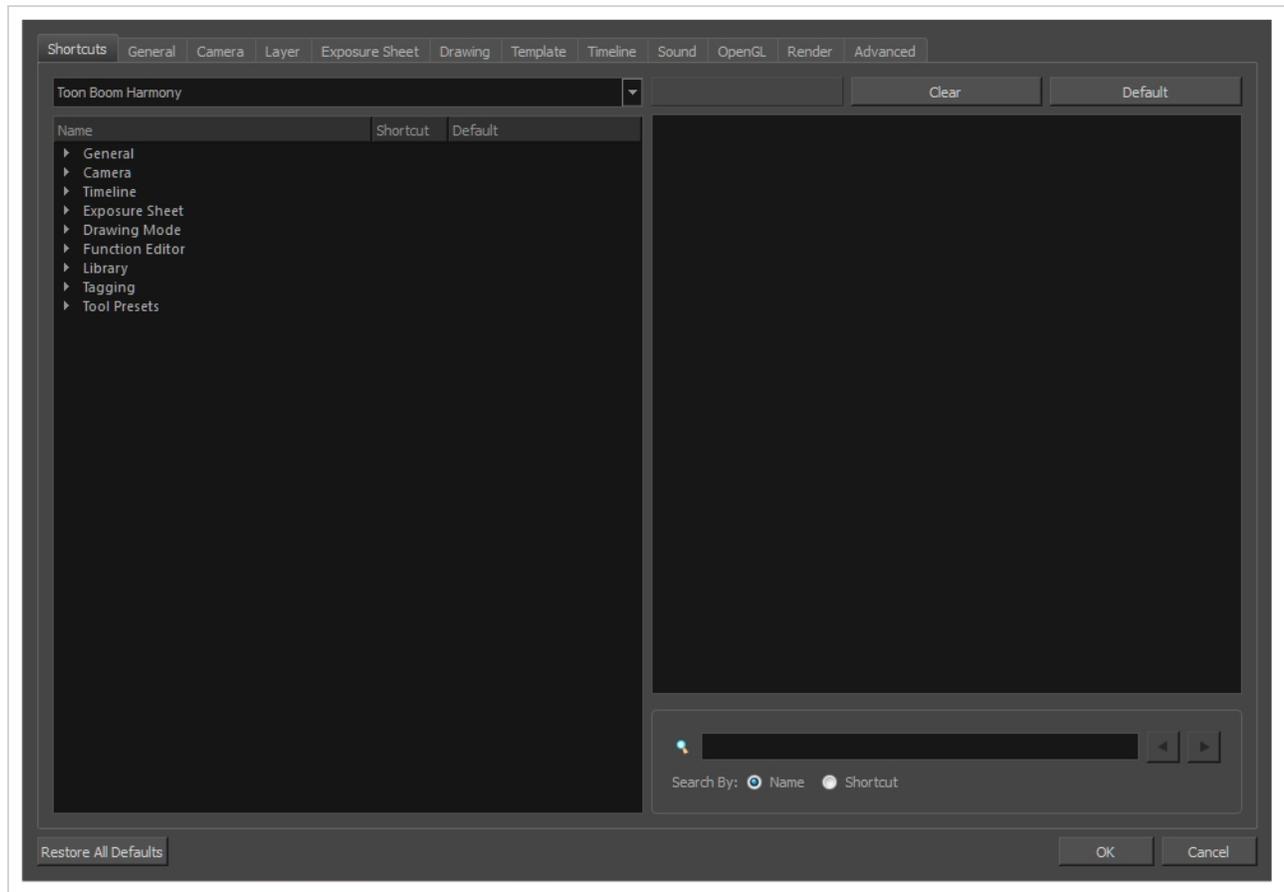
## Preferences Dialog Box

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

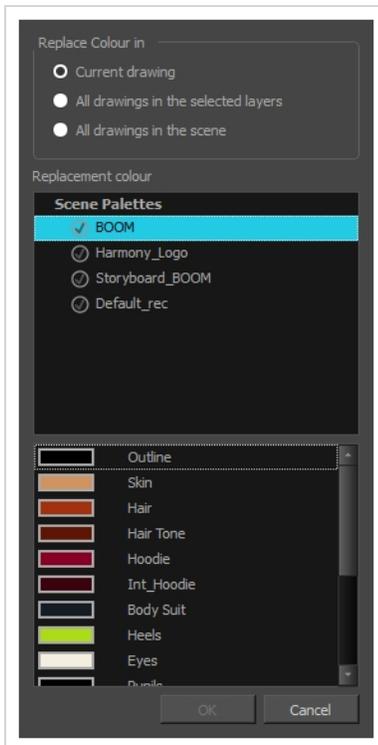
Do one of the following:

- Select **Edit > Preferences** (Windows/Linux) or **Harmony Advanced > 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.

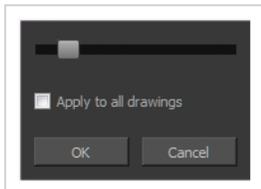
2. Do one of the following:

- 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	<p>Allows you to select which drawings will be affected by the colour replacement:</p> <ul style="list-style-type: none"> <li>• <b>Current drawing:</b> Replaces the selected colour in the currently selected drawing only.</li> <li>• <b>All drawings in the currently selected layers:</b> Replaces the selected colour in all the drawings in the layer that is currently selected in the Timeline or Xsheet view.</li> </ul> <div data-bbox="643 793 1430 930" style="border: 1px solid #c8e6c9; padding: 10px; margin: 10px 0;">  <b>NOTE</b>                      This option can work with several drawing layers selected.                 </div> <ul style="list-style-type: none"> <li>• <b>All drawings in the scene:</b> Replaces the selected colour in every drawing in the current scene.</li> </ul>
Replacement Colour	<p>Allows you to select the palette and colour or texture swatch to replace the selected colour or texture with.</p>

## 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.

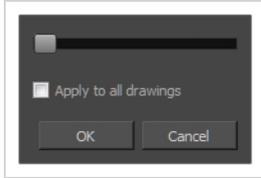
### How to access the Remove Dirt dialog box

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

Parameter	Description
Slider	<p>Lets you adjust the amount of detail removed from the layer.</p> <p>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.</p> <p>During this process, the dirt that will be removed is highlighted in red.</p>
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. In the Timeline or Xsheet view, select the drawing containing the drawing to clean.
2. From the top menu, select **View > Show > Show Strokes** to display the invisible lines or press K.
3. In the top menu, select **Drawing > Clean Up > Remove Hair**.

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

## Save Dialog Box

The Save dialog box appears when you save a scene for the first time in Harmony Server.



### How to access the Save dialog Box

1. Make sure you have the necessary rights to save the current scene version. If you do not, you can acquire the rights by selecting **File > Rights to Modify Scene Version** or **Rights to Modify Scene** in the top menu.
2. Do one of the following:
  - In the top menu, select **File > Save**.
  - In the File toolbar, click on the  Save button.
  - Press Ctrl + S (Windows/Linux) or ⌘ + S (macOS).

When saving the scene for the first time, the Save dialog box opens, prompting you to name the version.

Parameter	Description
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This Version	Allows you to enter the name of the current version.
Description	Enter a short description of the current version.

## Scene Settings Dialog Box

The Scene Settings dialog box lets you select settings for the resolution of your scene, its alignment and the resolution of bitmap drawings and textured brush strokes.

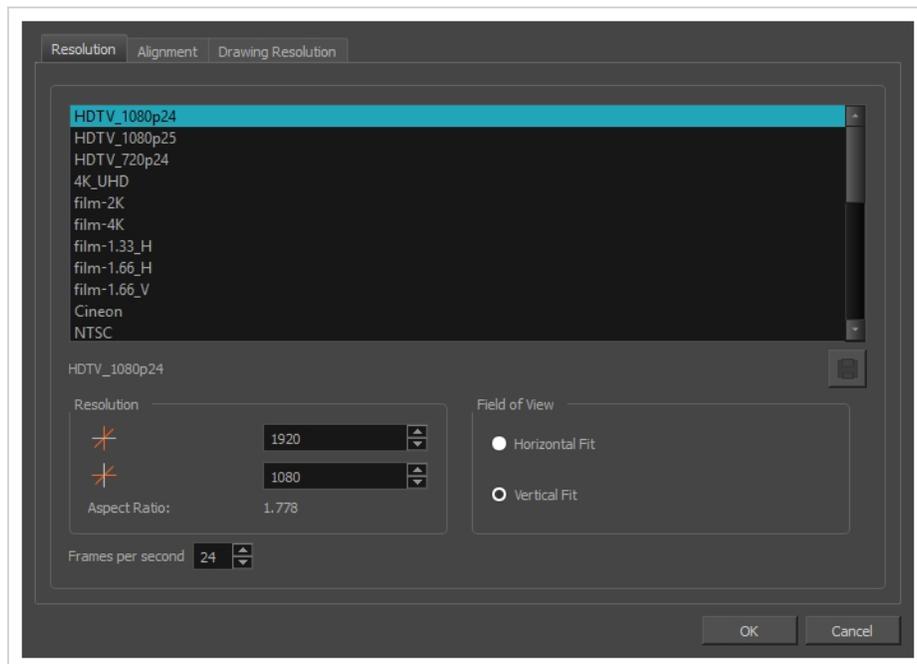
You are already required to select resolution and alignment settings when creating a scene, but those settings can also be modified later using the Scene Settings dialog box.

### How to access the Scene Settings dialog box

1. In the top menu, select **Scene > Scene Settings**.

The Scene Settings dialog box opens.

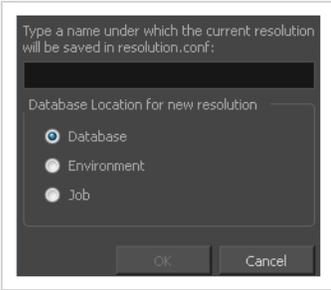
## Resolution Tab



The resolution tab allows you to set the width and height of your scene in pixels as well as whether the angle of the field of view.

Icon	Parameter	Description
	Resolution Presets	<p>You can select your project's resolution (camera frame size) from this preset list.</p> <ul style="list-style-type: none"> <li>• <b>HDTV_1080p24:</b> The standard definition for high definition television at 24 frames per second, mostly used in the Americas and some Asian countries that used the NTSC standard for</li> </ul>

		<p>analogue television.</p> <ul style="list-style-type: none"> <li>• <b>HDTV_1080p25:</b> The standard definition for high definition television at 25 frames per second, usually for broadcasting in European, African, Asian and Australian countries that used the PAL or SECAM standard for analogue television.</li> <li>• <b>HDTV_720p24:</b> The former standard high definition resolution at 24 frames per second.</li> <li>• <b>4K_UHD:</b> A standard ultra HD (4K) format for television productons. 4K implies that the width of the image is of, give or take, 4000 pixels.</li> <li>• <b>film-2K:</b> A standard HD format for film projectors with a low aspect ratio.</li> <li>• <b>film-4K:</b> A standard ultra HD (4K) format for film projectors with a low aspect ratio.</li> <li>• <b>film-1.33_H:</b> The standard resolution for the academy film format that conforms to the standard 4:3 aspect ratio.</li> <li>• <b>film-1.66_H:</b> The standard resolution for widescreen film format that conforms to the 16:9 aspect ratio.</li> <li>• <b>film-1.66_V:</b> The standard resolution for widescreen film format, but with a vertical field of view.</li> <li>• <b>Cineon:</b> The standard format for 35 mm Kodak/Cineon film.</li> <li>• <b>NTSC:</b> The standard resolution and framerate for analogue standard definition televisions in most of the Americas (except Brazil, Paraguay, Uruguay and Argentina), Japan, Taiwan, South Korea, the Philippines and Myanmar.</li> <li>• <b>PAL:</b> The standard resolution and framerate for analogue standard definition televisions in Europe, Africa, Australia, most of Asia, Brazil, Uruguay and Argentina.</li> <li>• <b>2160p-240p:</b> A series of standard widescreen presets named after their resolution heights.</li> <li>• <b>low:</b> A resolution based on NTSC with half of its standard dimensions.</li> <li>• <b>Web_Video:</b> A legacy format for web streaming.</li> <li>• <b>Game_512:</b> A preset for the gaming pipeline, with a square canvas.</li> <li>• <b>WebCC_Preview:</b> The preset used by WebCC to render previews of scenes in a Harmony Server database.</li> <li>• <b>HDTV:</b> The standard definition for high definition television at 24 frames per second, with a horizontal fit field of view.</li> </ul>
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		<ul style="list-style-type: none"> <li>• <b>HDTV_Vertical:</b> The standard definition for high definition television at 24 frames per second, with a vertical fit field of view.</li> </ul>
	Selected Resolution Preset	Displays the name of the selected resolution preset just below the presets list. If you have made any changes to the resolution since selecting a preset, this will display "(custom)".
	Save Resolution Setting	<p>Allows you to save the current resolution settings as a new preset. If you have a resolution preset selected, this button is only available if you have made changes to the resolution since selecting the preset. You will be prompted to type in the name of the new resolution preset. If using Harmony Server, you will also be asked to select in which part of the database you want the preset to be saved.</p> 
	Resolution	The resolution of the scene defines the width and height of the canvas in pixels. By default, the scene will be rendered in this resolution. If using bitmap layers or textured brush strokes, the definition of the pixels in your artwork will also be based on the scene's resolution.
	Scene Width	The width of the resolution for the scene, in pixels.
	Scene Height	The width of the resolution for the scene, in pixels.
	Aspect Ratio	Displays the ratio between the horizontal and vertical dimensions of the scene. For example, if the scene width and height are the same value, this ratio equals 1. The standard aspect ratio for widescreen televisions is 1.777. For legacy displays, it is 1.333.
	Frame per second	The amount of frames in your scene that should play out every second. The standard framerate for film production is 24 fps. However, televisions in some countries play at 25 fps.

	Field of View	<p>The angle of the field of view, which determines the size of the camera cone as well as the way the field grid used to position elements is adjusted to fit the scene.</p> <ul style="list-style-type: none"> <li>• Horizontal Fit: The field of view is automatically adjusted so that the field grid and camera cone fit the horizontal length of the scene.</li> <li>• Vertical Fit: The field of view is automatically adjusted so that the field grid and camera cone fits the vertical length of the scene.</li> </ul>
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## Alignment Tab

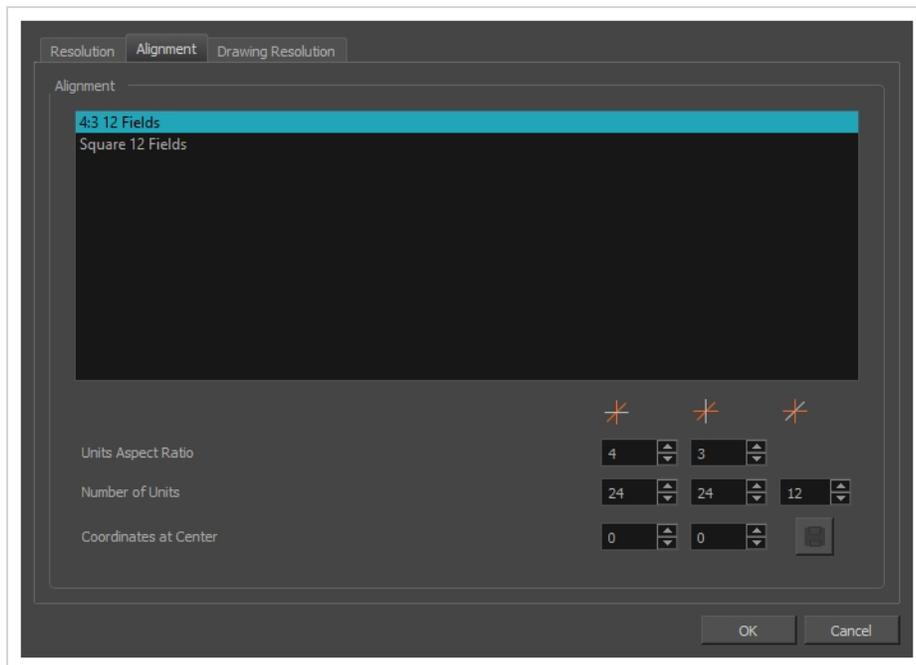
The alignment tab is used to determine the aspect ratio, the position and the size of the field grid used to position elements in the scene.

In Harmony are positioned in *fields*, a unit used in traditional animation which traditionally ranges from 0 to 12 followed by a cardinal direction, and in which 0,0 is the center of the scene.

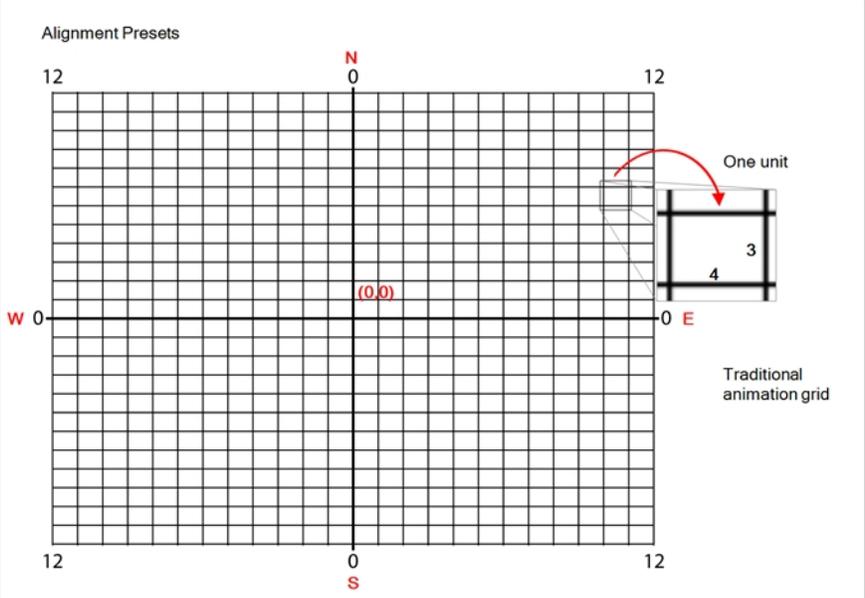
The default Alignment setting in Harmony is based on such a traditional 4:3 drawing grid. In a scene with an aspect ratio of 4:3, this means that positioning an element 12 fields in any direction will make it reach one of the edges of the camera field. For example, 12 North is the vertical position of the upper edge of the camera field, and 12 East is the horizontal position of the right edge of the camera field.

However, since the most commonly used scene resolutions have an aspect ratio of 16:9, and the default grid is in a 4:3 proportion, the grid used to position element will not be in the same proportions as the camera field. The way this is handled is determined by the Field of View setting in the Resolution tab. If your field of view is set to Horizontal fit, the field grid will be made to fit the scene horizontally, and stretch beyond the vertical edges of the scene. This means that 12 East will still be the right edge of the screen, but the position of the upper edge of the scene will be about 9.36 North. Likewise, if the field of view is set to Vertical Fit, the upper edge of the field will be at 12 North, but the right edge will be at about 16 East.

Some artists or studios may prefer to use a square fields grid, where fields have the same size horizontally and vertically.



Parameter	Description
Alignment	<p>The list of alignment presets. By default, Harmony has these two alignment presets:</p> <ul style="list-style-type: none"> <li>• <b>4:3 12 Fields:</b> Defines the units of your project to have a 4:3 ratio and sets up 12 of these units to run both vertically and horizontally in four cardinal quarters (NW, NE, SW, SE). This is the default setting, and it corresponds to an animation grid used in traditional animation. Hence, coordinates based on a traditional animation grid can be entered in Harmony as is to position elements where they are expected to be.</li> <li>• <b>Square 12 Fields:</b> Defines the units of your project to have a 1:1 or square ratio and sets up 12 units to run both vertically and horizontally in four cardinal quarters (NW, NE, SW, SE).</li> </ul> <div data-bbox="565 1436 1430 1675" style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>When the Grid is displayed in the Camera and Drawing view, it is always based on the 4:3 12 Fields alignment preset, regardless of your scene's alignment setting. To display the grid, from the top menu, select <b>View &gt; Grid &gt; Show Grid</b>.</p> </div>
Units Aspect Ratio	<p>The aspect ratio of each field. This describes the proportional difference between the width and the height of the field. By default, it is set to 4:3, which means the width of each field will take 4 unites of length for <u>each</u> 3 units the height of the field takes. In other words, the width of a field is 1.333 times its height. If set to, for example, 1:1, the fields will be perfectly square.</p>

	 <p>The diagram shows a large 24x24 grid with a central origin (0,0). The vertical axis is labeled 'N' at the top and 'S' at the bottom, with '0' at the center. The horizontal axis is labeled 'W' on the left and 'E' on the right, with '0' at the center. The grid extends to 12 units in each direction from the center. A smaller grid, labeled 'Traditional animation grid', is shown to the right with a width of 4 units and a height of 3 units. A red arrow points to one of its units, labeled 'One unit'.</p>
<p>Number of Units</p>	<p>The number of fields the grid should have in each direction. In the Number of Units fields, enter the number of horizontal, vertical and depth units for your scene's grid.</p> <p>The grid is a specific size based on the scene's resolution and field of view angle. Changing the amount of units for each direction will not change the size of the grid, but rather, the size of the units. Hence, if an element is offset at 3 North, 4 East, and you change the number of horizontal and vertical units from 24 to 12, the element will become offset twice as far from the centre as it originally was.</p> <p>The third setting in this field determines the amount of units across the Z axis. This determines how far each unit will take an element further or closer to the camera when moved on the Z-axis. By default, the grid has 12 fields across the Z-axis, which is half the amount of fields on the X and Y axes by default. Hence, each field on the Z-axis is worth exactly twice the length of a field on the horizontal axis.</p> <p>Animators who are familiar with traditional animation method will understand the default setting of 24 units horizontal by 24 units vertical as it corresponds to a traditional animation grid.</p>
<p>Coordinates at Centre</p>	<p>The offset for the centre of the fields grid. The centre of the fields grid is where elements are positioned by default, when they themselves are at coordinates 0,0. To change the centre, you must enter its offset from the actual centre of the grid in fields. For example, if your fields grid is 24 x 24, and you want the centre to be at the top-left corner, you should enter -12,-12.</p>
<p>Save</p>	<p>Saves your current Alignment settings and be able to select them later from the list.</p>

**TIP**

If you prefer working in pixel-based positions, you must set the aspect ratio of your units to be the same as the aspect ratio of your scene resolution, set the horizontal number of units to the width of your scene in pixels, the vertical number of units to the height of your scene in pixels, and the depth number of units to the width of your scene in pixels. This way, each unit will translate to exactly 1 pixel, in all directions.

**NOTE**

Each layer also has an alignment rule, which determines how it is positioned relative to the fields grid. By default, it is set to "Centre First Page". However, this alignment rule is made to be compatible to 4:3 fields grids. Hence, if you change your scene's alignment rules, your layers will be offset. To avoid this issue, change the alignment rules of your layers to "Centre" via the Advanced tab of the Layer Properties view.

## Drawing Resolution Tab

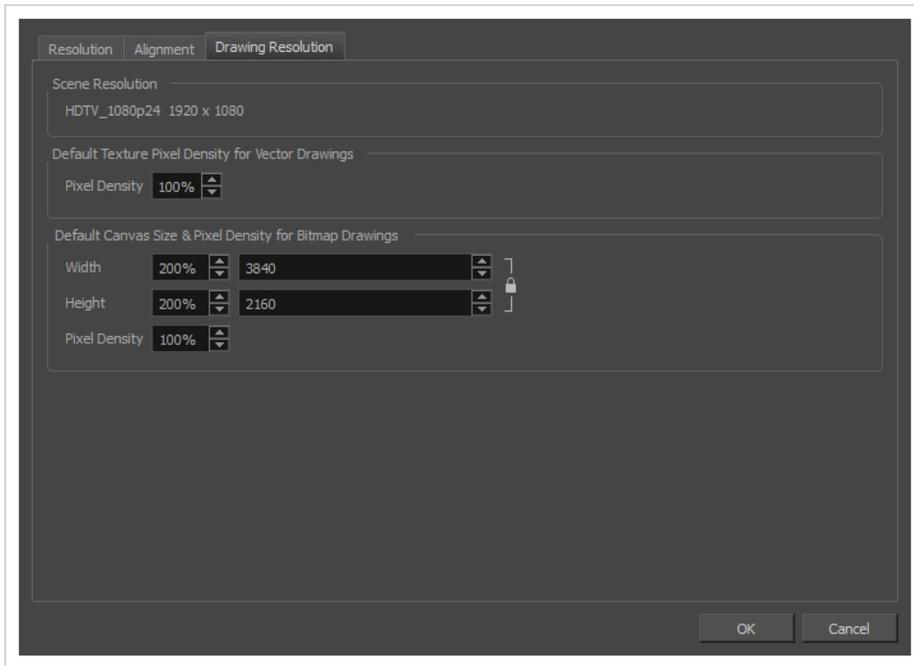
The drawing resolution tab is used to set the pixel density of bitmap drawings as well as of bitmap textures in textured brush strokes in vector drawings. Also, it is used to set the size of the canvas for bitmap drawings relative to the size of the scene.

**NOTE**

These settings are applied to newly created drawings in the scene, but not to existing drawings in your scene. To change the pixel density of existing vector drawings, you must select **Drawing > Change Vector Drawing Brush Resolution** from the top menu. To change the pixel density and canvas size of existing bitmap drawings, you must select **Drawing > Change Bitmap Drawing Resolution** from the top menu.

**NOTE**

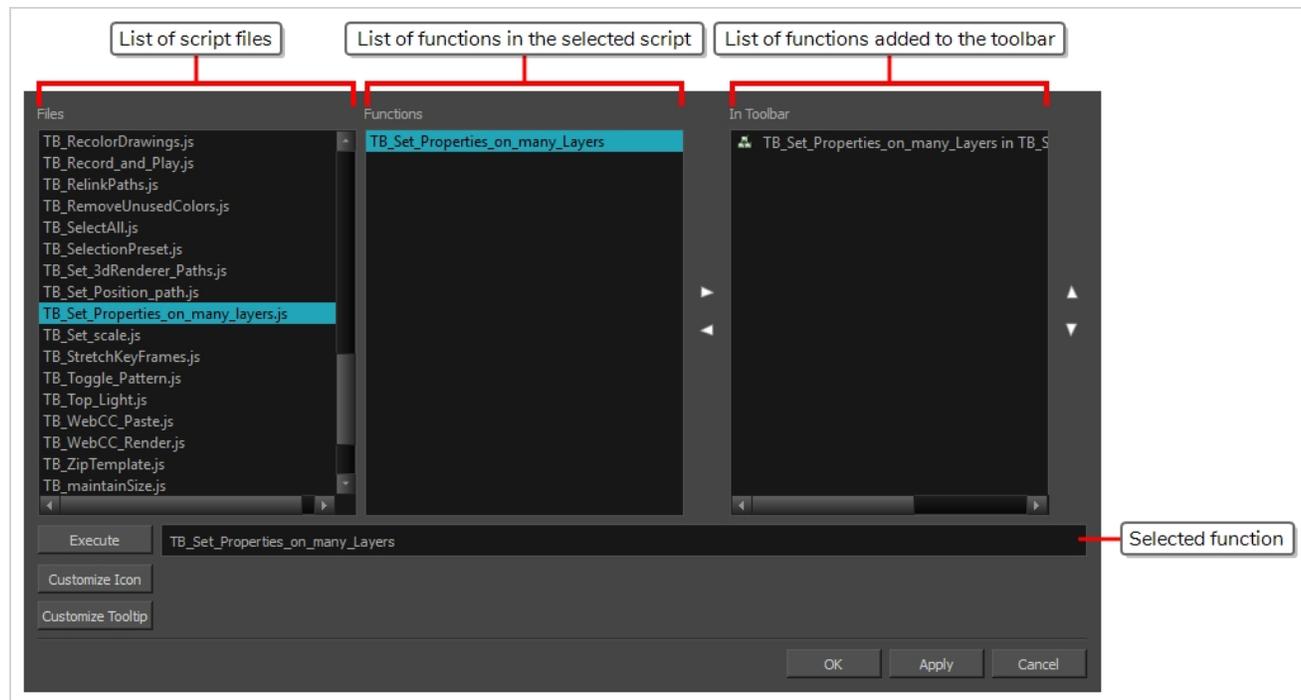
You can change the default drawing resolution settings for new scenes in the Drawing tab of the Preferences dialog.



Parameter	Description
Scene Resolution	This indicates the currently selected scene resolution preset and its dimensions in pixels.
Default Texture Density for Vector Drawings	<p><b>Pixel Density:</b> Determines the amount of pixels to store for each of a textured brush stroke's pixels that display when the scene is not zoomed in or the drawing is not scaled. For example, at 100%, zooming in or scaling up textured brush strokes will make them lose texture quality. If set to 200%, textured brush strokes can be zoomed in or scaled up until they're twice their original size without losing picture quality.</p>
Default Canvas Size and Pixel Density for Bitmap Drawings	<p><b>Width:</b> The default width of the canvas when creating drawings in a bitmap drawing layer. The percentage is relative to the width of the scene. Its default value, 200%, makes the width of the canvas twice the width of the stage.</p> <p><b>Height:</b> The default height of the canvas when creating drawings in a bitmap drawing layer. The percentage is relative to the height of the stage. Its default value, 200%, makes the height of the canvas twice the height of the stage.</p> <p><b>Pixel Density:</b> Determines the amount of pixels to store for each of a bitmap drawing's pixels that display when the scene is not zoomed in and the drawing is not scaled. For example, at 100%, zooming in or scaling up a bitmap drawing will make it lose picture quality. If set to 200%, bitmap drawings can be zoomed in or scaled up until they're twice their original size without losing picture quality.</p>

## Scripts Manager Dialog Box

The Scripts Manager dialog allows you to create buttons in the Scripting toolbar. Each button you create can run a specific function in one of your scripts. You can also choose an icon and a tool tip for the button, if you want.



### NOTE

For tasks related to this dialog box, see the User Guide.

### How to access the Scripts Manager Dialog Box

1. In the Scripting toolbar, click on the  Manage Scripts button.

The Scripts Manager dialog box opens.

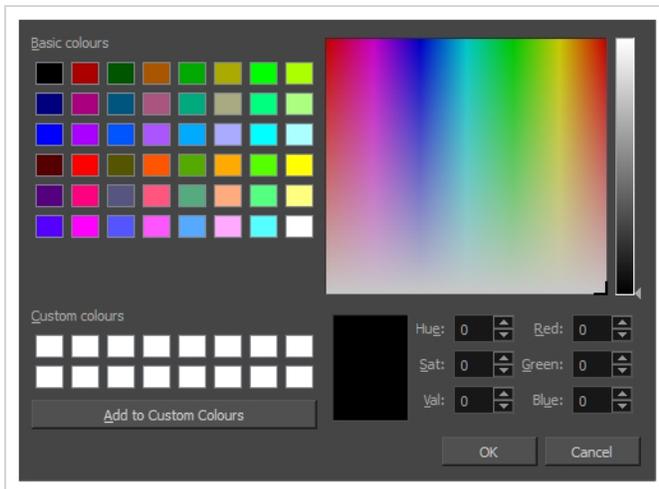
Parameter	Description
Files	A list of the available JavaScript files.
Functions	A list of the available functions for the selected script.
In Toolbar	The list of script functions already added to the Scripting toolbar.

Execute	<p>Runs the selected function.</p> <div data-bbox="565 247 1429 386" style="border: 1px solid #00a0e3; padding: 5px;">  <p><b>TIP</b> Press Esc to interrupt the execution of the script.</p> </div>
Customize Icon	<p>Allows you to select an icon for the toolbar button. Clicking on this button will open an Open dialog prompting you to browse for and select a <b>.png</b>, <b>.jpg</b>, <b>.xpm</b> or <b>.svg</b> file.</p>
Customize Tooltip	<p>Allows you to type in a custom tooltip for the toolbar button.</p>

## Select Colour Dialog Box

The Select Colour dialog box lets you set the colour of layers and columns. Using colours for layers and columns helps to differentiate them visually, making them easy to identify. The colours you choose will be reflected in the Node view.

You can select a colour by choosing from a basic set of colours, using the colour wheel or by specifying the HSV or RGB values. Once you have selected a colour, you can adjust its intensity and save it as a custom colour that you can reuse.



### How to access the Select Colour dialog box in the Timeline view

1. In the Timeline view, click the Change Track Colour  button of the layer you want to modify.



The Select Colour dialog box opens.

### How to access the Select Colour dialog box in the Xsheet view

1. In the Xsheet view, select one or more columns to modify.
2. Right-click on the column's header and select **Colour > Change Columns Colour**.

The Select Colour dialog box opens.

<b>Parameter</b>	<b>Description</b>
Basic colours	A basic set of colours to choose from.
Custom colours	Displays the custom colours you previously stored using the Add to Custom Colours button.
Add to custom colours	Lets you add the selected colour to the Custom colours list above.
Colour wheel	Lets you select a colour by dragging the T-shaped pointer.
Value slider	Once you select a colour, you can drag the slider to change the intensity and see it previewed in the Colour Preview window..
Colour Preview	Displays the colour you are currently selecting. To apply the colour, click OK.
Hue, Saturation, Value	Lets you set the hue (colour), saturation (amount of colour) and brightness (value) of the colour.
Red, Green, Blue	Lets you set the red, green and blue values.

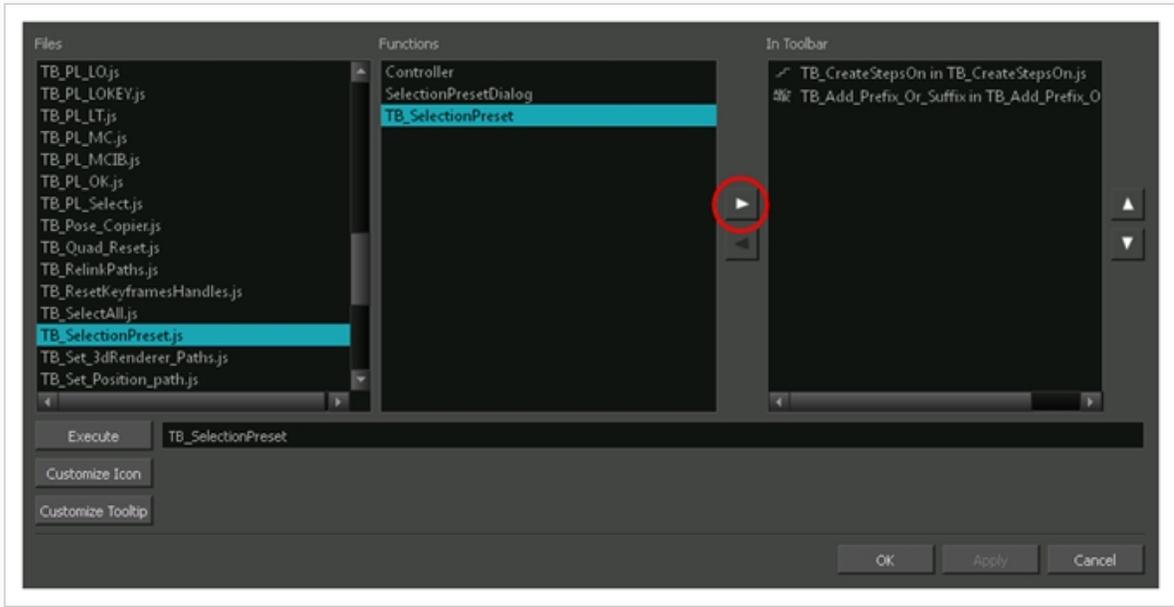
## Selection Presets Dialog Box

As you're animating, you might find that you are constantly selecting the same pegs, drawing layers, bezier points on a deformation envelope, part of a character rig, etc. You can create a preset that automatically selects any defined element or group of elements.



### How to access the Selection Presets dialog box

1. Add the Scripting toolbar to your interface:
  - Go to the top menu and select **Windows > Toolbars > Scripting**.
  - right-click on the empty space near the top of the interface and from the quick-access menu selecting **Scripting**.
  - right-click on the empty space near the top of a view and from the quick-access menu selecting **Scripting**.
2. In the Scripting toolbar, click on the Manage Scripts  button to open the Scripts Manager window.
3. In the Scripts Manager, in the Files section, select the file **TB\_SelectionPreset.js**.  
The functions associated with that file appear in the Functions section.
4. In the Functions section, select **TB\_SelectionPreset**.  
The Add script to toolbar  button becomes active.



5. Click on the Add script to toolbar button.

The TB\_SelectionPreset script button is added to the Scripting toolbar.

6. Click **Apply**.

7. Click **OK**.

8. In the Scripting toolbar, click on the TB\_SelectionPreset button.

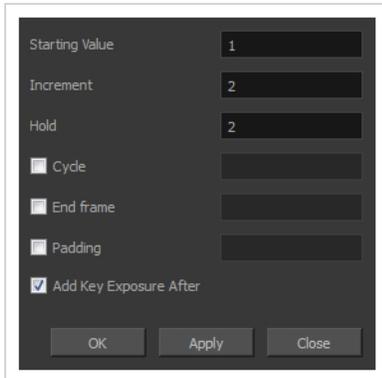
The Selection Presets window opens.

Parameter	Description
Refresh	Removes any highlighted zones from the Group column.
Add Selection Preset	Opens the Save Selection As Preset dialog box. After entering a name for the new preset and clicking OK, a new Selection Preset is added to the Selection Presets list. Note: before clicking on the Add button, make a selection in your scene of the elements for which you wish to create a Selection Preset.
Delete Selection Preset	Deletes the selected Selection Preset from the list.
Group	Double-click in this area, next to the Selection Preset you wish to use, to select the elements defined by the preset.
Name	Displays the name of the preset.

Apply to Selection	Selects the elements defined by the selected preset from the Name list.
Close	Closes the Selection Presets window.

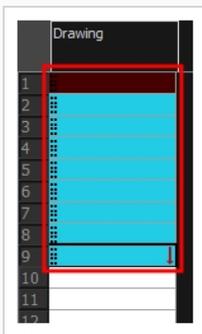
## Sequence Fill Dialog Box

The Sequence Fill dialog box lets you create a numbered sequence over a selection. The sequence can be forward, backward, single, double or higher increment, as a cycle, and so on. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.



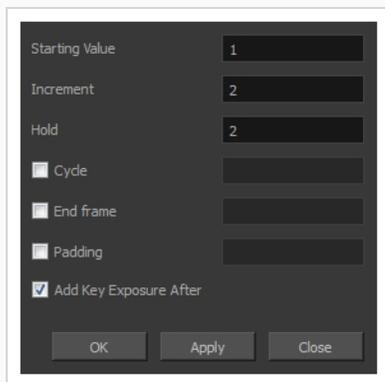
### How to access the Sequence Fill dialog box

1. In the Timeline or Xsheet view, select a cell range.



2. Do one of the following:
  - From the top menu, select **Animation > Cell > Sequence Fill**.
  - In the Timeline view, right-click and select **Exposure > Sequence Fill**.
  - In the Xsheet toolbar, click the Sequence Fill  button (you may have to customize the toolbar to display it).
  - Press Ctrl + M (Windows/Linux) or ⌘ + M (macOS).

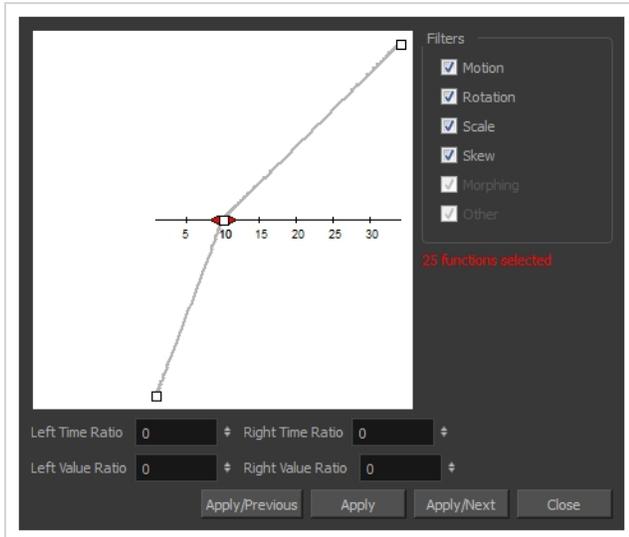
The Sequence Fill dialog box opens.



Parameter	Description
Starting Value	The first number in the sequence.
Increment	Lets you type the number by which the drawing number will increase from frame to frame. For example, an increment of 1 gives you: <b>1-2-3-4</b> ; an increment of 2 gives you: <b>1-3-5-7</b> ; and -2 gives you this: <b>8-6-4-2</b> .
Hold	The exposure holding value.
Cycle	Enable this option to cycle the values and enter the number of cycles in the Cycle field.
End Frame	Enable this option to stop the fill at a specific frame within the selection. Indicate the frame number in the End Frame field.
Padding	Enable this option to add a 0 padding before the drawing name. In the Padding field, enter as many hash symbols (#) as digit you want in your drawing name, including the value itself.
Add Key Exposure After	Inserts a key exposure on the frame following the last cell of the new fill selection.

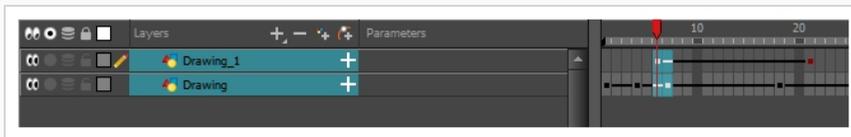
## Set Ease for Multiple Parameters Dialog Box

The Edit Set Ease for Multiple Parameters dialog box lets you apply ease to multiple functions and keyframes. You can display the function curve and modify the Bezier or Ease curve.



### How to access the Set Ease for Multiple Parameters dialog box

1. In the Timeline view, select a keyframe on one or more layers.



2. Do one of the following:
  - In the Timeline view, right-click and select **Set Ease For Multiple Parameters**.
  - In the Timeline toolbar, click the Set Ease For Multiple Parameters  button.

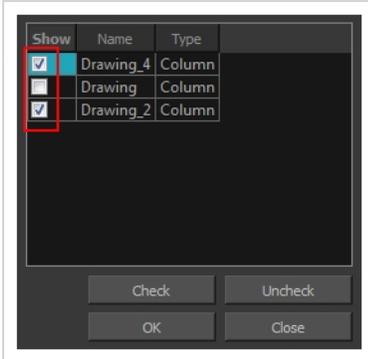
The Set Ease For Multiple Parameters dialog box opens.

Parameter	Description
Filters	
Motion	<b>Motion:</b> Applies the easing parameters to the selected Position X, Position Y, Position Z and 3D Path functions.

	<p><b>Rotation:</b> Applies the easing parameters to the selected Angle functions.</p>
	<p><b>Scale:</b> Applies the easing parameters to the selected Scale functions.</p>
	<p><b>Skew:</b> Applies the easing parameters to the selected Skew functions.</p>
	<p><b>Morphing:</b> Applies the easing parameters to the selected Morphing Velocity functions. Note that it applies to the Morphing velocity function found in the Layer Properties window, not the basic morphing ease in the Tool Properties view.</p>
	<p><b>Other:</b> Applies the easing parameters to all the other the selected functions, such as all functions created to animate effect parameters.</p>
Left and Right Time Ratio	<p>Lets you type the percentage value corresponding to the length of time you want the easing to last. Stay between 0% and 100%. If you go beyond 100%, your motion will overshoot.</p>
Left and Right Value Ratio	<p>Lets you type the percentage value of how strong you want the easing out to be. Stay between 0% and 100%. If you go beyond 100%, your motion will overshoot.</p>
Apply/Previous	<p>Applies the easing parameters to the selected keyframes and then selects the previous keyframe in the timeline.</p>
Apply	<p>Applies the easing parameters to the selected keyframes.</p>
Apply/Next	<p>Applies the easing parameters to the selected keyframes and then selects the next keyframe in the timeline.</p>
Close	<p>Close the dialog box. If you did not apply the modifications, they will be cancelled.</p>

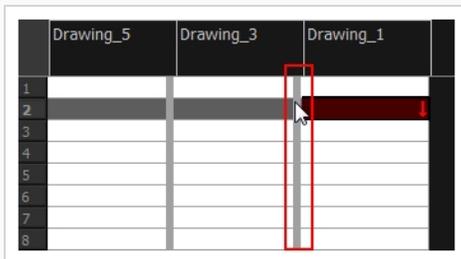
## Show Hidden Columns Dialog Box

The Show Hidden Columns dialog box lets you display all the columns contained in the exposure sheet. It can be used to hide individual columns.

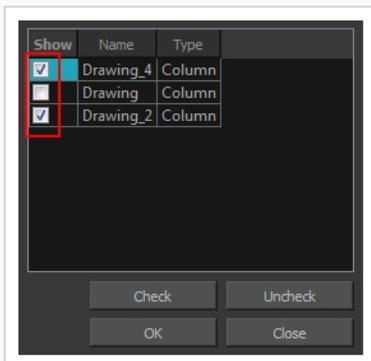


### How to access the Show Hidden Columns dialog box

- In the Xsheet view, do one of the following:
  - Click the thick grey line that represents a hidden column.
  - Right-click on the column header and select **Show Hidden Columns**.
  - Press Alt + Shift + H.



The Show Hidden Columns dialog box opens.

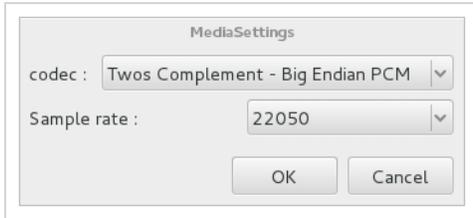


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Parameter	Description
Show	Lets you select the hidden columns to display in the Xsheet view.
Name	Name of the drawing.
Type	Indicates the column type such as column, timing, and expression.
Check	Selects all columns.
Uncheck	Deselects all selected columns.

## OpenQuickTime Sound Options Dialog Box

The OpenQuickTime Video Options dialog box is used to configure the audio compression settings when exporting a QuickTime movie file on Linux.



On Windows and macOS, Harmony uses Apple QuickTime to export QuickTime movies, and hence uses QuickTime's interface to configure video and audio compression settings for exporting movies. Since QuickTime is not supported on GNU/Linux, Harmony uses the OpenQuickTime library to create QuickTime-compatible movie files, which have a more limited set of compression settings.

### How to access the OpenQuickTime Sound Options dialog box

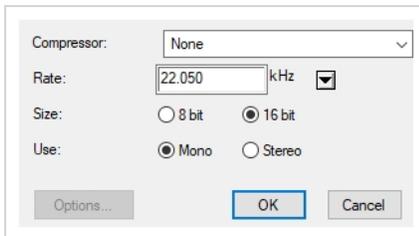
1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **QuickTime Movie (\*.mov)**.
3. Click on the **Sound Options** button.

Parameter	Description
Codec	<p>Lets you select a codec. By default, the following codecs will be available:</p> <ul style="list-style-type: none"> <li>• <b>A-Law 2:1:</b> This codec uses logarithms to compress audio data. The resulting audio stream requires half the disk space of uncompressed audio data, but is of noticeably lower quality.</li> <li>• <b>IMA 4:1:</b> This codec compresses audio data to require a quarter of the disk space required for uncompressed audio data. It is not supported by a lot of software.</li> <li>• <b>Twos Complement - Little Endian PCM:</b> A standard uncompressed audio codec.</li> <li>• <b>Twos Complement - Big Endian PCM:</b> A legacy standard uncompressed audio codec. This codec may be compatible with older editing interfaces.</li> <li>• <b>(mu)-Law 2:1:</b> Similarly to A-Law, this codec uses logarithms to compress audio data. The resulting audio stream requires half the disk space of uncompressed audio data, but is of noticeably lower quality.</li> </ul>

Sample rate	The sample rate at which to export your scene's audio. The only available option is <b>22050</b> Hz.
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## QuickTime Sound Settings Dialog Box

The Sound Settings dialog box lets you set the audio compression settings when you want to export a QuickTime Movie (.mov) file.



### NOTE

This dialog can only be accessed on Windows and macOS. On Windows, [Apple QuickTime](#) must be installed to be able to export QuickTime Movie (.mov) files.

### How to access the Sound Settings Dialog Box

1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **QuickTime Movie (\*.mov)**.
3. Click on the **Movie Settings** button.
4. In the Movie Setting dialog box that opens, click **Settings** in the Sound section.

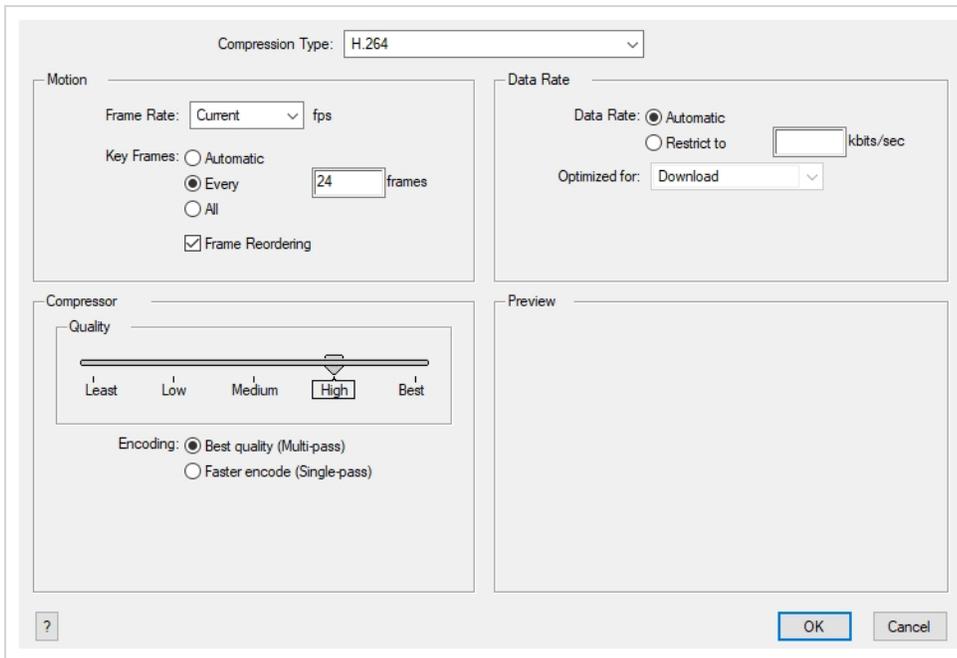
Parameter	Description
Compressor	Lets you select a compression type. The default setting is <b>None</b> . This exports your audio as is without performing any lossy compression or conversion, preserving its fidelity. Other compressors can be used if you need your movie's audio track to be exported in a specific format, or if disk space or download speed is critical, but they may impact the quality of your movie's soundtrack negatively.
Rate	Lets you select the audio rate at which to export. It is best to export your audio at a rate that matches the rate of your original sound files. For example, if your file has an audio sample rate of 48 kHz and you choose a conversion rate of 22.05 kHz, the sound will play at the same speed, but higher frequencies will be missing, making it sound muffled. For reference, the standard sound quality is <b>48 kHz</b> for broadcasting and DVD. Lower rates are liable to impact the quality of your movie's soundtrack negatively, but they can be useful if disk space or download speed is critical.

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Parameter	Description
Size	Lets you select the encoding size. Also known as <i>Bit Depth</i> , this determines the amount of precision used to record each wavelength in the soundtrack. The standard size is <b>16-bit</b> . If you choose <b>8-bit</b> , the amount of disk space your sound track requires is halved, but the audio will sound muffled.
Use	Lets you decide whether to use the <b>Mono</b> or <b>Stereo</b> channel mode. Stereo sound has a separate sound track for the left and the right speakers, allowing to make the origin of each sound realistically match the origin of their corresponding action. If you choose Mono, your sound track may use less disk space, but both the left and right channels will be merged into a single track.

## QuickTime Standard Video Compression Settings Dialog Box

The Standard Video Compression Settings dialog box lets you configure the video compression settings when exporting a QuickTime Movie (.mov) file.



### NOTE

This dialog can only be accessed on Windows and macOS. On Windows, [Apple QuickTime](#) must be installed to be able to export QuickTime Movie (.mov) files.

### How to access the Standard Video Compression Settings Dialog Box

1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **QuickTime Movie (\*.mov)**.
3. Click on the **Movie Settings** button.
4. In the Movie Setting dialog box that opens, click **Settings** in the Video section.

Parameter	Description
Compression Type	Allows you to select the codec to use for the video stream of your movie file. The availability of codecs may vary between machines. If you are unsure of which codec is best fit for you, it is recommended to use <b>H.264</b> for maximum portability,

Parameter	Description
	<p>and to use <b>Animation</b> if quality is more important.</p> <div data-bbox="565 342 1430 516" style="border: 1px solid #c8e6c9; padding: 10px;"> <p> <b>NOTE</b> The Animation codec, among a few others, allows you to set the colour depth to <b>Millions of Colors+</b>, which supports transparency.</p> </div>
Motion	
Frame Rate	The amount of frames per second for the video stream. Leave this setting to <b>Current</b> to use your project's frame rate.
Key Frames	<p>Some codecs compress the video by recording a limited amount of <i>keyframes</i>, which are frames in which the entire picture is encoded, pixel by pixel and, in-between, recording <i>deltas</i>, which are frames that are only defined by their difference with the previous frame. This significantly reduces the size of the movie file. However, the less keyframes a movie has, the more it is likely to encounter decoding errors, and the harder it is for players to scrub or jump to a specific time in the video. This option allows you to decide when keyframes are inserted in the video stream.</p> <p><b>Automatic:</b> Lets the encoder decide when keyframes should be inserted.</p> <p><b>Every ... frames:</b> Allows you to set the exact interval, in frames, at which keyframes should be inserted.</p> <p><b>All:</b> Encodes every frame as a keyframe. This option will significantly impact file size, but will make it easier to scrub through the video without causing any rendering error.</p> <div data-bbox="565 1371 1430 1577" style="border: 1px solid #c8e6c9; padding: 10px;"> <p> <b>NOTE</b> If you are using the H.264 codec, you must set the Key Frames option to <b>All</b>, or you will get an error message when you confirm the compression settings.</p> </div>
Frame Reordering	Encodes frames in a different order than the one at which they are meant to be displayed. This allows for more efficient compression, but may not be compatible with some players.
Compressor	

Parameter	Description
Depth	<p>Allows you to set the colour depth for your video. A lower colour depth will reduce the size of the video stream but will have significant impacts on picture quality.</p> <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;">  <b>TIP</b>  Set this to <b>Millions of Colors+</b> if you want to export a video with transparency. </div>
Quality	<p>Lets you choose a quality setting for the video compression. A higher quality setting will increase the size of the movie file, but will look better. A lower quality setting will reduce the size of the movie file, but will cause blurriness and compression artifacts to appear in the picture.</p>
Scan Mode / Interlaced	<p>Allows you to choose between the following scan modes:</p> <ul style="list-style-type: none"> <li>• <b>Interlaced:</b> Frames are encoded starting with their odd-numbered scanlines, then their even-numbered scanlines.</li> <li>• <b>Progressive:</b> Frames are encoded whole, from the highest scanline to the lowest scanline.</li> </ul> <div style="border: 1px solid #90ee90; padding: 10px; margin-top: 10px;">  <b>NOTE</b>  Some codecs will display a drop-down allowing you to select Interlaced or Progressive, while others will simply have an Interlaced checkbox. </div>
Aspect Ratio	<p>Allows you to select one of the following aspect ratios:</p> <ul style="list-style-type: none"> <li>• <b>4:3:</b> For output on standard definition displays.</li> <li>• <b>16:9:</b> For output to widescreen displays.</li> </ul>
Filter	<p>When exporting with the <b>PNG</b> compression type, this determines the algorithm with which each pixel is encoded relative to other pixels. Leaving this option to <b>Best</b> will export in the most space-efficient filter, without compromising picture quality. Picking a filter may increase rendering speed a bit, at the expense of some disk space.</p>
Data Rate	
Automatic	<p>Lets the encoder use the optimal bit rate for your compression settings.</p>

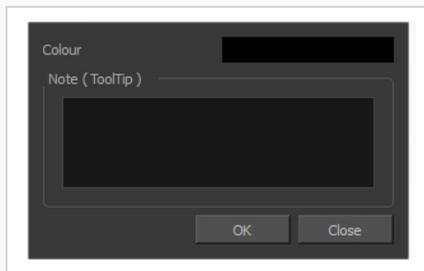
Parameter	Description
Restrict To	<p>Allows you to specify the encoding bit rate.</p> <div data-bbox="565 344 1430 512" style="border: 1px solid #c8e6c9; padding: 10px;"> <b>NOTE</b> This setting will override other compression settings, so that the specified bit rate is respected.</div>
Optimized For	<p>Optimize the encoding to be responsive depending on the intended viewing method:</p> <ul data-bbox="613 663 1430 905" style="list-style-type: none"><li>• <b>CD/DVD-ROM:</b> Optimizes the bit rate for a video that will be played using an optical disc player.</li><li>• <b>Download:</b> Optimizes the bit rate for a file that is going to be downloaded, then viewed from the user's hard drive.</li><li>• <b>Streaming:</b> Optimized the bit rate for a video that will be streamed from the web and played as the video is being downloaded.</li></ul>

## Timeline Scene Marker Dialog Box

The Timeline Scene Marker dialog box lets you create and manage scene markers in the Timeline view. Scene markers are visual indicators displayed at the top of the Timeline view in the frame counter area. You can use it to denote anything relevant to your work. You can indicate the frames you want to clean up, a change in action, an impact, or where you intend to apply an effect. You can also add a note to a scene marker, which is displayed when you hover over the scene marker.

### How to access the Timeline Scene Marker dialog box

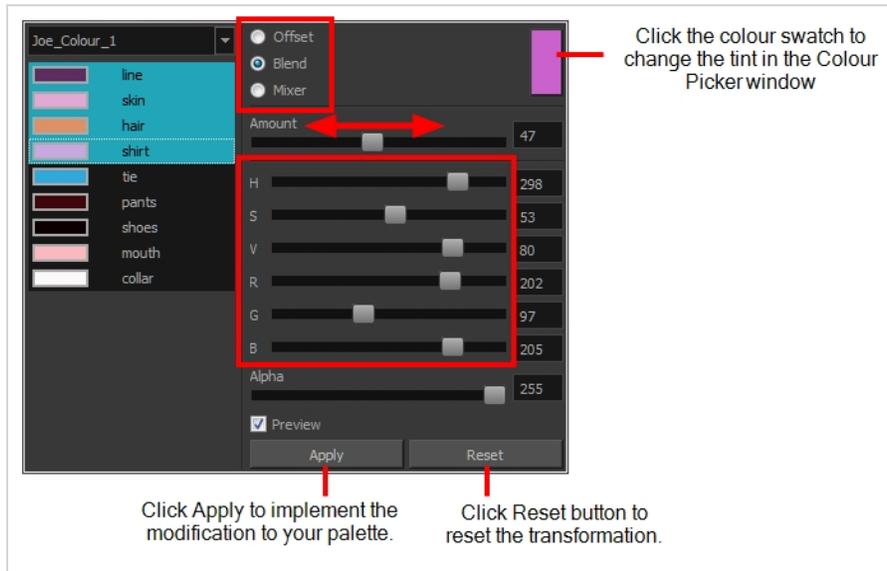
1. In the frame counter area of the Timeline view, do one of the following:
  - ▶ Drag to select the frame range to mark.
  - ▶ Right-click and select **Scene Markers > Mark Current Frame**.



Parameter	Description
Colour swatch	Opens the Mark Colour dialog box where you can select a colour for the scene marker.
Note (Tooltip)	Lets you type in a name for your scene marker. Making the name meaningful will help you to quickly identify scene markers especially when there are many of them in the frame counter area of the Timeline view.

## 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**.

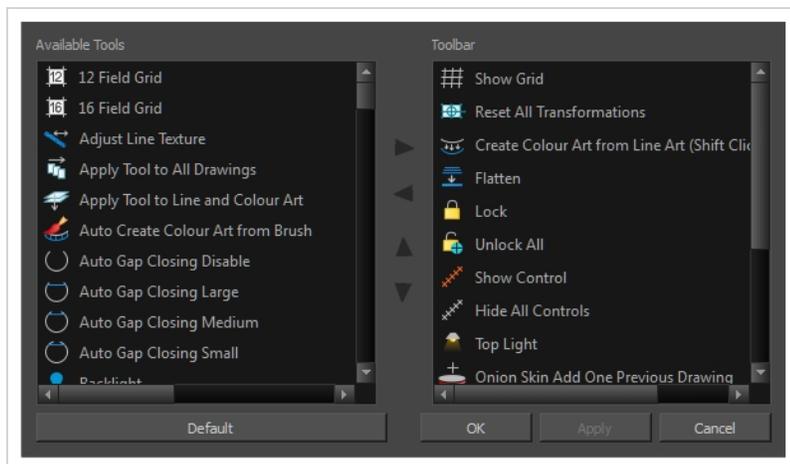
The Blend/Offset Tint panel opens.

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.



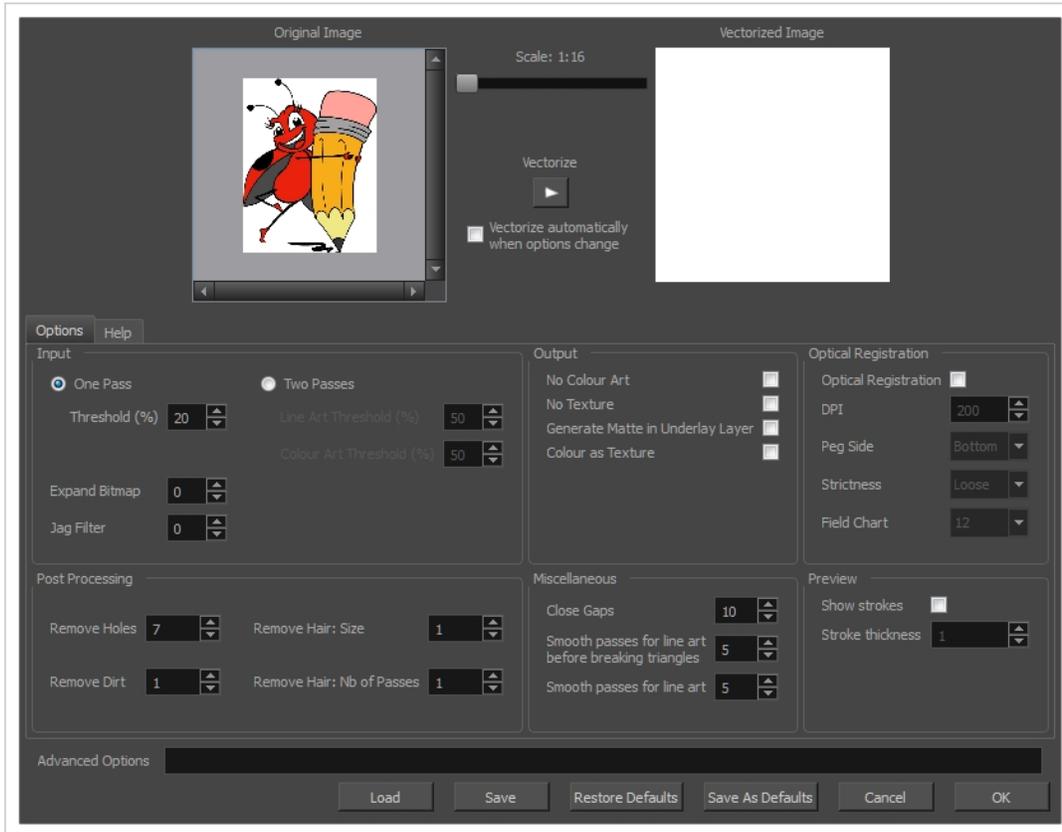
### How to access the Toolbar Manager dialog box

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.

## Vectorization Parameters Dialog Box

The Vectorization Parameters dialog box lets you vectorize pencil drawings, along with any red, blue or green pencil marks you may have used to indicate highlights and shadows. The drawing will be vectorized into pure red, blue, green and black (RGB values), while creating colour art zones wherever lines connect. After painting in your tones and highlights, change your pure RGB colours to transparent (0 Alpha) in the Colour Picker window and watch the indicator colour zone lines disappear.



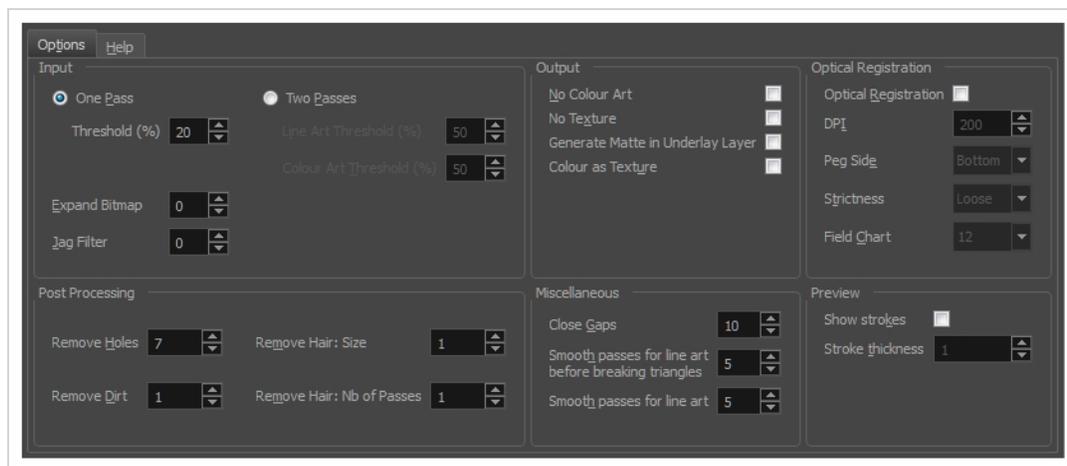
### How to open the Vectorization Parameters dialog box

1. From the top menu, select **File > Import > From Scanner**.  
You can also open it from any other import option that allows you to customize the vectorization parameters (i.e. from the scanner).
2. In the Scan Drawings window, do the following:
  - In the Layer section, decide on the layer options.
  - In the Import Options section, select the **Convert to Toon Boom Vector Drawing** option
  - Click **Preview**.

- In the Vectorization section, click the Vectorization Parameters  button.

## Options Tab

The Options tab contains the main vectorization settings. More settings are available in the Help tab.



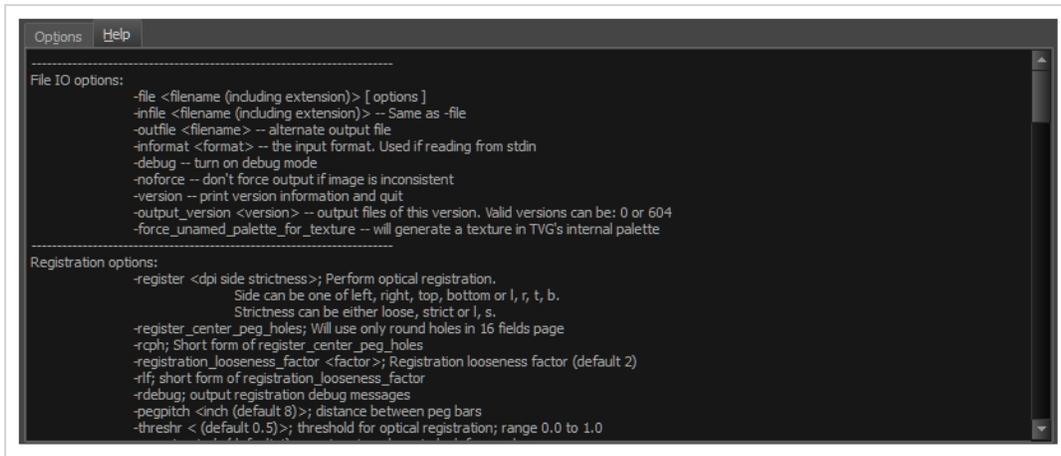
Parameter	Description
Input	The input filters are applied to the bitmap image before it is vectorized.
One Pass	One threshold value is applied to both the Line and Colour Art. For drawings with distinct vector-style lines of mattes, you only need one pass.
Two Passes	Applies a different threshold value to each layer. For greyscale drawings, you may want to perform the vectorization process twice to apply different threshold values to the Line and Colour Art layers.
Threshold	Determines which values in the scanned image are considered part of the Line and Colour Art layer and what will be eliminated from the vectorized drawing; 0% is white and 100% is black. The threshold is between these two values.
Expand Bitmap	Lets you enter a value to scale the bitmap to detect small variations in the line. Use this option if you scanned a greyscale image and want to preserve small variations in the texture to apply to the line art.
Jag Filter	Lets you enter a value to scale back the bitmap to remove some of the line's roughness. This is useless when you have a drawing that appears quite rough;

	the Jag filter will eliminate excess strokes in the final drawing.
Line Art Threshold (%)	Determines which values in the scanned image are considered part of the Line Art layer and what will be eliminated from the vectorized drawing; 0% is white and 100% is black. The threshold is between these two values.
Colour Art Threshold (%)	Determines which values in the scanned image are considered part of the Colour Art layer and what will be eliminated from the vectorized drawing; 0% is white and 100% is black. The threshold is between these two values.
Output	The output filters are applied during the vectorization process.
No Colour Art	Does not generate filling zones in the Colour Art layer.
No Texture	Does not generate texture in the Line Art layer in the final images. Select this option to create solid lines in the final line art.
Generate Matte in Underlay Layer	Creates an opaque zone behind your drawing's lines to avoid seeing through the layers.
Colour as Texture	Converts colour values into a texture layer.
Optical Registration	The optical registration options are used to automatically align drawings based on the position of the peg holes on the animation paper. The peg holes must appear in the scanned drawings for the optical registration to work.
DPI	Lets you enter the dots-per-inch value of your image. You must enter the same value as the DPI used to scan the image.
Peg Side	Lets you select the position of the peg holes on your drawings. Identify whether they are on the top, bottom, left or right.
Strictness	Determines how exact the location of the peg holes must be for the software to recognize them. There are two values to choose from:  <b>Strict:</b> The peg holes must be in a tightly defined area to be recognized.  <b>Loose:</b> The peg holes can be recognized somewhere in a larger area. This is the recommended setting.
Field Chart	Lets you indicate the size of the animation paper, 12 or 16.

Post Processing	The Post Processing filters are applied to the final vector images.
Remove Holes	Removes holes of a specified value that might make painting difficult.
Remove Dirt	Removes stray marks and dirt of a specified value. Try a value around 500.
Remove Hair Size	Removes small strokes that have no line art.
Remove Hair: Number of Passes	The number of times the drawing will be analyzed to identify hair marks.
Miscellaneous	
Close Gaps	Closes gaps in the Colour Art so you can paint it.
Smooth Passes for Line Art Before Breaking Triangles	The number of times the smoothing operation runs before creating the triangles that break lines in the drawing. If unnecessary triangles are appearing in the drawing, increase this value.
Smooth Passes for Line Art	The number of times the smoothing operation is performed after the triangles have been created. This further smooths the line art.
Preview	
Show Strokes	Shows the strokes in the Vectorized Image panel.
Stroke Thickness	Shows the size of the strokes.

## Help Tab

The Help tab contains the most advanced vectorization settings which you type in the Advanced Option fields at the bottom of the Vectorization Parameters dialog box.



## File IO Options

- file <filename (including extension)> [ options ]
- infile <filename (including extension)>; same as -file
- outfile <filename>; alternate output file
- informat <format>; the input format. Used if reading from stdin
- debug; turn on debug mode
- noforce; don't force output if image is inconsistent
- version; print version information and quit
- output\_version <version>; output files of this version. Valid versions can be: 0 or 604
- force\_unnamed\_palette\_for\_texture; will generate a texture in TVG's internal palette

## Registration Options

- register <dpi side strictness>; perform optical registration.
  - Side can be one of left, right, top, bottom or l, r, t, b.
  - Strictness can be either loose, strict or l, s.
- register\_center\_peg\_holes; will use only round holes in 16 fields page
- rcph; short form of register\_center\_peg\_holes
- registration\_looseness\_factor <factor>; registration looseness factor (default 2.000000)
- rlf; short form of registration\_looseness\_factor
- rdebug; output registration debug messages
- pegpitch <inch (default 8.000000)>; distance between peg bars
- threshr <(default 0.500000)>; threshold for optical registration; range 0.0 to 1.0

- rmargin** <inch (default 1)>; region size where to look for peg bars
- peg\_distance\_from\_center** <inch (default 5.25)>; peg distance from centre of the image
- pdfc**; short form of -peg\_distance\_from\_center
- out\_peg\_position** <side (default same)>; wanted position of the peg on the drawing.
  - Can be one of right, left, top, bottom (or r, l, t, b) or same.
  - A rotation will be performed if it is different from the side passed to -register.
- output\_peg\_matrix**; output the peg transformation matrix on standard output.
- scanner\_calibrate**; < (default 1.0000 1.0000) > x and y scale factors to be applied to scanner image.

## Filtering Options

- pixel** <pixel\_shape (default '4x3')>; Valid values: 4x3
- gap** <worldUnits (default 10)>; close gaps up to this big
- pencil**; generate line art only
- keep\_dirt**; don't filter out dirt
- thresh** <threshold (default 0.2)>; range 0.0 to 1.0
- rmv\_hairs** <worldUnits (default 1)> <passes (default 1)>
  - remove hairs of size smaller than "size" in "passes" passes
- rmv\_holes** <area (default 7)>; remove holes smaller than "area"
- rmv\_dirt** <area (default 1)>; remove dirt smaller than "area"
  - try values between 100 and 500 for rmv\_holes and rmv\_dirt. The area is in world units squared
- rmv\_triangles** <worldUnits (default 30.000000)>; remove triangles at "pixels"
  - distance from each other. Use -no\_break to remove all triangles
- no\_texture**; don't generate textured strokes
- color\_as\_texture**; will vectorize the alpha channel and put the RGB colour in a textured colour
- noclosegap**; disable all gap closing algorithms
- no\_break**; disable the breaking of line art
- jag\_filter** <pixels (default 0)>; expand the pixels in the vectorization bitmap
- expand\_bitmap** <pixels (default 0)>; expand the pixels in the vectorization bitmap
- fit\_errorc** <error (default 1.000000)>; fitting error for the colour art
- fit\_errorl** <error (default 1.000000)>; fitting error for the line art
- smoothl** <passes (default 1)>; number of smooth passes for line art

- smoothc** <passes (default 1)>; number of smooth passes for colour art
- first\_smooth** <passes (default 0)>; number of smooth passes for line art before breaking triangles
- first\_smoothl** <passes (default 0)>; number of smooth passes for line art before breaking triangles
- first\_smoothc** <passes (default 0)>; number of smooth passes for line art in colour art pass (needs -2pass)
- 2pass**; specify two sets of parameters; one for line art "l", one for colour art "c"
  - (-thresh, -rmv\_holes and -rmv\_dirt will be overridden by -threshl, threshc, -rmv\_holesl, -rmv\_holesc, -rmv\_dirtl and -rmv\_dirtc)
- threshl** <threshold for line art (default 0.5)>; range 0.0 to 1.0
- threshc** <threshold for color art (default 0.5)>; range 0.0 to 1.0
- jag\_filterl** <pixels (default 0)>; expand the pixels in the vectorization bitmap for line art
- jag\_filterc** <pixels (default 0)>; expand the pixels in the vectorization bitmap for colour art
- expand\_bitmapl** <pixels (default 0)>; expand the pixels in the vectorization bitmap for line art
- expand\_bitmapc** <pixels (default 0)>; expand the pixels in the vectorization bitmap for colour art
- rmv\_holesl** <area (default 7)>; remove line art holes smaller than "area"
- rmv\_holesc** <area (default 7)>; remove colour art holes smaller than "area"
- rmv\_dirtl** <area (default 1)>; remove line art dirt smaller than "area"
- rmv\_dirtc** <area (default 1)>; remove colour art dirt smaller than "area"
  - try values between 100 and 500 for rmv\_holesl, rmv\_holesc, rmv\_dirtl and rmv\_dirtc. The values are in world units squared
- margins** <inch (default 0.25)>; remove margin around bitmap
- top\_margin** <inch (default 0.25)>; remove margin at top of bitmap
- bottom\_margin** <inch (default 0.25)>; remove margin at bottom of bitmap
- left\_margin** <inch (default 0.25)>; remove margin at left of bitmap
- right\_margin** <inch (default 0.25)>; remove margin at right of bitmap
- remove\_peg\_bars**; remove the peg bar holes
- field\_size** <fields (default 12 or use value in scan file)>; set the drawing to this field size
- fs**; short hand for -field\_size
- peg\_bar\_size** <inch (default 1)>; the size of the peg bar region
- noframe**; do not put a frame around the colour art
- frame\_fields** <default -1.000000>; put a frame of the specified dimension around the colour art
- downscale\_input** <default 1>; downscale the raw input by this integer factor

- downscale\_texture** <default 1>; downscale the output texture by this integer factor
- buildmatte**; generate a matte on underlay for line test
- buildmatte\_colourart**; generate a matte on colour art for line test

**NOTE**

-buildmatte and -buildmatte\_colourart are mutually exclusive

- copystrokes**; copy original strokes when building matte.

## Options for bitmap that has no registration information

- pixel\_margins** <inch (default 0)>; remove margin around bitmap
- top\_pixel\_margin** <inch (default 0)>; remove margin at top of bitmap
- bottom\_pixel\_margin** <inch (default 0)>; remove margin at bottom of bitmap
- left\_pixel\_margin** <inch (default 0)>; remove margin at left of bitmap
- right\_pixel\_margin** <inch (default 0)>; remove margin at right of bitmap
- dpi** <(default -1)>; dpi information of input bitmap

## RGB Keying Options

- rgb**; generate separate zones for red, green and blue lines
- rgb\_alpha** <value (default 255)>; generate red, green and blue colour with alpha of this value
- no\_red**; ignore red colour in vectorization
- no\_green**; ignore green colour in vectorization
- no\_blue**; ignore blue colour in vectorization
- flatten**; flatten the drawing after generating colours
- rmv\_rgb\_dirt** <threshold area default 0.0>; remove red, green and blue regions smaller than area
- expand\_bitmap\_rgb** <pixels (default 0)>; expand the pixels in the vectorization bitmap for rgb
- threshrgb** <value> <threshold for rgb vectorization default 0.200000>;
- threshsv** <saturation threshold default 0.500000> <value threshold default 0.500000>; thresholds on saturation and value to consider a pixel to be grey

## Colour Vectorization Options

- color\_vectorize**; perform a colour vectorization
- file2** <colour art filename>; specify the colour art bitmap

- penstyle** <center alpha (0.0-20.0)> <edge alpha (0.0-20.0)> <gamma (0-10)><centre pressure effect (0.0-1.0)> <edge pressure effect (0.0-1.0)><texture bitmap downscaling (0.2-20)> <texture bitmap file (valid filename or "" if no file)>; generate brush texture for the line art
- pressure\_variation** <strategy (0, 1 or 2)> <min pressure (0.0-1.0)> <max pressure (0.0-1.0)> <max variation (0.0-1.0)>; specify a pressure strategy for the centre line.
- blur\_radius** <pixels (default 0)>; blur the penstyle texture generated
- color\_contour\_smooth\_passes** <times (default 3)>; perform number of smooth passes on contour before computing texture
- ccsp** <times (default 3)>; short for -color\_contour\_smooth\_passes
- color\_rmv\_holesl** <world units (default 0.000000)>; remove holes of this size when computing texture
- color\_fill\_holesl** <world units (default 0.000000)>; fill holes of this size for colour line art

## Bubble Usage (implemented only for colour vectorization's line art)

- create\_bubbles**; add bubbles into the LineArt. Implemented for colour vectorization only
- bubble\_gap** <value (default 3)>; max number of colour art points between 2 bubbles
- bubble\_length** <value (default 10)>; max number of circles in a bubble
- min\_radius** <value (default 1.5000)>; min radius of a circle in a bubble relative to the line thickness (must be >= 1.0)
- max\_radius** <value (default 3.5000)>; max radius of a circle in a bubble relative to the line thickness (must be >= 1.0)
- uniform\_gap**; the space between bubbles is constant

## 4 Colour Vectorization

-**4colours** [key:value] ... [key:value] ; The key value list can be empty. The list of keys is:

**rgbdiff:value** ; between [0.0-1.0] or [0-255]

**dark:value** ; between [0.0-1.0] or [0-255]

**grey:value** ; between [0.0-1.0] or [0-255]

**white:value** ; between [0.0-1.0] or [0-255]

**dirt:value** ; dirt area. 200 is a good value

**rt:value** ; between [0.0-1.0] or [0-255]

**gt:value** ; between [0.0-1.0] or [0-255]

**bt:value** ; between [0.0-1.0] or [0-255]

**NOTE**

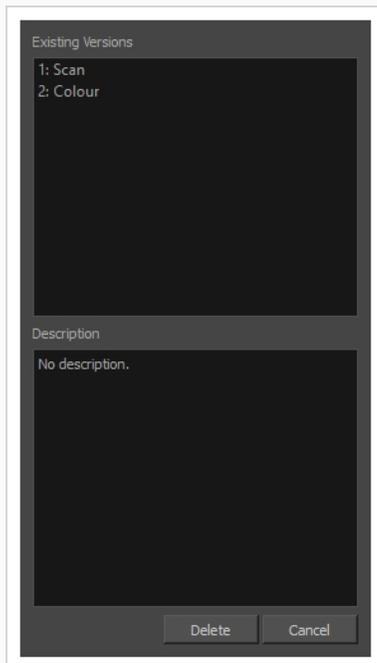
There must be no space between the colon and the key/value. For example: -4colours rgbdiff:20  
dark:20 grey:120 white:250 dirt:200 rt:240 gt:240 bt:240

## Versions Dialog Box

The Versions window lets you delete any unnecessary versions of scenes when working with Harmony Server. When working with multiple versions of a scene, you may want to clean up the database by deleting the ones you no longer need.

### How to access the Versions window

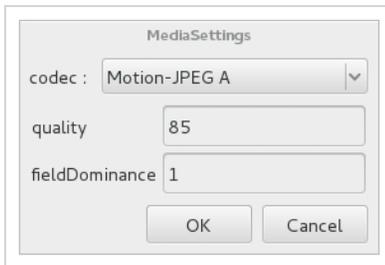
1. Make sure you have the necessary rights. If you do not, select **File > Rights to Modify Scene**.
2. Select **File > Manage Versions**.



Parameter	Description
Existing Versions	Displays the different versions of a scene that you can delete.
Description	Displays information about the selected version.
Delete	Removes the selected version of a scene. <div style="border: 1px solid red; padding: 5px; margin-top: 10px;">  <b>IMPORTANT</b>            This operation cannot be undone.         </div>

## OpenQuickTime Video Options Dialog Box

The OpenQuickTime Video Options dialog box is used to configure the video compression settings when exporting a QuickTime movie file on Linux.



On Windows and macOS, Harmony uses Apple QuickTime to export QuickTime movies, and hence uses QuickTime's interface to configure video and audio compression settings for exporting movies. Since QuickTime is not supported on GNU/Linux, Harmony uses the OpenQuickTime library to create QuickTime-compatible movie files, which have a more limited set of compression settings.

### How to access the OpenQuickTime Video Options dialog box

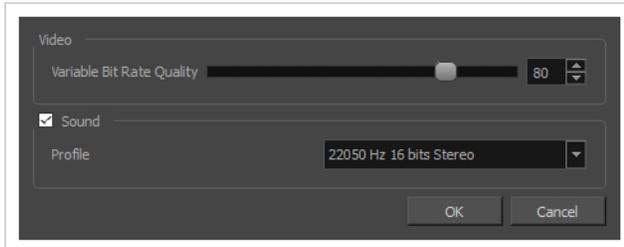
1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **QuickTime Movie (\*.mov)**.
3. Click on the **Video Options** button.

Parameter	Description
Codec	<p>Lets you select a codec. By default, the following codecs will be available:</p> <ul style="list-style-type: none"> <li>• <b>Motion-JPEG A:</b> A very portable codec that performs lossy JPEG compression and interlaces the frames. Motion-JPEG A compression is less efficient than Photo JPEG in terms of quality and file size, but may be a more portable alternative for software that does not support Photo JPEG.</li> <li>• <b>Photo JPEG:</b> Encodes the movie as a sequence of JPEG images. JPEG images have lossy compression. This is the most efficient codec for file size.</li> <li>• <b>Portable Network Graphics (PNG):</b> Encodes the movie as a sequence of PNG images. PNG images have lossless compression.</li> <li>• <b>Tag Image File Format (TIFF):</b> Encodes the movie as a sequence of uncompressed TIFF images. This codec is lossless.</li> <li>• <b>Uncompressed (RGB):</b> Encodes the movie as uncompressed bitmap data.</li> </ul>

	This codec is lossless.
Quality	For JPEG-type codecs, lets you set the JPEG compression quality. By default, this will be set to 85. Possible values range from 0 to 100. The higher the quality, the more disk space the resulting video file will take.
fieldDominance	For codecs with interlacing. This is set to 1 by default. If set to 1, the first field will be encoded on odd frames, and the second field will be encoded on even frames. If set to 2, the first field will be encoded on even frames, and the second field will be encoded on odd frames.
compression	The amount of lossless compression to perform when exporting in PNG format. PNG compression is lossless, but higher compression settings will take longer to encode and decode.
packbits	For TIFF movies, this option adds extra lossless compression to the encoding.
lendian	Encodes data in little endian byte order, instead of big endian.

## Windows Media Video Settings Dialog Box

The WMV Settings dialog box lets you set the video and audio settings when exporting a Windows Media Video (.wmv) movie.



### NOTE

The option to export to Windows Media Video is only available on Windows.

### How to access the WMV Settings dialog box

1. From the top menu, select **File > Export > Movie**.  
The Export Movie dialog box opens.
2. Set Movie Format to **Windows Media Video (\*.wmv)**.
3. Click on the **Movie Settings** button.

Parameter	Description
Video	
Variable Bit Rate Quality	Lets you choose a quality setting ranging from 5 to 100 for the video stream. The higher the quality of the export, the larger the resulting file.
Sound	
Profile	<p>Lets you choose among preset combinations of audio sample rates, sample sizes and channel modes for the audio stream:</p> <ul style="list-style-type: none"> <li>• <b>Sample rate:</b> Available sample rates are 8000 Hz, 16000 Hz, 22050 Hz and 44100 Hz. The default setting is 22050 Hz. It is best to export your audio at a rate that matches the rate of your original sound files. For example, if your file has an audio sample rate of 48000 Hz and you choose a sample rate of 22050 Hz, the sound will play at the same speed, but</li> </ul>

higher frequencies will be missing, making it sound muffled. For reference, the standard sound quality is **44000 kHz** for films, and **48000 kHz** for DVD. Lower rates are liable to impact the quality of your movie's soundtrack negatively, but they can be useful if disk space or download speed is critical.

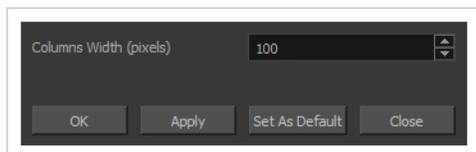
- **Sample size:** Also known as Bit Depth, this determines the amount of precision used to record each wavelength in the soundtrack. The standard size is **16-bit**. If you choose **8-bit**, the amount of disk space your sound track requires is halved, but the audio will sound muffled.
- **Channel mode:** Stereo sound has a separate sound track for the left and the right speakers, allowing to make the origin of each sound realistically match the origin of their corresponding action. If you choose Mono, your sound track may use less disk space, but both the left and right channels will be merged into a single track.

**NOTE**

Exporting in 8-bit audio requires [Apple QuickTime](#) to be installed.

## Xsheet Column Width Dialog Box

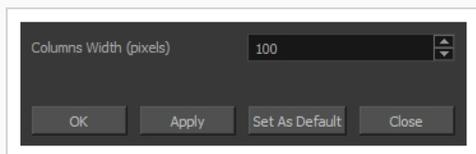
The Xsheet Column Width dialog box lets modify the width of a column in the Xsheet view and use it as the default column width.



### How to access the Xsheet Column Width Dialog Box

1. In the Xsheet view, select a column.
2. From the Xsheet menu, select **View > Set Columns Width**.

The Xsheet Column Width dialog box opens.



Parameter	Description
Columns Width (pixels)	Lets you set the width of the selected columns (in pixels).
Apply	Applies the value you entered to the selected column without closing the dialog box.
Set As Default	Uses the value you entered as the default for all columns in the Xsheet.



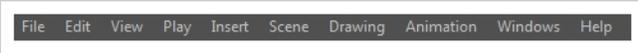
## Chapter 2: Menus

The Menus section covers all the menu entries available in Harmony. There are several types of menus in Harmony: main menus, quick-access menus and view menus. Menus contains most of the functions available. They may also have a toolbar button or keyboard shortcut equivalent.

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## Main Menus

The main menu contain most of the commands. Depending on the view you're working in and the element, some commands are available and others not. The main menu is always located at the very top of the interface.



On macOS, there is also a Harmony Advanced category that contains the following commands: Preferences, About, and Quit.

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## Animation Menu

The Animation menu lets you access tools, adjust animation timing, set morphing and parameters, lock or unlock layers, and select elements in the Xsheet and Timeline views.

### How to access the Animation menu

- At the top of the interface, select **Animation**.

Command	Description
Animate	Enables the Animate mode which records the position, rotation, scale, skew, etc. of objects as keyframes in the Timeline view. Turn off the Animate mode to reposition objects for the entire scene. When the Animate mode is disabled, keyframes are not created when an object's parameters change.
Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new location.
Delete Keyframe	Deletes the selected keyframes.
Tools	
Transform	Allows you to select drawing layers and position, rotate, scale and skew them.
Translate	Lets you move the selected element along the X and Y axes.
Rotate	Turns a selected element around its pivot point.
Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
Skew	Slants the selected element.
Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them towards or away from the camera.

<p>Spline Offset</p>	<p>Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.</p>
<p>Cell</p>	
<p>Increase Exposure</p>	<p>Adds one more exposure to a selected cell; repeating this action adds an extra cell each time. This is an efficient way to extend a drawing's exposure and is always set in Insert mode. Increasing an exposure pushes the existing exposure forward.</p>
<p>Decrease Exposure</p>	<p>Decreases exposure of a selected cell by one; repeating this action decreases one exposure adds an extra cell each time. This is an efficient way to shorten a drawing's exposure. Decreasing an exposure pulls in the existing exposure.</p>
<p>Set Exposure to</p>	<p>Lets you set the exposure to 1, 2, 3 or a custom exposure.</p>
<p>Extend Exposure</p>	<p>Lets you enter the frame up to which you want to extend the exposure. You can expose the drawing in the frames and replace the drawings that were originally there or move the subsequent frames forward in time.</p>
<p>Add Key Exposure</p>	<p>Adds a key exposure to the selected cell.</p>
<p>Remove Key Exposure</p>	<p>Removes only the key exposure (key frames) not all the exposures. The existing key exposure is replaced by the preceding exposure.</p>
<p>Remove Duplicate Key Exposure</p>	<p>When working with drawings to adjust the timing of a mouth in a lipsync, for example, and forcing the use of specific key exposures, unnecessary key exposures will be created. You can delete these duplicates without affecting the rest of the drawing. The first drawing of the selection will be used for the range.</p> <div data-bbox="678 1696 1429 1864" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b> Duplicate key exposures may occur when pasting with the Enforce Key Exposure option selected.</p> </div>

Fill Empty Cells	Lets you fill empty cells to extend the exposure of single frame drawings to fill the range of empty cells after each one. When creating drawings on cells that are not side-by-side, the exposure of the first drawing no longer fills automatically. You must select the frame range where you want your drawings to hold their exposure up to the next drawing and use the Fill Empty Cells command.
Insert Blank Cell	Adds an empty cell between other cells.
Clear Exposure	Removes the exposure from the selected cell.
Clear Exposure and Pull	Replaces the exposure from the selected cell with exposures that follow it.
Fill Selection	Lets you fill the same value over an entire selection. The selection can be over one cell, a cell range in one column, a cell range over many columns, an entire column, or many columns. You can use numbers, words, letters, or any alphanumeric value.
Sequence Fill	Lets you create a numbered sequence over a selection. The sequence can be forward, backward, single, double or higher increment, as a cycle, and so on. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.
Fill Cells Randomly	Lets you fill in random values over a selection. You can give a maximum and a minimum value and create a range for Harmony to choose the random values from. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.
Hold Exposure	Lets you expose a drawing for three, four, or five cells and so on.
Morphing	
Create Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
Insert Morphing Key Drawing	Creates a morphing keyframe from a selected morphing frame.
Delete Morphing	Once a cell is selected in a morphing sequence, deletes the entire sequence between the two keyframes.

Convert Morphing to Drawing	<p>Lets you convert your morphing inbetweens to real drawings you can edit. This is useful when manually editing a morphing sequence or if you prefer to have animation timing in double frame (on twos) instead of single frame (on ones).</p>
Contour Hint	<p>The Contour Hint point is used on the colour fill zone and brush lines; in other words, on Contour vectors. It allows you to control the line thickness and contour position. Also, if a contour is not animated correctly, you can use hints to correct the animation. For example, if a flag is not waving properly.</p> <p>When adding a Contour Hint point, make sure to place it far enough away from the contour so you can see it snap to the contour.</p> <p>Contour Hint points are yellow.</p>
Zone Hint	<p>The Zone Hint point is used on a colour zone to control the proximity rule. The Zone Hint is placed in the centre of the colour zone. Sometimes a colour zone is not associated with the corresponding one by default. For example, in a splash animation there are many water droplets that are the same colour. Harmony automatically morphs the droplet to the nearest one. This is not always the one you may have predicted. A Zone Hint will force a colour zone to morph with another one.</p> <p>Zone Hint points are cyan in colour.</p>
Pencil Hint	<p>A Pencil Hint point is used to control a pencil line, also known as central vector. It can be used on drawings that were done using the Pencil, Polyline, Ellipse, Line and Rectangle tools. Like the Contour Hint, the Pencil Hint snaps to the central vector. Make sure to place it far enough away from the line so you will see it snap when you move it.</p> <p>Pencil Hint points are magenta in colour.</p>
Appearing Point Hint	<p>An Appearing Point Hint is used to control the trajectory of an appearing shape. A shape will appear in the destination drawing when there is no corresponding shape in the source drawing. If you do not place an Appearing Point Hint to control the point of appearance, the shape will appear from its centre and expand outwards.</p> <p>Appearing Point Hint points are violet in colour.</p>
Vanishing Point Hint	<p>A Vanishing Point Hint is used to control the trajectory of a vanishing shape. A shape will vanish from the source drawing when there is no corresponding shape in the destination drawing. If you do not place a</p>

	<p>Vanishing Point Hint to control the point of disappearance, the shape will vanish into its centre.</p> <p>Vanishing Point Hint points are green in colour.</p>
Switch Between Morphing Key Drawings	Toggles between the two key drawings in your morphing sequence. This option is useful while setting hints. You can use the default keyboard shortcut F4 to toggle between your drawings.
Go to First Frame	Goes to the first frame of your morphing sequence.
Go to Previous Frame	Goes to the previous frame of the selected frame in the morphing sequence.
Go to Next Frame	Goes to the next frame of the selected frame in the morphing sequence.
Go to Last Frame	Goes to the last frame of your morphing sequence.
Suggest Hints	Automatically sets hint points on key drawings as a help tool. If you're not sure where to set hints, you can use this option. It will set the main hints which you can then fine tune.
Hide Hints	Temporarily hides the hint points from the key drawings. Use this option when you have a series of hint points hiding some lines you would like to see.
Lip-Sync	
Change Mouth Shape to	Lets you change the mouth shape to one of the following: A, B, C, D, E, F, G, X.
Auto Lip-Sync Detection	Generates a sound detection for lip-sync.
Map Lip-Sync	Automatically maps drawings in an element to the mouth chart you have generated for a sound. This can save time when you are lip-synching a voice track.
Flip	
Flip Horizontal	Flips the selection horizontally.

Flip Vertical	Flips the selection vertically.
Flip Scale X	Once your drawing layer is rotated, the original horizontal and vertical axes change. The Flip Scale X and Flip Scale Y will perform a flip on your drawing layer following its original axis. Remembers the original X-axis of the layer and flips the element following it.
Flip Scale Y	Remembers the original Y-axis of the layer and flips the element following it.
Linear Motion	Switches between a linear and curved corner.
Lock in Time	Indicates whether the point is locked to a specific frame (keyframe) or only locked to a specific position and the curve can flow through it freely as other points are being added, moved, or adjusted (control point).
No Z Dragging	Keeps the Z value constant when you drag a character using the Transform or Translate tool.
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the previous drawing.
Substitute Drawing Next	Replaces the drawing or cell's symbol on the current frame by the next drawing.
Go to Previous Keyframe	Goes to the previous keyframe.
Go to Next Keyframe	Goes to the next keyframe.
Select Previous Keyframe /Point	Select the previous keyframe/point.
Select Next Keyframe /Point	Select the next keyframe/point.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.
Select Children	Lets you select all elements parented to the selected peg element in the Timeline view.

Select Parent	Lets you select the parent of the selected element in the Timeline view.
Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
Lock	
Lock	Locks one or a multiple selection of layers.
Unlock	Unlocks one or a multiple selection of locked layers.
Lock All	Locks all the layers in the Timeline view.
Unlock All	Unlocks all the layers in the Timeline view.
Lock All Others	Locks every layer except the selected ones.
Reset	Returns the value of the selected element to the initial value of the active tool. For example, if the Rotate tool is active, the transformation angle will be reset to 0 and if the Transform tool is active, all the transformation values will be reset.
Reset All	Resets all transformations on the current frame in a selected layer. Your keyframe will remain, but all the values will return to the starting value. All transformations are reset regardless of the tool you're using.
Reset All Except Z	Resets all transformations on the current frame except the Z position. This is useful when doing cut-out animation. Cut-out puppets often have a particular Z ordering for the different views of a character. You might want to reset the transformation, but not necessarily the Z position.

## Drawing Menu

The Drawing menu lets you access many tools related to drawing, painting, dirt removal, optimizing strokes, and more.

### How to access the Drawing menu

- At the top of the interface, select **Drawing**.

Command	Description
Drawing Tools	Allows you to select one of the drawing tools available in Harmony.
Select	Allows you to select and reposition, scale, rotate and skew brush strokes, pencil lines, shapes and other parts of your artwork.
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.
Cutter	Allows you to cut a part of your artwork, then reposition, scale, rotate and skew it.
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.
Reposition All Drawings	Allows you to reposition, scale, rotate and skew all drawings in the current layer.

Drawing Pivot	Allows you to position the pivot on a drawing layer by clicking where you want its location to be.
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.
Dropper	Allows you to select a colour by clicking on a colour in your artwork.
Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
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.
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.
Repaint Brush	Like the Brush tool, but only paints over existing brush strokes.
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.

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.
Edit Gradient/Texture	Allows you to adjust the position, angle and size of gradients and textures in a colour zone.
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.
Clean Up	
Remove Dirt	Opens the Remove Dirt dialog box where you can specify the number and size of dots removal from a selected drawing.
Remove Hair	Opens the Remove Hair dialog box where you can specify the number and length of hairs for removal from a selected drawing. This removes any small strokes created in the Colour Art layer from very thick lines or filled zones. Increase the value to select larger strokes for removal from the drawing.
Close Gaps	Closes 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.
Remove Art Inside Selection	Removes any art inside a selection. It is recommended that you clean your Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high definition resolutions.
Remove Art Inside Selection on All Drawings	Removes any art inside all drawings selected with the Permanent Selection option in the Select tool.
Remove Art Outside Selection	Removes any art existing outside a selection. It is recommended that you clean the Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high-definition resolutions.

Remove Art Outside Selection on All Drawings	Removes any art outside all drawings selected with the Permanent Selection option in the Select tool.
Paint	<div style="border: 1px solid green; padding: 10px;">  <p><b>NOTE</b> The Paint commands require you to use the Permanent Selection option in the Select tool so you can maintain a selection over multiple drawings.</p> </div>
Unpaint Selection	Unpaints any art existing inside a selection.
Unpaint Selection on All Drawings	Unpaints all art contained inside a selection on all the drawings within the same layer.
Unpaint Outside Selection	Unpaints any art existing outside a selection. If no selection have been drawn using the Select tool, the entire drawing will be unpainted.
Unpaint Outside Selection on All Drawings	Unpaints all art outside a selection on all the drawings within the same layer.
Repaint Selection	Repaints any art inside a selection.
Repaint Selection on All Drawings	Repaints any art inside a selection on all the drawings contained within the same layer.
Repaint Outside Selection	Repaints any art outside a selection. If no selection has been drawn using the Select tool, the entire drawing will be repainted.
Repaint Outside Selection on All Drawings	Repaints any art outside a selection on all the drawings contained within the same layer.
Convert	
Pencil Lines to Brush Strokes	Converts the selected centreline pencil strokes into contour strokes brush lines.
Brush Strokes to Pencil Lines	Converts selected contour strokes into centreline pencil strokes. The brush stroke thickness will be lost.

Strokes to Pencil Lines	Converts the selected invisible line to a pencil line.
Break Apart Text Layers	Text is treated as a single drawing object. This separates the text so each character becomes an individual drawing object you can select and modify independently.
Optimize	
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.
Smooth	Smooths selected drawing strokes and removes extra points.
Create Contour Strokes	Adds a permanent invisible line around a shape that was drawn directly in Harmony. This allows you to unpaint lines with the Paint tool but maintain the shape of the lines, should you need to repaint later.
Remove Contour Strokes	Remove any permanently invisible lines that were created while scanning and vectorizing drawings or manually adding contour strokes. This is useful for removing the intersection triangles created during vectorization.
Remove Extra Strokes	Removes strokes inside painted area. This option only works after the painted drawing is flattened.
Optimize	Reduces the number of layers, such as overlapping brush strokes, in the selected drawing objects. Drawing objects will only be flattened and optimized if the selected objects do not change the appearance of the final image when they are merged.
Crop Brush Textures	Crops an unnecessarily large texture bitmap that lies unseen beneath the vector contour of a textured line. This often occurs when you cut and paste textured lines from one drawing into another. If you cut a portion from a textured line and paste it into a different drawing, Harmony pastes the entire unseen texture bitmap from the source drawing into the new one, even if you only took a small portion of the source drawing. Using the Crop Brush Texture command will crop away extraneous texture that does not touch the vector area. If there are many textured lines in your scene, this will greatly reduce the file

	size.
Reduce Drawing Texture Resolution	When you import and vectorize as texture (colour) a high resolution image, the size of your drawing can be heavy. You can reduce the size and resolution of the textures in a drawing.
Transform	
Flip Horizontal	Flips the current selection horizontally.
Flip Vertical	Flips the current selection vertically.
Rotate 90 CW	Rotates the current selection 90 degrees clockwise.
Rotate 90 CCW	Rotates the current selection 90 degrees counter-clockwise.
Rotate 180	Rotates the current selection 180 degrees.
Arrange	
Bring to Front	Moves the selected art to the front (on top).
Bring Forward	Moves the selected art one level forward (closer to the front).
Send Backward	Moves the selected art one level lower (behind).
Send to Back	Moves the selected art behind everything (bottom / back).
Create Empty Drawing	Creates a drawing in the selected cell, replacing any drawing that may already be exposed in that cell and the following ones until it meets another drawing, key exposure or a blank cell.
Duplicate Drawings	Lets you duplicate the drawing and work on a copy of it. This lets you modify an existing drawing but retain the original. When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.
Delete Selected Drawings	Permanently removes selected drawings. Once you save your project,

	these drawings cannot be recovered.
Rename Drawing	Lets you give a selected drawing a new name.
Rename Drawing with Prefix	Lets you rename a drawing sequence with a prefix, which can be quite useful for cut-out puppet breakdown and deformation animation. This applies to any deformation work done in pre-Harmony 12 versions.
Rename by Frame	Lets you rename a series of drawings relative to their frame position. This is useful in hand-drawn animation.
Select Strokes with Current Colour	Lets you select drawing elements and painted areas with the same colour as the currently selected colour in your colour palette.
Distribute to Layers	Every selected stroke in the Camera view is placed on separate layers; one layer per stroke. If artwork is composed of several strokes, you must group them to put them on the same layer.  This operation cannot be done in the Drawing view.
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.
Create Breaking Triangles	Useful for brush strokes, creates triangular breaks at natural line intersections. These intersections are the probable locations where colour line breaks may occur, such as where a sleeve meets a hand.  This makes it easier to soft trace lines in different colours when there are flattened or unflattened clean brush strokes.
Generate Auto-Matte	Fills colour based on currently selected colour swatch on different drawing layers (overlay, underlay) so overlapping lines are more visible during a line test.
Adjust Line Texture Opacity	Lets you adjust the contrast and opacity of textured lines in a drawing.
Change Vector Drawing	Allows you to change the pixel density of textured brush strokes in

Brush Resolution	<p>vector drawings in your scene.</p> <div data-bbox="678 247 1429 451" style="border: 1px solid #90EE90; padding: 5px;">  <p><b>NOTE</b> When you create a new vector drawing, its pixel density for textured brush strokes is based on the settings in the Drawing Resolution tab of the Scene Settings dialog.</p> </div>
Change Bitmap Drawing Resolution	<p>Allows you to change the pixel density and canvas size of existing bitmap drawings in your scene.</p> <div data-bbox="678 604 1429 808" style="border: 1px solid #90EE90; padding: 5px;">  <p><b>NOTE</b> When you create a new bitmap drawing, its canvas size and pixel density are based on the settings in the Drawing Resolution tab of the Scene Settings dialog.</p> </div>
Previous Drawing	<p>When a cell is selected in the Timeline or Xsheet view, displays the previous drawing.</p>
Next Drawing	<p>When a cell is selected in the Timeline or Xsheet view, displays the next drawing.</p>
Previous Layer	<p>When a cell is selected in the Timeline or Xsheet view, displays the previous layer.</p>
Next Layer	<p>Once a cell is selected in the Timeline or Xsheet view, you can navigate between the drawings, frames, and layers. Displays the previous drawing, next drawing, previous layer or next layer.</p> <p>When a cell is selected in the Timeline or Xsheet view, displays the next layer.</p>
Colour Protection	
Toggle Current Colour Protection	<p>Temporarily enables/disables the Colour Protection feature so you can quickly correct wrongly inked or painted areas under protected colour without readjusting the Current Colour Protection option.</p>
Respect Colour Protection	<p>In the Colour view, you can protect a colour swatch to avoid repainting or unpainting the zones linked to that swatch. If you using the Paint tool and this option is deselected, you will repaint or unpaint the protected colours on your drawings until you enable the option again.</p>

## Edit Menu

The Edit menu lets you repeat and undo actions, cut/copy/paste selected objects, select and manipulate objects, work with symbols, and access the Preferences dialog box.

### How to access the Edit menu

- From the top menu, select **Edit**.

Command	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.
Paste Special	Opens the Paste Special dialog box which lets you determine how templates and symbols are imported in the Timeline view.  There are advanced paste options for drawings, timings, keyframes, layers, as well as palettes and symbols.
Paste Special Again	Pastes new drawings with the previous Paste Special settings.
Paste Cycle	Cycles a portion of an animation. You can increase or decrease the number of cycles to paste and select a type of cycle: Normal, Reverse, Forward-Reverse and Reverse-Forward.
Paste Reverse	Reverses the timing of drawings or keyframes in range of selection after copying.

Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Auto-Apply	Automatically applies changes you make to a property window or dialog box. Harmony applies the modification automatically and displays the result in the Camera view. When working on a heavy scene, it is useful to turn off this option. If you want to always work in Auto-Apply mode, you can deselect the Auto-Apply option in the Preferences dialog box (General tab). Then, each time you start Harmony, the Auto-Apply mode will be off. You must click the Apply button to see any modifications.
Create Symbol	Creates a symbol from selected drawing elements in the Drawing or Camera view or a layer or cells in the Timeline view.
Expand Symbol	<p>Extracts a symbol's contents and places it on the root timeline. Its contents will be copied and inserted into the root timeline. The symbol will not be removed from the Timeline view once it is expanded.</p> <p>The symbol's layers will be parented to it in case you created motions and transformations on the drawing layer that contain the symbol. Breaking the hierarchy could result in the loss of any scaling and animation you may have created.</p>
Duplicate Selected Symbol	Creates a duplicate of a selected symbol. If other symbols are nested inside the new symbol, they are not duplicated. If you modify them, the original and other instances will also be modified.
Create Drawing from Drawing Selection	Breaks a character into its main body parts. There is no need to create any layers prior to this process. Make sure your model is well centered and sized in the Camera view.
Clone: Drawings Only	Creates a copy of the drawings in the selected layer in the Timeline

	view or column in the Xsheet view. The timing it not copied.
Clone: Drawings and Timing	Creates a copy of the drawings and their timings in the selected layer in the Timeline view or column in the Xsheet view.
Duplicate	Duplicates a layer to have a copy of the drawings that are independent from the original ones, as well as an independent timing (exposure). When you need the drawings to be modified independently, you will want to duplicate the layer instead of cloning it.
Merge	There are two methods of merging drawings. <ul style="list-style-type: none"> <li>You can merge selected drawings in adjacent elements. The columns and layers will be left intact, and each new merged drawing will reside in the frames of the left-most column or lower layer.</li> <li>You can merge elements. All drawings will be merged. Unused columns and layers will be deleted, but the original drawing files are still accessible.</li> </ul>
Group	
Group	Groups selected drawing objects in the Camera or Drawing view.
Ungroup	Ungroups a selected group of drawing objects in the Camera or Drawing view.
Edit Drawing Mode	When the Auto-Get Rights to Modify Drawings option is selected in the Preferences dialog box (General tab), the system automatically gets the rights to modify drawings when you select a drawing. Otherwise, you must manually get the rights to modify drawings.
Edit Palette List Mode	When the Auto-Get Rights to Modify Palette option is selected in the Preferences dialog box (General tab), the system automatically gets the rights to modify palettes and palette lists when you select a colour from a palette. Otherwise, you must manually get the rights to modify a palette or palette list.
Get Rights to Modify Drawing	Manually releases the rights to modify a selected drawing.
Release Rights to Modify Drawing	Manually releases rights to modify a selected drawing.

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Force Release Rights to Modify Drawing	This option is always available even if the Get Rights to Modify All Scene Assets option is not selected in the Database Selector dialog box.
Preferences	Opens the Preferences dialog box where you can set your preferences for Harmony.

## File Menu

The File menu lets you open, close, save, scan, print, and import and export files.

### How to access the File menu

- From the top menu, select **File**.

Command	Description
New	Creates a new scene while closing any scene already open. The New Scene dialog box opens, asking for directory, name, and resolution information.
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.
Open Recent	Displays a list of the most recently opened scenes.
Clear	Clears the list of recently opened scenes.
Close	Closes the currently opened scene, but does not close the Harmony application.
Save	Saves all changes made to the opened scene, drawings, palettes, and palette lists.
Advanced Save	Lets you do the following: <ul style="list-style-type: none"> <li>• Save the scene as the current version.</li> <li>• Save different versions representing different stages of the production of your scene.</li> <li>• Save different versions representing different scene setups.</li> <li>• Choose specific assets that you want to save, such as drawings or palettes.</li> </ul>
Rights to Modify Scene Version	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.

Rights to Modify Scene	Allows you to modify the currently selected scene version only. Unless the <b>Get rights to modify the scene</b> 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.
Read Changed Drawings	Determines which drawing files have been modified on disk since you loaded them. All updated drawings will be reloaded.  <div data-bbox="678 520 1429 655" style="border: 1px solid green; padding: 5px;">  <b>NOTE</b>  Reloading a locked drawing will discard unsaved changes. </div>
Manage Versions	Allows you to manage all the versions of the current scene.
Save As	Saves the current file with a different name and at a different location.  Saves the current state of a scene as another scene. The Save As window prompts you for a new name and a different location for this scene before saving it. This will create a complete scene directory for the new scene.  <div data-bbox="678 1029 1429 1163" style="border: 1px solid green; padding: 5px;">  <b>NOTE</b>  The scene name <b>cannot</b> exceed 23 characters. </div>
Save as New Version	Saves the current scene as another version. The Save Version dialog box prompts you to give a name for this new version. This will create a new .xstage file in your current project directory.
Back Up Scene	Backs up the current scene to a location you choose.
Update Database Scene	Updates your database with only the changes you made to the scene. To do this, you must enter your host name and host port in the Preferences dialog box, General tab.
Download Database Changes	If any changes were made to the scene you downloaded, you can perform an update by downloading these changes, which will be integrated into your scene.
Remove Unused Files	Removes the unused palettes from the scene list.

Import	
From Scanner	Imports drawings from a TWAIN scanner.
Images	Imports bitmap images which you can choose to vectorize.
Movie	Lets you convert a QuickTime movie to an image sequence and audio file.
Sound	Lets you import sound files into your project.
Colour Model	Lets you import TVG drawing file into your project. Once imported, it is display in the Model view for use as a colour model which you can load into any Harmony scene.
SWF, Illustrator Files to Library	Lets you import SWF files into your project.
Export	
Images	Exports a scene as a bitmap image sequence. If there is sound in your scene, it will not be exported with the images.
Movie	Exports animation as a QuickTime movie.
SWF	Exports a Flash movie file. Harmony supports exporting Flash movie files with a limited subset of vector and bitmap effects, the latter which can be previewed in Render View  mode.
OpenGL Frames	Exports OpenGL frames (fast display mode) for a quick screen renders of a scene that contain no transparency channel. Heavier scenes containing 3D, multiple effects and camera moves can be fairly long to export.
Print	
Xsheet	Prints the exposure sheet so you can take it to your animation table, provide a copy to the animator, or create your Xsheet skeleton directly in Harmony.

Quit	Closes the application.
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## Help Menu

The Help menu lets you display the Harmony documentation, Welcome screen and end user license agreement, as well as access the Toon Boom website, and identify the product name and version number.

### How to access the Help menu

- At the top of the interface, select **Help**.

Command	Description
Online Help	Opens the Harmony Help system, complete with instructions on how to use the system. This requires an internet connection.
Getting Started	Opens the Harmony Getting Started Guide (in PDF format) in a browser window. Requires Acrobat Reader.
Toon Boom on the Web	Opens the Toon Boom website, which features a Support and Community > Forum section.
Customer Experience Improvement Program	<p>The Customer Experience Improvement Program allows Toon Boom to collect usage information. The data does not contain any personally identifiable information and cannot be used to identify you. The data will consist of a basic hardware description, a project summary and usage information. The information is used only for software improvement purposes, as well as for sharing with third parties for the same reason.</p> <p>This program is enabled by default but is voluntary. If you prefer not to participate, you can opt out when you first launch the software, by using a global preference, or by a command line argument.</p>
About	Identifies the product name and version number.
Show Welcome Screen	Displays the Harmony Welcome screen.
Show End User License Agreement	Displays the End User License Agreement.
Debug Mode	When enabled, information is logged in the Message Log view about the preview generated in the Camera view, each time the preview is refreshed. In OpenGL preview mode, summary information is logged about the amount of layers to process and the time it takes to generate

	<p>the preview. In Render Preview mode, detailed information about each composite and effect that is processed is logged.</p>
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## Insert Menu

The Insert menu lets you create empty symbols in the Library view, different types of layers in the Timeline view, keyframes and control points.

### How to access the Insert menu

- At the top of the interface, select **Insert**.

Command	Description
Create Empty Symbol in Library	Creates an empty symbol in the Library view to which you can edit (add content).
Bone	Adds a new Bone layer to the Timeline view.
Camera	Adds a new Camera layer to the Timeline view.
Colour-Card	Adds a new Colour-Card layer to the Timeline view.
Drawing	Adds a new Drawing layer to the Timeline view and a column in the Xsheet view.
Game Bone	Adds a new Game Bone layer to the Timeline view.
Kinematic Output	Adds dd a new Kinematic Output layer to the Timeline view.
Peg	Adds a new Peg layer to the Timeline view.
Quadmap	Adds a new Quadmap layer to the Timeline view.
Effects	Adds a new layer in the Timeline view with the effect you select: Blending, Blur, Blur-Gaussian, Brightness-Contrast, Colour-Override, Colour-Scale, Cutter, Glow, Highlight, Shadow, Tone, or Transparency.
Keyframe	Adds a keyframe to the selected cell in the Timeline view.
Keyframe and Duplicate Drawing	Adds a keyframe to the selected drawing layer cell in the Timeline view and creates a duplicate of the drawing, which sits on top of the original drawing.

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Position Keyframe	Adds a position keyframe whereby keyframes will only be added on the X, Y and Z parameters of the selected layer. Keyframes are not added on the Angle, Scale and Skew parameters.
Control Point	Adds a control point to the trajectory of the selected element or peg in the Camera view when the element or peg is in a 3D path. Note that you must have a 3D path in the peg portion in order to add a control point.

## Play Menu

The Play menu lets you play back animation and sound. Use it to scrub the sound to create your lip-sync, loop the playback, navigate through frames, and change the playback range and speed.

### How to access the Play menu

- At the top of the interface, select **Play**.

Command	Description
Play	Plays the scene in the Camera or Drawing view.
Render and Play	<p>Renders your scene's frames, then opens the rendered frames in Harmony Play for playback.</p> <p>This allows you to preview your scene's animation in real time, with the effects rendered and with no risk of slowdown.</p>
Record and Play	<p>Exports your scene as it appears in the Camera view into a movie file, then opens it in your workstation's default video player.</p> <p>This allows you to preview your animation without any risk of slowdown, but it does not preview the effects in your scene. However, it is much faster than Render and Play.</p> <p>This button automates the usage of the Export OpenGL Frames dialog see</p>
Test SWF Movie	Quickly exports your scene as a Flash Movie ( <b>.swf</b> ), then opens it in your workstation's default web browser.
Stop	Stops playback.
Playback Speed	Opens the Set New Frame Rate dialog box where you can set the frame rate at which the playback plays.
Loop	If pressed, your scene will repeat indefinitely when playing. Otherwise, it will stop when the end is reached.
Enable Sound	Turns on sound during playback.

Enable Sound Scrubbing	Turns on sound scrubbing during playback.
Start Frame	Opens the Set Playback Start Frame dialog box , in which you can enter the frame number from which to start playback.
Stop Frame	Opens the Set Playback Stop Frame dialog box, in which you can set the frame number at which to stop playback.
First Frame	Moves the red playhead to the first frame.
Previous Frame	Moves the red playhead to the previous frame.
Next Frame	Moves the red playhead to the next frame.
Last Frame	Moves the red playhead to the last frame.
Go to Frame	Opens the Go to Frame dialog box where you can enter the frame number on which the red playhead to be positioned in the Timeline view.
Enable Playback	
Top View	Plays back your animation in the Top view.
Side View	Plays back your animation in the Side view.
Perspective View	Plays back your animation in the Perspective view.

## Scene Menu

The Scene menu lets you set the scene length, add frames to the scene, view different displays of the scene, set render options, access the Scene Settings dialog box and Elements Manager window, and verify the drawing and palette files in your project.

### How to access the Scene menu

- At the top of the interface, select **Scene**.

Command	Description
Scene Length	Lets you set the length of the scene in frames.
Frame	
Add Frames at Start	Adds the number of frames you specify to the beginning of the scene.
Add Frames at End	Adds the number of frames you specify to the end of the scene.
Add Frames Before Selection	Adds the number of frames you specify before or after your selection.
Add Frames After Selection	
Remove Selected Frames	Deletes the selected frames from your scene.
Camera	
Default Camera	Lets you select a camera. If you only add one camera to your scene, you will only see Default Camera in your list.
Default Display	
Display All	Shows the contents of a specific Display node, updating the contents of the Camera, Top, Side, Perspective, and Timeline views.
Display	
Scene Settings	Opens the Scene Settings dialog box where you can set the resolution, alignment, bitmap resolution and many other parameters.

Render	
Auto Render	Automatically recalculates the preview image whenever you modify a parameter. If your scene is heavy and you do not want the preview rendered automatically, deselect the Auto-Render option and do the preview update manually. Note that this will slow down Harmony as it takes resources to update every frame.
Auto Render Write	Renders a frame each time the current frame is changed. You must have a Write node in your node structure to use this command.
Cancel Preview Render	Cancels a render that was started.
Element Manager	Opens the Element Manager window where you can add, delete or modify elements (drawing folders) in your scene. If you have drawing folders that are not linked to a column in your scene, use the Element Manager to delete them if needed. See <a href="#">xref Reference &gt; Windows &gt; Element Manager</a> .
Check Files	Verifies the integrity of the drawing and palette files in your project.

## View Menu

The View menu lets you manipulate the view by zooming, panning, or rotating. You can also display the grid and change its size, use the onion skin feature to help with drawing, and set the preview resolution.

### How to access the View menu

- At the top of the interface, select **View**.

Command	Description
Toggle Full Screen	<p>Cycles through the following display modes:</p> <ul style="list-style-type: none"> <li>• <b>Normal Full-Screen:</b> The main application window becomes full screen.</li> <li>• <b>View Full-Screen:</b> The selected view becomes full screen and all other views are collapsed.</li> <li>• <b>Normal:</b> The main application window is restored to its original size and collapsed views are expanded.</li> </ul>
Zoom In	Zooms in the view.
Zoom Out	Zooms out the view.
Rotate View CW	Rotates the Camera view 30 degrees clockwise, like an animation table.
Rotate View CCW	Rotates the Camera view 30 degrees counter-clockwise, like an animation table.
Reset Zoom	Resets the view's zoom to its default position.
Reset Rotation	Resets the view's rotation to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Next Colour	Goes to the next colour in the Colour view.

Previous Colour	Goes to the previous colour in the Colour view.
Grid	
Show Grid	Displays the grid.
Grid Outline Only	Displays the outline of the grid only.
Underlay	Displays the grid under the drawing elements.
Overlay	Displays the grid over the drawing elements.
Square Grid	Displays a standard square grid.
12 Field Grid	Displays a 12-field size grid.
16 Field Grid	Displays a 16-field size grid.
Onion Skin	
Show Onion Skin	Lets you preview the previous and next drawings. By default, the previous drawings appear in a shade of red and the next drawings are displayed with a shade of green. You can change these colours in the Preferences dialog box.
Add to Onion Skin	Adds a series of selected elements to the onion skin preview.
Remove from Onion Skin	Removes a series of selected elements from the onion skin preview.
Remove Unselected from Onion Skin	Removes all elements except the ones selected from the onion skin preview.
Add All to Onion Skin	Adds all of the scene's elements to the onion skin preview.
Remove All from Onion Skin	Removes all of the scene's elements from the onion skin preview.
Onion Skinning by Drawing	In Camera view, the onion skin by default is per frame, this option lets you set it by drawing so you don't see any exposure's onion skin from the same drawing.

No Previous Drawing	Removes the previous drawing's onion skin and displays only the next drawing.
Previous Drawing	Displays the previous drawing.
Previous Two Drawings	Displays the previous two drawings.
Previous Three Drawings	Displays the previous three drawings.
No Next Drawing	Do not show the onion skin for all of the next drawings.
Next Drawing	Show the onion skin for the next drawing.
Next Two Drawings	Show the onion skin for the next two drawings.
Next Three Drawings	Show the onion skin for the next three drawings.
Reduce One Previous Drawing	Reduces the number of previous visible drawings by one.
Add One Previous Drawing	Adds one drawing to the number of previous visible drawings.
Reduce One Next Drawing	Reduces the number of next visible drawings by one.
Add One Next Drawing	Adds one drawing to the number of next visible drawings.
Light Table	Turns on the light table so you can see the previous and subsequent active layers in washed-out colours. It is useful for seeing the other layers when designing, animating or cleaning up your animation.
Backlight	Produces a silhouette effect by changing the drawing's coloured areas into a single dark, solid colour. Use this to verify the completeness of the ink and paint process. Any unpainted zones can be seen as the light shows through the unpainted areas of the silhouetted drawing.
Show	
Symbol Pivot	Displays a symbol's pivot. The Symbol pivot is similar to the Drawing pivot. Each symbol cell can have its own pivot and act the same as the Drawing pivot. The Symbol pivot can also be referred to as embedded

	<p>pivot. Inside a symbol, each drawing can have its own pivot.</p>
Safe Area	<p>Displays the TV safety zone and the centre of the camera frame. The safe area adapts to the scene resolution, as well as the safety zone and frame's centre.</p>
Camera Mask	<p>Displays a black mask around the scene's frame to avoid seeing the unnecessary artwork. This option is handy when you're animating and setting up the scene. It allows you to see your scene's composition better.</p>
Control	<p>Displays the controls of the selected element.</p>
Current Drawing on Top	<p>Displays the selected drawing on top of everything while you draw. By enabling this option, each time you select a drawing tool, the selected drawing is displayed in front of everything in the Camera view. The Timeline view ordering remain unchanged. You only need to enable this option once, it is not necessary to do it each time you select a drawing tool.</p>
Outline Locked Drawings	<p>Displays drawing that are locked in the Timeline view (cannot be selected in the Camera view) as wireframes.</p>
Show Strokes	<p>Displays the strokes in your drawings so that the invisible lines stand out.</p>
Show Strokes with Colour Wash	<p>Displays strokes with washed-out colours.</p>
Hide All Controls	<p>Hides the controls of the selected element.</p>
Preview Manager	<p>Opens the Preview Manager where you can set options for the quality of previews, and clearing and updating the cache.</p>
Preview Resolution	

Same as Scene Resolution	<p>Lets you choose a resolution for previewing a scene.</p>
3/4 of Scene Resolution	
1/2 of Scene Resolution	
1/3 of Scene Resolution	
1/4 of Scene Resolution	
Custom	<p>Lets you select a resolution from a list of presets or enter X and Y values for a custom preview resolution.</p>
Bitmap File Quality	<p>Let's you increase or decrease the preview quality of raw bitmap images. By default, bitmap files imported in Harmony will display in a low resolution in the Camera view to avoid hindering performance.</p> <div data-bbox="680 905 1429 1136" style="border: 1px solid #add8e6; padding: 10px; margin-bottom: 10px;">  <p><b>TIP</b> You can change the default resolution in which bitmap files are displayed in the Camera view by changing the Small Bitmap Resolution preference located in the Camera tab of the Preferences dialog.</p> </div> <div data-bbox="680 1165 1429 1396" style="border: 1px solid #90ee90; padding: 10px;">  <p><b>NOTE</b> This only affects the way bitmap images display in the OpenGL preview of the scene in the Camera view. The preview quality of bitmap images does not affect the final render.</p> </div>

## Windows Menu

The Windows menu lets you customize your workspace to suit your working style, save it as a new workspace, and load it from the Workspace toolbar. You can also show or hide the different toolbars and views in Harmony.

### How to access the Windows menu

- From the top menu, select **Windows**.

Command	Description
Restore Default Workspace	Returns modified workspaces to their original default layout if you do not like the current modifications or inadvertently closed some windows.
Workspace	
Workspace Manager	Opens the Workspace Manager where you can modify, create, delete, rename and reorder your workspaces.
Save Workspace	Saves the current workspace along with any modifications you made.
Save Workspace As...	Saves the workspace as a new version to avoid overwriting the current one.
Workspace	Lets you open workspaces designed specifically for animating, compositing, hand drawing, scripting and the default workspace.
Toolbars	Lets you show or hide these toolbars: Tool Presets, Art Layer, Playback, File, Edit, Advanced Animation, Scripting, Tools, Flip, Onion Skin, Mark Drawing, Easy Flipping, Workspace, Deformation, Camera View, Xsheet View and Timeline View.
Camera	Shows or hides the Camera view.
Colour	Shows or hides the Colour view.
Drawing	Shows or hides the Drawing view.
Function	Shows or hides the Function view.

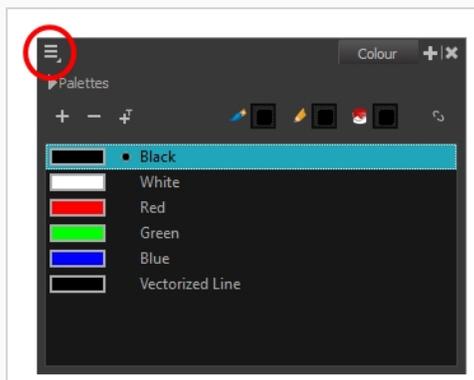
Layer Properties	Shows or hides the Layer Properties view.
Library	Shows or hides the Library view.
Message Log	Shows or hides the Message Log view.
Model	Shows or hides the Model view.
Perspective	Shows or hides the Perspective view.
Side	Shows or hides the Side view.
Timeline	Shows or hides the Timeline view.
Tool Properties	Shows or hides the Tool Properties view.
Top	Shows or hides the Top view.
Xsheet	Shows or hides the Xsheet view.
Integrated Help	Shows or hides the Integrated Help view.
Metadata Editor	Shows or Hides the Metadata Editor view.
Script Editor	Shows or hides the Script Editor view.

## View Menus

A view menu contains commands specifically related to that view.

### How to access a view menu

1. In the top-left corner of a view, click the Menu  button.



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## Camera View Menu

The Camera View menu lets you do many things in the Camera view, including selecting and editing objects in different views, changing the display, setting morphing parameters, accessing tools and many more.

### How to access the Camera menu

- In the upper-left corner of the Camera view, click the menu  button.

Command	Description
Edit	
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.
Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Select Stroke With Current Colour	Select the strokes that contain the currently selected colour.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Select Child Skipping Effects	Lets you select the first element parented to the selected peg element in the Timeline view skipping effects in the hierarchy.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.

Select Children	Lets you select all elements parented to the selected peg element in the Timeline view.
Select Parent Skipping Effects	Lets you select the parent of the selected element in the Timeline view skipping effects in the hierarchy.
Select Parent	Lets you select the parent of the selected element in the Timeline view.
Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
Group	<b>Group:</b> Groups selected drawing objects in the Camera or Drawing view.
	<b>Ungroup:</b> Ungroups a selected group of drawing objects in the Camera or Drawing view.
View	
Navigation	<b>Zoom In:</b> Zooms in the view.
	<b>Zoom Out:</b> Zooms out the view.
	<b>Rotate View CW:</b> Rotates the Camera view 30 degrees clockwise, like an animation table.
	<b>Rotate View CCW:</b> Rotates the Camera view 30 degrees counter-clockwise, like an animation table.
	<b>Reset Zoom:</b> Resets the view's zoom to its default position.
	<b>Reset Rotation:</b> Resets the view's rotation to its default position.
	<b>Reset Pan:</b> Resets the view's pan to its default position.
<b>Reset View:</b> Resets the view to its default position.	
Switch to Colour Art	Displays the Colour Art layer. When switching art layers, you can edit the selected

	layer without affecting the other one.
Preview Line Art and Colour Art	Displays all Art layers.
Open GL View	Switches the Camera view to fast display, letting you see your animation play in real time. The OpenGL display requires less memory. The final look of your effects is not shown in the OpenGL View Mode. You must switch to the Render View Mode to see your effects.
Render View	Switches the Camera view to a fully rendered display showing the final image of the current frame. If a modification is done to your current frame or if you move to a different frame, click the <b>Update Preview</b> button to update the display if your preview does not update automatically. The Render View Mode display lets you see the final look of your frames including effects and antialiasing. You cannot play back your scene in Render View Mode. To see your scene fully rendered and to play it back, you must press the Render and Play button in the Playback toolbar.
Matte View	Switches the Camera view to a matte display showing the alpha channel of the elements in your scene. The transparency level ranges from 0 to 100 percent. Zero percent is completely transparent and represented by black and 100 percent is completely opaque and represented by white. Everything in between these extremes has a transparency level somewhere between 1 and 99 percent and is represented in various shades of grey.
Grid	<b>Show Grid:</b> Displays the grid.
	<b>Grid Outline Only:</b> Displays the outline of the grid only.
	<b>Underlay:</b> Displays the grid under the drawing elements.
	<b>Overlay:</b> Displays the grid over the drawing elements.
	<b>Square Grid:</b> Displays a standard square grid.
	<b>12 Field Grid:</b> Displays a 12-field size grid.
	<b>16 Field Grid:</b> Displays a 16-field size grid.
Onion Skin	<b>Show Onion Skin:</b> Lets Lets you preview the previous and next drawings. By

	<p>default, the previous drawings appear in a shade of red and the next drawings are displayed with a shade of green. You can change these colours in the Preferences dialog box.</p>
	<p><b>Add to Onion Skin:</b> Adds Adds a series of selected elements to the onion skin preview.</p>
	<p><b>Remove from Onion Skin:</b> Removes Removes a series of selected elements from the onion skin preview.</p>
	<p><b>Remove Unselected from Onion Skin:</b> Removes Removes all elements except the ones selected from the onion skin preview.</p>
	<p><b>Add All to Onion Skin:</b> Adds Adds all of the scene's elements to the onion skin preview.</p>
	<p><b>Remove All from Onion Skin:</b> Removes Removes all of the scene's elements from the onion skin preview.</p>
	<p><b>Onion Skinning by Drawing:</b></p>
	<p><b>No Previous Drawing:</b></p>
	<p><b>Previous Drawing:</b> Displays the previous drawing.</p>
	<p><b>Previous Two Drawings:</b> Displays the previous two drawings.</p>
	<p><b>Previous Three Drawings:</b> Displays the previous three drawings.</p>
	<p><b>No Next Drawing:</b> Displays no next drawing.</p>
	<p><b>Next Drawing:</b> Displays the next drawing.</p>
	<p><b>Next Two Drawings:</b> Displays the next two drawings.</p>
	<p><b>Next Three Drawings:</b> Displays the next three drawings.</p>
	<p><b>Reduce One Previous Drawing:</b> Reduces the number of previous visible drawings by one.</p>

	<p><b>Add One Previous Drawing:</b> Adds one drawing to the number of previous visible drawings.</p>
	<p><b>Reduce One Next Drawing:</b> Reduces the number of next visible drawings by one.</p>
	<p><b>Add One Next Drawing:</b> Adds one drawing to the number of next visible drawings.</p>
<p>Light Table</p>	<p>Turns on the light table so you can see Turns on the light table so you can see the previous and subsequent active layers in washed-out colours. It is useful for seeing the other layers when designing, animating or cleaning up your animation.</p>
<p>Backlight</p>	<p>Produces Produces a silhouette effect by changing the drawing's coloured areas into a single dark, solid colour. Use this to verify the completeness of the ink and paint process. Any unpainted zones can be seen as the light shows through the unpainted areas of the silhouetted drawing.</p>
<p>Show</p>	<p><b>Symbol Pivot:</b> Displays a symbol's pivot. The Symbol pivot is similar to the Drawing pivot. Each symbol cell can have its own pivot and act the same as the Drawing pivot. The Symbol pivot can also be referred to as <i>embedded pivot</i>. Inside a symbol, each drawing can have its own pivot.</p> <p><b>Safe Area:</b> Displays Displays the TV safety zone and the centre of the camera frame. The safe area adapts to the scene resolution, as well as the safety zone and frame's centre.</p> <p><b>Camera Mask:</b> Displays Displays a black mask around the scene's frame to avoid seeing the unnecessary artwork. This option is handy when you're animating and setting up the scene. It allows you to see your scene's composition better.</p> <p><b>Control:</b> Displays the controls of the selected element.</p> <p><b>BBox Selection Style:</b> Lets you change the display style of selected elements to a bounding box style. This removes the default overlay highlight and leaves only the bounding box around the selected element.</p> <p><b>Outline Locked Drawings:</b> Drawings that are locked in the Timeline view (cannot be selected in the Camera view) are displayed as wireframes.</p> <p><b>Show Current Drawing on Top:</b> Displays Displays the selected drawing on top of everything while you draw. By enabling this option, each time you select a drawing tool, the selected drawing is displayed in front of everything in the</p>

	<p>Camera view. The Timeline view ordering remain unchanged. You only need to enable this option once, it is not necessary to do it each time you select a drawing tool.</p> <p><b>Show Strokes:</b> Displays the strokes in your drawings so that the invisible lines stand out.</p> <p><b>Show Strokes with Colour Wash:</b> Displays strokes with washed-out colours.</p> <p><b>Highlight Selected Colour:</b></p> <p><b>Show Scan Information:</b> Displays a status bar showing the scanning information at the bottom of the Drawing and Camera view.</p>
Hide All Controls	Hides the controls of the selected element.
Render Current Frame	Renders only the current frame.
Auto Render	Automatically recalculates the preview image whenever you modify a parameter. If your scene is heavy and you do not want the preview rendered automatically, deselect the Auto-Render option and do the preview update manually. Note that this will slow down Harmony as it takes resources to update every frame.
Layer Properties	Displays the Layer Properties window of the selected layer in the Timeline view.
Preview Manager	Opens the Preview Manager where you can set options for the quality of previews, and clearing and updating the cache.
Bitmap File Quality	<p>Let's you increase or decrease the preview quality of raw bitmap images. By default, bitmap files imported in Harmony will display in a low resolution in the Camera view to avoid hindering performance.</p> <div data-bbox="555 1556 1429 1759" style="border: 1px solid #add8e6; padding: 10px;"> <p> <b>TIP</b> You can change the default resolution in which bitmap files are displayed in the Camera view by changing the Small Bitmap Resolution preference located in the Camera tab of the Preferences dialog.</p> </div>

	<div style="border: 1px solid green; padding: 10px;">  <p><b>NOTE</b> This only affects the way bitmap images display in the OpenGL preview of the scene in the Camera view. The preview quality of bitmap images does not affect the final render.</p> </div>
Drawing	
Clean Up	<p><b>Remove Dirt:</b> Opens the Remove Dirt dialog box where you can specify the number and size of dots removal from a selected drawing.</p>
	<p><b>Remove Hair:</b> Opens the Remove Hair dialog box where you can specify the number and length of hairs for removal from a selected drawing. This removes any small strokes created in the Colour Art layer from very thick lines or filled zones. Increase the value to select larger strokes for removal from the drawing.</p>
	<p><b>Close Gaps:</b> Closes 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.</p>
	<p><b>Remove Art Inside Selection:</b> Removes any art inside a selection. It is recommended that you clean your Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high definition resolutions.</p>
	<p><b>Remove Art Inside Selection On All Drawings:</b> Removes any art inside all drawings selected with the Permanent Selection option in the Select tool.</p>
	<p><b>Remove Art Outside Selection:</b> Removes any art existing outside a selection. It is recommended that you clean the Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high-definition resolutions.</p>
	<p><b>Remove Art Outside Selection On All Drawings:</b> Removes any art outside all drawings selected with the Permanent Selection option in the Select tool.</p>
Paint	<p><b>Unpaint Selection:</b> Unpaints any art existing inside a selection.</p>
	<p><b>Unpaint Selection on All Drawings:</b> Unpaints all art contained inside a selection on all the drawings within the same layer.</p>

	<p><b>Unpaint Outside Selection:</b> Unpaints any art existing outside a selection. If no selection have been drawn using the Select tool, the entire drawing will be unpainted.</p>
	<p><b>Unpaint Outside Selection on All Drawings:</b> Unpaints all art outside a selection on all the drawings within the same layer.</p>
	<p><b>Repaint Selection:</b> Repaints any art inside a selection.</p>
	<p><b>Repaint Selection on All Drawings:</b> Repaints any art inside a selection on all the drawings contained within the same layer.</p>
	<p><b>Repaint Outside Selection:</b> Repaints any art outside a selection. If no selection has been drawn using the Select tool, the entire drawing will be repainted.</p>
	<p><b>Repaint Outside Selection on All Drawings:</b> Repaints any art outside a selection on all the drawings contained within the same layer.</p>
Convert	<p><b>Pencil Lines to Brush Strokes:</b> Converts the selected centreline pencil strokes into contour strokes brush lines.</p>
	<p><b>Brush Strokes to Pencil Lines:</b> Converts selected contour strokes into centreline pencil strokes. The brush stroke thickness will be lost.</p>
	<p><b>Strokes to Pencil Lines:</b> Converts the selected invisible line to a pencil line.</p>
	<p><b>Brush Apart Text Layers:</b> Text is treated as a single drawing object. This separates the text so each character becomes an individual drawing object you can select and modify independently.</p>
Optimize	<p><b>Flatten:</b> Merges 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.</p>
	<p><b>Smooth:</b> Smooths selected drawing strokes and removes extra points.</p>
	<p><b>Create Contour Strokes:</b> Adds a permanent invisible line around a shape that was drawn directly in Harmony. This allows you to unpaint lines with the Paint tool but maintain the shape of the lines, should you need to repaint later.</p>

	<p><b>Remove Contour Strokes:</b> Remove any permanently invisible lines that were created while scanning and vectorizing drawings or manually adding contour strokes. This is useful for removing the intersection triangles created during vectorization.</p>
	<p><b>Remove Extra Strokes:</b> Removes strokes inside painted area. This option only works after the painted drawing is flattened.</p>
	<p><b>Optimize:</b> Reduces Reduces the number of layers, such as overlapping brush strokes, in the selected drawing objects. Drawing objects will only be flattened and optimized if the selected objects do not change the appearance of the final image when they are merged.</p>
	<p><b>Crop Brush Textures:</b> Crops Crops an unnecessarily large texture bitmap that lies unseen beneath the vector contour of a textured line. This often occurs when you cut and paste textured lines from one drawing into another. If you cut a portion from a textured line and paste it into a different drawing, Harmony pastes the entire unseen texture bitmap from the source drawing into the new one, even if you only took a small portion of the source drawing. Using the Crop Brush Texture command will crop away extraneous texture that does not touch the vector area. If there are many textured lines in your scene, this will greatly reduce the file size.</p>
	<p><b>Reduce Drawing Texture Resolution:</b> When you import and vectorize as texture (colour) a high resolution image, the size of your drawing can be heavy. You can reduce the size and resolution of the textures in a drawing.</p>
<p>Arrange</p>	<p><b>Bring to Front:</b> Moves the selected art to the front (on top).</p>
	<p><b>Bring Forward:</b> Moves the selected art one level forward (closer to the front).</p>
	<p><b>Send Backward:</b> Moves the selected art one level lower (behind).</p>
	<p><b>Send to Back:</b> Moves the selected art behind everything (bottom / back).</p>
<p>Transform</p>	<p><b>Flip Horizontal:</b> Flips the current selection horizontally.</p>
	<p><b>Flip Vertical:</b> Flips the current selection vertically.</p>
	<p><b>Rotate 90 CW:</b> Rotates the current selection 90 degrees clockwise.</p>

	<p><b>Rotate 90 CCW:</b> Rotates the current selection 90 degrees counter-clockwise.</p>
	<p><b>Rotate 180:</b> Rotates the current selection 180 degrees.</p>
Create Empty Drawing	Creates a drawing in the selected cell, replacing any drawing that may already be exposed in that cell and the following ones until it meets another drawing, key exposure or a blank cell.
Duplicate Drawings	<p>Lets you duplicate the drawing and work on a copy of it. This lets you modify an existing drawing but retain the original. When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.</p> <p>When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.</p>
Delete Selected Drawings	Permanently removes selected drawings. Once you save your project, these drawings cannot be recovered.
Rename Drawing	Lets you give a selected drawing a new name.
Create Colour Art From Line Art	<p>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.</p> <p>You can also configure this option to create the invisible strokes on any of the four embedded layers.</p>
Generate Auto-Matte	<p>Automatically creates a matte from a selected drawing or all drawings on a layer.</p> <p>Opens the auto-Matte dialog box where you can set the radius of the lines depending on how precise or rough your line is.</p> <p>You can also select the source and destination layers from which the matte will be created.</p>
Adjust Line Texture Opacity	Lets you adjust the contrast and opacity of textured lines in a drawing.
Change Bitmap Drawing Resolution	Lets you change the resolution of bitmap art for individual drawings. You can reduce the resolution of your bitmap file as well as increase it. Be careful

	<p>because enlarging the bitmap resolution on an existing drawing will result in a loss of quality. Harmony will perform a pixel smoothing pass (resampling) and create additional pixels to avoid losing too much quality, but only to a certain extent. This feature is very useful when you need to have a full resolution of a bitmap image (such as imported bitmaps as .psd or .tga for the background) for tracing to create a matte directly in Harmony. By default, Harmony creates small thumbnail images when imported as bitmap in order to increase performance by using a small thumbnail image instead of using the original large size bitmap for animation work in Harmony. This will make difficult to view details or trace due to the low resolution (blurry). This option temporary increases the resolution of bitmaps up to their original bitmap resolution to make tracing easier.</p>
Previous Drawing	<p>Once a cell is selected in the Timeline or Xsheet view, you can navigate between the drawings, frames, and layers. Displays the previous drawing, next drawing, previous layer or next layer.</p> <p>Displays the previous drawing, next drawing, previous layer or next layer.</p>
Next Drawing	
Previous Layer	
Next Layer	
Colour Protection	<p><b>Toggle Current Colour Protection:</b> Temporarily enables/disables the Colour Protection feature so you can quickly correct wrongly inked or painted areas under protected colour without readjusting the Current Colour Protection option.</p>
	<p><b>Respect Colour Protection:</b> In the Colour view, you can protect a colour swatch to avoid repainting or unpainting the zones linked to that swatch. If you using the Paint tool and this option is deselected, you will repaint or unpaint the protected colours on your drawings until you enable the option again.</p>
Drawing Tools	
Select	<p>Allows you to select and reposition, scale, rotate and skew brush strokes, pencil lines, shapes and other parts of your artwork.</p>
Contour Editor	<p>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.</p>
Centerline Editor	<p>Allows you to tweak and deform a brush stroke by manipulating the points at the centre of its line rather than its contour.</p>
Pencil Editor	<p>Lets you modify the thick and thin contour of a pencil line (basically a central</p>

	vector shape). Shape control points along the central spine allow you to adjust the stroke curve and position.
Cutter	Allows you to cut a part of your artwork, then reposition, scale, rotate and skew it.
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.
Reposition All Drawings	Allows you to reposition, scale, rotate and skew all drawings in the current layer.
Drawing Pivot	Allows you to position the pivot on a drawing layer by clicking where you want its location to be.
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.
Dropper	Allows you to select a colour by clicking on a colour in your artwork.
Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
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.
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.
Repaint Brush	Lets you repaint existing brush strokes. The new brush strokes will be cropped to fit in existing artwork.
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.
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.
Edit Gradient/Texture	Allows you to adjust the position, angle and size of gradients and textures in a colour zone.
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.
Animation	
Insert Keyframe	Adds a keyframe on the selected cell in the Timeline view. If the Animate mode is enabled in the Camera view, a keyframe is automatically created on the current frame.
Insert Control Point	Adds a control point to a 3D path function.
Set Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new

	location.
Set Motion Keyframe	Sets a motion keyframe. With motion keyframes, Harmony generates the interpolation between the keyframes. This means that a value for each frame between the keyframes is calculated by Harmony to progress from the value of the previous keyframe to the value of the next keyframe.
Flip	Flips the position of an element on its axis.
Set Ease for Multiple Parameters	Lets you set the ease in and ease out on multiple functions and keyframes. This opens the Set Ease For Multiple Parameters where you can modify the Bezier or Ease curve. You can apply easing parameters to a certain type of function only, such as rotation or scale.
Linear Motion	Transforms a curved path to a linear path removing tension, bias, and continuity.
Lock in Time	Indicates whether the point is locked to a specific frame (keyframe) or only locked to a specific position and the curve can flow through it freely as other points are being added, moved, or adjusted (control point).
No Z Dragging	Keeps the Z value constant when you drag a character using the Transform or Translate tool.
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the next drawing.
Substitute Drawing Next	
Select Previous Keyframe/Point	Select the previous keyframe/point.
Select Next Keyframe/Point	
Lock	Locks a layer so it cannot be selected in the Camera view.
Reset	Returns the value of the selected element to the initial value of the active tool. For example, if the Rotate tool is active, the transformation angle will be reset to 0 and if the Transform tool is active, all the transformation values will be reset.

Reset All	Resets Resets all transformations on the current frame in a selected layer. Your keyframe will remain, but all the values will return to the starting value. All transformations are reset regardless of the tool you're using.
Reset All Except Z	Resets Resets all transformations on the current frame except the Z position. This is useful when doing cut-out animation. Cut-out puppets often have a particular Z ordering for the different views of a character. You might want to reset the transformation, but not necessarily the Z position.
Animation Tools	
Transform	Allows you to select drawing layers and position, rotate, scale and skew them.
Translate	Lets you move the selected element along the X and Y axes.
Rotate	Turns a selected element around its pivot point.
Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them towards or away from the camera.
Skew	Slants the selected element.
Reposition Drawing	Lets you reposition, scale, rotate or skew all drawing strokes on every drawing included in a layer.
Spline Offset	Lets you Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.
Inverse Kinematic Tool	Allows you to pose a character model by pulling on its extremities, such as hands and feet, and have the other connected limbs follow. Can be used on any piece connected in a hierarchy.

IK Constraints	
Set IK Nail	Blocks the X, Y and Z positions.
Set IK Hold Orientation	Blocks the angle.
Set IK Hold X	Blocks only the X position.
Set IK Hold Y	Blocks only the Y position.
Set IK Min Angle	Sets limitations on the angle parameter to prevent the puppet from bending too far.
Set IK Max Angle	
Remove All Constraints	Removes all nails except the minimum and maximum angles.
Morphing	
Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
Contour Hint	<p>The Contour Hint point is used on the colour fill zone and brush lines; in other words, on Contour vectors. It allows you to control the line thickness and contour position. Also, if a contour is not animated correctly, you can use hints to correct the animation. For example, if a flag is not waving properly.</p> <p>When adding a Contour Hint point, make sure to place it far enough away from the contour so you can see it snap to the contour.</p> <p>Contour Hint points are yellow.</p>
Zone Hint	<p>The Zone Hint point is used on a colour zone to control the proximity rule. The Zone Hint is placed in the centre of the colour zone. Sometimes a colour zone is not associated with the corresponding one by default. For example, in a splash animation there are many water droplets that are the same colour. Harmony automatically morphs the droplet to the nearest one. This is not always the one you may have predicted. A Zone Hint will force a colour zone to morph with another one.</p> <p>Zone Hint points are cyan in colour.</p>

Pencil Hint	<p>A Pencil Hint point is used to control a pencil line, also known as central vector. It can be used on drawings that were done using the Pencil, Polyline, Ellipse, Line and Rectangle tools. Like the Contour Hint, the Pencil Hint snaps to the central vector. Make sure to place it far enough away from the line so you will see it snap when you move it.</p> <p>Pencil Hint points are magenta in colour.</p>
Vanishing Point Hint	<p>A Vanishing Point Hint is used to control the trajectory of a vanishing shape. A shape will vanish from the source drawing when there is no corresponding shape in the destination drawing. If you do not place a Vanishing Point Hint to control the point of disappearance, the shape will vanish into its centre.</p> <p>Vanishing Point Hint points are green in colour.</p>
Appearing Point Hint	<p>An Appearing Point Hint is used to control the trajectory of an appearing shape. A shape will appear in the destination drawing when there is no corresponding shape in the source drawing. If you do not place an Appearing Point Hint to control the point of appearance, the shape will appear from its centre and expand outwards.</p> <p>Appearing Point Hint points are violet in colour.</p>
Switch Between Morphing Key Drawings	<p>Toggles Toggles between the two key drawings in your morphing sequence. This option is useful while setting hints. You can use the default keyboard shortcut F4 to toggle between your drawings.</p>
Suggest Hints	<p>Automatically sets Automatically sets hint points on key drawings as a help tool. If you're not sure where to set hints, you can use this option. It will set the main hints which you can then fine tune.</p>
Hide Hints	<p>Temporarily Temporarily hides the hint points from the key drawings. Use this option when you have a series of hint points hiding some lines you would like to see.</p>

## Colour View Menu

The Colour View menu lets you access commands related to the Colour view such as creating new palettes, adding new colour swatches, and displaying the Tint panel.

### How to access the Colour menu

- In the upper-left corner of the Colour view, click the menu  button.

Command	Description
Palettes	
New	Creates a new colour palette.  By default, Toon Boom Harmony is set to the Basic mode. For simple productions, it is recommended to use the Basic mode. This setting stores the palettes automatically for you and saves them at the Scene level. When you use the Advanced Palette Lists mode, you can decide at which level you want to store your palettes: Environment, Job, Scene, or Element.
Link	Lets you access other palettes created in the project and link them to your scene.
Import	Imports a colour palette located on your hard drive.
Remove	Removes the selected palette from the palette list.
Remove and Delete on Disk	Removes the selected palette from the palette list and deletes the palette file from the disk.
Rename	Lets you give the selected colour palette a new name.
Duplicate	Creates a copy of the original palette, using the same names and colour values, but has a different ID and is independent from the original palette. This ensures that both the duplicate and original palettes are completely independent.
Clone	Creates a copy of the master palette. The colours in each palette have the same properties. The colours have the same identification number pointing to the same colour zones, but they can have different names and RGBA values.
Pencil Texture Palette	Displays the colour palette containing the pencil line textures.

Move Up	Moves the selected colour palette up one level.
Move Down	Moves the selected colour palette down one level.
Colour Editor	Opens the Colour Editor where you can pick and edit colour swatches.
Tint Panel	Opens the Tint panel where you can modify a series of colours to blend a tint in them or offset their RGBA values.
Current Palette Overrides	When clone palettes are present in the palette list, by default, priority is given to the palette that is the highest in the palette list to decide which colours to apply to drawings. With this option enabled, priority is given to the currently selected palette. Selecting any of the clone palettes will make drawings use colours from the selected palette instead.
Display Colour Values	Display the colour values beside their colour swatches in the palette list.
Colours	
Cut	Cuts the selected colour swatch from the palette.
Copy	Copies the selected colour swatch which you can paste in a different palette.
Copy Colour ID	Copies a colour swatch's colour ID so you can keep a reference file of colour IDs or use them with custom plug-ins. Example of a colour ID: <b>075cf5b552401130</b> .
Paste Colour Values	Pastes the colour value of the copied swatch over an existing colour swatch.
Paste As New Colours	Creates a new colour swatch from the colour value of the copied swatch.
Paste As Clones	Pastes a copied colour to a new palette as a clone of the original one. Both colour use the same colour ID. They have to be in different palettes.
New	Creates a new colour swatch from the colour swatch that was last selected.
Edit	Opens the Colour Picker window in which you can edit the selected colour swatch.

Delete	Deletes the selected colour swatch from the palette.
New Texture	Lets you add a bitmap colour swatch to your palette. You can load photos and textures and paint your drawings with it. The bitmap image must be a .tga or .psd file format.
Edit Texture	Opens the browser to replace the texture used in a textured colour swatch. All zones using the swatch will be updated with the new texture.
Scale Down Texture	Lets you set a new maximum texture size or scaling factor.
New Default Colour	Creates a new colour using the default colour set in the preferences.
Protect Colour	Locks a selected colour, so if you ever paint over it accidentally, the work already done will not be affected. You can also block the filling colours if you painted all of the animation in Line Art and plan to repaint the lines.
Swatch Mode	Displays the colour swatches with its corresponding name inside the swatch. When this option is not selected, the names of the colour swatches are displayed beside the swatch.
Independent Bitmap Colour	Bitmap colour selection is independent from the vector colour selection.
Bitmap Colour Sliders	
RGB	Displays the colour picking sliders as RGB (red, green, blue).
HSV	Displays the colour picking sliders as HSV (hue, saturation, value).

## Drawing View Menu

The Drawing View menu lets you access tools, set morphing parameters, lock or unlock layers, and select elements in the Drawing view.

### How to access the Drawing menu

- In the upper-left corner of the Drawing view, click the menu  button.

Command	Description
Edit	
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.
Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Select Stroke With Current Colour	Select the strokes that contain the currently selected colour.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
View	
Zoom In	Zooms in the view.
Zoom Out	Zooms out the view.

Reset Zoom	Resets the view's zoom to its default position.
Rotate View CW	Rotates the Camera view 30 degrees clockwise, like an animation table.
Rotate View CCW	Rotates the Camera view 30 degrees counter-clockwise, like an animation table.
Reset Rotation	Resets the view's rotation to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Switch to Colour Art	Displays the Colour Art layer. When switching art layers, you can edit the selected layer without affecting the other one.
Preview Line Art and Colour Art	Displays all Art layers.
Grid	<b>Show Grid:</b> Displays the grid.
	<b>Grid Outline Only:</b> Displays the outline of the grid only.
	<b>Underlay:</b> Displays the grid under the drawing elements.
	<b>Overlay:</b> Displays the grid over the drawing elements.
	<b>Square Grid:</b> Displays a standard square grid.
	<b>12 Field Grid:</b> Displays a 12-field size grid.
	<b>16 Field Grid:</b> Displays a 16-field size grid.
Onion Skin	<b>Show Onion Skin:</b> Lets Lets you preview the previous and next drawings. By default, the previous drawings appear in a shade of red and the next drawings are displayed with a shade of green. You can change these colours in the Preferences dialog box.
	<b>Show Centre Line:</b>

	<b>No Previous Drawing:</b> Displays no previous drawing.
	<b>Previous Drawing:</b> Displays the previous drawing.
	<b>Previous Two Drawings:</b> Displays the previous two drawings.
	<b>Previous Three Drawings:</b> Displays the previous three drawings.
	<b>No Next Drawing:</b> Displays no next drawing.
	<b>Next Drawing:</b> Displays the next drawing.
	<b>Next Two Drawings:</b> Displays the next two drawings.
	<b>Next Three Drawings:</b> Displays the next three drawings.
	<b>Reduce One Previous Drawing:</b> Reduces the number of previous visible drawings by one.
	<b>Add One Previous Drawing:</b> Adds one drawing to the number of previous visible drawings.
	<b>Reduce One Next Drawing:</b> Reduces the number of next visible drawings by one.
	<b>Add One Next Drawing:</b> Adds one drawing to the number of next visible drawings.
Light Table	Turns on the light table so you can see Turns on the light table so you can see the previous and subsequent active layers in washed-out colours. It is useful for seeing the other layers when designing, animating or cleaning up your animation.
Backlight	Produces Produces a silhouette effect by changing the drawing's coloured areas into a single dark, solid colour. Use this to verify the completeness of the ink and paint process. Any unpainted zones can be seen as the light shows through the unpainted areas of the silhouetted drawing.
Show	
Show Strokes	Displays the strokes in your drawings so that the invisible lines stand out.

Show Strokes with Colour Wash	Displays strokes with washed-out colours.
Highlight Selected Colour	Identify a selected colour swatch used in a drawing.
Show Morphing Key Drawing Thumbnail	When using the Morphing tools, this displays the source or destination drawing as a reference in the bottom corner of the Drawing view.
Show Scan Information	Displays a status bar showing the scanning information at the bottom of the Drawing and Camera view.
Desk	
No Thumbnail	Changes the size of the drawing desk thumbnails.
Small Thumbnail	
Medium Thumbnail	
Large Thumbnail	
Remove Selected Drawing	Clears selected drawing from drawing desk.
Remove All Drawings	Clears all drawing from drawing desk.
Drawing	
Clean Up	<b>Remove Dirt:</b> Opens the Remove Dirt dialog box where you can specify the number and size of dots removal from a selected drawing.
	<b>Remove Hair:</b> Opens the Remove Hair dialog box where you can specify the number and length of hairs for removal from a selected drawing. This removes any small strokes created in the Colour Art layer from very thick lines or filled zones. Increase the value to select larger strokes for removal from the drawing.
	<b>Close Gaps:</b> Closes 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

	<p>directly over the gap. You can draw it a few millimeters away. The two closest points automatically close the gap.</p>
	<p><b>Remove Art Inside Selection:</b> Removes any art inside a selection. It is recommended that you clean your Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high definition resolutions.</p>
	<p><b>Remove Art Inside Selection On All Drawings:</b> Removes any art inside all drawings selected with the Permanent Selection option in the Select tool.</p>
	<p><b>Remove Art Outside Selection:</b> Removes any art existing outside a selection. It is recommended that you clean the Colour Art level as well. If you have a stroke accumulation in the Colour Art, it can result in large output files, especially if you work in high-definition resolutions.</p>
	<p><b>Remove Art Outside Selection On All Drawings:</b> Removes any art outside all drawings selected with the Permanent Selection option in the Select tool.</p>
<p>Paint</p>	<p><b>Unpaint Selection:</b> Unpaints any art existing inside a selection.</p>
	<p><b>Unpaint Selection on All Drawings:</b> Unpaints all art contained inside a selection on all the drawings within the same layer.</p>
	<p><b>Unpaint Outside Selection:</b> Unpaints any art existing outside a selection. If no selection have been drawn using the Select tool, the entire drawing will be unpainted.</p>
	<p><b>Unpaint Outside Selection on All Drawings:</b> Unpaints all art outside a selection on all the drawings within the same layer.</p>
	<p><b>Repaint Selection:</b> Repaints any art inside a selection.</p>
	<p><b>Repaint Selection on All Drawings:</b> Repaints any art inside a selection on all the drawings contained within the same layer.</p>
	<p><b>Repaint Outside Selection:</b> Repaints any art outside a selection. If no selection has been drawn using the Select tool, the entire drawing will be repainted.</p>
	<p><b>Repaint Outside Selection on All Drawings:</b> Repaints any art outside a selection on all the drawings contained within the same layer.</p>

Convert	<b>Pencil Lines to Brush Strokes:</b> Converts the selected centreline pencil strokes into contour strokes brush lines.
	<b>Brush Strokes to Pencil Lines:</b> Converts selected contour strokes into centreline pencil strokes. The brush stroke thickness will be lost.
	<b>Strokes to Pencil Lines:</b> Converts the selected invisible line to a pencil line.
	<b>Brush Apart Text Layers:</b> Text is treated as a single drawing object. This separates the text so each character becomes an individual drawing object you can select and modify independently.
Optimize	<b>Flatten:</b> Merges 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.
	<b>Smooth:</b> Smooths selected drawing strokes and removes extra points.
	<b>Create Contour Strokes:</b> Adds a permanent invisible line around a shape that was drawn directly in Harmony. This allows you to unpaint lines with the Paint tool but maintain the shape of the lines, should you need to repaint later.
	<b>Remove Contour Strokes:</b> Remove any permanently invisible lines that were created while scanning and vectorizing drawings or manually adding contour strokes. This is useful for removing the intersection triangles created during vectorization.
	<b>Remove Extra Strokes:</b> Removes strokes inside painted area. This option only works after the painted drawing is flattened.
	<b>Optimize:</b> Reduces Reduces the number of layers, such as overlapping brush strokes, in the selected drawing objects. Drawing objects will only be flattened and optimized if the selected objects do not change the appearance of the final image when they are merged.
	<b>Crop Brush Textures:</b> Crops Crops an unnecessarily large texture bitmap that lies unseen beneath the vector contour of a textured line. This often occurs when you cut and paste textured lines from one drawing into another. If you cut a portion from a textured line and paste it into a different drawing, Harmony pastes the entire unseen texture bitmap from the source drawing into the new one, even if

	<p>you only took a small portion of the source drawing. Using the Crop Brush Texture command will crop away extraneous texture that does not touch the vector area. If there are many textured lines in your scene, this will greatly reduce the file size.</p>
	<p><b>Reduce Drawing Texture Resolution:</b></p> <p>When you import and vectorize as texture (colour) a high resolution image, the size of your drawing can be heavy. You can reduce the size and resolution of the textures in a drawing.</p>
<p>Arrange</p>	<p><b>Bring to Front:</b> Moves the selected art to the front (on top).</p>
	<p><b>Bring Forward:</b> Moves the selected art one level forward (closer to the front).</p>
	<p><b>Send Backward:</b> Moves the selected art one level lower (behind).</p>
	<p><b>Send to Back:</b> Moves the selected art behind everything (bottom / back).</p>
<p>Transform</p>	<p><b>Flip Horizontal:</b> Flips the current selection horizontally.</p>
	<p><b>Flip Vertical:</b> Flips the current selection vertically.</p>
	<p><b>Rotate 90 CW:</b> Rotates the current selection 90 degrees clockwise.</p>
	<p><b>Rotate 90 CCW:</b> Rotates the current selection 90 degrees counter-clockwise.</p>
	<p><b>Rotate 180:</b> Rotates the current selection 180 degrees.</p>
<p>Create Empty Drawing</p>	<p>Creates Creates a drawing in the selected cell, replacing any drawing that may already be exposed in that cell and the following ones until it meets another drawing, key exposure or a blank cell.</p>
<p>Duplicate Drawings</p>	<p>Lets you duplicate the drawing and work on a copy of it. This lets you modify an existing drawing but retain the original. When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.</p> <p>When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is</p>

	exposed.
Delete Selected Drawings	Permanently removes selected drawings. Once you save your project, these drawings cannot be recovered.
Rename Drawing	Lets you give a selected drawing a new name.
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.
Generate Auto-Matte	Automatically creates a matte from a selected drawing or all drawings on a layer.  Opens the auto-Matte dialog box where you can set the radius of the lines depending on how precise or rough your line is.  You can also select the source and destinatin layers from which the matte will be created.
Adjust Line Texture Opacity	Lets you adjust the contrast and opacity of textured lines in a drawing.
Change Bitmap Drawing Resolution	Lets you Lets you change the resolution of bitmap art for individual drawings. You can reduce the resolution of your bitmap file as well as increase it. Be careful because enlarging the bitmap resolution on an existing drawing will result in a loss of quality.Harmony will perform a pixel smoothing pass (resampling) and create additional pixels to avoid losing too much quality, but only to a certain extent. This feature is very useful when you need to have a full resolution of a bitmap image (such as imported bitmaps as .psd or .tga for the background) for tracing to create a matte directly in Harmony.By default, Harmony creates small thumbnail images when imported as bitmap in order to increase performance by using a small thumbnail image instead of using the original large size bitmap for animation work in Harmony. This will make difficult to view details or trace due to the low resolution (blurry). This option temporary increases the resolution of bitmaps up to their original bitmap resolution to make tracing easier.

Previous Drawing	Once a cell is selected in the Timeline or Xsheet view, you can navigate between the drawings, frames, and layers. Displays the previous drawing, next drawing, previous layer or next layer.  Displays the previous drawing, next drawing, previous layer or next layer.
Next Drawing	
Previous Layer	
Next Layer	
Colour Protection	<b>Toggle Current Colour Protection:</b> Temporarily enables/disables the Colour Protection feature so you can quickly correct wrongly inked or painted areas under protected colour without readjusting the Current Colour Protection option.
	<b>Respect Colour Protection:</b> In the Colour view, you can protect a colour swatch to avoid repainting or unpainting the zones linked to that swatch. If you using the Paint tool and this option is deselected, you will repaint or unpaint the protected colours on your drawings until you enable the option again.
Drawing Tools	
Select	Allows you to select and reposition, scale, rotate and skew brush strokes, pencil lines, shapes and other parts of your artwork.
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	Lets you modify the thick and thin contour of a pencil line (basically a central vector shape). Shape control points along the central spine allow you to adjust the stroke curve and position.
Cutter	Allows you to cut a part of your artwork, then reposition, scale, rotate and skew it.
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.
Reposition All Drawings	Allows you to reposition, scale, rotate and skew all drawings in the current layer.
Drawing Pivot	Allows you to position the pivot on a drawing layer by clicking where you want its location to be.
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.
Dropper	Allows you to select a colour by clicking on a colour in your artwork.
Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
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.
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.

Repaint Brush	Lets you repaint existing brush strokes. The new brush strokes will be cropped to fit in existing artwork.
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.
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.
Edit Gradient/Texture	Allows you to adjust the position, angle and size of gradients and textures in a colour zone.
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.
Morphing	
Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.
Contour Hint	<p>The Contour Hint point is used on the colour fill zone and brush lines; in other words, on Contour vectors. It allows you to control the line thickness and contour position. Also, if a contour is not animated correctly, you can use hints to correct the animation. For example, if a flag is not waving properly.</p> <p>When adding a Contour Hint point, make sure to place it far enough away from the contour so you can see it snap to the contour.</p> <p>Contour Hint points are yellow.</p>
Zone Hint	<p>The Zone Hint point is used on a colour zone to control the proximity rule. The Zone Hint is placed in the centre of the colour zone. Sometimes a colour zone is not associated with the corresponding one by default. For example, in a splash animation there are many water droplets that are the same colour. Harmony automatically morphs the droplet to the nearest one. This is not always the one you may have predicted. A Zone Hint will force a colour zone to morph with another one.</p> <p>Zone Hint points are cyan in colour.</p>

Pencil Hint	<p>A Pencil Hint point is used to control a pencil line, also known as central vector. It can be used on drawings that were done using the Pencil, Polyline, Ellipse, Line and Rectangle tools. Like the Contour Hint, the Pencil Hint snaps to the central vector. Make sure to place it far enough away from the line so you will see it snap when you move it.</p> <p>Pencil Hint points are magenta in colour.</p>
Vanishing Point Hint	<p>A Vanishing Point Hint is used to control the trajectory of a vanishing shape. A shape will vanish from the source drawing when there is no corresponding shape in the destination drawing. If you do not place a Vanishing Point Hint to control the point of disappearance, the shape will vanish into its centre.</p> <p>Vanishing Point Hint points are green in colour.</p>
Appearing Point Hint	<p>An Appearing Point Hint is used to control the trajectory of an appearing shape. A shape will appear in the destination drawing when there is no corresponding shape in the source drawing. If you do not place an Appearing Point Hint to control the point of appearance, the shape will appear from its centre and expand outwards.</p> <p>Appearing Point Hint points are violet in colour.</p>
Switch Between Morphing Key Drawings	<p>Toggles Toggles between the two key drawings in your morphing sequence. This option is useful while setting hints. You can use the default keyboard shortcut F4 to toggle between your drawings.</p>
Go to First Frame	<p>Goes to the first frame of your morphing sequence.</p>
Go to Previous Frame	<p>Goes to the previous frame of the selected frame in the morphing sequence.</p>
Go to Next Frame	<p>Goes to the next frame of the selected frame in the morphing sequence.</p>
Go to Last Frame	<p>Goes to the last frame of your morphing sequence.</p>
Suggest Hints	<p>Automatically sets Automatically sets hint points on key drawings as a help tool. If you're not sure where to set hints, you can use this option. It will set the main hints which you can then fine tune.</p>
Hide Hints	<p>Temporarily Temporarily hides the hint points from the key drawings. Use this option when you have a series of hint points hiding some lines you would like to see.</p>

## Function View Menu

The Functions View menu lets you do many things in the Camera view, including selecting and editing objects in different views, changing the display, setting morphing parameters, accessing tools and many more.

### How to access the Function menu

- In the upper-left corner of the Function view, click the menu  button.

Command	Description
Edit	
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.
Delete	Removes selected objects.
Select Next Keyframe	Selects the next keyframe.
Select Previous Keyframe	Selects the previous keyframe.
Select Left Handle	Selects the left handle of the selected keyframe.
Select Right Handle	Selects the right handle of the selected keyframe.
Select All	Selects all objects in the Function view. This helps you manage multiple objects as one.
Deselect All	Deselects all selected objects in the Function view.
View	

Show Current Frame	Displays the current frame
Toggle Grid	Enables the display of the grid.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Function List	
Auto Load Selection	
Clear	
Load Selection	
Add Selection	
Remove Selection	
Show	<b>Show Motion:</b>
	<b>Show Rotation:</b>
	<b>Show Scale:</b>
	<b>Show Skew:</b>
	<b>Show Other:</b>

## Library View Menu

The Library View menu lets you access commands specific to the Library view, such as opening a Library or getting the rights to modify a library folder.

### How to access the Library menu

- In the upper-left corner of the Library view, click the menu  button.

Command	Description
View	
List	Displays the contents of the selected folder as a list.
Thumbnails	Displays the contents of the selected folder as a thumbnails.
Details	Displays the details of the selected file.
Generate Thumbnails	Creates a thumbnail to display in the preview window.
Edit	
New Symbol	<p>Creates a new symbol from a drawing or part of a drawing in the Drawing or Camera view, or a layer in the Timeline view.</p> <p>If your selection is in the Timeline , the new symbol appears in the Symbol folder. The current selection is not replaced by the new symbol. The new symbol only appears in the library. You must drag it into your scene to use it.</p> <p>If your selection is in the Drawing or Camera view, the new symbol appears in the Symbol folder and in the Timeline view as a new layer.</p>
Cut	Cuts the selected file in the Library view.
Copy	Copies the selected file in the Library view.
Paste	Pastes the selected file in the Library view.
Delete	Deletes the selected file in the Library view.

Delete Thumbnails	Deletes any thumbnails that were generated for display in the preview window.
Edit Symbol	Places you inside the symbol where you can edit it. To return to the project's timeline, click the Top 🏠 button in the Camera view's top-left corner, press Ctrl + Shift + E (Windows/Linux) or ⌘ + Shift + E (macOS).
Remove Unused Files	Removes any files not in use in the selected template.
Rename Template	Lets you rename a selected template.
Import Files	Imports vector files such as AI, PDF, and SWF. You requires the right to modify the library in which you want to import the files.
Folders	
New Folder	Creates a new folder in the Library view. Before you can create a new folder, you must have the right to modify the folder in which you are creating the new folder.
Refresh	Updates the view and its contents.
Open Library	Lets you open a library on your computer.
Close Library	Unlinks a library folder from your library list.

## Model View Menu

The Model View menu lets you load models and view them in different ways, as well as access some drawing tools.

### How to access the Model menu

- In the upper-left corner of the Model view, click the menu  button.

Command	Description
Previous Model	Shows the previous model loaded in the Model view.
Next Model	Shows the next model loaded in the Model view.
Import Model	Imports a TVG drawing as a model in the Model view.
Use Current Drawing as Model	Loads the currently selected drawing in the scene as a model in the Model view.
Load Default Models	Loads TVG drawings placed in a custom <code>models</code> folder located in the scene folder.
Clear Model	Removes the model from the Model view.
Zoom In	Zooms in the view.
Zoom Out	Zooms out the view.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Rotate View CW	Rotates the Camera view 30 degrees clockwise, like an animation table.
Rotate View CCW	Rotates the Camera view 30 degrees counter-clockwise, like an animation table.

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Reset Rotation	Resets the view's rotation to its default position.
Select	Activates the Select tool. This tools is also available on the Tools toolbar.
Cutter Selection	Allows to cut a section of the model to paste it in your scene.
Dropper	Activates the Dropper tool. This tools is also available on the Tools toolbar.
Zoom	Activates the Zoom tool. This tools is also available on the Tools toolbar.

## Perspective View Menu

The Perspective View menu lets you select and edit elements, manipulate the view during scene setup, set parameters for animation and access animation tools.

### How to access the Perspective menu

- In the upper-left corner of the Perspective view, click the menu  button.

Command	Description
Edit	
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.
Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Select Child Skipping Effects	Lets you select the first element parented to the selected peg element in the Timeline view skipping effects in the hierarchy.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.
Select Children	Lets you select all elements parented to the selected peg element in the

	Timeline view.
Select Parent Skipping Effects	Lets you select the parent of the selected element in the Timeline view skipping effects in the hierarchy.
Select Parent	Lets you select the parent of the selected element in the Timeline view.
Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
View	
Zoom In	Zooms into the view, towards the view's pivot point, up to 80,000%.
Zoom Out	Zooms out of the view, away from the view's pivot point, up to 1%.
Move Forward	Moves infinitely forward into the view, using the direction set by the current position and angle of rotation.
Move Backward	Moves infinitely backwards out of the view, using the direction set by the current position and angle of rotation.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Layer Properties	Shows or hides the Layer Properties view.
Light Table	Turns on the light table so you can see Turns on the light table so you can see the previous and subsequent active layers in washed-out colours. It is useful for seeing the other layers when designing, animating or cleaning up your animation.
Camera Cone	Displays the camera cone.

Control	Displays the controls of the selected element.
Hide All Controls	Hides the controls of the selected element.
Enable Playback	Plays back your animation in the Perspective view.
Animation	
Animate	Enables the Animate mode which records the position, rotation, scale, skew, etc. of objects as keyframes in the Timeline view. Turn off the Animate mode to reposition objects for the entire scene. When the Animate mode is disabled, keyframes are not created when an object's parameters change.
Insert Keyframe	Adds a keyframe to the currently selected frame in the Timeline view.
Insert Control Point	Adds a control point to the motion path at the currently selected frame. This control point does not appear in the Timeline, but can be used to reshape the motion path. In order for this command to work, layers must be set to 3D Path.
Set Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new location.
Set Motion Keyframe	Sets a motion keyframe. With motion keyframes, Harmony generates the interpolation between the keyframes. This means that a value for each frame between the keyframes is calculated by Harmony to progress from the value of the previous keyframe to the value of the next keyframe.
Flip	<b>Flip Horizontal:</b> Flips the current selection horizontally.
	<b>Flip Vertical:</b> Flips the current selection vertically.
	<b>Flip Scale X:</b> Once your drawing layer is rotated, the original horizontal and vertical axes change. The Flip Scale X and Flip Scale Y will perform a flip on your drawing layer following its original axis. Remembers the original X-axis of the layer and flips the element following it.
	<b>Flip Scale Y:</b> Remembers the original Y-axis of the layer and flips the element following it.

Set Ease for Multiple Parameters	Opens the Set Ease for Multiple Parameters dialog box where you can change the velocity of selection functions.
Linear Motion	Straightens out the motion path on either sides of the selected control point.
Lock in Time	Indicates whether the point is locked to a specific frame (keyframe) or only locked to a specific position and the curve can flow through it freely as other points are being added, moved, or adjusted (control point).
No Z Dragging	Locks the Z value when you're animating in 3D space. This means you can only reposition your object along the x and y axes.
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the next drawing.
Substitute Drawing Next	
Select Previous Keyframe /Point	Select the previous keyframe/point.
Select Next Keyframe /Point	Select Next Keyframe /Point
Lock	<b>Lock:</b> Locks Locks one or a multiple selection of layers.
	<b>Unlock:</b> Unlocks Unlocks one or a multiple selection of locked layers.
	<b>Lock All:</b> Locks Locks all the layers in the Timeline view.
	<b>Unlock All:</b> Unlocks Unlocks all the layers in the Timeline view.
	<b>Lock All Others:</b> Locks Locks every layer except the selected ones.
Reset	Returns Returns the value of the selected element to the initial value of the active tool. For example, if the Rotate tool is active, the transformation angle will be reset to 0 and if the Transform tool is active, all the transformation values will be reset.
Reset All	Resets Resets all transformations on the current frame in a selected layer. Your keyframe will remain, but all the values will return to the starting value. All

	transformations are reset regardless of the tool you're using.
Reset All Except Z	Resets Resets all transformations on the current frame except the Z position. This is useful when doing cut-out animation. Cut-out puppets often have a particular Z ordering for the different views of a character. You might want to reset the transformation, but not necessarily the Z position.
Animation Tools	
Transform	Allows you to select drawing layers and position, rotate, scale and skew them.
Translate	Lets you move the selected element along the X and Y axes.
Rotate	Turns a selected element around its pivot point.
Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them towards or away from the camera.
Skew	Slants the selected element.
Spline Offset	Lets you Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.

## Script Editor View Menu

The Script Editor view menu gives you access to all of the commands needed for editing and testing scripts in the Script Editor view—see [Script Editor View on page 546](#).

### How to access the Script Editor view menu

1. Add the Script Editor view to your workspace by doing one of the following:
  - In the top-right corner of an existing view, click on the **+** Add View button and select Script Editor.
  - In the top menu, select **Windows > Script Editor**.
2. In the top-left corner of the Script Editor view, click on the **☰** Menu button.

Button	Description
File	<p>Creates a new script. When you click on this button, you are first prompted to type in a name for the script. Then, you will be prompted to select which location to save the script in:</p> <ul style="list-style-type: none"> <li>• <b>User:</b> Saves the script to your user preferences. You will be able to run and edit the script from any scene as long as you are logged in as the same user.</li> </ul> <div data-bbox="574 1209 1430 1440" style="border: 1px solid #c8e6c9; padding: 10px; margin: 10px 0;"> <p> <b>NOTE</b> If you are using Harmony Stand Alone, the script will be saved to the preferences for your account on your computer. If you are using Harmony Server, the script will be saved to the preferences for your Harmony database user.</p> </div> <ul style="list-style-type: none"> <li>• <b>Global:</b> If you are using Harmony Server, select this option to save the script to the Harmony database's global script directory. Anyone who is logged in to the database will be able to edit and run this script.</li> <li>• <b>Environment:</b> If you are using Harmony Server, select this option to save the script to the current scene's environment. Anyone will be able to edit and run the script as long as they are working on a scene inside this environment.</li> <li>• <b>Job:</b> If you are using Harmony Server, select this option to save the script to the current scene's job. Anyone will be able to edit and run the script as long as they are working on a scene inside this job.</li> <li>• <b>Scene:</b> Save the script to the scene's <b>scripts</b> sub-folder. Anyone will be able to edit and run the script when working on this specific scene.</li> </ul>
New Script	

Button	Description
	<div data-bbox="495 283 1429 426" style="border: 1px solid #c8e6c9; padding: 10px;">  <b>NOTE</b>            For more information on script locations, see <a href="#">Script Editor View</a>.         </div>
Import Script	<p>Allows you to import a script from your machine into Harmony. When you click on this button, you are prompted to browse for and select a script on your file system. Then, you are prompted to select which location to import the script in:</p> <ul style="list-style-type: none"> <li>• <b>User:</b> Saves the script to your user preferences. You will be able to run and edit the script from any scene as long as you are logged in as the same user.</li> </ul> <div data-bbox="576 703 1429 934" style="border: 1px solid #c8e6c9; padding: 10px;">  <b>NOTE</b>            If you are using Harmony Stand Alone, the script will be saved to the preferences for your account on your computer. If you are using Harmony Server, the script will be saved to the preferences for your Harmony database user.         </div> <ul style="list-style-type: none"> <li>• <b>Global:</b> If you are using Harmony Server, select this option to save the script to the Harmony database's global script directory. Anyone who is logged in to the database will be able to edit and run this script.</li> <li>• <b>Environment:</b> If you are using Harmony Server, select this option to save the script to the current scene's environment. Anyone will be able to edit and run the script as long as they are working on a scene inside this environment.</li> <li>• <b>Job:</b> If you are using Harmony Server, select this option to save the script to the current scene's job. Anyone will be able to edit and run the script as long as they are working on a scene inside this job.</li> <li>• <b>Scene:</b> Save the script to the scene's <b>scripts</b> sub-folder. Anyone will be able to edit and run the script when working on this specific scene.</li> </ul> <div data-bbox="495 1438 1429 1581" style="border: 1px solid #c8e6c9; padding: 10px;">  <b>NOTE</b>            For more information on script locations, see <a href="#">Script Editor View</a>.         </div>
Delete Script	Deletes the selected script.

Button	Description
	<div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>You cannot delete a script if it is in the Application Resources location, as those are scripts that are installed with Harmony.</li> <li>If you delete a script that was originally in Application Resources but which you copied to another location so you could make changes to it, the original version of the script in the Application Resources folder will be restored to the list.</li> </ul> </div>
Refresh Script File List	Refresh the list of scripts in the Script Editor. If there are new scripts in your user preferences or your scene's scripts sub-folder, click on this button to be able to open them in the Script Editor.
Editor	
Set External Editor	<p>Allows you to type in the path and name for your preferred text editing software.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>On macOS, only typing the name of your preferred text editing software is enough if that application supports the AppleScript Open Document protocol.</li> <li>On Windows and GNU/Linux, unless your text editor is in your system's <b>PATH</b> environment variable, you will have to type in the full path to the editor.</li> </ul> </div>
External Editor	Opens the selected script in the chosen external text editing software.
Play/Debug	
Set Target	Prompts you to select which script and which function to use with the <b>Run</b> and <b>Debug</b> commands.
Run	Runs the target script and function.

Button	Description
	<div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• If you have not set a target script and function, you will be prompted to set one when you select this command.</li> <li>• You can set or change the target script and function by selecting <b>Set Target</b> from this menu.</li> <li>• If you are editing &lt;&lt;&lt;<b>Sandbox</b>&gt;&gt;&gt;, this button will simply run what you typed into the sandbox, regardless of whether another target is set.</li> </ul> </div>
Debug	<p>Open the target script and function in the Qt Script Debugger, in which you can test and debug the function.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• If you have not set a target script and function, you will be prompted to set one when you select this command.</li> <li>• You can set or change the target script and function by selecting <b>Set Target</b> from this menu.</li> <li>• If you are editing &lt;&lt;&lt;<b>Sandbox</b>&gt;&gt;&gt;, this button will simply debug what you typed into the sandbox, regardless of whether another target is set.</li> </ul> </div>
Stop	<p>If a script is currently running, this interrupts its execution.</p>
Help	
Scripting Interface Documentation	<p>Opens the reference documentation for the Harmony scripting interface in a web browser.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTE</b></p> <p>This documentation is installed with Harmony and does not require Internet access.</p> </div>

## Side View Menu

The Side View menu lets you position elements in 3D space, set parameters for animation and access animation tools—see [Side View on page 548](#).

### How to access the Side menu

- In the upper-left corner of the Side view, click the menu  button.

Command	Description
Edit	
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.
Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Select Child Skipping Effects	Lets you select the first element parented to the selected peg element in the Timeline view skipping effects in the hierarchy.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.
Select Children	Lets you select all elements parented to the selected peg element in the Timeline view.

Select Parent Skipping Effects	Lets you select the parent of the selected element in the Timeline view skipping effects in the hierarchy.
Select Parent	Lets you select the parent of the selected element in the Timeline view.
Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
View	
Zoom In	Zooms in the view.
Zoom Out	Zooms out the view.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Layer Properties	Shows or hides the Layer Properties view.
Camera Cone	Displays the camera cone.
Control	Displays the controls of the selected element.
Hide All Controls	Hides the controls of the selected element.
Enable Playback	Plays back your animation in the Perspective view.
Animation	
Animate	Enables the Animate mode which records the position, rotation, scale, skew, etc. of objects as keyframes in the Timeline view. Turn off the Animate mode to reposition objects for the entire scene. When the Animate mode is disabled, keyframes are not created when an object's parameters change.

Insert Keyframe	Adds a keyframe to the selected cell in the Timeline view.
Insert Control Point	
Set Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new location.
Set Motion Keyframe	Sets a motion keyframe. With motion keyframes, Harmony generates the interpolation between the keyframes. This means that a value for each frame between the keyframes is calculated by Harmony to progress from the value of the previous keyframe to the value of the next keyframe.
Flip	<b>Flip Horizontal:</b> Flips the current selection horizontally.
	<b>Flip Vertical:</b> Flips the current selection vertically.
	<b>Flip Scale X:</b> Once your drawing layer is rotated, the original horizontal and vertical axes change. The Flip Scale X and Flip Scale Y will perform a flip on your drawing layer following its original axis. Remembers the original X-axis of the layer and flips the element following it.
	<b>Flip Scale Y:</b> Remembers the original Y-axis of the layer and flips the element following it.
Set Ease for Multiple Parameters	Opens the Set Ease for Multiple Parameters dialog box where you can change the velocity of selection functions.
Linear Motion	Transforms a curved path to a linear path removing tension, bias, and continuity.
Lock in Time	Indicates whether the point is locked to a specific frame (keyframe) or only locked to a specific position and the curve can flow through it freely as other points are being added, moved, or adjusted (control point).
No Z Dragging	Keeps the Z value constant when you drag a character using the Transform or Translate tool.
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the next drawing.

Substitute Drawing Next	
Select Previous Keyframe /Point	Select the previous keyframe/point.
Select Next Keyframe /Point	Select Next Keyframe /Point
Lock	<b>Lock:</b> Locks Locks one or a multiple selection of layers.
	<b>Unlock:</b> Unlocks Unlocks one or a multiple selection of locked layers.
	<b>Lock All:</b> Locks Locks all the layers in the Timeline view.
	<b>Unlock All:</b> Unlocks Unlocks all the layers in the Timeline view.
	<b>Lock All Others:</b> Locks Locks every layer except the selected ones.
Reset	Returns Returns the value of the selected element to the initial value of the active tool. For example, if the Rotate tool is active, the transformation angle will be reset to 0 and if the Transform tool is active, all the transformation values will be reset.
Reset All	Resets Resets all transformations on the current frame in a selected layer. Your keyframe will remain, but all the values will return to the starting value. All transformations are reset regardless of the tool you're using.
Reset All Except Z	Resets Resets all transformations on the current frame except the Z position. This is useful when doing cut-out animation. Cut-out puppets often have a particular Z ordering for the different views of a character. You might want to reset the transformation, but not necessarily the Z position.
Animation Tools	
Transform	Allows you to select drawing layers and position, rotate, scale and skew them.
Translate	Lets you move the selected element along the X and Y axes.
Rotate	Turns a selected element around its pivot point.

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Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them towards or away from the camera.
Spline Offset	Lets you Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.

## Timeline View Menu

The Timeline View menu lets you modify layers, keyframe and timing.

### How to access the Timeline menu

- In the upper-left corner of the Timeline view, click the menu  button.

Parameter	Description
Import	
From Scanner	Imports drawings from a TWAIN scanner.
Images	Imports bitmap images which you can choose to vectorize.
Sounds	Lets you import sound files into your project.
Edit	
Cut cells from Xsheet	Removes selected objects. You can then paste the object or its properties to another object.
Copy cells from Xsheet	Copies selected objects and properties.
Paste	Places an object you cut or copied into the location you select in a view.
Paste Special	Lets you copy and paste selected drawings into a different layer or paste the selection in the same layer to duplicate the drawings.
Paste Special Again	Pastes new drawings with the previous Paste Special settings.
Paste Cycle	Cycles a portion of an animation. You can increase or decrease the number of cycles to paste and select a type of cycle: Normal, Reverse, Forward-Reverse and Reverse-Forward.
Paste Reverse	Reverses the timing of drawings or keyframes in range of selection after copying.

Delete	Removes selected objects.
Modify Paste Presets	Lets you modify existing presets when pasting keyframes and exposures. There are three presets you can modify: the default presets for both key frames and exposures, key frames only and exposures only.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Select Synced Layers	Selects all the layers synced to the selected layer. The selected layer must be a synced in order for this option to be enabled.
Select Child Skipping Effects	Lets you select the first element parented to the selected peg element in the Timeline view skipping effects in the hierarchy.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.
Select Children	Lets you select all elements parented to the selected peg element in the Timeline view.
Select Parent Skipping Effects	Lets you select the parent of the selected element in the Timeline view skipping effects in the hierarchy.
Select Parent	Lets you select the parent of the selected element in the Timeline view.
Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
Lock	<b>Lock:</b> Locks one or a multiple selection of layers.

	<p><b>Unlock:</b> Unlocks Unlocks one or a multiple selection of locked layers.</p>
	<p><b>Lock All:</b> Locks Locks all the layers in the Timeline view.</p>
	<p><b>Unlock All:</b> Unlocks Unlocks all the layers in the Timeline view.</p>
	<p><b>Lock All Others:</b> Locks Locks every layer except the selected ones.</p>
<p>Tag</p>	<p><b>Timeline Tag:</b> You can tag elements in the Timeline or Node views to view only those elements. When you tag elements, an asterisk appears beside the item in the Timeline view. Once your elements are tagged and you have switched over to View Tagged Layers mode, the Timeline view will display only tagged elements. The red bar on the left of the layers indicates you are in this view mode.</p>
	<p><b>Timeline Untag:</b> Untags selected layer in the Timeline view.</p>
	<p><b>Timeline Untag All:</b> Untags all tagged elements.</p>
	<p><b>Timeline Untag All Others:</b> Untags all elements except the selected one.</p>
<p>Scene Markers</p>	<p><b>Mark Current Frame:</b> Places a scene marker on the current frame on which the playhead is parked. The marker appears in the frame counter area of the Timeline view. You can customize the colour of the scene marker and add text to display as a tooltip when you hover over the marker—see .</p>
	<p><b>Create Scene Marker:</b> Creates a scene marker from a selected frame range in the frame counter area of the Timeline view.</p>
	<p><b>Edit Scene Marker:</b> Lets you edit an existing scene marker. <b>NOTE:</b> It's important to select the entire length of the scene marker, otherwise the Timeline Scene Marker dialog box will not open for editing.</p>
	<p><b>Delete Scene Marker:</b> Removes an existing scene marker.</p>
<p>Share Functions</p>	<p>Lets you share an existing function curve. By default, all function curves can only be used and modified using their original parameter. If you want another layer or parameter to use the same function curve, you must share it.</p>
<p>View</p>	

Cycle to Next View Mode	Displays the new view mode.
Normal View Mode	Displays the Normal view mode, the default in the Timeline view. It shows everything connected to the chosen display. In this mode, anything not connected to the currently set default display will not be shown in the Timeline view. This also means that you cannot add certain elements to the Timeline view, as by default, when added they are not connected to any display or composite node. An example of such an element is a peg.
Selection Only Mode	Displays only elements currently selected in the Camera or Node view. This makes it easier to concentrate on one or a few elements at a time.
View Tagged Layers	<p>Lets you see only elements which have been assigned a Tagged status. An item that has been tagged will appear in the Timeline view with a small asterisk beside its name.</p> <p>Once your elements are tagged and you have switched over to View Tagged Layers mode, the Timeline view will display only tagged elements. The red bar on the left of the layers indicates you are in this view mode. While in this mode, the asterisks are not displayed beside the tagged elements.</p>
Show Functions	
Centre on Selection	Centers the Timeline view on the selected layer. This useful when you have many layers in the Timeline view, you may find it hard to locate which one is selected.
Change Track Colour	Opens the colour picker window to modify the colour of the selected layer.
Default Track Colour	Resets the layer colour.
Collapse/Expand	Toggles between expanding and collapsing all parent layers in the Timeline view.
Collapse All	Collapses all parented layers in the Timeline view.
Expand All	Expands all parented layers in the Timeline view.
Set Tempo Marker	Lets you set a marker that synchronizes your animation with a musical score. This lets you reproduce the FPB (Frames Per Beat) and use the tempo signature as tempo markers. The Xsheet view lets you pace your animation according to the tempo or beat of the soundtrack music or to any rhythmic sound, such as the ticking of a clock or water leaking from a spout. See .

Layers	
Add Synced Drawing Layer	Creates a new drawing layer whose timing is synced immediately with the currently selected drawing layer.
Sync Layer With	Opens the Convert to Synced Drawing Layer dialog box. In this dialog box, every other drawing layer in the project can be selected, parented and have its timing synced to the currently selected layer.
Unsync Layer	Unsyncs the parent layer of a synced pairing, when the child layer is selected.

## Top View Menu

The Top View menu lets you position elements in 3D space, set parameters for animation and access animation tools—see [Top View](#) on page 562.

### How to access the Top menu

- In the upper-left corner of the Top view, click the menu  button.

Command	Description
Edit	
Cut Drawing Object	Removes selected objects. You can then paste the object or its properties to another object.
Copy Drawing Object	Copies selected objects and properties.
Paste	Places an object you cut or copied into the location you select in a view.
Delete Drawing Object	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Invert Selection	Deselects the currently selected items and selects all other items that were not selected. For example, if some lines are selected in a drawing, this command will deselect them and select any other lines in the drawing that were not selected.
Select Child	Lets you select the first element parented to the selected peg element in the Timeline view.
Select Children	Lets you select all elements parented to the selected peg element in the Timeline view.
Select Parent	Lets you select the parent of the selected element in the Timeline view.

Select Previous Sibling	Lets you select the previous element (above current element) in the Timeline view.
Select Next Sibling	Lets you select the next element (below current element) in the Timeline view.
View	
Zoom In	Zooms in the view.
Zoom Out	Zooms out the view.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Layer Properties	Shows or hides the Layer Properties view.
Camera Cone	Displays the camera cone.
Control	Displays the controls of the selected element.
Hide All Controls	Hides the controls of the selected element.
Enable Playback	Plays back your animation in the Perspective view.
Animation	
Animate	Enables the Animate mode which records the position, rotation, scale, skew, etc. of objects as keyframes in the Timeline view. Turn off the Animate mode to reposition objects for the entire scene. When the Animate mode is disabled, keyframes are not created when an object's parameters change.
Insert Keyframe	Adds a keyframe to the selected cell in the Timeline view.
Insert Control Point	

Set Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new location.
Set Motion Keyframe	Sets a motion keyframe. With motion keyframes, Harmony generates the interpolation between the keyframes. This means that a value for each frame between the keyframes is calculated by Harmony to progress from the value of the previous keyframe to the value of the next keyframe.
Flip	<b>Flip Horizontal:</b> Flips the current selection horizontally.
	<b>Flip Vertical:</b> Flips the current selection vertically.
	<b>Flip Scale X:</b> Once your drawing layer is rotated, the original horizontal and vertical axes change. The Flip Scale X and Flip Scale Y will perform a flip on your drawing layer following its original axis. Remembers the original X-axis of the layer and flips the element following it.
	<b>Flip Scale Y:</b> Remembers the original Y-axis of the layer and flips the element following it.
Set Ease for Multiple Parameters	Opens the Set Ease for Multiple Parameters dialog box where you can change the velocity of selection functions.
Linear Motion	
Lock in Time	Indicates whether the point is locked to a specific frame (keyframe) or only locked to a specific position and the curve can flow through it freely as other points are being added, moved, or adjusted (control point).
No Z Dragging	
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the next drawing.
Substitute Drawing Next	
Select Previous Keyframe /Point	Select the previous keyframe/point.

Select Next Keyframe /Point	Select Next Keyframe /Point
Lock	<b>Lock:</b> Locks Locks one or a multiple selection of layers.
	<b>Unlock:</b> Unlocks Unlocks one or a multiple selection of locked layers.
	<b>Lock All:</b> Locks Locks all the layers in the Timeline view.
	<b>Unlock All:</b> Unlocks Unlocks all the layers in the Timeline view.
	<b>Lock All Others:</b> Locks Locks every layer except the selected ones.
Reset	Returns Returns the value of the selected element to the initial value of the active tool. For example, if the Rotate tool is active, the transformation angle will be reset to 0 and if the Transform tool is active, all the transformation values will be reset.
Reset All	Resets Resets all transformations on the current frame in a selected layer. Your keyframe will remain, but all the values will return to the starting value. All transformations are reset regardless of the tool you're using.
Reset All Except Z	Resets Resets all transformations on the current frame except the Z position. This is useful when doing cut-out animation. Cut-out puppets often have a particular Z ordering for the different views of a character. You might want to reset the transformation, but not necessarily the Z position.
Animation Tools	
Transform	Allows you to select drawing layers and position, rotate, scale and skew them.
Translate	Lets you move the selected element along the X and Y axes.
Rotate	Turns a selected element around its pivot point.
Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them

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	towards or away from the camera.
Spline Offset	Lets you Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.

## Xsheet View Menu

The Xsheet View menu lets you modify columns, keyframe and timing.

### How to access the Xsheet menu

- In the upper-left corner of the Xsheet view, click the menu  button.

Parameter	Description
File	
Import	<b>Images:</b> Imports bitmap images which you can choose to vectorize.
	<b>From Scanner:</b> Imports drawings from a TWAIN scanner.
	<b>Sounds:</b> Lets you import sound files into your project.
Print	Prints the exposure sheet so you can take it to your animation table, provide a copy to the animator, or create your Xsheet skeleton directly in Harmony.
Edit	
Cut cells from Xsheet	Removes selected objects. You can then paste the object or its properties to another object.
Copy cells from Xsheet	Copies selected objects and properties.
Paste	Places an object you cut or copied into the location you select in a view.
Paste Special	Lets you copy and paste selected drawings into a different layer or paste the selection in the same layer to duplicate the drawings.
Paste Special Again	Pastes new drawings with the previous Paste Special settings.
Paste Cycle	Cycles a portion of an animation. You can increase or decrease the number of cycles to paste and select a type of cycle: Normal, Reverse, Forward-Reverse and Reverse-Forward.

Paste Reverse	Reverses the timing of drawings or keyframes in range of selection after copying.
Delete	Removes selected objects.
Select All	Selects all drawing objects in the current drawing window in the Drawing, Timeline and Camera views. This helps you manage multiple objects as one when moving them.
Deselect All	Deselects all selected objects in the Drawing and Camera views.
Insert Mode	Adds a new value or a new value sequence over existing ones, the new values are inserted between the old ones. The existing timing sequence is pushed down the column. The Insert mode opposite of the Overwrite mode, which is the Xsheet default mode.
Gestural Drag Mode	Lets you drag a cell to any other frame in the same column or into another column.  This feature does not apply to Annotation columns.
Send to Function View	Sends selected objects to the Function view where you can edit and adjust its function curve and parameters.
View	
Zoom In Xsheet	Zooms in the view.
Zoom Out Xsheet	Zooms out the view.
Reset Zoom	Resets the view's zoom to its default position.
Reset Pan	Resets the view's pan to its default position.
Reset View	Resets the view to its default position.
Set Tempo Marker	
Expand/Collapse	<b>Collapse Selection:</b>
	<b>Expand Selection:</b>

	<b>Collapse All:</b>
	<b>Expand All:</b>
Column Properties	Lets you rename a column, and enable or disable a column. To view additional properties, select <b>Edit &gt; Preferences</b> from the top menu. In the Preferences dialog box, select the <b>Advanced</b> tab, then select the <b>Advanced Element Mode</b> option.
Show Column List	
Column Types Manager	Lets you add advanced column types to create particular animation paths. When you create these columns, they are not linked automatically to any particular drawing layer. You can create a motion path using these columns and then link or unlink several drawing or peg layers to it.
Show Thumbnails	Displays column thumbnails making it easier to identify a particular column. This option displays a small thumbnail picture of the current frame below the column header.
Show Selection	
Set Columns Width	Lets you change the column width (in pixels) and set it as the default.
All Columns to Default Width	Returns all columns to their default width of 100 pixels.
Change Columns Colour	Lets you customize the colour of the column by selecting one from the Select Colour dialog box. The colour you select is also reflected in the corresponding layer in the Timeline view.
Default Column Colour	Removes the colour you assigned to a column (if any).
Hide Selected Columns	Hides selected columns.
Unhide All Columns	Displays all columns.
Show Hidden Columns	Displays columns that were previously hidden.

Enable Playback	Plays back your animation in the Perspective view.
Columns	
Add Columns	Lets you add a column. You can specify the column name, type, and set drawing layer options in the Add Column dialog box that opens.
Delete Columns	Removes the selected column. You have the option to delete the associated drawing files and element folders.
Clone Selected Columns: Drawings Only	Creates a copy of the selected column that is linked to the original. If a drawing is modified in the original or cloned column, both will be updated. However, cloned columns can have different timings.  You can clone the drawings only or both the drawings and timing.
Clone Selected Columns: Drawings and Timing	
Duplicate Selected Columns	Creates an independent copy of the selected column. This useful when you need to modify the element independently, including the timing (exposure). Changes to the original element do not propagate to the duplicate.
Merge Selected Columns	There are two methods of merging drawings. <ul style="list-style-type: none"> <li>You can merge selected drawings in adjacent elements. The columns and layers will be left intact, and each new merged drawing will reside in the frames of the left-most column or lower layer.</li> <li>You can merge elements. All drawings will be merged. Unused columns and layers will be deleted, but the original drawing files are still accessible.</li> </ul>
Frames	
Add Frames At Start	Adds the number of frames you specify to the end of the scene.
Add Frames At End	
Add Frames Before Selection	Adds the number of frames you specify before or after your selection.
Add Frames After Selection	

Remove Selected Frames	Deletes the selected frames from your scene.
Drawings	
Create Empty Drawing	Creates Creates a drawing in the selected cell, replacing any drawing that may already be exposed in that cell and the following ones until it meets another drawing, key exposure or a blank cell.
Duplicate Drawings	<p>Lets you duplicate the drawing and work on a copy of it. This lets you modify an existing drawing but retain the original. When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.</p> <p>When duplicating a drawing, the selected cell is replaced with the new drawing. The exposure of the original drawing that was on the current cell is removed. The original drawing is not deleted from the project folder or other cells in which it is exposed.</p>
Rename Drawing	Lets you give a selected drawing a new name.
Mark Drawing As	<p>Marks selected drawings as one of the following: Key, Breakdown, In-between, RetakeKey, RetakeBD or RetakeIB.</p> <p>This helps to keep the Xsheet well organized while animating.</p> <p>When working with several animators, directors or even other studios, the necessity for retakes will often arise. Harmony gives you the possibility to mark new drawings as either Retake Key, Retake Breakdown, or Retake In-betweens.</p>
Substitute Drawing Previous	Replaces the drawing or cell's symbol on the current frame by the next drawing.
Substitute Drawing Next	
Exposure	
Increase	Adds Adds one more exposure to a selected cell; repeating this action adds an extra cell each time. This is an efficient way to extend a drawing's exposure and is always set in Insert mode. Increasing an exposure pushes the existing exposure forward.

Decrease	Decreases exposure of a selected cell by one; repeating this action decreases one exposure adds an extra cell each time. This is an efficient way to shorten a drawing's exposure. Decreasing an exposure pulls in the existing exposure.
Set Exposure to	Lets you set the exposure to 1, 2, 3 or a custom exposure.
Extend Exposure	Lets you extend the length of a selected cell.
Add Key Exposure	Adds a key exposure to the selected cell.
Remove Key Exposure	Removes only the key exposure (key frames) not all the exposures. The existing key exposure is replaced by the preceding exposure.
Remove Duplicate Key Exposure	<p>When working with drawings to adjust the timing of a mouth in a lipsync, for example, and forcing the use of specific key exposures, unnecessary key exposures will be created. You can delete these duplicates without affecting the rest of the drawing. The first drawing of the selection will be used for the range.</p> <div data-bbox="565 919 1430 1094" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b> Duplicate key exposures may occur when pasting with the Enforce Key Exposure option selected.</p> </div>
Fill Empty Cells	Lets you Lets you fill empty cells to extend the exposure of single frame drawings to fill the range of empty cells after each one. When creating drawings on cells that are not side-by-side, the exposure of the first drawing no longer fills automatically. You must select the frame range where you want your drawings to hold their exposure up to the next drawing and use the Fill Empty Cells command.
Insert Blank Cell	Adds Adds an empty cell between other cells.
Clear Exposure	Removes the exposure from the selected cell.
Clear Exposure and Pull	Replaces the exposure from the selected cell with exposures that follow it.
Fill Selection	Lets you Lets you fill the same value over an entire selection. The selection can be over one cell, a cell range in one column, a cell range over many columns, an entire column, or many columns. You can use numbers, words, letters, or any alphanumeric value.

Sequence Fill	Lets you Lets you create a numbered sequence over a selection. The sequence can be forward, backward, single, double or higher increment, as a cycle, and so on. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.
Fill Cells Randomly	Lets you Lets you fill in random values over a selection. You can give a maximum and a minimum value and create a range for Harmony to choose the random values from. The selection can be over one cell or a cell range in one column or more or an entire column or many entire columns.
Hold Exposure	Lets you expose a drawing for three, four, or five cells and so on.
Motion	
Insert Keyframe	
Insert Keyframe and Duplicate Drawing	
Delete Keyframes	Deletes the selected keyframes.
Go to Previous Keyframe	
Go to Next Keyframe	
Set Stop-Motion Keyframe	Sets a stop-motion keyframe which there is no computer-generated motion between two keyframes. The segment is constant or flat. The drawing remains still until the playback reaches the next keyframe, then the drawing pops to its new location.
Set Motion Keyframe	Sets a motion keyframe. With motion keyframes, Harmony generates the interpolation between the keyframes. This means that a value for each frame between the keyframes is calculated by Harmony to progress from the value of the previous keyframe to the value of the next keyframe.
Morphing	
Create Morphing	Allows you to create and configure a morphing sequence, which will automatically generate the in-betweens between two drawings in the current layer.

Delete Morphing	Once a cell is selected in a morphing sequence, deletes the entire sequence between the two keyframes.
Insert Morphing Key Drawing	Creates a morphing keyframe from a selected morphing frame.
Convert Morphing to Drawing	Lets Lets you convert your morphing inbetweens to real drawings you can edit. This is useful when manually editing a morphing sequence or if you prefer to have animation timing in double frame (on twos) instead of single frame (on ones).
Lip-Sync	
Change Mouth Shape to	Lets you change the mouth shape to one of the following: A, B, C, D, E, F, G, X.
Auto Lip-Sync Detection	Generates a sound detection for lip-sync.
Map Lip-Sync	Automatically maps Automatically maps drawings in an element to the mouth chart you have generated for a sound. This can save time when you are lip-synching a voice track.
Sound Display	
Sound Name	Shows the name of the sound file, as well as the file format. The line running vertically through the column frames between the same file name indicates a continuity of the same sound file in these frames.
Mouth Shapes	Shows the letter (or name depending on the way you named your character's different mouth positions) in the column's frames. There is only one mouth position allotted per frame and this position should correspond to the sound file after performing a lip-sync.
Waveform	Shows a vertical display of the sound file's actual waveform. In the column header, in the field under the column name, you can type in a percentage to zoom in or zoom out on the waveform, or pass the scroll cursor  over the Zoom Waveform  icon.
Sound Edit	

Insert Blank Cell	Places an empty cell between other cells.
Clear Exposure and Pull	Replaces the exposure from the selected cell with exposures that follow it.
Annotation	
Import File	Lets you import an image file in an Annotation column.
Change Pen Colour	Lets you change the pen colour by selecting one from the Select Colour dialog box.
Pen Width	Lets you select a pen preset or change the pen width (in pixels).
Eraser Width	Lets you modify the width of the Eraser tool.
Erase All	Removes all text and drawn annotations. Annotations that you type in cannot be erased using this method.
Erase Selected Images	Removes images you select in the Annotation column.
Erase Selected Texts	Removes text you select in the Annotation column.
Enable Drawing	Lets you draw in the Annotation column using your mouse or pen tablet.

## Chapter 3: Layers

In Harmony, everything that constitutes the different elements of a scene, including drawing layers, sound effects, visual effects and pegs is represented by a layer in the Timeline view.

At the core of the rendered picture is the drawing layer, which is used to display drawings. Those layers are rendered from bottom to top, with the bottommost layer appearing in the background, and the topmost layer appearing in the foreground.

Some layers, such as Peg, Bone or Quadmap layers, are made to offset drawing layers. They must be created as the parent of a drawing layer, or of a hierarchy of drawing layers, in order to transform the layers in the rendered image.

Other layers, such as Blur and Transparency layers, are made to transform the picture output by drawing layers. They must be created as children of drawing layers, or groups of drawing layers, in order to transform the drawings.

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## Deformation Layers

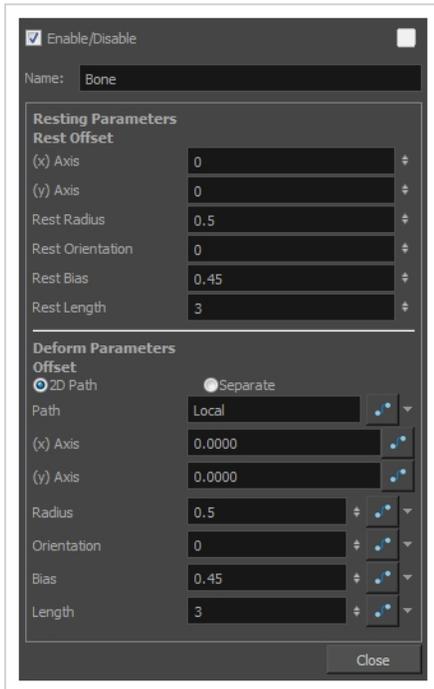
Deformation layers are layers that make deformers. In Harmony, deformers are made of chains of deformation layers laid out in a hierarchy. Each deformation layer represents a point in the deformation chain.

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## Bone Layers

The Bone node is one of the main nodes used to build a deformation rig. Each Bone node consists of a bone and an articulation. You can chain Bone nodes to create a skeleton chain for your character. The Rigging tool can be used to create and connect those nodes automatically.

## Properties



Parameter	Descriptions
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
<b>Resting Parameters Rest Offset</b>	
(x) Axis	This is the bone x-axis (horizontal) coordinates for the resting position.
(y) Axis	This is the bone y-axis (vertical) coordinates for the resting position.

Rest Radius	This is the articulation's radius value (articulation size) for the resting position.
Rest Orientation	This is the bone's orientation angle for the resting position.
Rest Bias	This is the articulation's bias (roundness and smoothness) for the resting position.
Rest Length	This is the bone's length for the resting position.
<b>Deform Parameters Offset</b>	
2D Path	When this option is enabled, the X and Y-axis parameters are controlled by the same 2D path function.
Separate	When this option is enabled, the X and Y-axis parameters are individual one from another.
Path	When using a 2D Path, this field displays the name of the function.
(x) Axis	This is the bone X-axis (horizontal) coordinates for the animation position. This parameter can be linked to a function to be animated over time.
(y) Axis	This is the bone y-axis (vertical) coordinates for the animation position. This parameter can be linked to a function to be animated over time.
Radius	This is the articulation's radius value (articulation size) for the animation position. This parameter can be linked to a function to be animated over time.
Orientation	This is the bone's orientation angle for the animation position. This parameter can be linked to a function to be animated over time.
Bias	This is the articulation's bias (roundness and smoothness) for the animation position. This parameter can be linked to a function to be animated over time.
Length	This is the bone's length for the animation position. This parameter can be linked to a function to be animated over time.

## Deformation Composite Layer

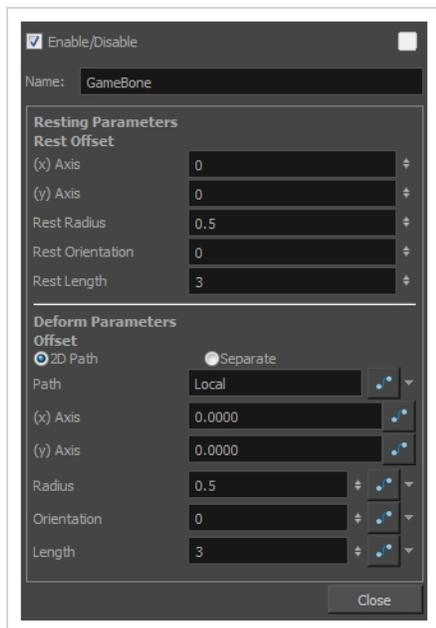
The Deformation-Composite node is automatically added to a rig when creating a split deformation chain. It is used to link the different nodes of a split deformation chain together before deforming the drawing it is linked to.

### Properties

Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Use this field to rename the node.

## Game Bone Layer

The Bone node is one of the main node used to build a deformation rig. Each Bone node consists of a bone and an articulation. Chaining Bone nodes will create a skeleton chain for your character. The Rigging tool can be used to create and connect those nodes automatically.



Parameter	Descriptions
<b>Resting Parameters Rest Offset</b>	
(x) Axis	This is the bone X-axis (horizontal) coordinates for the resting position.
(y) Axis	This is the bone Y-axis (vertical) coordinates for the resting position.
Rest Radius	This is the articulation's radius value (articulation size) for the resting position.
Rest Orientation	This is the bone's orientation angle for the resting position.
Rest Length	This is the bone's length for the resting position.
<b>Deform Parameters Offset</b>	
2D Path	When this option is enabled, the X and Y axis parameters are controlled by the same 2D path function.

Separate	When this option is enabled, the X and Y axis parameters are individual from each other.
Path	When using a 2D Path, this field displays the name of the function curve.
(x) Axis	This is the bone X-axis (horizontal) coordinates for the animation position. This parameter can be linked to a function curve to be animated over time.
(y) Axis	This is the bone Y-axis (vertical) coordinates for the animation position. This parameter can be linked to a function curve to be animated over time.
Radius	This is the articulation's radius value (articulation size) for the animation position. This parameter can be linked to a function curve to be animated over time.
Orientation	This is the bone's orientation angle for the animation position. This parameter can be linked to a function curve to be animated over time.
Length	This is the bone's length for the animation position. This parameter can be linked to a function curve to be animated over time.

## Kinematic Output Layer

The Kinematic Output node lets you hook a separate element that you want to be linked to the deformation chain but not be part of the deformation, such as a hand to an arm or an arm to the body. These elements will follow the movement of the chain just like a regular cut-out character hierarchy piece without being influenced by the deformation of the arm. If you don't use the Kinematic Output, the piece's pivot will not follow the deformation.

Connect a Kinematic Output node below the deformation node you want your drawing to follow.

## Effect Layers

Effect layers can be connected under a layer or under a group to transform the image.

Should you need to apply the same effect to several layers combined, you must group them together so that Harmony composes those layers into a single image before applying the effect.

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## Blending Layer

T-COMP2-005-001

By default, layers are composited onto each other directly. This means that opaque pixels in front-most layers hide pixels in layers further back, and semi-transparent pixels on front-most layers are blended with pixels further back proportionally to their alpha ratio. This does the job for solid objects. However, some types of layers and effects may look better when composited into the scene using more advanced approaches. The Blending node can be used to composite an element, effect or group using one of many different algorithms that may make it look much better in the final render.

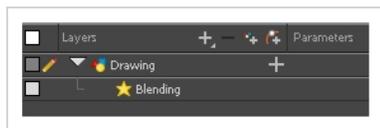


### NOTE

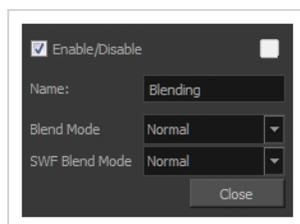
The effect of the Blending node is only visible when the Camera view is in Render Preview  mode.

## Connection

A Blending layer can be connected under a layer, an effect or a group to affect the way it will be composited into the scene.



## Properties



Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Lets you rename the node.
Blend Mode	<p>Choose the blending effect mode you wish to apply to your layer.</p> <div data-bbox="518 686 1429 1234" style="border: 1px solid #c8e6c9; padding: 10px; margin: 10px 0;">  <p><b>NOTE</b></p> <p>Some of the available blending modes have a BETA or Legacy variant to them.</p> <ul style="list-style-type: none"> <li>• A BETA blending mode is one that has been recently added in Harmony and which was made to more closely resemble results obtained in professional photo editing software such as Adobe Photoshop.</li> <li>• A Legacy blending mode is a blending mode that was present in older versions of Harmony. Starting from Harmony 10, these blending modes were enhanced by de-multiplying colours before compositing the image then re-multiplying them. Their legacy version remain available to ensure scenes created in older versions of Harmony do not render differently.</li> </ul> </div> <ul style="list-style-type: none"> <li>• <b>Normal:</b> Composites the image without any specific blending effect.</li> <li>• <b>Add / Add Legacy:</b> Adds the colour values of each channel in the overlay pixel and the underlay pixel. For example, adding two dark grey pixels with a value of 100 in each channel will result in a light grey pixel with a value of 200 in each channel. Likewise, if one of the pixels is red and the other is green, the resulting pixel will be yellow.</li> <li>• <b>Burn / BETA Colour Burn:</b> Darkens each channel in the underlay pixel with the darkness value of the corresponding channel in the overlay pixel, by increasing the contrast of the underlay pixel.</li> <li>• <b>Darken / BETA Darken:</b> For each channel, uses the value that is the darkest between the underlay pixel and the overlay pixel.</li> <li>• <b>BETA Linear Burn:</b> Darkens each channel in the underlay pixel with the darkness value of the corresponding channel in the overlay pixel, by reducing the brightness of the underlay pixel.</li> <li>• <b>Multiply / BETA Multiply:</b> Multiplies the value of each channel in the underlay</li> </ul>

Parameter	Description
	<p>pixel with the value of each channel in the overlay pixel, treating those values as ratios. Multiplying anything with black will result in black, and multiplying anything with white will leave the colour unchanged.</p> <ul style="list-style-type: none"> <li>• <b>Dodge / BETA Colour Dodge:</b> Lightens each channel in the underlay pixel with the brightness value of the corresponding channel in the overlay pixel, by decreasing the contrast of the underlay pixel.</li> <li>• <b>Erase:</b> Subtracts the overlay pixel's alpha from the underlay pixel, "cutting out" the overlay from the underlay. The overlay pixel's colour information is ignored.</li> <li>• <b>Lighten / Lighten Legacy / BETA Lighten:</b> For each channel, uses the value that is the brightest between the underlay pixel and the overlay pixel.</li> <li>• <b>BETA Linear Dodge:</b> Lightens each channel in the underlay pixel with the brightness value of the corresponding channel in the overlay pixel, by increasing the brightness of the underlay pixel.</li> <li>• <b>Screen / BETA Screen:</b> The reverse of multiply. Multiplies the reverse value of each channel in the underlay and overlay pixel, treating those values as ratios. Multiplying anything with white will result in white, and multiplying anything with black will leave the colour unchanged.</li> <li>• <b>Vividlight:</b> This colour dodges overlay pixels with a value above 50% onto underlay pixels, and colour burns overlay pixels with a value below 50% onto underlay pixels. The brighter the overlay pixel is, the more intense the colour dodging effect will be. The darker the overlay pixel is, the more intense the colour burning effect will be.</li> <li>• <b>Hardlight / Hardlight Legacy / BETA Hardlight:</b> This screens overlay pixels with a value above 50% onto underlay pixels, and multiplies overlay pixels with a value below 50% onto underlay pixels. The brighter the overlay pixel is, the more intense the screen effect will be. The darker the overlay pixel is, the more intense the multiplying effect will be. Blending any colour with white or black will result in white or black, and blending a colour with plain grey will leave the colour unchanged.</li> <li>• <b>Linearlight:</b> This linear dodges overlay pixels with a value above 50% onto underlay pixels, and linear burns overlay pixels with a value below 50% onto underlay pixels. The brighter the overlay pixel is, the more intense the linear dodging effect will be. The darker the overlay pixel is, the more intense the linear burning effect will be.</li> <li>• <b>Overlay / Overlay Legacy / BETA Overlay:</b> Like hardlight, except it screens or multiplies the underlay pixel over the overlay pixel, based on the value of the underlay pixel.</li> <li>• <b>Pin Light:</b> For each channel, if the overlay pixel's value is above 50%, use the lightest pixel between the underlay and overlay pixels. If the overlay pixel's</li> </ul>

Parameter	Description
	<p>value is below 50%, use the darkest pixel between the underlay and overlay pixels.</p> <ul style="list-style-type: none"> <li>• <b>Softlight / BETA Softlight:</b> Each channel of the overlay pixel lightens or darkens the corresponding channel of the underlay pixel on a softer scale. The effect is proportional to how dark or bright the overlay pixel is, but inversely proportional to how dark or bright the underlay pixel is.</li> <li>• <b>Difference / Difference Legacy:</b> For each channel, this takes the darkest pixel among the overlay and underlay pixels, subtract it from the lightest pixel, and outputs the result.</li> <li>• <b>Divide / Divide Legacy / BETA Divide:</b> For each channel, this divides the value of the underlay pixel by the value overlay pixel. Both values are treated as ratios, so the resulting colour is brighter. A white overlay pixel will leave the underlay colour unaffected, and a black overlay pixel will always result in white.</li> <li>• <b>Exclusion / BETA Exclusion:</b> Adds the overlay and underlay pixel, then subtracts the multiplied value of both pixels twice. This results in an effect similar to Difference, except that while the Difference mode produces consistently high contrast pixels, the contrast of the resulting pixels with the Exclusion mode is proportional to how dark or bright the overlay pixels are.</li> <li>• <b>Subtract / Subtract Legacy / BETA Subtract:</b> For each channel, subtracts the value of the overlay pixel from the value of the underlay pixel. For example, if the underlay pixel is white, and the overlay pixel is dark gray, the resulting pixel will be light gray. Likewise, if the underlay pixel is yellow, and the overlay pixel is red, the resulting pixel will be green, as yellow is a mix of green and red.</li> <li>• <b>Alpha:</b> Adds the opacity of the overlay pixel to the opacity of the underlay pixel, ignoring the colour of the overlay pixel.</li> </ul>

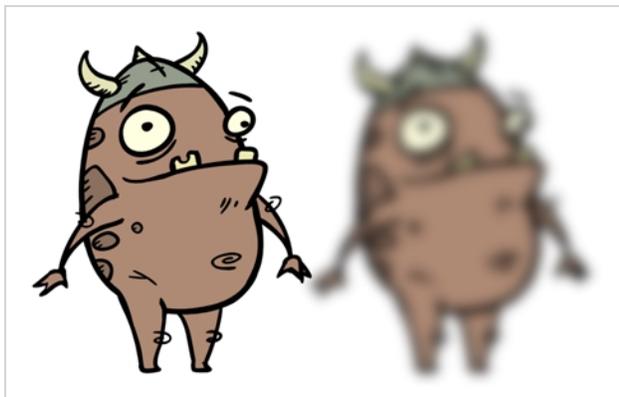
Parameter	Description
	<div data-bbox="597 285 1430 1003" style="border: 1px solid #90EE90; padding: 10px; margin-bottom: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• This mode adds to the alpha of the image, but does not modify its colours. Because colours in Harmony are pre-multiplied with black, adding alpha to the image without affecting its colours is equivalent to replacing part or all of its transparency with black.</li> <li>• The effect of this blending mode can only be observed in one of the following conditions: <ul style="list-style-type: none"> <li>• If the blending node is connected to a bitmap composite, which is then connected to another composite that combines other elements in the scene. The effect will not be visible on elements that are connected to the same composite as the blending node.</li> <li>• If you render the scene in images with an alpha channel, then composite the rendered images in third party software.</li> <li>• If you set the mode of the Camera view to Matte View .</li> </ul> </li> </ul> </div> <ul style="list-style-type: none"> <li>• <b>Colour:</b> Outputs a colour with the hue and saturation of the overlay pixel, and the luminosity of the underlay pixel. The overlay layer can hence be used to "colourize" the underlay layer.</li> <li>• <b>Hue:</b> Outputs a colour with the luminosity and saturation of the underlay pixel and the hue of the overlay pixel.</li> <li>• <b>Invert:</b> Inverts the underlay pixel proportionally to the alpha value of the overlay pixel. The overlay image hence acts as a "matte" for an invert effect.</li> <li>• <b>Luminosity / BETA Luminosity:</b> Outputs a colour with the hue and saturation of the underlay pixel and the luminosity of the overlay pixel. This is the reverse of the Colour blending mode.</li> <li>• <b>Replace:</b> Ignores the underlay pixel completely, outputting the overlay pixel as if nothing existed behind it. This applies to all overlay pixels that have an alpha value of at least 1, so the negative space of the overlay image will not hide the underlay image. If the overlay pixel is not fully opaque, it will be mixed with black.</li> <li>• <b>Saturation:</b> Outputs a colour with the luminosity and hue of the underlying colour, and the saturation of the source colour.</li> </ul>
SWF Blend Mode	<p>If you intend to export your scene in SWF format, you can use this option to choose which blend mode to use for this effect in the exported Flash movie. Since Flash does not support all the blending modes supported by Harmony, this is left as a separate</p>

Parameter	Description
	<p>option. You can ignore this option if you don't intend to export your scene in SWF format.</p> <ul style="list-style-type: none"> <li>• <b>Normal:</b> Composites the image without any specific blending effect.</li> <li>• <b>Multiply:</b> Multiplies the value of each channel in the underlay pixel with the value of each channel in the overlay pixel, treating those values as ratios. Multiplying anything with black will result in black, and multiplying anything with white will leave the colour unchanged.</li> <li>• <b>Screen:</b> The reverse of multiply. Multiplies the reverse value of each channel in the underlay and overlay pixel, treating those values as ratios. Multiplying anything with white will result in white, and multiplying anything with black will leave the colour unchanged.</li> <li>• <b>Lighten:</b> For each channel, uses the value that is the brightest between the underlay pixel and the overlay pixel.</li> <li>• <b>Darken:</b> For each channel, uses the value that is the darkest between the underlay pixel and the overlay pixel.</li> <li>• <b>Difference:</b> For each channel, this takes the darkest pixel among the overlay and underlay pixels, subtract it from the lightest pixel, and outputs the result.</li> <li>• <b>Add:</b> Adds the colour values of each channel in the overlay pixel and the underlay pixel. For example, adding two dark grey pixels with a value of 100 in each channel will result in a light grey pixel with a value of 200 in each channel. Likewise, if one of the pixels is red and the other is green, the resulting pixel will be yellow.</li> <li>• <b>Subtract:</b> For each channel, subtracts the value of the overlay pixel from the value of the underlay pixel. For example, if the underlay pixel is white, and the overlay pixel is dark gray, the resulting pixel will be light gray. Likewise, if the underlay pixel is yellow, and the overlay pixel is red, the resulting pixel will be green, as yellow is a mix of green and red.</li> <li>• <b>Invert:</b> Inverts the underlay pixel proportionally to the alpha value of the overlay pixel. The overlay image hence acts as a "matte" for an invert effect.</li> <li>• <b>Overlay:</b> Like hardlight, except it screens or multiplies the underlay pixel over the overlay pixel, based on the value of the underlay pixel.</li> <li>• <b>Hardlight:</b> This screens overlay pixels with a value above 50% onto underlay pixels, and multiplies overlay pixels with a value below 50% onto underlay pixels. The brighter the overlay pixel is, the more intense the screen effect will be. The darker the overlay pixel is, the more intense the multiplying effect will be. Blending any colour with white or black will result in white or black, and blending a colour with plain grey will leave the colour unchanged.</li> </ul>

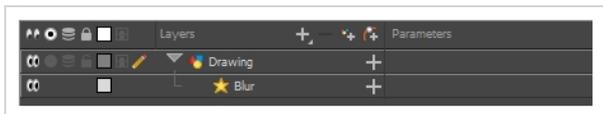
## Blur Layer

T-HFND-010-007

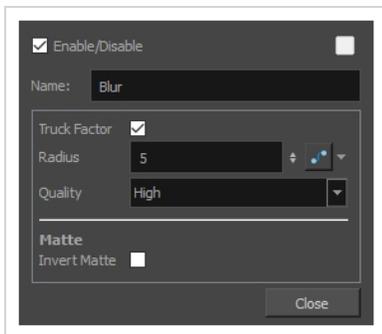
The Blur effect creates an effect that softens, fogs or obscures the image evenly in all directions. This effect is useful when you want to make cloudy images not realistically seen in detail, such as a drawing object that is farther back or in the background of your scene, usually blurry due to the laws of atmospheric perspective. Other uses include the general softening of objects such as snow, stars and shadows that do not naturally have a hard outline.



Refer to the following example to connect this effect:



## Properties



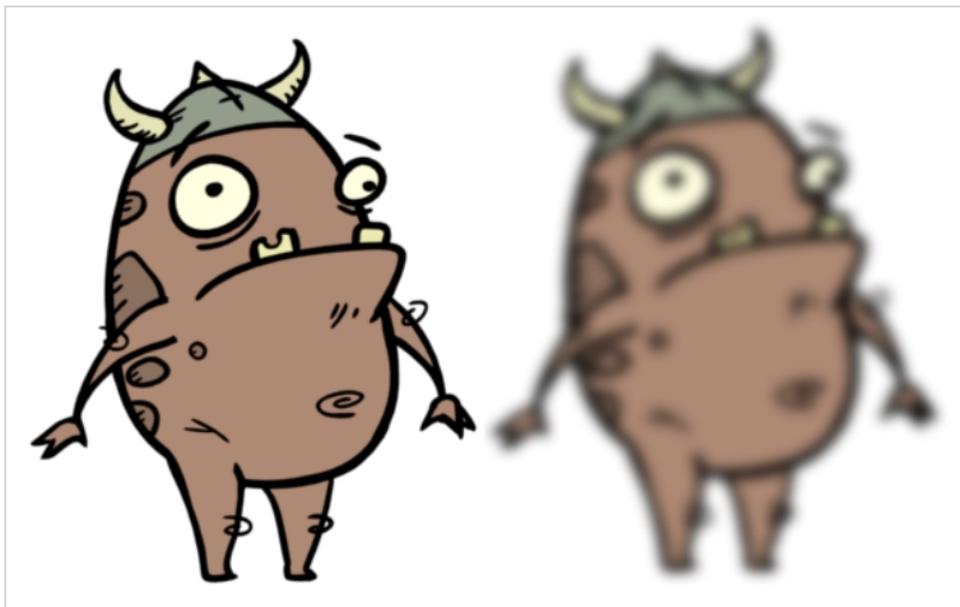
Parameter	Description
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When this option is deselected, the effect's values

Parameter	Description
	remain unchanged regardless of any depth or scale changes. This option should be deselected when multiple drawings are composited and attached to this effect.
Radius	Size of the blur. The larger the value, the greater the strength or reach of the blur. The blur radius is affected by the drawing scale and camera position. Click the Edit Curve button to change these values over time by adjusting the function curve.
Quality	Select High for a slow and accurate operation or Low for a faster operation with a more raw look.
<b>Matte</b>	
Invert Matte	Inverts the matte used to generate the effect. By default, the effect is applied to the opaque areas of the matte drawing. When this option is enabled, the effect is applied to the transparent areas of the matte instead.

## Blur-Gaussian Layer

T-COMP2-003-002

The Blur-Gaussian effect softens the image, reducing the amount of noise and detail. The look of the Gaussian blur is smooth, but does take some rendering time. This effect is useful when rendering time is less important, and quality is more important. Also, you can use a matte with this effect to isolate areas of the image.



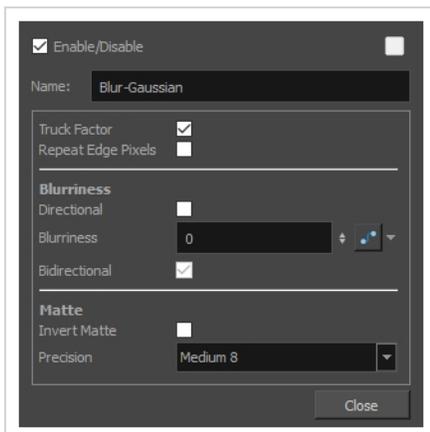
For detailed video tutorials and sample scenes by Adam Phillips, see:

<https://www.toonboom.com/resources/video-tutorials/chapter/adam-phillips-harmony-effects>

Refer to the following example to connect this effect:



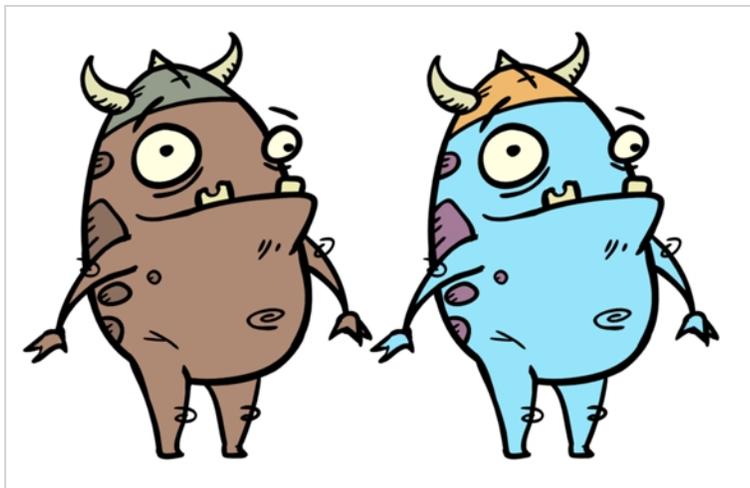
## Properties



Parameter	Description
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When this option is deselected, the effect's values remain unchanged regardless of any depth or scale changes. This option should be deselected when multiple drawings are composited and attached to this effect.
Repeat Edge Pixels	Makes the blur algorithm operate as if the pixel values beyond the edge of the layer are the same as the values of the edge pixels. This keeps edges sharp, preventing them from darkening and becoming more transparent.
<b>Blurriness</b>	
Directional	Blurs according to the length, width, and angle you specify. For example, if a character is walking east, the blur may fall to the west.
Blurriness	Amount of blur applied to the layer.
Horizontal Blurriness	Length of the blur.
Vertical Blurriness	Thickness of the blur.
Angle	The direction in which the blur is applied: sideways, up, down, 90 degrees, 45 degrees, and so on.
Bidirectional	Blurs in both horizontal and vertical directions.
<b>Matte</b>	
Invert Matte	Inverts the matte used to generate the effect. By default, the effect is applied to the opaque areas of the matte drawing. When this option is enabled, the effect is applied to the transparent areas of the matte instead.
Precision	Blurs the image the number of times the precision indicates at different radius (between 0 and the specified radius).

## Colour-Override Layer

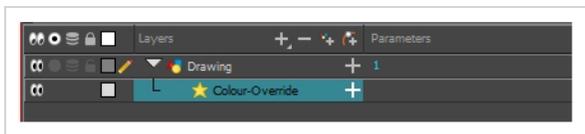
The Colour-Override effect processes the colours in a drawing layer. Using this effect, you can change colours from the palette without affecting the actual palette, swap clone palettes, or even replace a specific colour zone. The drawings in this layer must be .tvg files as the Colour-Override uses the colour palettes linked to them.



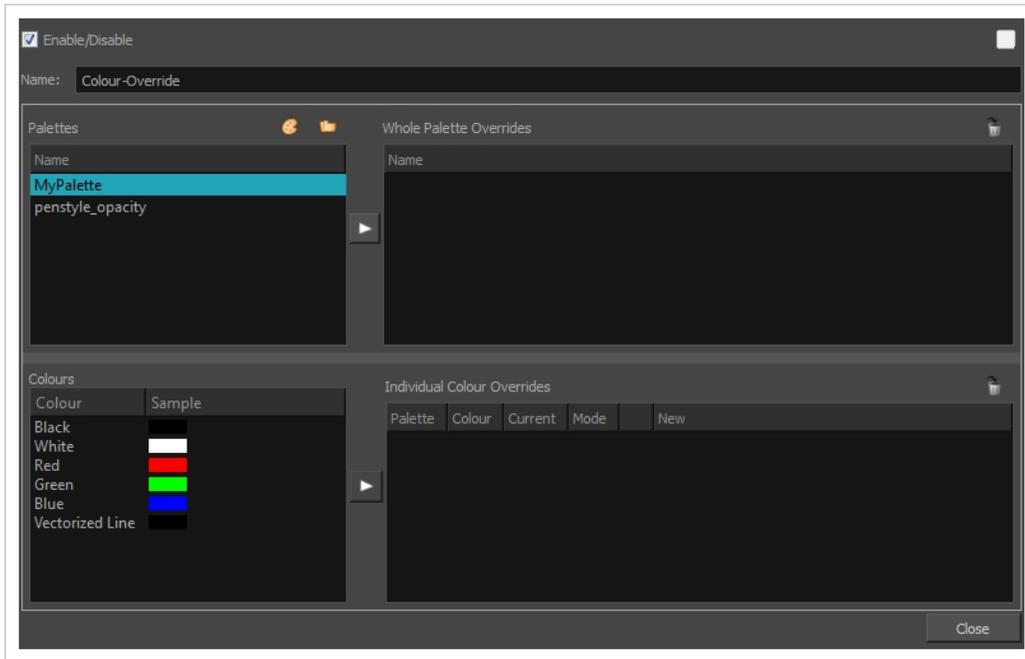
The Colour-Override effect lets you:

- Change colour values in drawings during the compositing process.
- Use colour values from a specific colour palette in the palette list.
- Establish the priority of override palettes in the palette list. For example, you may have different clones of the same palette, such as a daytime and nighttime version.
- Isolate specific areas of a drawing by selecting certain colours. For example, using specific colours to generate a matte for a glow effect.
- Hide certain colours.

Refer to the following example to connect this effect:



## Interface

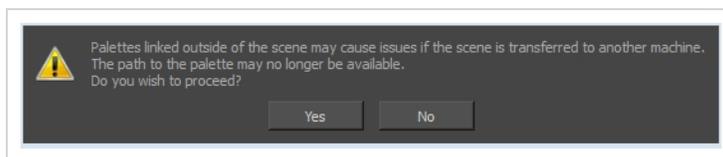


## Palettes

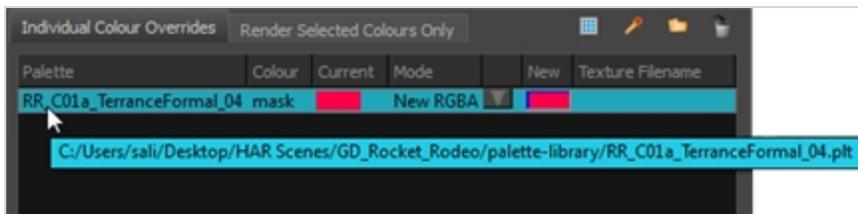
The Palettes section displays the palettes in the palette list of the selected layer. You can move these palettes into the Whole Palette Overrides section to reorder them. If you have cloned palettes, the higher one in the list will override the others. This is useful for overriding the clone palette ordering set in the scene through the Colour view.

You can load additional palettes in the palette list from either your project, by clicking on The Palette 🎨 button, or your computer by clicking on the Browse 📁 button.

- The Palette 🎨 button allows you to load a palette contained within the project hierarchy (Environment, Job, Scene and Elements).
- The Browse 📁 button allows you to load a palette located outside the project hierarchy, anywhere on your system or server. If you link to a palette outside of your project, you will be prompted with the following warning message:

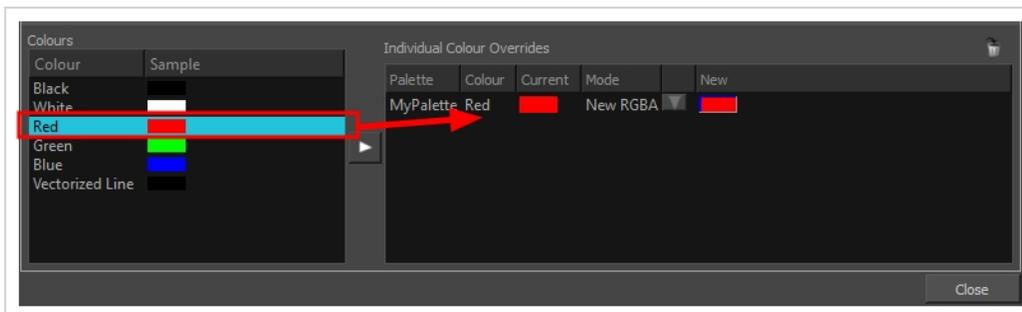


You can hover your mouse over the palette name in any of the override sections to display the path to the palette.



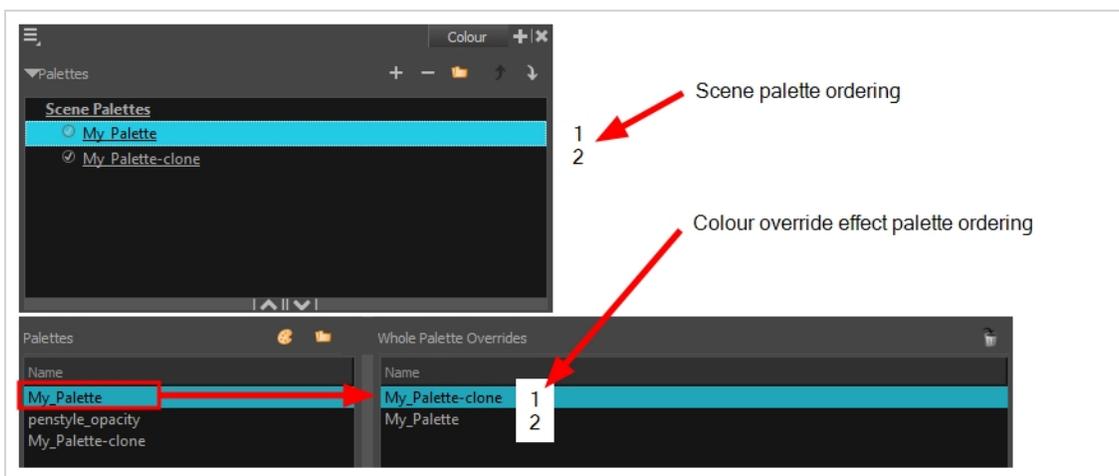
## Colours

The Colours section displays the colour swatches of the selected palette. Move a swatch into the Colour-Overrides section to change its value.



## Whole Palette Overrides

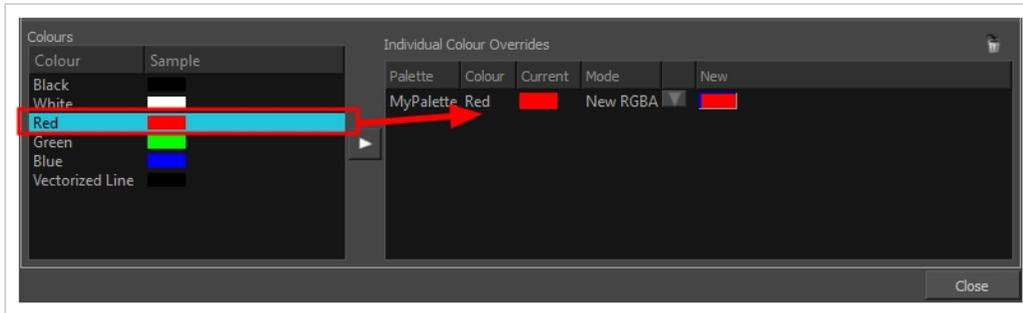
The Whole Palette Overrides section forces the use of a particular palette (clone palette) or palette list ordering during the compositing process. You must drag palettes from the Palettes section to change their order. Harmony uses the palettes in the order they appear in the palette list to find the colour values associated with the colour IDs of each colour zone. To apply a different version of a colour palette to, for example, switch from a day to a night palette, use the Override section to change the order of the colour palettes (you must be working with cloned palettes).



## Individual Colour Overrides

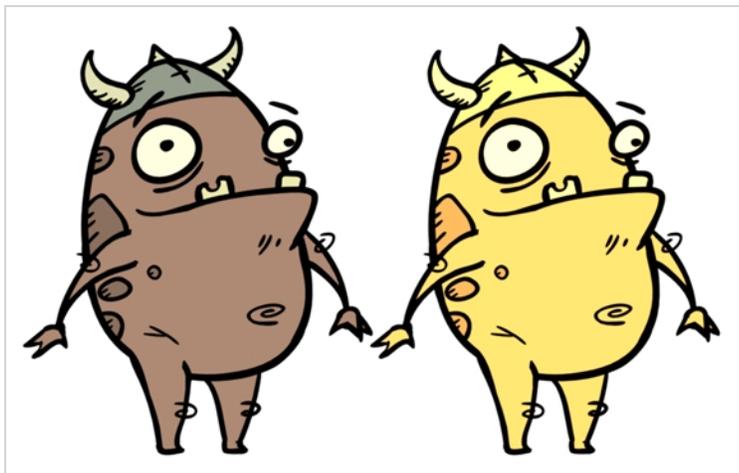
When you drag a swatch from the Colours section to this section, you can override its value. The default override mode is set to New RGBA so you can override the RGB value as well as the transparency value.

The Current column always displays the colours from the currently active palette. Selecting a clone palette in the Palettes area will not change the colours if you haven't changed the active palette in the Whole Palette Overrides section. The update will be done once you close and reopen the Colour Override Layer Properties window.



## Colour-Scale Layer

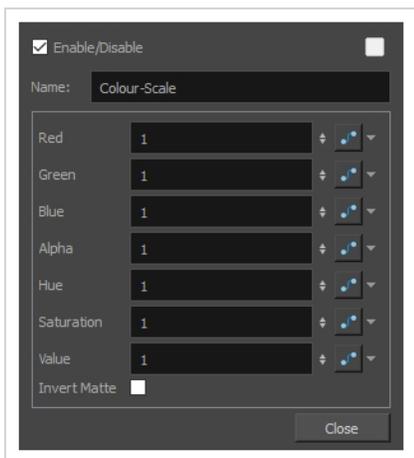
The Colour-Scale effect offsets an image's colours. This effect is useful in creating ambient transitions, such as from daytime to nighttime.



Refer to the following example to connect this effect:



## Properties



Parameter	Description
Name	Allows you to enter a name for the node.
Red	The factor by which to multiply red values in the image.

Parameter	Description
Green	The factor by which to multiply green values in the image.
Blue	The factor by which to multiply blue values in the image.
Alpha	The factor by which to multiply alpha values in the image.
Hue	The colour or hue to offset the image.
Saturation	The amount of colour to offset the image.
Value	<p>Enter the value for the colour to offset the image. The actual colour values of the image are not changed; instead, the channels are multiplied by a selected amount. For example:</p> <ul style="list-style-type: none"><li>• A value of 1 does not change the colour values.</li><li>• A value greater than 1 brings the colour channel value closer to 255 (or white).</li><li>• A value less than 1 brings the colour channel value closer to zero (0 or black).</li></ul>
Invert Matte	Inverts the matte used to generate the effect. By default, the effect is applied to the opaque areas of the matte drawing. When this option is enabled, the effect is applied to the transparent areas of the matte instead.

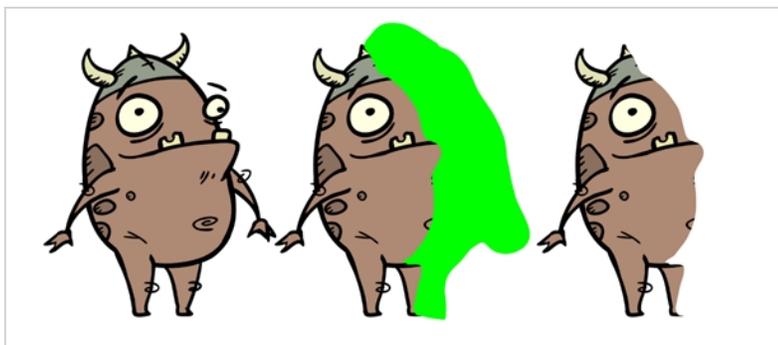
## Cutter Layer

T-HFND-010-009

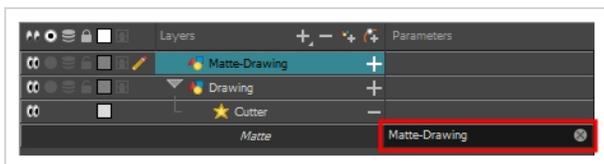
The Cutter effect cuts out a portion of an image. To do this, it needs to be connected to the drawing it is intended to cut as well as to a matte layer. The cutter will take the shape of the drawing in the matte layer and cut this shape out of the drawing layer. This is especially useful if you want to make a character disappear between a background element, or if you want to cut out a hole in the middle of a character.

Like all effects that use a matte, the Cutter's effect has an Inverted parameter, which is disabled by default. When enabled, the Cutter will have the reverse effect: Instead of cutting the matte's shape out of the drawing, it will cut everything outside of the matte's shape out of the drawing, leaving only the parts of the drawing that are covered by the matte.

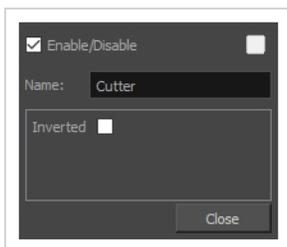
The Cutter effect can be used with 2D-3D integration. Rendered 2D drawings, integrated with 3D models, display soft, anti-aliased edges, even where the Cutter effect is applied.



Refer to the following example to connect this effect:



## Properties



Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Inverted	When this option is enabled, the Cutter node will invert the matte shape to cut the drawing. Instead of cutting the image intersecting with the matte, it will cut any artwork outside of the matte shape.

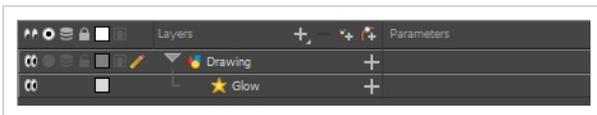
## Glow Layer

T-HFND-010-009B

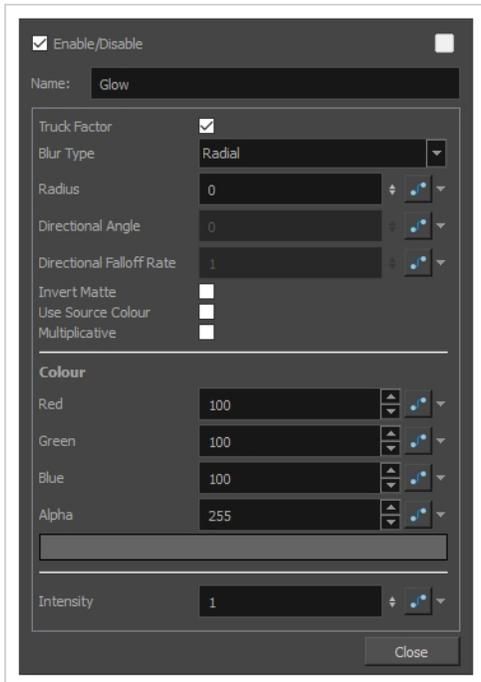
The Glow effect turns your image into a glow area with a bright soft-edged light or diffuse light region around an image. The Glow effect is useful for creating a shining rim around objects, such as the sun or stars. Clone your layer to display the original image on top of the glow.



Refer to the following example to connect this effect:



## Properties



Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When disabled, the effect's values will remain unchanged regardless of depth or scale changes. It is recommended that this option be disabled when multiple drawings are composited and attached this effect.
Blur Type	Allows you to choose between the following blur types for the effect: <ul style="list-style-type: none"> <li>• <b>Radial:</b> The edges of the matte are blurred evenly around points that make up the edge of the matte.</li> <li>• <b>Directional:</b> The matte is blurred in the direction configured with the Directional Angle and Directional Falloff Rate parameters.</li> </ul>

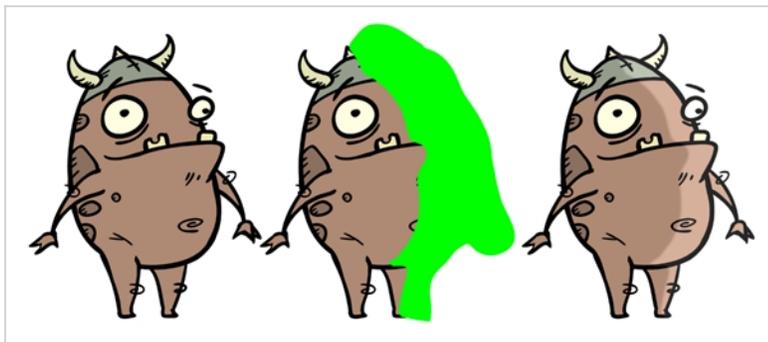
Parameter	Description
Radius	Enter a value for the size of the blur. The larger the value, the greater the blur effect. The blur radius is affected by the drawing scale and camera position.
Directional Angle	<p>If you set the Blur Type to Directional, this sets the angle of the blur. The value goes from 0 to 360, with 0 meaning west, and angles going counterclockwise. For example:</p> <ul style="list-style-type: none"> <li>• <b>0:</b> Blurs the image to the west.</li> <li>• <b>90:</b> Blurs the image to the south.</li> <li>• <b>180:</b> Blurs the image to the east.</li> <li>• <b>270:</b> Blurs the image to the north.</li> </ul>
Directional Falloff Rate	<p>The distance where the blur fades from the edge of the image. Select a decimal value between 0 and 1. For example:</p> <ul style="list-style-type: none"> <li>• <b>0:</b> Makes the blur fade out slowly, distributing the blur evenly from the edge of the character to the farthest edge of the blur.</li> <li>• <b>1:</b> Makes the blur fade out quickly. The blur is heaviest closer to the edge of the image.</li> </ul>
Invert Matte	Inverts the matte used to generate the effect. By default, the effect is applied to opaque areas of the drawing. When this option is enabled, the effect is applied to transparent or empty areas of the drawing.
Use Source Colour	<p>Instead of using the colour in the Colour parameters, this uses the colours in the source drawing to generate the effect.</p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b> The effect of this parameter is only visible in Render View  mode.</p> </div>
Multiplicative	Multiplies the colours of the effect with the colours of the background. This intensifies the effect.
<b>Colour</b>	
Red	The amount of red to add to the colour in the background image.
Green	The amount of green to add to the colour in the background image.

Parameter	Description
Blue	The amount of blue to add to the colour in the background image.
Alpha	The alpha value of the effect.
Colour Swatch	Opens the Colour Picker dialog, in which you can visually select a colour for the effect.
Intensity	Allows you to set the factor by which to multiply the intensity of the effect. This parameter can take a decimal value between 0 and 1. At 1, the effect is fully applied. At 0, the effect is not visible.

## Highlight Layer

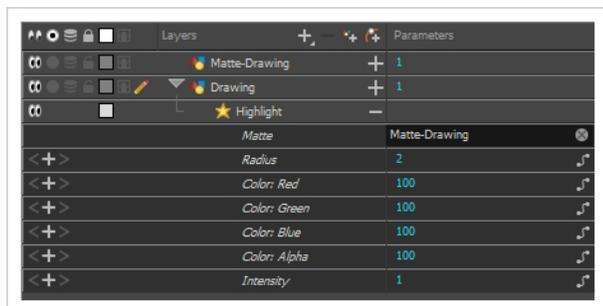
T-HFND-010-009C

The Highlight node allows you to brighten an image's area to simulate a light source. For this effect, you will need to create a matte to determine the shape and position of the highlight on a separate element, so that you can blur the edges to create a softer effect. By adjusting the Highlight properties, you can control the type and amount of blur, as well as the colour of the Highlight effect.

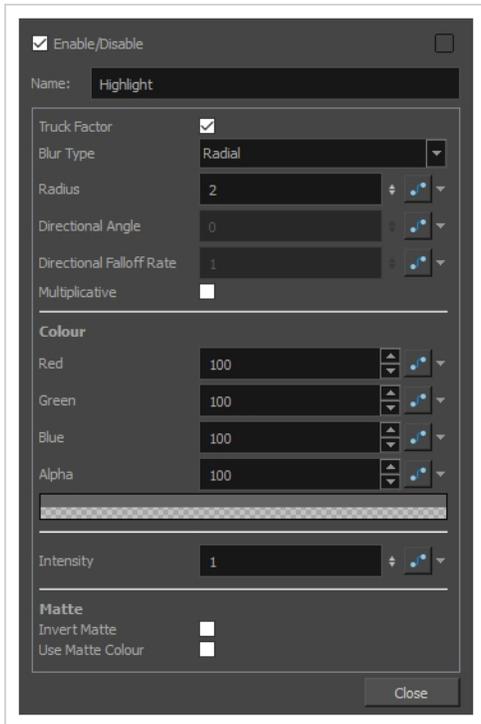


## Connection

The Highlight effect layer must be connected as a child of the drawing layer or group which you want it to affect, and must have a matte drawing layer or group added to its Matte attribute. The part of its parent image that are covered by the matte drawing will have a highlight applied to it.



## Layer Properties



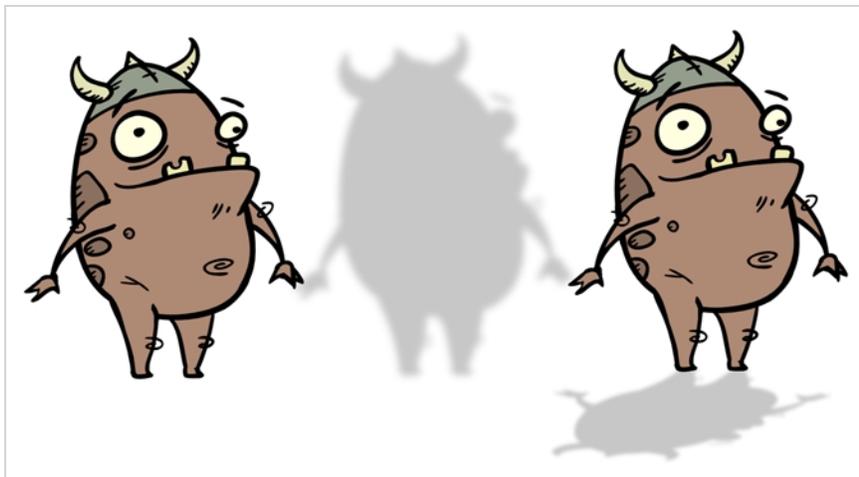
Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When disabled, the effect's values will remain unchanged regardless of depth or scale changes. It is recommended that this option be disabled when multiple drawings are composited and attached this effect.
Blur Type	Allows you to choose between the following blur types for the effect: <ul style="list-style-type: none"> <li>• <b>Radial:</b> The edges of the matte are blurred evenly around points that make up the edge of the matte.</li> <li>• <b>Directional:</b> The matte is blurred in the direction configured with the Directional Angle and Directional Falloff Rate parameters.</li> </ul>

Parameter	Description
Radius	Enter a value for the size of the blur. The larger the value, the greater the blur effect. The blur radius is affected by the drawing scale and camera position.
Directional Angle	If you set the Blur Type to Directional, this sets the angle of the blur. The value goes from 0 to 360, with 0 meaning west, and angles going counterclockwise. For example: <ul style="list-style-type: none"> <li>• <b>0</b>: Blurs the image to the west.</li> <li>• <b>90</b>: Blurs the image to the south.</li> <li>• <b>180</b>: Blurs the image to the east.</li> <li>• <b>270</b>: Blurs the image to the north.</li> </ul>
Directional Falloff Rate	The distance where the blur fades from the edge of the image. Select a decimal value between 0 and 1. For example: <ul style="list-style-type: none"> <li>• <b>0</b>: Makes the blur fade out slowly, distributing the blur evenly from the edge of the character to the farthest edge of the blur.</li> <li>• <b>1</b>: Makes the blur fade out quickly. The blur is heaviest closer to the edge of the image.</li> </ul>
Multiplicative	Multiplies the colours of the effect with the colours of the source image. This intensifies the effect.
<b>Colour</b>	
Red	The amount of red to add to the colour of the source image.
Green	The amount of green to add to the colour of the source image.
Blue	The amount of blue to add to the colour of the source image.
Alpha	The alpha value of the effect.
Colour Swatch	Opens the Colour Picker dialog, in which you can visually select a colour for the effect.
Intensity	Allows you to set the factor by which to multiply the intensity of the effect. This parameter can take a decimal value between 0 and 1. At 1, the effect is fully applied. At 0, the effect is not visible.
<b>Matte</b>	

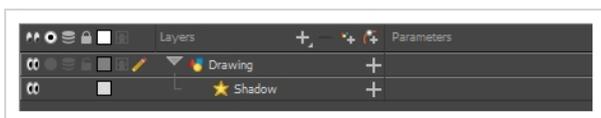
Parameter	Description
Invert Matte	Inverts the matte used to generate the effect. By default, the affect is applied to opaque areas of the matte and transparent areas of the matte are ignored. When this option is enabled, the effect is applied to transparent areas of the matte and opaque areas of the matte are ignored.
Use Matte Colour	<p>Instead of using the colour in the Colour parameters, this uses the colours in the matte drawing to generate the effect.</p> <div data-bbox="407 541 1430 684" style="border: 1px solid #c8e6c9; padding: 10px;"><p> <b>NOTE</b> The effect of this parameter is only visible in Render View  mode.</p></div>

## Shadow Layer

With the Shadow effect, you can turn a drawing into a shadow. It doesn't matter if the drawing layer is a fully coloured character. The Shadow effect will render it into a grey, semitransparent, slightly blurry silhouette. You must clone your layer to see the original image displayed on top of the shadow.



Refer to the following example to connect this effect:



## Properties

Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When disabled, the effect's values will remain unchanged regardless of depth or scale changes. It is recommended that this option be disabled when multiple drawings are composited and attached this effect.

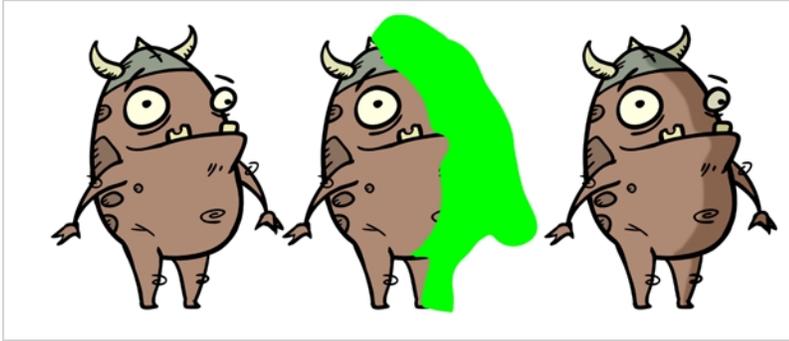
Parameter	Description
Blur Type	<p>Allows you to choose between the following blur types for the effect:</p> <ul style="list-style-type: none"> <li>• <b>Radial:</b> The edges of the matte are blurred evenly around points that make up the edge of the matte.</li> <li>• <b>Directional:</b> The matte is blurred in the direction configured with the Directional Angle and Directional Falloff Rate parameters.</li> </ul>
Radius	<p>Enter a value for the size of the blur. The larger the value, the greater the blur effect. The blur radius is affected by the drawing scale and camera position.</p>
Directional Angle	<p>If you set the Blur Type to Directional, this sets the angle of the blur. The value goes from 0 to 360, with 0 meaning west, and angles going counterclockwise. For example:</p> <ul style="list-style-type: none"> <li>• <b>0:</b> Blurs the image to the west.</li> <li>• <b>90:</b> Blurs the image to the south.</li> <li>• <b>180:</b> Blurs the image to the east.</li> <li>• <b>270:</b> Blurs the image to the north.</li> </ul>
Directional Falloff Rate	<p>The distance where the blur fades from the edge of the image. Select a decimal value between 0 and 1. For example:</p> <ul style="list-style-type: none"> <li>• <b>0:</b> Makes the blur fade out slowly, distributing the blur evenly from the edge of the character to the farthest edge of the blur.</li> <li>• <b>1:</b> Makes the blur fade out quickly. The blur is heaviest closer to the edge of the image.</li> </ul>
Invert Matte	<p>Inverts the matte used to generate the effect. By default, the effect is applied to opaque areas of the drawing. When this option is enabled, the effect is applied to transparent or empty areas of the drawing.</p>
Use Source Colour	<p>Instead of using the colour in the Colour parameters, this uses the colours in the source drawing to generate the effect.</p> <div data-bbox="565 1625 1430 1766" style="border: 1px solid #c8e6c9; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b> The effect of this parameter is only visible in Render View  mode.</p> </div>
Multiplicative	<p>Multiplies the colours of the effect with the colours of the background. This intensifies the effect.</p>

Parameter	Description
<b>Colour</b>	
Red	The amount of red to subtract from the colour in the background image. To obtain a shadow effect, this value must be negative.
Green	The amount of green to subtract from the colour in the background image. To obtain a shadow effect, this value must be negative.
Blue	The amount of blue to subtract from the colour in the background image. To obtain a shadow effect, this value must be negative.
Alpha	The alpha value of the effect.
Colour Swatch	Opens the Colour Picker dialog, in which you can visually select a colour for the effect.
Intensity	Allows you to set the factor by which to multiply the intensity of the effect. This parameter can take a decimal value between 0 and 1. At 1, the effect is fully applied. At 0, the effect is not visible.

## Tone Layer

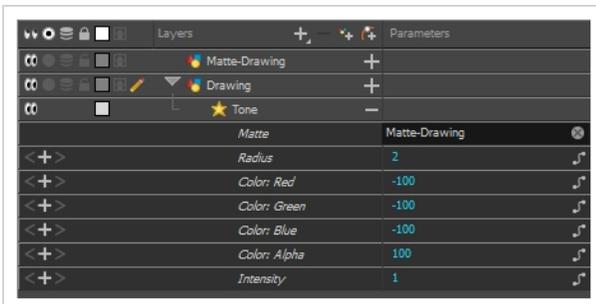
T-COMP2-004-004

The Tone effect allows you to add a dark-coloured region to your drawing and simulate the shaded area away from a light source. To produce the tone effect, create a drawing to control where the tone will appear. The Tone effect uses a matte to determine the shape and position of the tone on your drawing and can be blurred at the edges to create a softer effect.

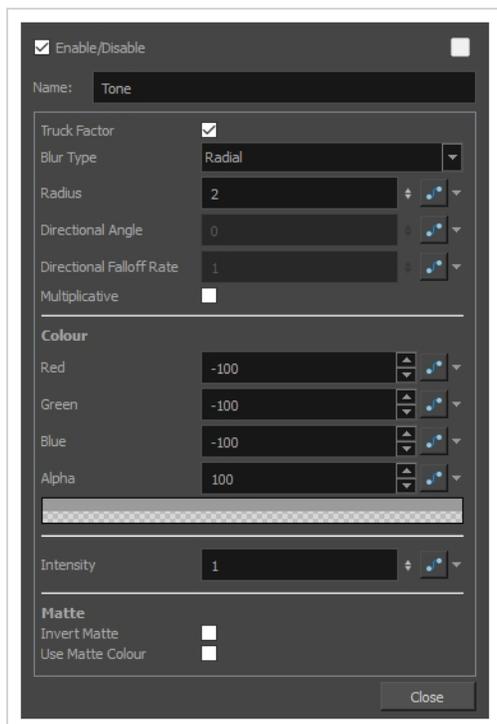


## Connection

The Tone effect layer must be connected as a child of the drawing layer or group which you want it to affect, and must have a matte drawing layer or group added to its Matte attribute. The part of its parent image that are covered by the matte drawing will have a tone applied to it.



## Layer Properties



Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Truck Factor	Activated by default, this option readjusts the blur when the elements undergo a change of depth or scale. When disabled, the effect's values will remain unchanged regardless of depth or scale changes. It is recommended that this option be disabled when multiple drawings are composited and attached this effect.
Blur Type	Allows you to choose between the following blur types for the effect: <ul style="list-style-type: none"> <li>• <b>Radial:</b> The edges of the matte are blurred evenly around points that make up the edge of the matte.</li> <li>• <b>Directional:</b> The matte is blurred in the direction configured with the Directional Angle and Directional Falloff Rate parameters.</li> </ul>

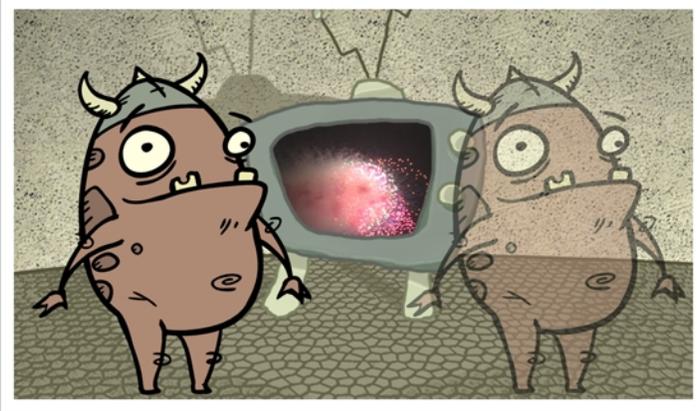
Parameter	Description
Radius	Enter a value for the size of the blur. The larger the value, the greater the blur effect. The blur radius is affected by the drawing scale and camera position.
Directional Angle	If you set the Blur Type to Directional, this sets the angle of the blur. The value goes from 0 to 360, with 0 meaning west, and angles going counterclockwise. For example: <ul style="list-style-type: none"> <li>• <b>0</b>: Blurs the image to the west.</li> <li>• <b>90</b>: Blurs the image to the south.</li> <li>• <b>180</b>: Blurs the image to the east.</li> <li>• <b>270</b>: Blurs the image to the north.</li> </ul>
Directional Falloff Rate	The distance where the blur fades from the edge of the image. Select a decimal value between 0 and 1. For example: <ul style="list-style-type: none"> <li>• <b>0</b>: Makes the blur fade out slowly, distributing the blur evenly from the edge of the character to the farthest edge of the blur.</li> <li>• <b>1</b>: Makes the blur fade out quickly. The blur is heaviest closer to the edge of the image.</li> </ul>
Multiplicative	Multiplies the colours of the effect with the colours of the source image. This intensifies the effect.
<b>Colour</b>	
Red	The amount of red to subtract from the colour of the source image. To obtain a shadow effect, the value must be negative.
Green	The amount of green to subtract from the colour of the source image. To obtain a shadow effect, the value must be negative.
Blue	The amount of blue to subtract from the colour of the source image. To obtain a shadow effect, the value must be negative.
Alpha	The alpha value of the effect.
Colour Swatch	Opens the Colour Picker dialog, in which you can visually select a colour for the effect.
Intensity	Allows you to set the factor by which to multiply the intensity of the effect. This parameter can take a decimal value between 0 and 1. At 1, the effect is fully applied. At 0, the effect is not visible.

Parameter	Description
<b>Matte</b>	
Invert Matte	Inverts the matte used to generate the effect. By default, the affect is applied to opaque areas of the matte and transparent areas of the matte are ignored. When this option is enabled, the effect is applied to transparent areas of the matte and opaque areas of the matte are ignored.
Use Matte Colour	Instead of using the colour in the Colour parameters, this uses the colours in the matte drawing to generate the effect. <div data-bbox="407 632 1430 779" style="border: 1px solid #c8e6c9; padding: 10px;"> <b>NOTE</b> The effect of this parameter is only visible in Render View  mode.</div>

## Transparency Layer

T-HFND-010-008

The Transparency effect is used to make an image partially transparent. The Transparency effect is useful when fading images in and out, such as a phantom or to make something partially see-through, such as a window.

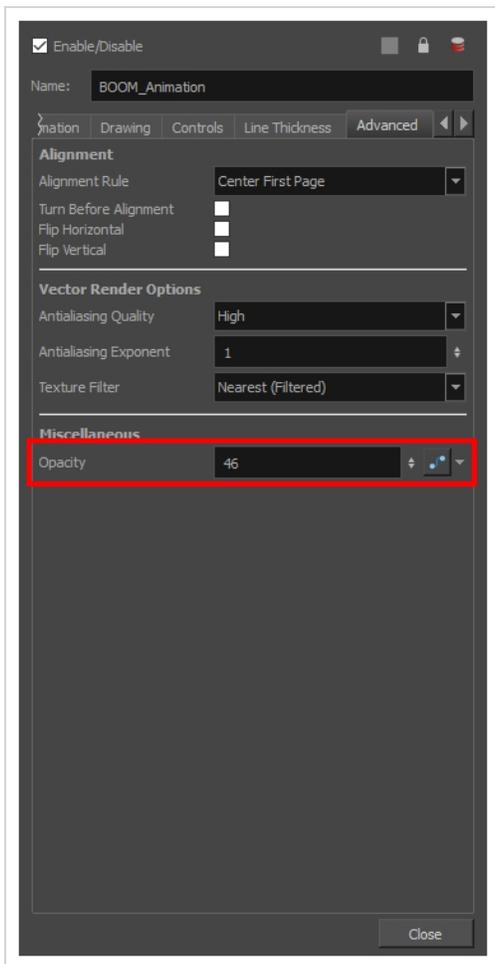


Refer to the following example to connect this effect:

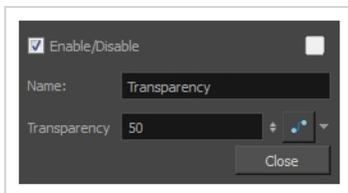


You can enter a value in the Transparency field or change the transparency value over time by linking it to a function curve. Entering a value of 100 in the Transparency field will make the element 100% transparent, in other words, invisible. Entering a value of 0 will render the element completely opaque.

It is also possible to adjust a drawing layer's transparency directly in the Layer Properties window without using the Transparency layer. In the layer's properties, go to the Drawing tab and adjust the Opacity parameter. This parameter is visible in OpenGL mode.



## Properties



Parameter	Description
Name	Allows you to enter a name for the node.
Transparency	Lets you set the opacity of an element. Values range from 0 to 100. A value of 100 will make the element 100% transparent and a value of 0 will render the element completely opaque.

## Image Layers

Image layers generate an image that display in your scene's render. The drawing layer, which is the main type of layer used in Harmony, generates an image based on the drawings in its element which are exposed at the current frame. The Colour-Card simply fills the render area with a solid colour.

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## Colour-Card Layer

T-ANIMPA-012-001

The Colour Card allows you to fill the scene's background with a solid colour when there is no background image. If no drawing or colour-card is present to cover the scene's background, the scene will be rendered on a pitch black canvas.



### NOTE

By default, the Colour Card has a Z ordering value of **12 Backward**. This puts the Colour card behind all elements that have a value lower than **12 Backward**. Most of the time, the Colour card will appear automatically behind all the scene elements as they are all set to **0 Backward**, unless you have changed the Z ordering of the scene components. If so, the Colour Card will be in front of the elements that are pushed back to more than 12 fields backward.

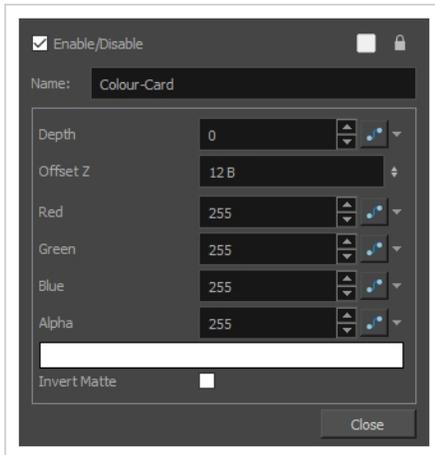
## Connection

The Colour Card does not need to be connected to anything in your scene. It simply needs to be added to it alongside your drawing layers and groups.



Because a Colour Card has a default position on the z-axis of 12 Backward, it will appear behind all the layers in your scene regardless of whether or not it has layers underneath it.

## Layer Properties

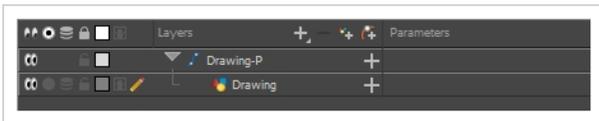


Parameter	Description
Enable/Disable	Allows you to enable or disable the layer. When disabled, a layer has no visible effect on the rendered image, nor on the preview in the Camera, Perspective, Side and Top views.
Colour Swatch	Sets the colour of the layer in the Timeline view.
Name	Allows you to enter a name for the node.
Depth	This parameter can be used to determine whether the colour card displays behind or in front of elements with the same position on the z-axis.
Offset Z	The position of the Colour Card on the Z-axis. By default, this is set to 12 B to ensure the Colour Card appears behind other elements in the scene. You can set this to 0 F to make the Colour Card respect the order of the layers in the Timeline view.
Colour	The colour and transparency of the Colour Card. You can also attach these parameters to function columns to change their values over time. Click the colour swatch to open the Colour Picker window and select a colour.
Colour Swatch	Opens the Colour Picker window in which you can specify the colour.
Invert Matte	If an image is connected to the Colour Card's matte port, by default, the colour is only applied on the opaque areas of the matte. If this parameter is enabled, the colour is applied to the transparent areas of the matte instead.

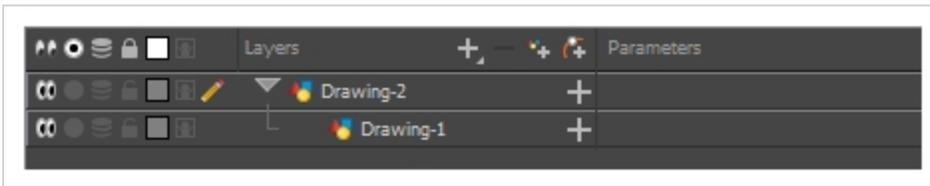
## Drawing Layer

The Drawing layer is at the core of a scene's structure. A drawing layer is linked to an element, which contains a series of drawing, and its Xsheet column, which indicates when and for how long each drawing is exposed. The layer is what connects the element and its exposure to the rendered image. It indicates the position of the drawings relative to other elements and to the stage, as well as the drawing's connections with pegs, groups and effects, if any.

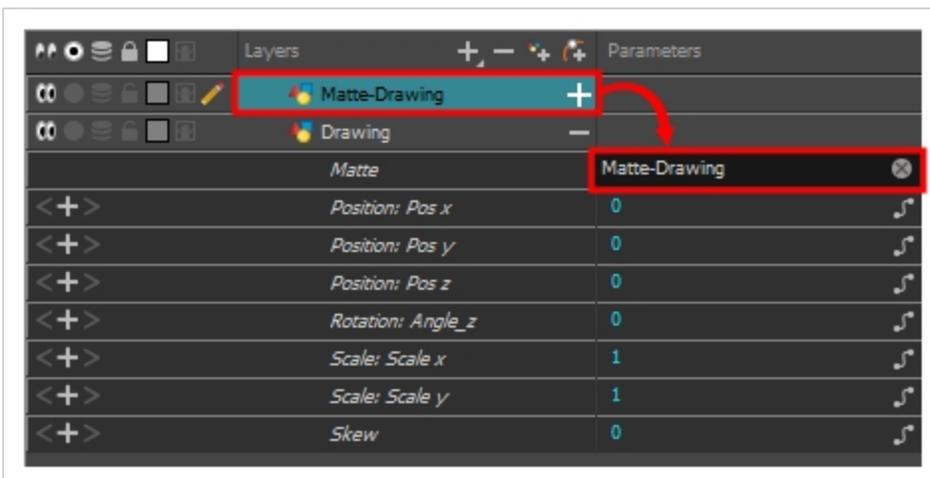
Although drawing layers can be transformed and animated on their own, it is typical to connect them under a parent peg. This allows you to keep the position and animation information of the element in the peg, making it easier to manipulate the exposure and the transformations separately. This is especially useful in digital cut-out animation where manipulating and transforming layers is often the main method of simulating movement, and changing drawings is the secondary method.



You can also connect a drawing layer as a child of another drawing layer. Just like with pegs, any transformation done to the parent layer, whether on itself or through one of its parents, will also be applied to the child layer.



Optionally, you can connect a matte drawing to a drawing layer. When a drawing layer has a matte drawing, only the parts of the drawings that intersect with the opaque areas of the matte drawing will be rendered. This allows you to accomplish the same effect as connecting the drawing layer to a cutter effect.



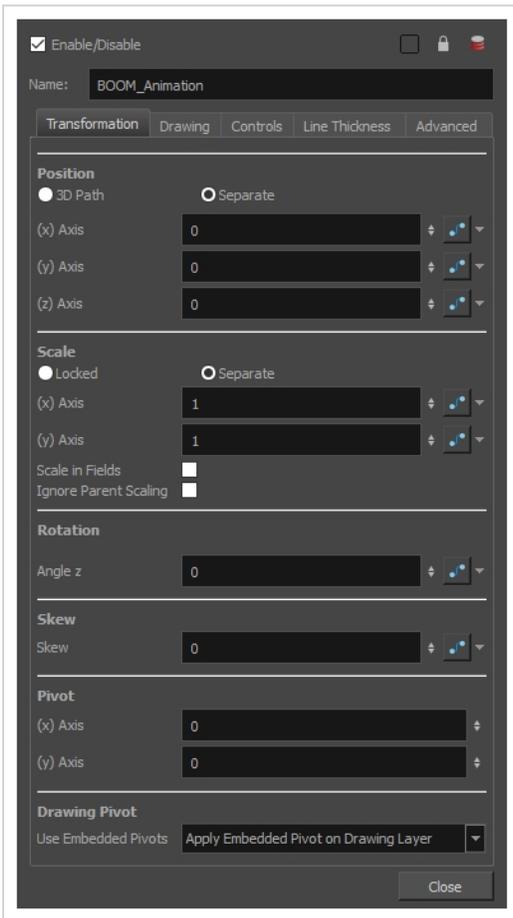
# Layer Properties

The drawing layer's properties are organized in the following tabs:

- [Transformation Tab](#)
- [Drawing Tab](#)
- [Controls Tab](#)
- [Line Thickness](#)
- [Advanced Tab](#)

## Transformation Tab

The Transformation tab contains parameters for adjusting the position, scale, rotation, skew and pivots of an element.



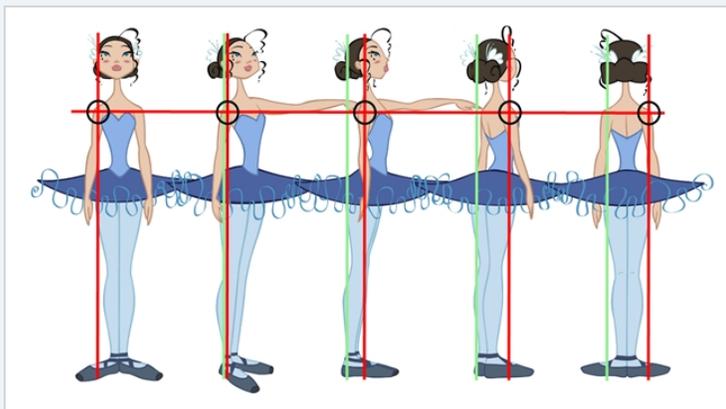
Parameter	Description
Position	<b>3D Path:</b> Use a 3D path to position the element. A 3D path uses a single function

	<p>to define the position on the X, Y and Z axes. This function is made of control points linked by a curvilinear path, making the movement follow a natural curve. The pace and ease of the movement is determined by a single velocity function.</p> <p><b>Separate:</b> Positions the element using separate functions for the X, Y and Z axes. This allows to control the direction and pace of the movement across all three axes separately. Unless ease is applied to the axes, the trajectory of the element will follow straight lines going between each keyframe.</p>
	<p><b>Path:</b> If the 3D Path option is selected, this field allows you to create or select the 3D Path function used to position the element.</p> <p><b>Path (x) Axis:</b> The position of the element on the East-West axis, in fields.</p> <p><b>Path (y) Axis:</b> The position of the element on the South-North axis, in fields.</p> <p><b>Path (z) Axis:</b> The position of the element in the Back-Front axis, in fields.</p> <p><b>Velocity:</b> If the 3D Path option is selected, this function is used to control the pace at which the element moves towards each control point in the 3D Path function, on all three axes simultaneously.</p>
Scale	<p><b>Locked:</b> Uses a single scale parameter to scale the element, preserving its proportions.</p> <p><b>Separate:</b> Uses a separate parameter to scale the element on the X and Y axis, allowing to stretch or squash the element.</p>
	<p><b>(x) Axis:</b> The horizontal scale factor. The default value is 1.</p> <p><b>(y) Axis:</b> The vertical scale factor. The default value is 1.</p> <p><b>Scale in Fields:</b> With this option enabled, the scale factor is based on the amount of fields in the scene. For example, to shrink one of the dimensions of an element to half its original size, the scale factor would normally be set to 0.5. If this option is enabled and the amount of fields in the scene is 12, then the scale factor to shrink the element by half would be 6.</p> <p><b>Ignore Parent Scaling:</b> When this option is enabled, scaling factors applied to a parent layer will not be applied to the current layer. This can be handy in cut-out rigs when you need to scale an arm without affecting the forearm.</p>
Rotation	<p><b>Angle z:</b> The angle at which the element is rotated, based on the 360 degrees scale. Values below 0 or above 360 degrees will cause the rotation to cycle.</p>
Skew	<p><b>Skew:</b> The angle at which the element is skewed. This value can range from -90 to 90 degrees.</p>
Pivot	<p><b>(x) Axis:</b> The horizontal position of the pivot point of the element relative to the</p>

	<p>pivot point of the drawing, in fields.</p> <p><b>(y) Axis:</b> The vertical position of the pivot point of the element relative to the pivot point of the drawing, in fields.</p> <div style="border: 1px solid #90EE90; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b></p> <p>These parameters can be changed visually by clicking and dragging the pivot point when using on of the tools in the Advanced Animation toolbar.</p> </div>
<p>Drawing Pivot</p>	<p>An element layer has two pivots:</p> <ul style="list-style-type: none"> <li>• The pivot of the element, which is set by the Pivot parameters above.</li> <li>• The pivot of the currently exposed drawing, which is set using the Drawing Pivot  tool.</li> </ul> <p>This preference is used to determine what to do with the pivot point of the currently exposed drawing:</p> <ul style="list-style-type: none"> <li>• <b>Don't Use Embedded Pivot:</b> Ignores the pivot point of the exposed drawing. The pivot point of the element is positioned using the Pivot parameters above, relative to the centre of the drawing.</li> <li>• <b>Apply Embedded Pivot on Parent Peg:</b> Use the pivot point of the exposed drawing to determine the position of the pivot point of the parent peg of the drawing layer. This is useful when making a character rig where each element has a parent peg, and those parent pegs are intended to be used for animation. The pivot point of these parent pegs will be based on the pivot point set for the exposed drawing.</li> <li>• <b>Apply Embedded Pivot on Drawing Layer:</b> Use the pivot point of the drawing to determine the pivot point of the element. This means the pivot point is positioned using the Pivot parameters above, but relative to the pivot point of the drawing.</li> </ul>

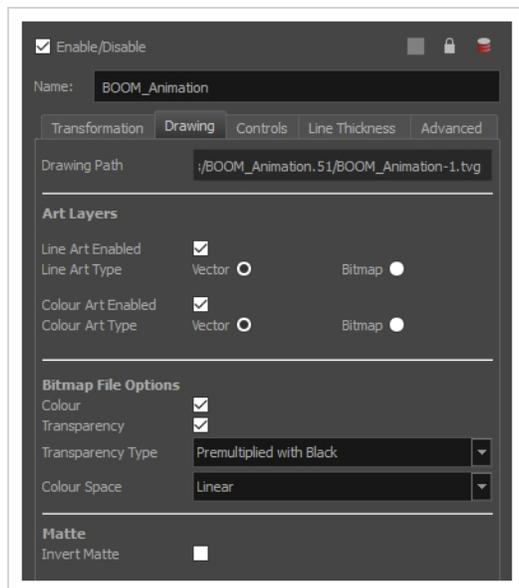
**TIP**

The two latter options are useful when making a character rig where a layer can represent a body part from different angles. Since each angle is represented by a drawing, and each angle is liable to have a different pivot point, you can set the pivot point of each angle by using the Drawing Pivot  tool on each drawing. Then, if you want to animate the drawing layers directly, you can set this parameter to the **Apply Embedded Pivot on Drawing Layer** option, and if you want to animate using the parent pegs of the drawing layers, you can set this parameter to the **Apply Embedded Pivot on Parent Peg** option, so that these pivots are used when animating the different parts of the rigs.



## Drawing Tab

The Drawing tab contains parameters for the art layers, bitmap images and the element's matte drawing.

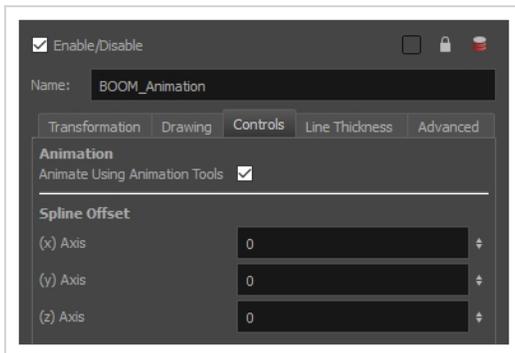


Parameter	Description
Element Columns	<p><b>Drawing Path:</b> Displays the full path to the current drawing.</p>
Art Layers	<p>These parameters allow you to set whether each art layer in the drawing layer is enabled, and whether they should contain vector or bitmap artwork. By default, options for the Line Art and Colour Art layers will be available. If the Enable Overlay and Underlay Arts preference is enabled, options for the Overlay Art and Underlay Art layers will also be available.</p> <p><b>Enabled:</b> Determines whether the art layer is displayed.</p> <p><b>Vector:</b> Makes the art layer enabled for vector artwork, Vector drawing tools will be used to draw in this art layer, and vector artwork information will be preserved.</p> <p><b>Bitmap:</b> Makes the art layer enabled for bitmap artwork. Only bitmap-compatible drawing tools will be enabled when drawing on this layer, and all artwork will be rasterized into a bitmap image.</p>
Bitmap File Options	<p><b>Colour:</b> Determines whether or not the colours in the image is processed. If unchecked, the image will be solid black.</p> <p><b>Transparency:</b> Determines whether or not the transparency in the image is processed. If unchecked, the image will be fully opaque.</p>
	<p><b>Transparency Type:</b> If the layer contains bitmap images with a transparency channel, there are several approaches to rendering the image's transparency. You may need to select the proper transparency type to make sure Harmony renders the image as intended.</p> <ul style="list-style-type: none"> <li>• <b>Premultiplied with Black:</b> Semi-transparent pixels in the original image are blended with black.</li> <li>• <b>Premultiplied with White:</b> Semi-transparent pixels in the original image are blended with white.</li> <li>• <b>Straight:</b> Semi-transparent pixels in the original image are left as is (unmatted).</li> <li>• <b>Clamp Colour to Alpha:</b> Semi-transparent pixels in the original image are blended with black. On import, each of the RGB channels is clamped so that a color value never exceed the alpha value for a given pixel. When the RGB values are multiplied with the alpha value, that is to say, if you have a pixel of value R=247, G=188, B=29 and the alpha is 50% or the image has a 50% transparency, then the actual RGB values output would be half of the amounts listed above.</li> </ul>
	<p><b>Colour Space:</b> If the element is displaying original bitmap files that are not tagged with their colour space information, this allows you to set the colour space in</p>

	<p>which Harmony should render the image.</p> <ul style="list-style-type: none"> <li>• <b>Linear:</b> The default value. The linear colour space is one where the intensity of each primary is directly proportional to their value. Typically, visuals are rendered in a linear colour space until the final compositing stage.</li> <li>• <b>sRGB:</b> The most common colour space used with computer and digital device displays. With this colour space, the relation between the value of each primary and their intensity is defined by a gamma function.</li> <li>• <b>Rec.709:</b> A colour space commonly used for HD television. It is very similar to sRGB with a slightly lower gamma curve.</li> </ul>
Matte	<p><b>Invert Matte:</b> If a drawing, group or effect is added to the drawing's Matte attribute, the part of the drawing that intersect with the matte's opaque areas will be cut out by default. If this parameter is enabled, the part of the drawing that intersect with the matte's transparent areas will be cut out instead.</p>

## Controls Tab

The Controls tab contains animation control options.

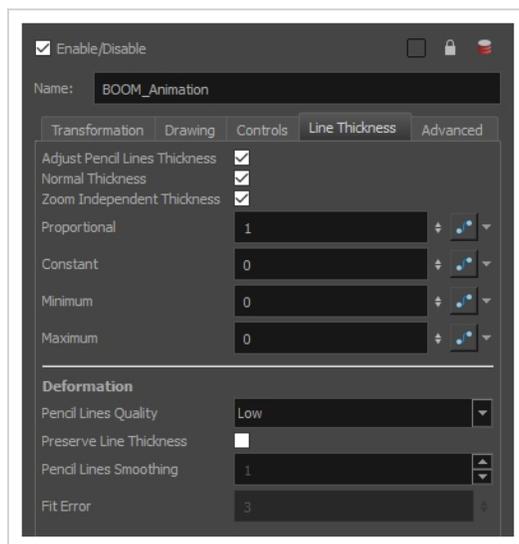


Parameter	Description
Animation	<p><b>Animate Using Animation Tools:</b> By default, a drawing layer can be animated directly, as if it was its own peg. If you disable this option, it will only be possible to animate the layer using its parent peg. If the layer has no parent peg, it will be immutable.</p> <p>This can be useful if you want to create cut-out character rigs that should only be animated using pegs, which can help separate the drawing exposure from the transformations on the drawings. If every drawing layer in a character rig has this option disabled, only layers that have a parent peg will be animatable, and the animator will only be able to animate on the pegs. This also rules out the possibility of accidentally animating an element directly and using its parent peg</p>

	<p>concurrently.</p> <p>When this option is disabled, clicking on the drawing layer in the Camera view with the Transform tool will automatically select the layer's parent peg.</p>
Spline Offset	<p>If the layer's controls are displayed, you can see its animation trajectory in the Camera view. This is referred to as the <i>spline</i>. By default, the position of each point in the spline is based on the element's pivot point. However, you can use the spline offset to give it a more fitting position if desired. You can do this by using the Spline Offset tool of the Advanced Animation toolbar, or by manually entering the offset values in the Spline Offset fields.</p> <p><b>(x) Axis:</b> The horizontal offset of the spline, in fields.</p> <p><b>(y) Axis:</b> The vertical offset of the spline, in fields.</p> <p><b>(z) Axis:</b> The depth offset of the spline, in fields.</p> <div data-bbox="565 772 1430 1079" style="border: 1px solid #0070C0; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>To display the animation trajectory of the layer in the Camera view, select the layer, then do one of the following:</p> <ul style="list-style-type: none"> <li>• In the Camera toolbar, click on Show Control .</li> <li>• From the top menu, select <b>View &gt; Show &gt; Control</b>.</li> <li>• Press Shift + F11 (Windows/Linux) or ⌘ + F11 (macOS).</li> </ul> </div>

## Line Thickness

The Line Thickness tab contains options regarding the way pencil lines in the element are rendered. These options can be very useful to enhance the quality of line art without having to work on it.

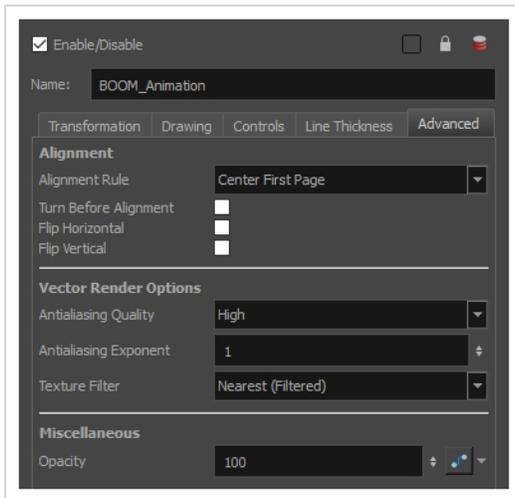


Parameter	Description
Line Thickness	<p><b>Adjust Pencil Lines Thickness:</b> Enables the options below to adjust the line thickness in the rendered image.</p> <p><b>Normal Thickness:</b> This setting makes the line thickness adjustments take one of two very different behaviors:</p> <ul style="list-style-type: none"> <li>• <b>Enabled:</b> The line thickness settings are applied to pencil lines in all art layers in the element. This setting should be used if you want to adjust the line thickness of pencil lines.</li> <li>• <b>Disabled:</b> The line thickness settings are applied to all art, whether brush strokes or pencil lines, in the line art layer, so that it fits the desired thickness pattern around art in the colour art layer. This setting should be used for drawings that have their line art on the line art layer and their colour art on the colour art layer, which is typical of traditional and paperless animation productions.</li> </ul> <div data-bbox="643 827 1430 1024" style="border: 1px solid #c8e6c9; padding: 10px; margin: 10px 0;">  <b>NOTE</b>  When this option is disabled, all artwork in the line art layer that does not surround artwork in the colour art layer will be cropped out. </div> <p><b>Zoom Independent Thickness:</b> Makes the thickness of pencil lines remain unchanged when the camera zooms in or zooms out.</p> <p><b>Proportional:</b> The factor by which to adjust line thickness. The original line thickness in the drawing will be multiplied by this value. A value between 0 and 1 can be used to make pencil lines thinner.</p> <p><b>Constant:</b> The offset by which to adjust line thickness. This value will be added to the original line thickness in the drawing. A negative number can be entered to make pencil lines thinner.</p> <p><b>Minimum:</b> The minimum pencil line thickness allowed. Line thickness will not go below this value.</p> <p><b>Maximum:</b> The maximum pencil line thickness allowed. Line thickness will not go above this value. Set it to 0 to disable maximum line thickness.</p>
Deformation	<p><b>Pencil Lines Quality:</b> The quality of the rendered pencil lines when deformed by deformation chains. Increasing this parameter is unlikely to yield noticeable result unless rendering in very high resolutions.</p> <p><b>Preserve Line Thickness:</b> If this option is checked, the thickness of pencil lines will not be affected by deformations. Only their directions will be affected. Also, if a pencil line is textured, it will not be stretched or squashed by deformations.</p>

	<div style="border: 1px solid #c8e6c9; padding: 10px; margin-bottom: 10px;">  <p><b>NOTE</b> This setting must be enabled for the Pencil Lines Smoothing and Fit Error parameters to be available.</p> </div> <p><b>Pencil Lines Smoothing:</b> The smoothing factor applied to pencil lines when rendering. This value can range from 0 to 10. The higher it is, the more corners and points will appear smoothed out.</p> <p><b>Fit Error:</b> When this parameter is increased, pencil lines in the rendered image will have less vector points and the curves between the remaining vector points will be adjusted to fit the original shape. This setting can be increased if the amount of details and points in the pencil lines creates problems around deformation articulations and corners. Its value can range from 1 to 100.</p> <div style="border: 1px solid #c8e6c9; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b> The Fit Error parameter will have no effect if the Pencil Lines Smoothing parameter is set to 0.</p> </div>
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## Advanced Tab

The Advanced tab contains options for setting the alignment of drawings, line thickness, vector render options, and more.



Parameter	Description
Alignment	<b>Alignment Rule:</b> The alignment rule selections are intended to deal with drawings that were created on paper of a different size or orientation from the default alignment rule (set up in the Scene Settings dialog box) or imported bitmap

images. The drawings are then scaled to match the Harmony alignment rectangle. Note that alignment rules are not based on the camera frame, but on the scene frame. Refer to the Fundamentals Guide to learn more about scene alignment and scene settings.

- **Left:** The default alignment for drawings; aligns the drawings to the left side of the scene's alignment rectangle. Harmony scales the drawings to match their height to the alignment rectangle of the scene.
- **Right:** Aligns the drawings to the right side of the alignment rectangle. Harmony scales the drawings to match their height to the height of the alignment rectangle of the scene.
- **Top:** Aligns the drawings to the top of the alignment rectangle. Harmony scales the drawings to match their widths to the width of the alignment rectangle of the scene.
- **Bottom:** Aligns the drawings to the bottom of the alignment rectangle. Harmony scales the drawings to match their widths to the width of the alignment rectangle of the scene.
- **Centre Fit:** Centers the drawings.
- **Centre Fill:** Centers the drawings and then scales them so the width or height fills the available space.
- **Centre LR:** Aligns the drawings in the left-right centre of the alignment rectangle. Harmony scales the drawings to match their height to the height of the alignment rectangle of the scene.
- **Centre TB:** Aligns the drawings in the top-bottom centre of the alignment rectangle. Harmony scales the drawings to match their widths to the width of the alignment rectangle of the scene.
- **Stretch:** Scales the drawings so they fit within the alignment rectangle of the scene. This is particularly useful for images that you will manipulate with a Quadmap node. If the drawings in the Quadmap node do not have the same aspect ratio as the alignment rectangle of the scene (from the Scene Settings dialog box), the handles on the quadmap will not appear on the corners of the image, making it difficult to manipulate the quadmap. In this case, you would set the drawing layer of the quadmap images to Stretch to make the handles appear on the corner of the image. This can have the effect of distorting the images, but it is not an issue with images that will be distorted through the Quadmap node anyways.
- **As Is:** Leaves the drawings aligned as they are.
- **Centre First Page:** Aligns the centre of the first part of a standard pan cel with the centre of the field chart.

**Turn Before Alignment:** Rotates the drawings in the selected element 90 degrees to the left before scaling and aligning them according to the alignment rule, and before performing any offset, rotation or scaling for the element or peg. This and

	<p>the Alignment Rule are intended for drawings that were created on paper of a different size or orientation than the other paper in the scene, and requires alignment so they are treated accurately.</p>
	<p><b>Flip Horizontal:</b> Flips the drawing on the horizontal axis.</p>
	<p><b>Flip Vertical:</b> Flips the drawing on the vertical axis.</p>
<p>Vector Render Options</p>	<p><b>Antialiasing Quality:</b> The smoothness (antialiasing) setting used to make the crisp vector contours appear smooth.</p> <ul style="list-style-type: none"> <li>• <b>None - No Transparency:</b> Disables antialiasing, renders semi-transparent pixels either fully opaque or fully transparent, and fills single-pixel gaps with an opaque pixel to avoid generating out-of-place gaps when lines intersect each other.</li> <li>• <b>Low:</b> Disables antialiasing, but renders transparency.</li> <li>• <b>Medium Low:</b> Renders vector artwork with basic antialiasing.</li> <li>• <b>Medium:</b> Renders vector shapes with improved antialiasing. Bitmap texture fills will appear blurred.</li> <li>• <b>High:</b> Renders vector shapes with improved antialiasing, without blurring bitmap texture fills.</li> </ul> <div data-bbox="565 1079 1429 1283" style="border: 1px solid #add8e6; padding: 10px; margin: 10px 0;"> <p> <b>TIP</b> It is recommended to leave this setting to <b>High</b> unless you are working on a pencil test, or another type of scene where rendering speed is more important than rendering quality.</p> </div> <div data-bbox="565 1312 1429 1583" style="border: 1px solid #add8e6; padding: 10px; margin: 10px 0;"> <p> <b>TIP</b> If the production requires exporting line art without antialiasing to colour them in a third-party software, it is recommended to use the <b>None - No Transparency</b> setting. This setting automatically fills one-pixel gaps created by crisp lines intersecting each other, which would otherwise need to be filled manually in the third-party software.</p> </div> <p><b>Antialiasing Exponent:</b> Determines how much the artwork is scaled up to apply antialiasing onto it. A higher value will result in sharper edges, and a lower value will result in softer edges. Typical values range between 0 and 3. Higher values may be attempted but may result in overly crisp outlines. Negative values will cause the outlines to appear blurry.</p> <p><b>Texture Filter:</b> This setting determines how textures in the element are resampled when rendering:</p>

	<ul style="list-style-type: none"><li>• <b>Bilinear:</b> This option takes the four pixels around each point and makes a bilinear interpolation between them, which may make them look blurry.</li><li>• <b>Nearest:</b> When sampling the texture up, this option generates extra pixels by using the colour of the nearest defined pixel. When sampling the texture down, this option simply removes pixels from the texture.</li><li>• <b>Nearest (Filtered):</b> This option is similar to <b>Nearest</b>, but it adds an extra layer of resampling to make all pixels look like they are the same size.</li></ul>
Miscellaneous	<p><b>Opacity:</b> Lets you quickly change the transparency of the selected element. Opacity settings here will be reflected in both <b>OpenGL</b> preview, and full render.</p>

## Move Layers

Move layers are used to animate layers as well as camera motions.

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## Camera Layer

You can setup the camera position by entering coordinates and values in the Layer Properties view.



Parameter	Description
Enable/Disable	Turns the camera layer on or off.
Change Track Colour	The Change Track Colour button lets you change the colour of the exposed frames; this helps you to quickly locate a layer in the Timeline view. Click the Change Track Colour button to open the Select Colour window and choose a new colour. You can modify the colour for any type of layer, such as group, peg, drawing, and effects.
Name	Displays the current layer name. You can rename the layer by typing in a new layer name.
Position	Displays the current position of the camera layer using X-axis (East/West), Y-axis (North/South) and Z-axis (Forward/Backward) coordinates. To reposition your camera frame, type in the new values corresponding to the desired position coordinates. You can also use the up and down arrows to set the value of each field.
Angle	Displays the current rotation value. To set a new rotation position, type in a new angle value. You can also use the up and down arrows to set the new angle value.
Pivot	Displays the current position of the rotation pivot of the camera layer. The camera will perform a rotation taking the position of the pivot as its angle centre. By default, the pivot is set at the centre of the camera frame. To reposition the pivot point, enter new X and Y coordinates values in the appropriate field. To see the pivot's position, the Rotate tool must be selected.

## Peg Layer

Find below a description of all the Peg node parameters.

### Transformation Tab

Parameter	Description
Position	<p><b>3D Path:</b> Use a 3D path to position the element. A 3D path uses a single function to define the position on the X, Y and Z axes. This function is made of control points linked by a curvilinear path, making the movement follow a natural curve. The pace and ease of the movement is determined by a single velocity function.</p> <p><b>Separate:</b> Positions the element using separate functions for the X, Y and Z axes. This allows to control the direction and pace of the movement across all three axes separately. Unless ease is applied to the axes, the trajectory of the element will follow straight lines going between each keyframe.</p> <p><b>Path:</b> If the 3D Path option is selected, this field allows you to create or select the 3D Path function used to position the element.</p> <p><b>Path (x) Axis:</b> The position of the element on the East-West axis, in fields.</p> <p><b>Path (y) Axis:</b> The position of the element on the South-North axis, in fields.</p> <p><b>Path (z) Axis:</b> The position of the element in the Back-Front axis, in fields.</p> <p><b>Velocity:</b> If the 3D Path option is selected, this function is used to control the pace at which the element moves towards each control point in the 3D Path function, on all three axes simultaneously.</p>
Scale	<p><b>Locked:</b> Uses a single scale parameter to scale the element, preserving its proportions.</p> <p><b>Separate:</b> Uses a separate parameter to scale the element on the X and Y axis, allowing to stretch or squash the element.</p> <p><b>(x) Axis:</b> The horizontal scale factor. The default value is 1.</p> <p><b>(y) Axis:</b> The vertical scale factor. The default value is 1.</p> <p><b>Scale in Fields:</b> With this option enabled, the scale factor is based on the amount of fields in the scene. For example, to shrink one of the dimensions of an element to half its original size, the scale factor would normally be set to 0.5. If this option is enabled and the amount of fields in the scene is 12, then the scale factor to shrink the element by half would be 6.</p> <p><b>Ignore Parent Scaling:</b> When this option is enabled, any scaling value applied to a parent layer is ignored in the current layer. This can be handy in cut-out rigs when you need to scale an arm without affecting the forearm.</p>

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Rotation	<b>Angle z:</b> Lets you type in a degree value for the rotation angle. Note that you can enter values greater than 360 and -360 degrees. If you enter 720, the object will rotate twice.
Skew	<b>Skew:</b> Lets you type in a degree value between -90 to 90 for the skew angle.
Pivot	<b>(x) Axis:</b> The horizontal position of the pivot point of the element relative to the pivot point of the drawing, in fields. <b>(y) Axis:</b> The vertical position of the pivot point of the element relative to the pivot point of the drawing, in fields.

## Quadmap Layer

T-COMP2-010-001

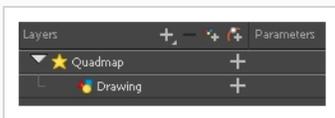
The Quadmap transformation layer lets you deform the shape of an element. For example, you can use it to create a drop-shadow effect on an element.



You can edit the Quadmap visually in the Camera view.

### How to edit the Quadmap in the Camera view

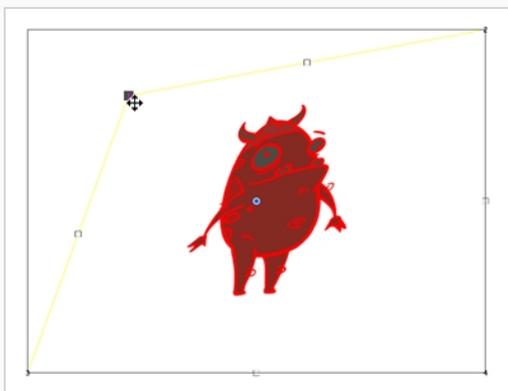
1. In the Timeline view, click the Add Layer **+** button and select **Quadmap**.
2. Connect the drawing you want to deform to the Quadmap.



3. In the Tools toolbar, disable the Animate mode to change the value for the Quadmap over the entire duration of the element.
4. In the Timeline view, click on the Quadmap layer to select it.
5. From the top menu, select **View > Show > Control** or press Shift + F11.

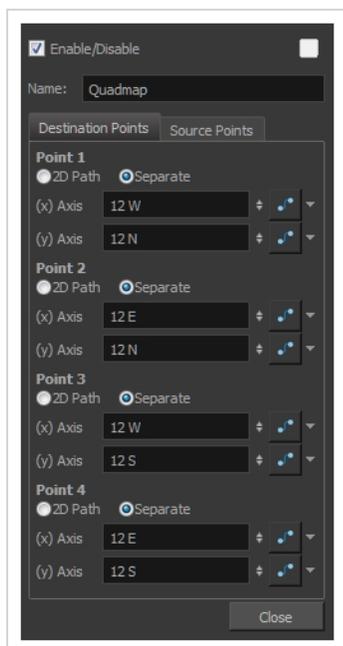
The quadmap handles appear around the element in the window. There is also a pivot point at the centre of the quadmap frame that you can reposition.

6. In the Camera view window, use the Transform tool to move the points on the quadmap. Shift + click to select multiple points.

**TIP**

The position of the points can be animated. To do this, open the Quadmap layer properties and create functions for each of the coordinates.

## Properties

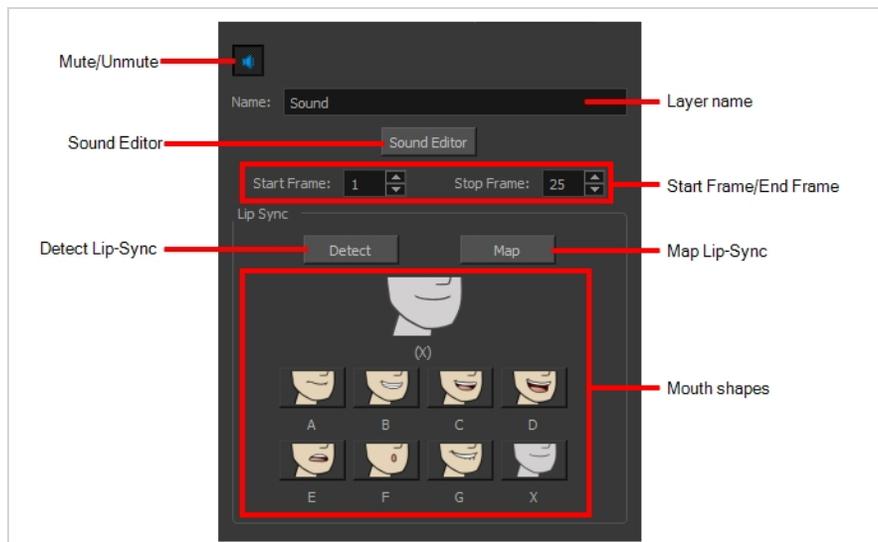


Parameter	Description
Name	Lets you rename the node.
2D Path	Changes the X and Y values simultaneously and control the velocity of the change.

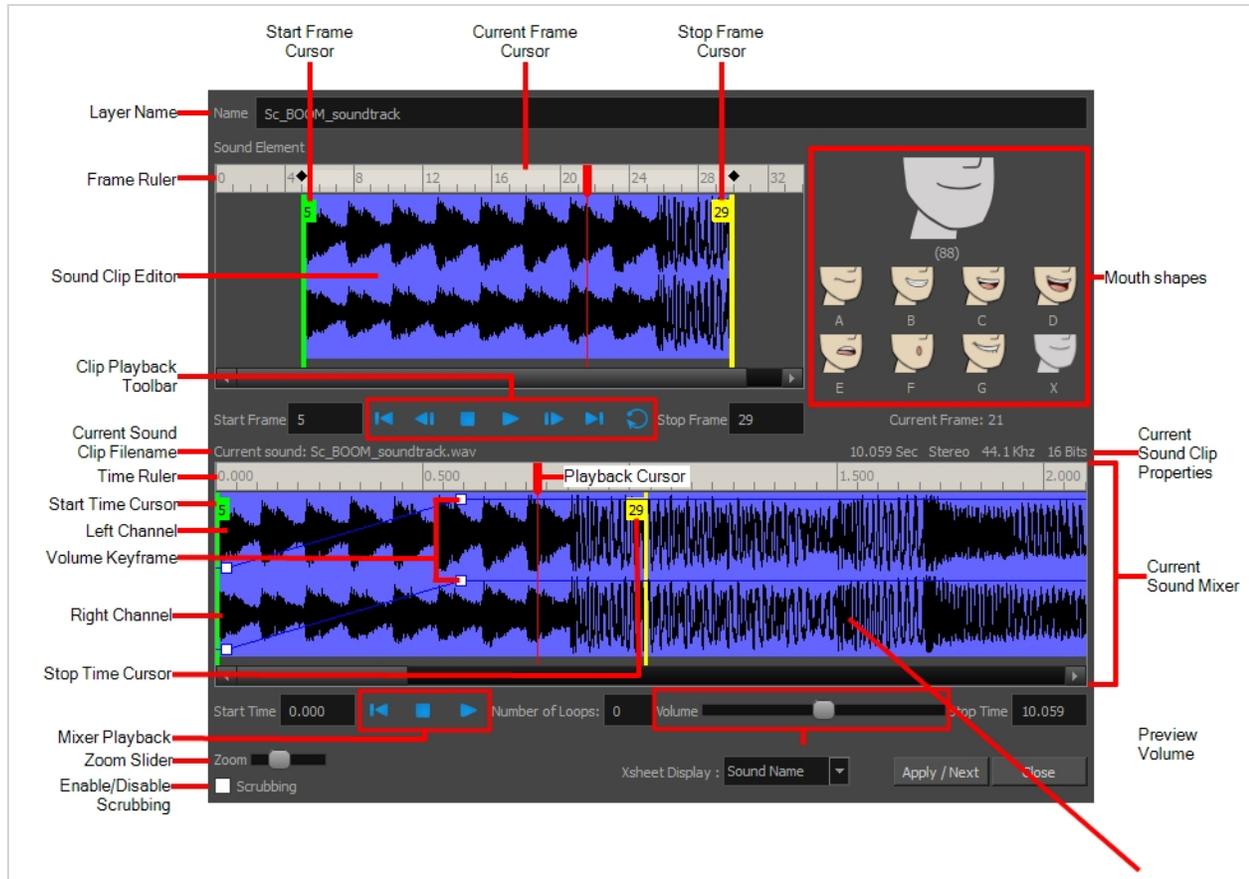
Separate	Changes the X and Y values separately. Each one can be attached to separate function curves.
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## Sound Layer

When you select a sound layer in the Timeline view, the options related to that layer appear in the Layer Properties view.



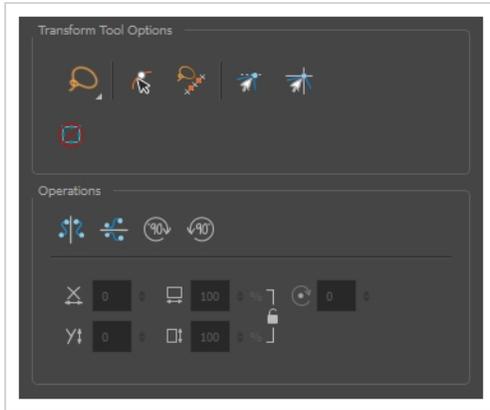
If you double-click on a sound layer in the Timeline view, or in a sound column in the Xsheet view, the Sound Element Editor dialog will open. This dialog allows you to fine-tune the sound track's lip sync, start time, stop time and volume.





# Chapter 4: 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.

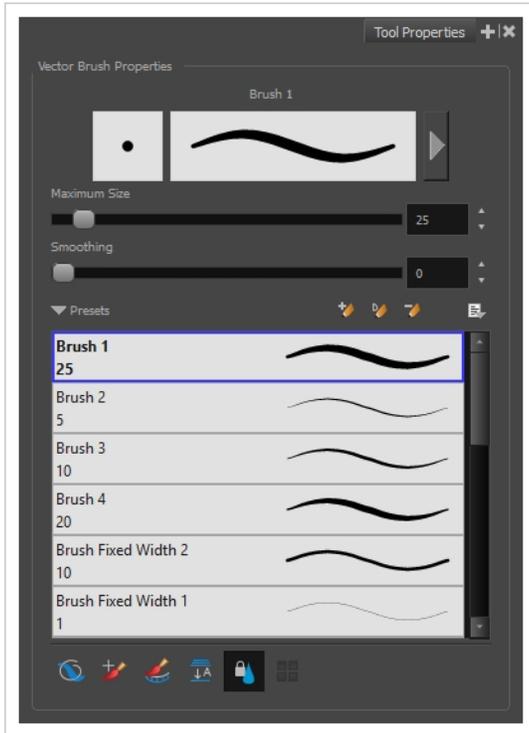


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## Brush Tool Properties

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



## Brush Properties

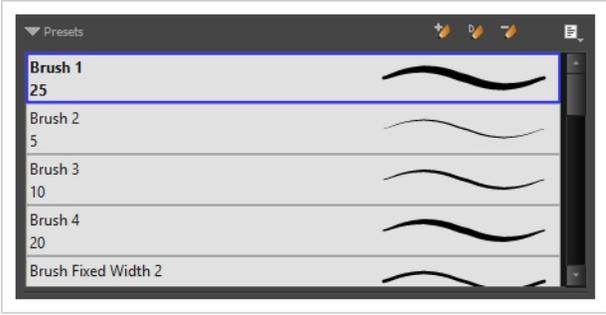
The following properties affect the brush's size, smoothing and other properties for the drawing style of your brush. Those properties can be saved into brush presets for later use.

Icon	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. 

		<p>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 Pencil Properties dialog, see the <a href="#">Brush Properties Dialog</a> section below.</p>
	Maximum Size	<p>Defines the maximum width of brush strokes.</p> <p>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.</p>
	Smoothing	<p>Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <b>NOTE</b>  This option is only available when drawing on a vector layer. </div>
	Flow	<p>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.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <b>NOTE</b>  This option is only displayed in the Tool Properties view when drawing on a bitmap layer. </div>
	Opacity	<p>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.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <b>NOTE</b>  This option is only displayed in the Tool Properties view when drawing on a bitmap layer. </div>

## Brush Presets

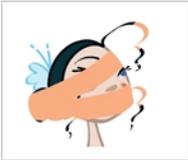
These options allow you to select, create and manage pencil presets.

Icon	Property	Description
	Presets list	<p>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.</p> 
	New Brush Preset	Creates a new preset based on the current brush properties.
	New Dynamic Brush	<p>Creates a dynamic brush preset based on the selected drawing. A dynamic brush is a drawing that you can paint or stamp.</p> <div data-bbox="646 1163 1430 1398" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b></p> <p>You can also create a dynamic brush preset that cycles through several drawings. To do this, create the drawings on several layers, then select them all using the Select tool in the Camera view, with the Single mode option disabled.</p> </div>
	Delete Brush	Deletes the currently selected preset.
	Rename Brush	Deletes 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 <b>.xml</b> 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. This is the default setting.

## Drawing Options

These options affect the way your drawing strokes are integrated into your artwork.

Icon	Property	Description
	Draw Behind	<p>When enabled, your brush strokes will appear behind the existing artwork. Note that they will appear over your artwork while drawing your stroke, until you release the brush.</p>  <p>Orange stroke appears behind existing black stroke</p>
	Repaint Brush	<p>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.</p> 
	Automatically Create Colour Art	<p>As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.</p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <b>NOTE</b> This option is only available when drawing on a vector layer.         </div>

	Auto-Flatten Mode	<p>By default, when drawing, 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.</p> <div data-bbox="646 359 1430 527" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This option is only available when drawing on a vector layer. When drawing on a bitmap layer, artwork is always flattened.</p> </div>
	Respect Protected Colour	<p>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.</p> <div data-bbox="646 751 1430 953" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> 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.</p> </div>
	Use Stored Colour Gradient	<p>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.</p> <div data-bbox="646 1220 1430 1360" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This option is only available when drawing on a vector layer.</p> </div>

## 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.

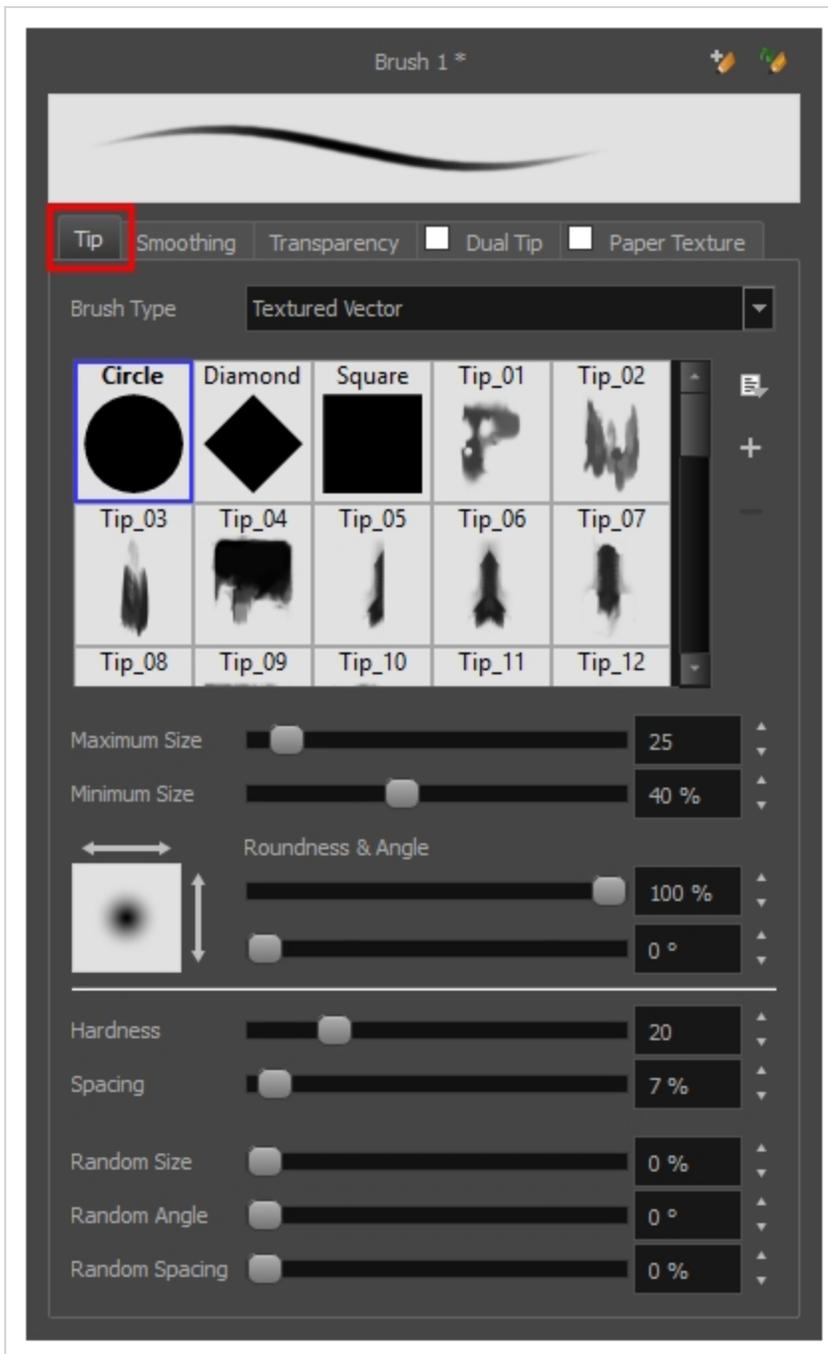


The Brush Properties dialog has five different tabs, minus the Smoothing tab if you are working on a bitmap layers. Below is detailed information about the options available in each tab:

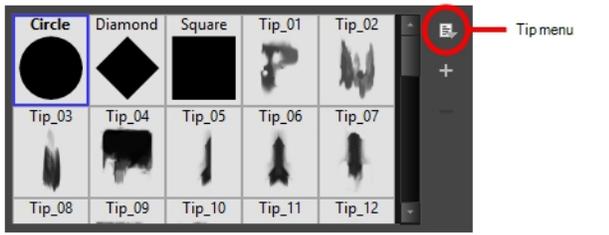
- [Tip Tab](#) on page 345
- [Smoothing Tab](#) on page 350
- [Transparency Tab](#) on page 351
- [Dual Tip Tab](#) on page 354
- [Paper Texture Tab](#) on page 357

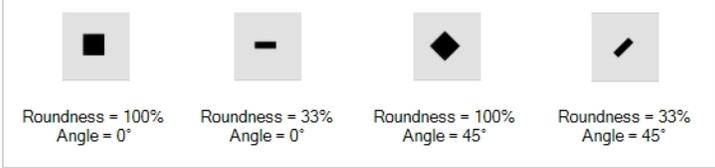
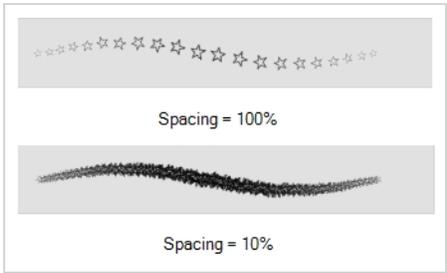
## Tip Tab

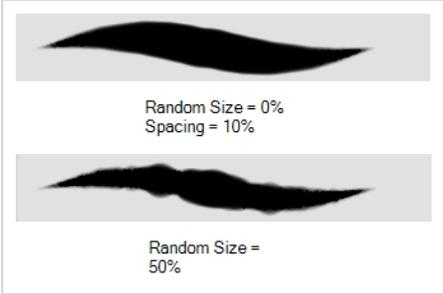
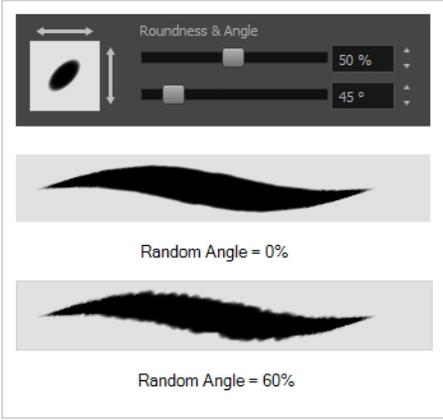
The Tip tab allows you to configure the shape, size, hardness and spacing of your brush tip.

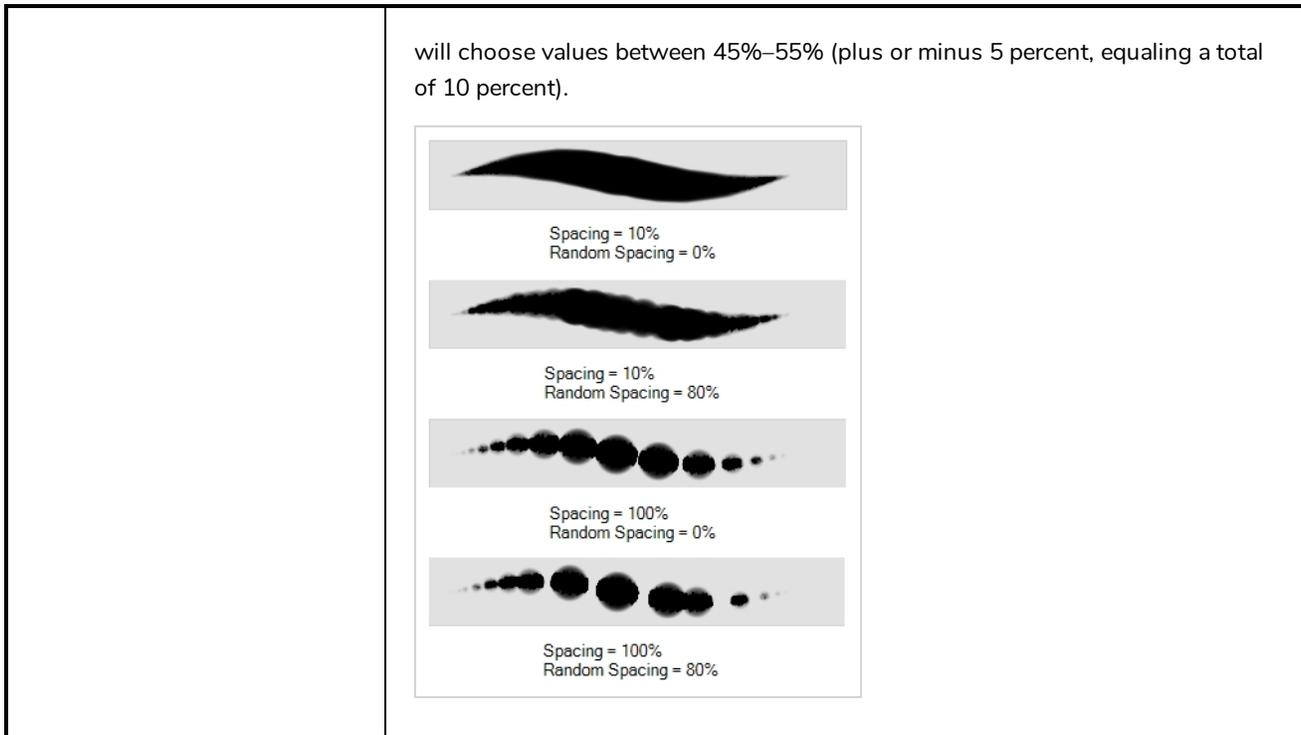


Property	Description
Brush Type	<p>Allows you to select between one of the following brush types:</p> <ul style="list-style-type: none"> <li> <b>Solid Vector Brush:</b> Creates vector shapes filled with a solid colour. Makes artwork lightweight, scalable and easy to tweak. Since this kind of brush can only create solid colour shapes, solid vector brushes have a limited set of options including size, roundness, angle, centerline smoothing and contour smoothing. </li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Textured Vector Brush:</b> Creates vector shapes filled with a texture. This gives you access to bitmap brush tips, paper textures, transparency and several other options.</li> </ul> <div data-bbox="570 321 1430 522" style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b> 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.</p> </div>
<p>Brush Tip Library</p>	<div data-bbox="570 579 1190 835" style="border: 1px solid gray; padding: 5px; margin-bottom: 10px;">  </div> <p>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%.</p> <p>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.</p> <p>You can also import brush tips that you exported from Harmony, so you can share them with colleagues.</p>
<p>Minimum and Maximum Size</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• <b>Maximum Size:</b> Defines the maximum width of the stroke.</li> <li>• <b>Minimum Size:</b> Defines the minimum width of the stroke in relation to and as a percentage of the maximum size.</li> </ul> <div data-bbox="570 1696 1430 1898" style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b> 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.</p> </div>

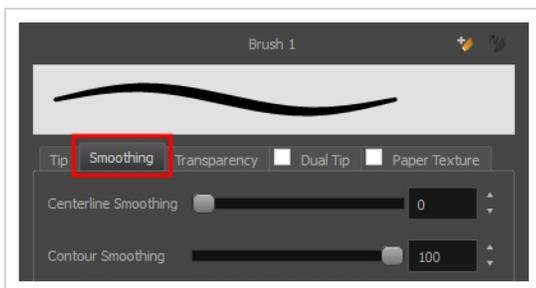
<p>Roundness and Angle</p>	<p>The Roundness and Angle parameters allow you to change the shape and orientation of the tip.</p> <ul style="list-style-type: none"> <li>• <b>Roundness:</b> Squashes the height of the tip from its centre point. 100% roundness = the native height of the tip. A smaller percentage will make the brush tip look flatter and more narrow. The squashing is NOT relative to the angle value—if the tip is rotated, the squashing function still uses the brush tip's original orientation.</li> <li>• <b>Angle:</b> Rotates the brush tip counter-clockwise. 0° = the tip's native orientation.</li> </ul> 
<p>Hardness</p>	<p>The Hardness and Spacing parameters allow you to change the softness and spacing of the marks made by the brush tip. You can preview the hardness and spacing at the top of the Brush Properties window, stroke preview area.</p> <p>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.</p> 
<p>Spacing</p>	<p>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.</p> <p>Spacing is only evident when making a continuous stroke.</p> 

<p>Randomness</p>	<p>The Randomness parameters let you create a varied brush stroke. Refining these options can give your stroke a lovely, non-mechanical look.</p>
<p>Random Size</p>	<p>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.</p> <div data-bbox="570 550 1013 844" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;">  </div> <div data-bbox="570 884 1430 1115" style="border: 1px solid #90EE90; padding: 10px; margin: 10px 0;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
<p>Random Angle</p>	<p>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).</p> <div data-bbox="570 1335 1013 1755" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;">  </div>
<p>Random Spacing</p>	<p>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</p>



## Smoothing Tab

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



### NOTE

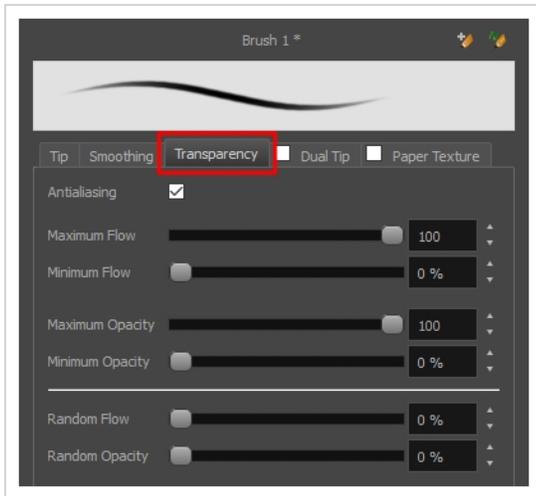
The Smoothing tab is only available when working on a vector layer, as bitmap layers do not support smoothing.

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.
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## Transparency Tab

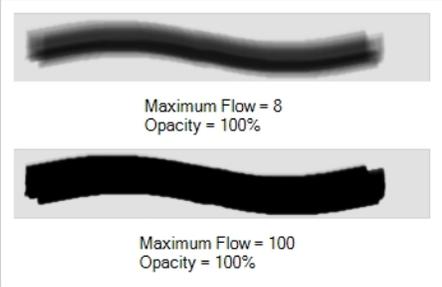
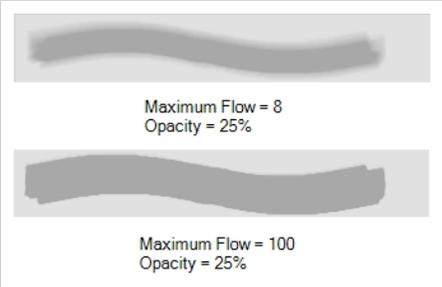
The Transparency tab allows you to decide if your brush has antialiasing as well as to set its flow and opacity settings.

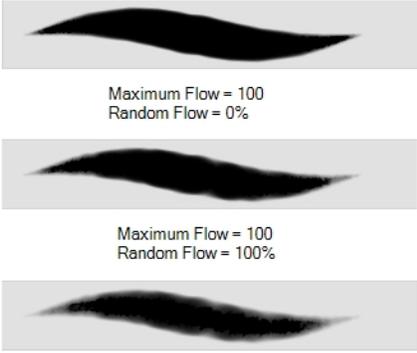


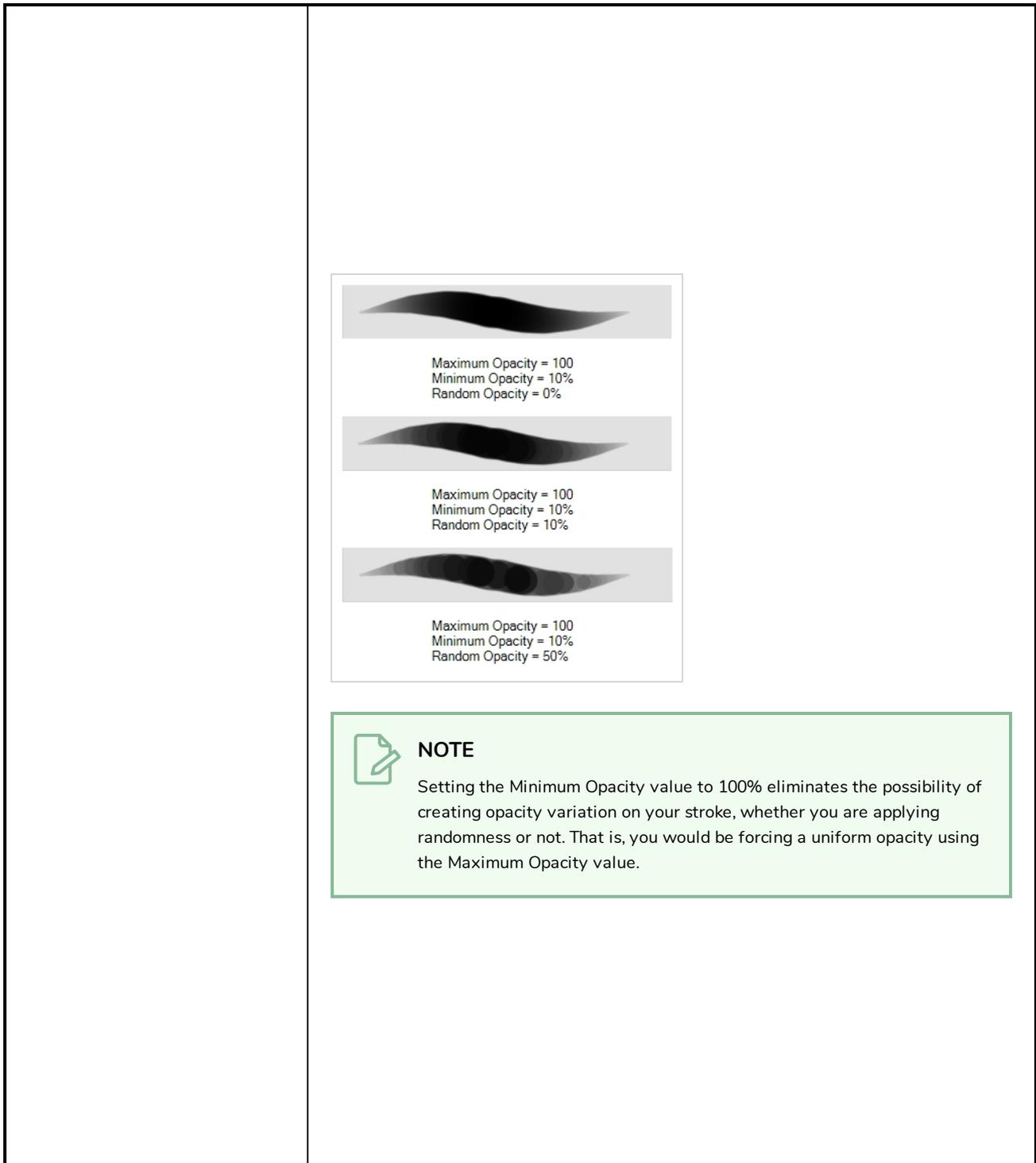
### NOTE

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	<p>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.</p> <p>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.</p> <div style="border: 1px solid #c8e6c9; padding: 10px; margin-top: 10px;"> <p><b>NOTE</b> When disabled, all other options in the Transparency tab are disabled.</p> </div>

<p>Maximum and Minimum Flow</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• <b>Maximum Flow:</b> Sets the maximum rate at which colour and texture are applied as you create a fluid stroke.</li> <li>• <b>Minimum Flow:</b> 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.</li> </ul> 
<p>Maximum Opacity and Minimum Opacity</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• <b>Maximum Opacity:</b> Sets the transparency limit of the brush mark when the pressure is heavy.</li> <li>• <b>Minimum Opacity:</b> 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.</li> </ul> 
<p>Randomness</p>	<p>The 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.</p>

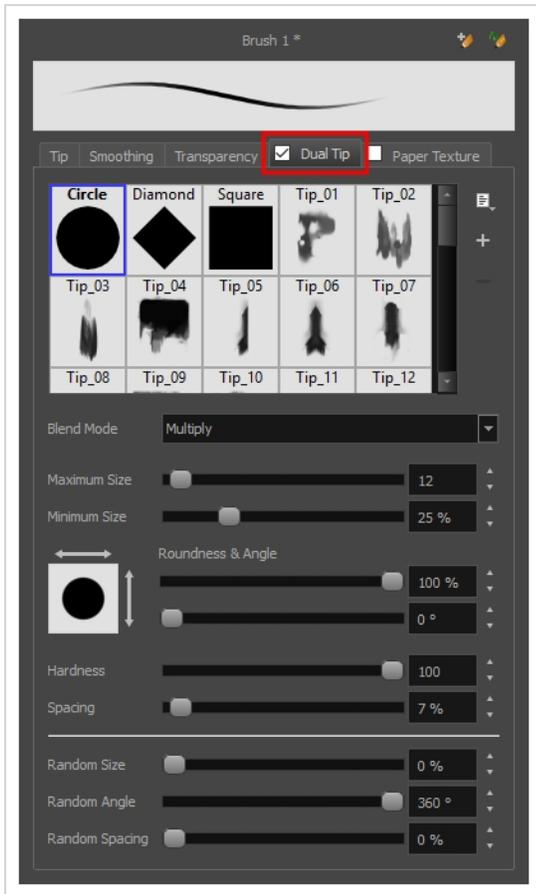
<p>Randomness Flow</p>	<p>You can create variation in the flow of your brush stroke just by setting the Maximum and Minimum Flow values. If you add randomness to the mix, pressure sensitivity from your drawing tablet will still be applied. Light pressure will create random values around the minimum, while heavy pressure will create random values closer to the maximum. The larger the percentage, the larger the range of random variation.</p> <div data-bbox="573 422 1016 863" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;">  <p style="text-align: center;">Maximum Flow = 100 Random Flow = 0%</p> <p style="text-align: center;">Maximum Flow = 100 Random Flow = 100%</p> <p style="text-align: center;">Maximum Flow = 50 Random Flow = 100%</p> </div> <div data-bbox="573 903 1430 1136" style="border: 1px solid #90EE90; padding: 10px; margin: 10px 0;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
<p>Random Opacity</p>	<p>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.</p>



## 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.

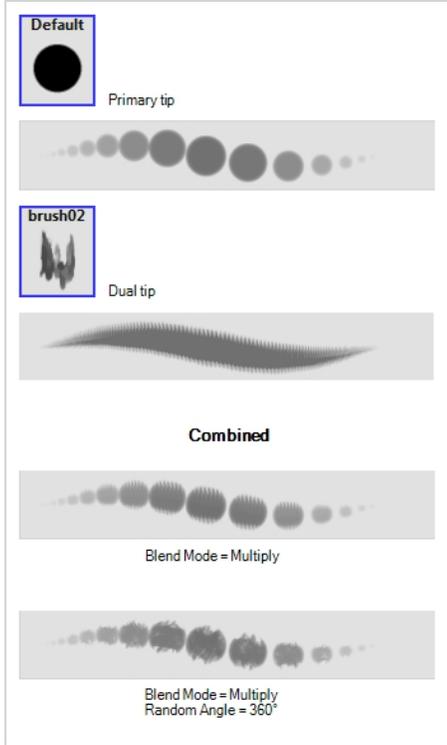
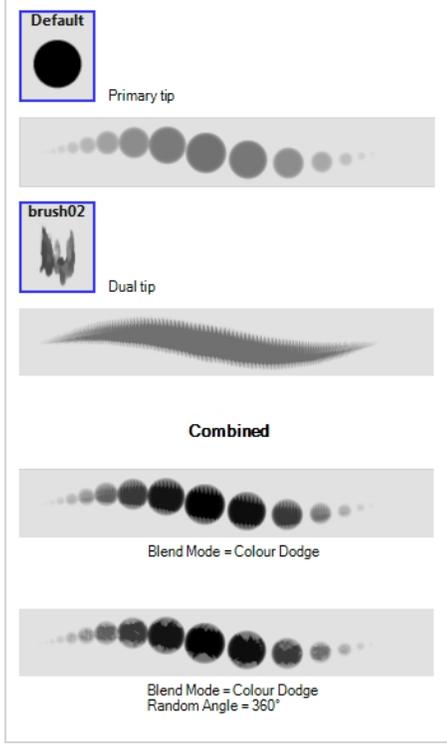
By default, the Blend Mode is set to Multiply and the Random Angle to 360°.

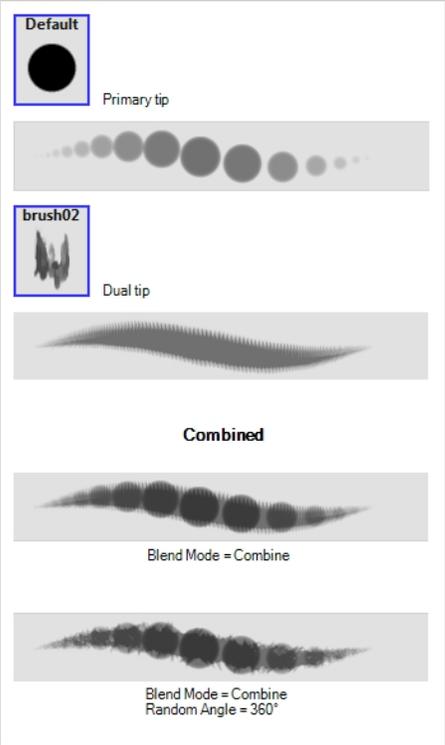


**NOTE**

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**.

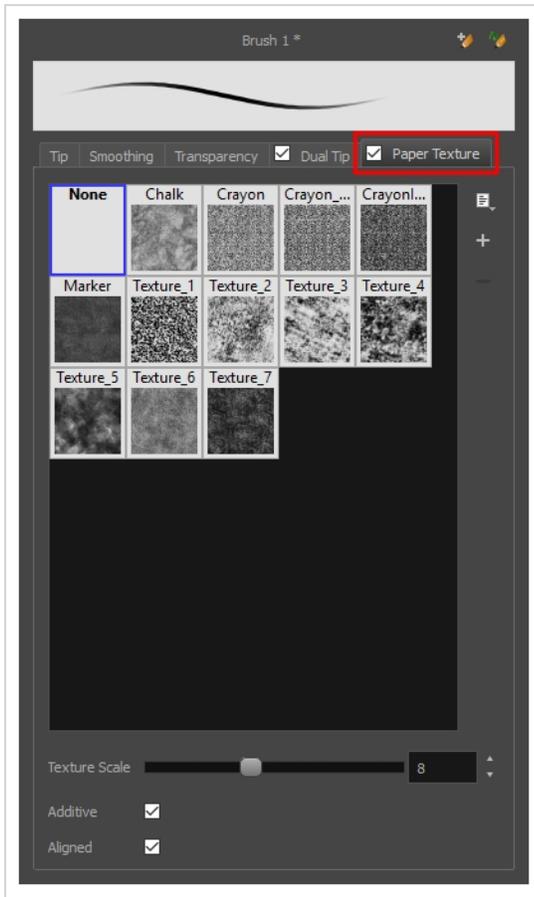
Property	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your brush uses a dual tip. If this checkbox is unchecked, the options in the Dual Tip tab will be disabled.
Blend Mode	The Blend modes let you decide how the primary tip and the dual tip are combined.
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.

	 <p><b>Default</b> Primary tip</p> <p><b>brush02</b> Dual tip</p> <p><b>Combined</b> Blend Mode = Multiply</p> <p>Blend Mode = Multiply Random Angle = 360°</p>
<p>Colour Dodge</p>	<p>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.</p>  <p><b>Default</b> Primary tip</p> <p><b>brush02</b> Dual tip</p> <p><b>Combined</b> Blend Mode = Colour Dodge</p> <p>Blend Mode = Colour Dodge Random Angle = 360°</p>

<p>Combine</p>	<p>This mode treats the two tips as two different and separate brushes that have the same colour and follow the same path.</p> 
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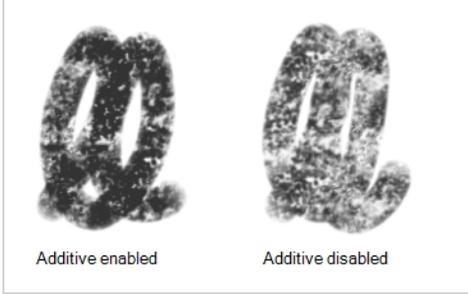
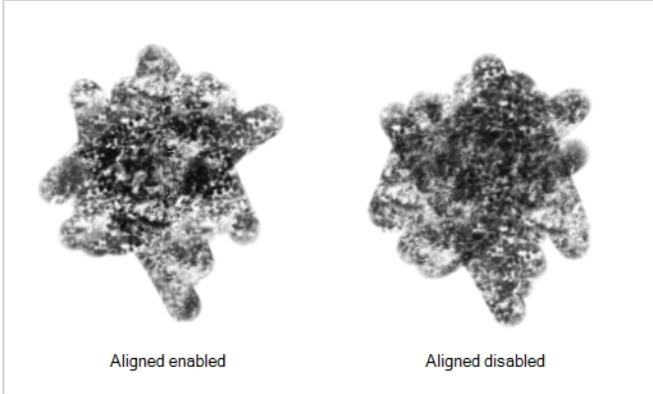
## Paper Texture Tab

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**

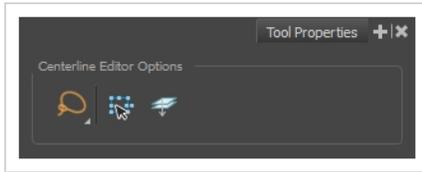
To use a Paper Texture, you must enable option by checking the checkbox inside the **Paper Texture** tab. Additionally, if you are working on a vector layer, the **Brush Type** option of the Tip tab must be set to **Textured Vector Brush**.

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.

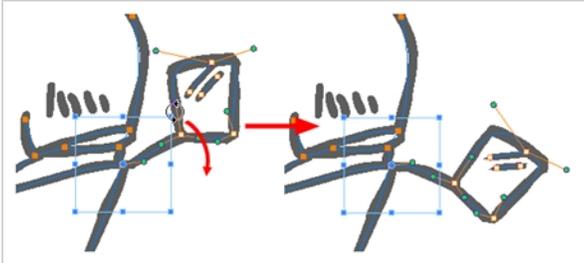
	 <p data-bbox="553 436 678 457">Additive enabled</p> <p data-bbox="781 436 906 457">Additive disabled</p>
<p data-bbox="191 814 277 842">Aligned</p>	<p data-bbox="521 558 1419 688">This option defines the way separate, overlapping strokes behave. If this option is enabled, the paper texture's position 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.</p>  <p data-bbox="630 1045 755 1066">Aligned enabled</p> <p data-bbox="943 1045 1068 1066">Aligned disabled</p>

## Centerline Editor Tool Properties

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



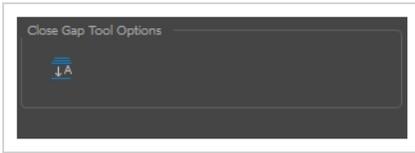
### Tool Options

Icon	Property	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Show Centerline Editor Controls	<p>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.</p> 
	Apply to Line and Colour Art	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p>

		<div data-bbox="727 191 1430 359" style="border: 1px solid #90EE90; padding: 10px;"> <b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</div>
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## Close Gap Tool Properties

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

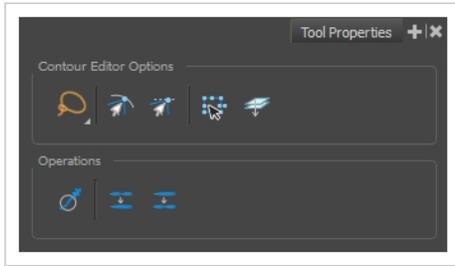


## Tool Options

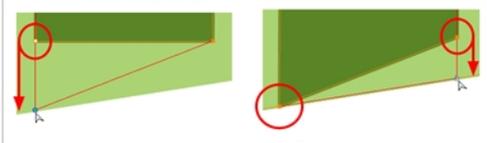
Icon	Property	Description
	Auto-Flatten Mode	By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.

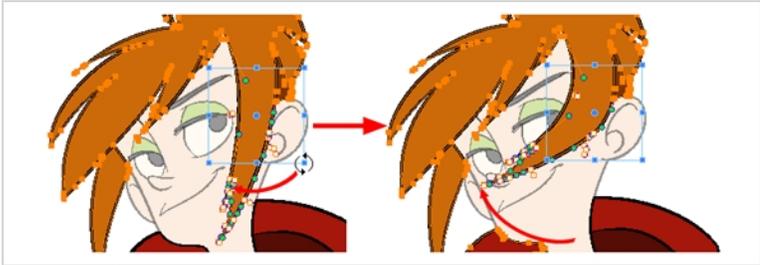
## Contour Editor Tool Properties

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

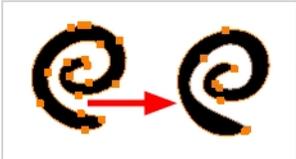


## Tool Options

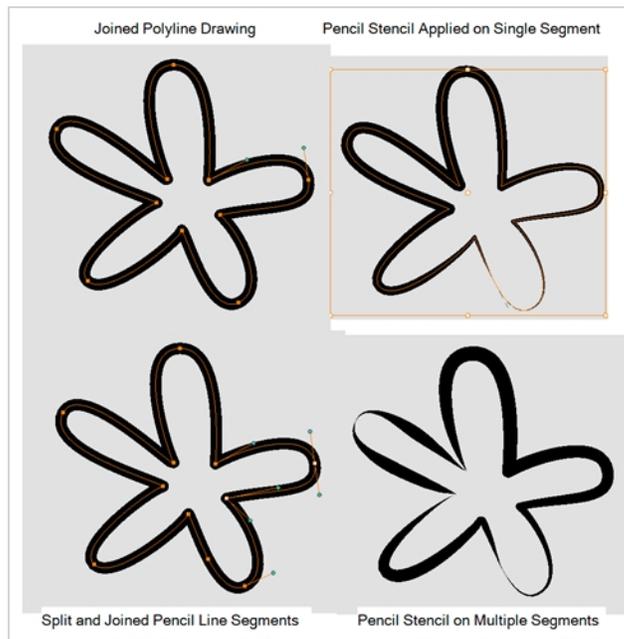
Icon	Property	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Snap to Contour	<p>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.</p> 
	Snap and Align	<p>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.</p>

		
	Show Contour Editor Controls	<p>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.</p> 
	Apply to Line and Colour Art	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <p><b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</p> </div>

## Operations

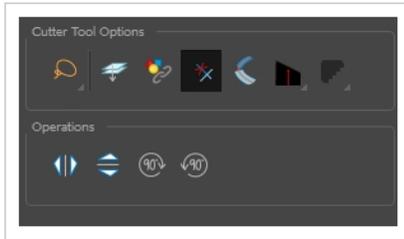
Icon	Property	Description
	Smooth Selection	<p>The Smooth operation lets you smooth out selected drawing strokes and remove extra points.</p> <ul style="list-style-type: none"> <li>From the top menu, select <b>Drawing &gt; Optimize &gt; Smooth</b> or press Alt + Shift + S.</li> </ul> 
	Split Pencil Line and Join Pencil Lines	<p>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</p>

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.



## Cutter Tool Properties

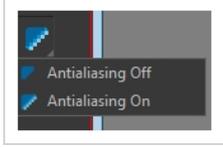
When you select the Cutter tool, its properties and options appear in the Tool Properties view.



## Tool Options

Icon	Property	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Apply to Line and Colour Art	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p> <div style="border: 1px solid #008000; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</p> </div>
	Apply to Synced Drawing Layers	<p>When working on a synced layer, the tool is applied to the current layer and all the layers that are synced to it. This option only works in the Camera view.</p>
	Use Mouse	<p>When using the Lasso selection type, the Use Mouse Gesture option lets you</p>

	<p>Gesture</p>	<p>automatically delete any extra sections of line in your artwork by simply dragging your mouse over it.</p> <div data-bbox="576 283 1430 426" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> For this operation to work, you lines <b>CANNOT</b> be flattened.</p> </div> <div data-bbox="576 451 1242 615"> </div>
	<p>Use Mouse Gesture Breaker Mode</p>	<p>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.</p> <div data-bbox="576 882 1437 1035"> </div> <div data-bbox="576 1066 1430 1205" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This option only works with pencil lines.</p> </div>
	<p>Tip Style</p>	<p>If you erase the end of a pencil line or erase a pencil line through the centre, new line tips or line ends are created. Use the Tip Style option to customize the shape of the new line tips that are created.</p> <div data-bbox="576 1388 764 1564"> </div>
	<p>Antialiasing</p>	<p>When drawing on a bitmap layer, lines are no longer clean vector shapes. For the edges to be smooth, a slight amount of antialiasing is used. When using the Cutter tool, you can cut a portion of your drawing with or without antialiasing. By default, the option is enabled. If you want to cut your drawing using a hard edge, you can select the Antialiasing Off option.</p>

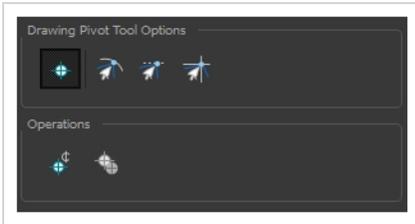
		
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## Operations

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.

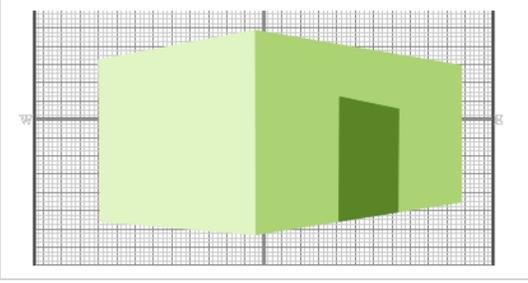
## Drawing Pivot Tool Properties

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	<p>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.</p> <p>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.</p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
	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	<p>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.</p>
	Copying Pivot on Parent Symbol	<p>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.</p> <div data-bbox="857 909 1429 1270" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>

## Dropper Tool Properties

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

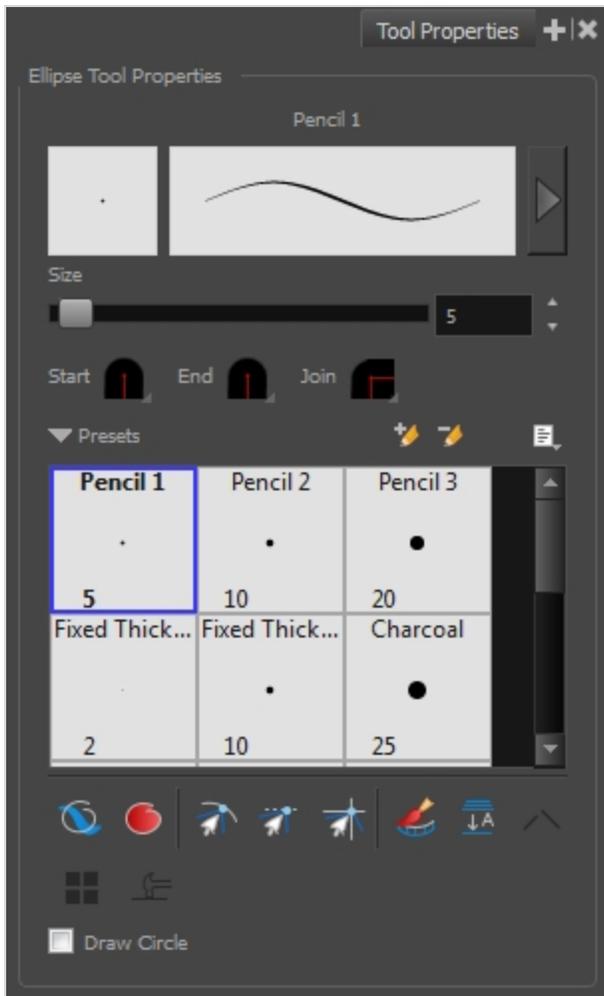


## Tool Options

Icon	Property	Description
	Sample All Layers	On bitmap layers, if strokes with transparency located on separated art layers overlap, the Dropper will pick the combination of the two colours. When disabled, the Dropper will pick the colour on the current art layer.
	Do not Pick Transparency	On bitmap layers, when enabled, the dropper will pick the colour at 100% of opacity even if the selection has some transparency.

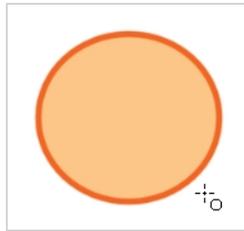
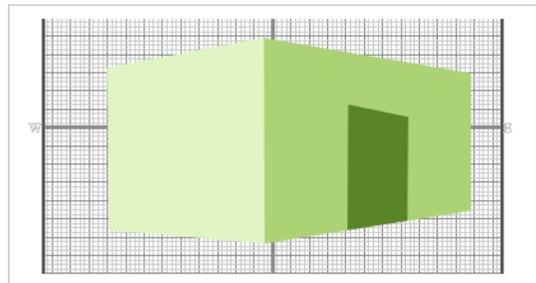
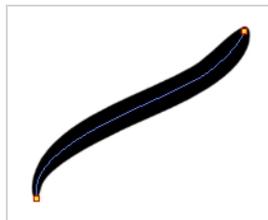
## Ellipse Tool Properties

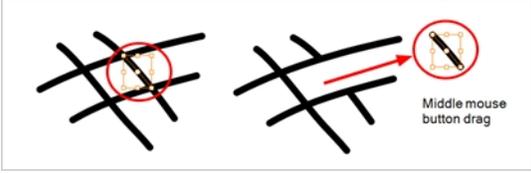
When you select the Ellipse tool, its properties and options appear in the Tool Properties view. There are a few less options available when working on a bitmap layer.



Icon	Tool Name	Description
	Previewing the Stroke	The Preview area lets you see a preview of the stroke your drawing tool will make. 
	Size	Defines the width of the pencil line used to draw the circle.
	Shape	You can adjust the start, end, and join style of a pencil line.

		 <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>
	<p>Presets</p>	<p>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.</p> <p>All tools using pencil lines share the same preset list. Therefore, the Polyline, Line, Rectangle, Ellipse, and Pencil tools share the same preset list.</p>
	<p>New Brush</p>	<p>Creates a new preset based on the current brush properties.</p>
	<p>Delete Brush</p>	<p>Deletes the currently selected preset.</p>
	<p>Rename Brush</p>	<p>Deletes the currently selected preset.</p>
	<p>Import Brushes</p>	<p>Allows you to import brush presets exported from Harmony.</p>
	<p>Export Brushes</p>	<p>Allows you to export your brush presets into an <b>.xml</b> file.</p>
	<p>Small Thumbnail, Large Thumbnail, and Stroke View</p>	<p>Allows you to display the presets as small square thumbnails, large square thumbnails or a list of stroke preview.</p>
	<p>Draw Behind</p>	<p>When enabled, your brush strokes will appear behind the existing artwork. Note that they will appear over your artwork while drawing your stroke, until you release the brush.</p>

		 <p>Orange stroke appears behind existing black stroke</p>
	Automatic Filling	<p>Use the Automatic Filling option to automatically fill your shape with the selected colour as you draw. By default, the Shape tool creates the outline of an empty shape that you can later fill using the Paint tool. This option is unavailable for the line tool.</p> 
	Snap to Contour	<p>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.</p>
	Snap and Align	<p>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.</p>
	Snap to Grid	<p>Snaps your selection following the currently enabled grid.</p> 
	Automatically Create Colour Art	<p>As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.</p> 

	<p>Auto-Flatten Mode</p>	<p>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.</p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
	<p>Use Stored Colour Gradient</p>	<p>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.</p>
	<p>Draw Circle</p>	<p>Enable this option to draw perfect circle (ratio 1:1) without holding any keyboard shortcuts. As an alternative, you can hold down the Shift key.</p>

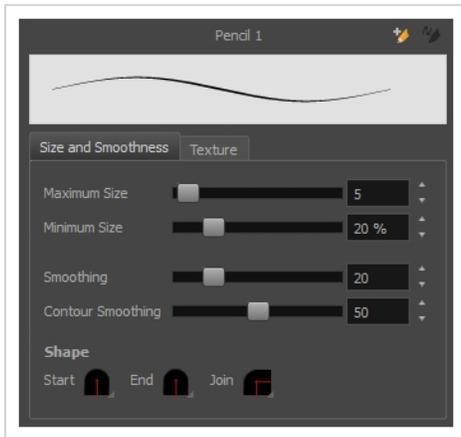
## Pencil Properties Dialog

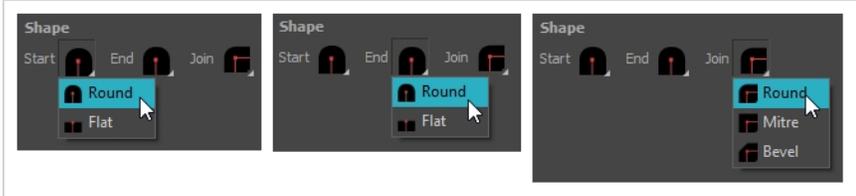
The Ellipse tool draws the same type of line as the Pencil tool. Hence, you can configure the Ellipse tool's lines using the Pencil Properties dialog, which you can open by clicking on the arrow button right of the stroke display area in the Tool Properties view.



## 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.



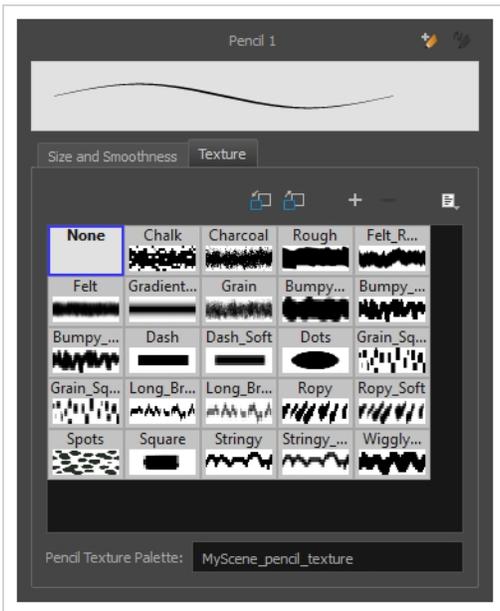
Tool Name	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke 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.
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	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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</li> </ul>

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 518](#).



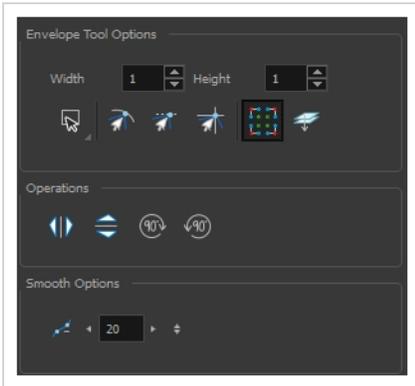
Icon	Tool Name	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, 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

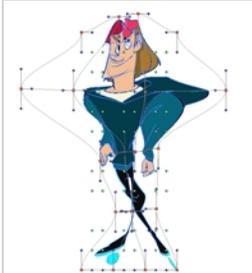
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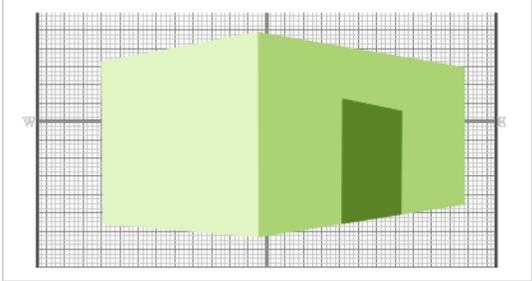
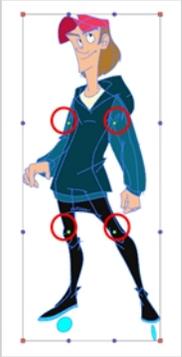
		pencil lines on its horizontal axis.
	Delete Texture	Deletes a pencil texture swatch from the current pencil texture palette.
	Rename Texture	Renames the selected pencil texture swatch in the current pencil texture palette.
	Pencil Texture List	Displays the pencil textures in the current pencil texture palette and allows you to select one to use with the Pencil tool.
	Pencil Texture Palette	Displays the name of the currently selected pencil texture palette, for reference. To select a different pencil texture palette, you must select it in the Colour view—see <a href="#">Colour View</a> on page 518.

## Envelope Tool Properties

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



Icon	Tool Name	Description
	Width and Height	<p>Increase the width and height values to add more columns and rows to the deformation grids.</p> 
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div data-bbox="852 1375 1429 1575" style="border: 1px solid #add8e6; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the ALT key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p>

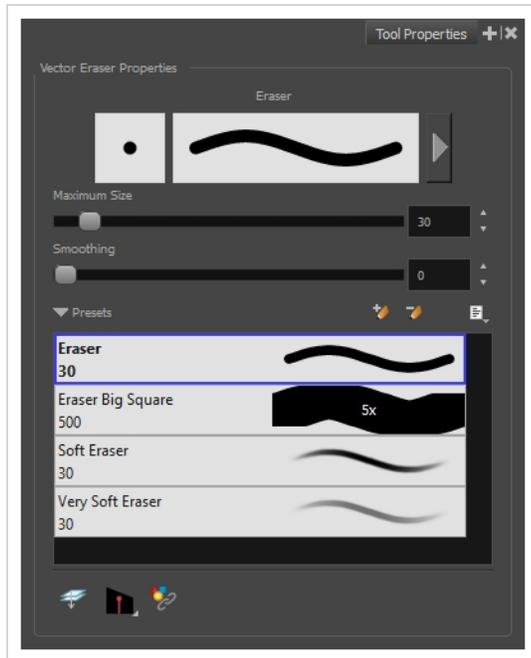
		 <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.
	Snap to Contour	Snaps your selection or point to any line you position it on. As soon as you move it close enough to another line, your point or selection will snap to it.
	Snap and Align	Snaps 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.

		<div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</p> </div>
	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

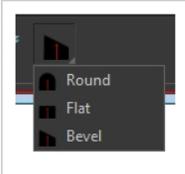
When you select the Eraser  tool, its properties and options appear in the Tool Properties view.

The Eraser tool properties are almost identical to the Brush tool properties.



Icon	Tool Name	Description
	Stroke Preview Area	<p>The Preview area lets you see a preview of the stroke your drawing tool will make.</p> 
	Eraser Properties Dialog	<p>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 information on the Eraser Properties dialog, see the <a href="#">Eraser Tool Properties</a> section below.</p> 
	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.  <div style="border: 1px solid #90EE90; padding: 5px;">  <b>NOTE</b>  This option is only displayed in the Tool Properties view when drawing on a bitmap layer. </div>
	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.  <div style="border: 1px solid #90EE90; padding: 5px;">  <b>NOTE</b>  This option is only displayed in the Tool Properties view when drawing on a bitmap layer. </div>
	New Eraser	Creates a new preset based on the current eraser properties.
	Delete Eraser	Deletes the currently selected preset.
	Rename Eraser	Deletes the currently selected preset.
	Import Erasers	Allows you to import brush presets exported from Harmony.
	Export Erasers	Allows you to export your brush presets into an <b>.xml</b> file.

	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.
	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.  <div style="border: 1px solid green; padding: 5px; background-color: #e6f2e6;">  <b>NOTE</b>            If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.         </div>
	Tip Style	If you erase the end of a pencil line or erase a pencil line through the centre, new line tips or line ends are created. Use the Tip Style option to customize the shape of the new line tips that are created.  
	Apply to Synced Drawing Layers	When working on a synced layer, the tool is applied to the current layer and all the layers that are synced to it. This option only works in the Camera view.

## 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.



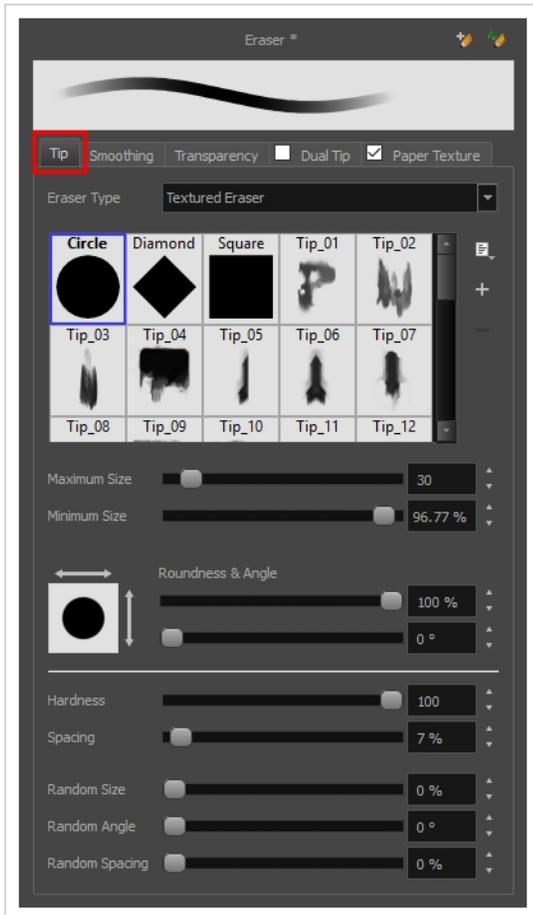
The Eraser Properties dialog has five different tabs, minus the Smoothing tab if you are working on a bitmap layers. Below is detailed information about the options available in each tab:

- [Tip Tab on page 385](#)
- [Smoothing Tab on page 389](#)
- [Transparency Tab on page 390](#)

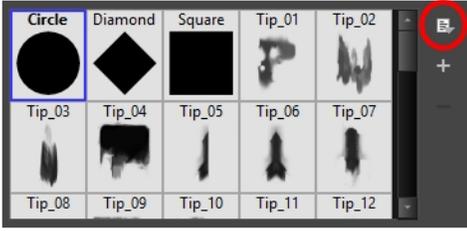
- [Dual Tip Tab](#) on page 393
- [Paper Texture Tab](#) on page 396

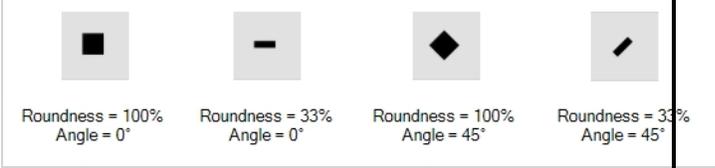
## Tip Tab

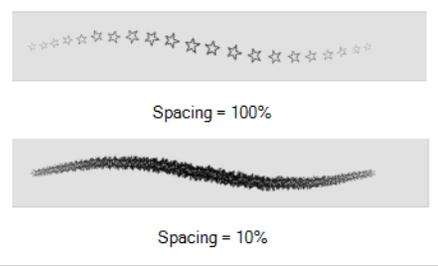
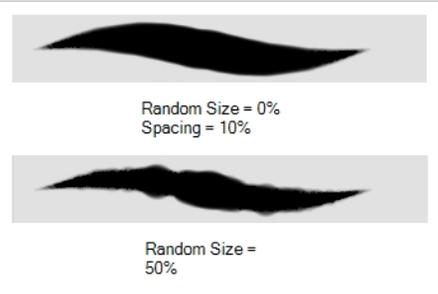
The Tip tab allows you to configure the shape, size, hardness and spacing of your eraser tip.

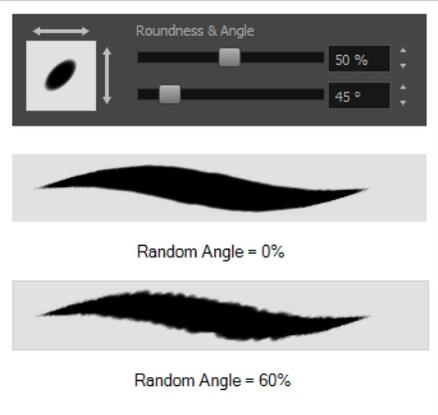
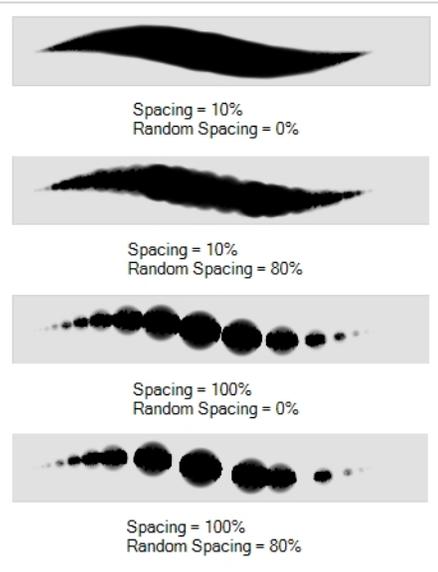


Tool Name	Description
Eraser Type	<p>Allows you to select between one of the following eraser types:</p> <ul style="list-style-type: none"> <li>• <b>Solid Vector:</b> Simply cuts out the eraser stroke's shape from the vector artwork. A solid vector eraser always completely erase the artworks leaving hard seams.</li> <li>• <b>Textured Eraser:</b> 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.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Textured, Preserve Vector:</b> 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.</li> </ul> <div data-bbox="708 321 1430 617" style="border: 1px solid #c8e6c9; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div> <div data-bbox="708 646 1430 846" style="border: 1px solid #c8e6c9; padding: 10px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
Eraser Tip Library	<div data-bbox="708 905 1328 1161" style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;">  </div> <p>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%.</p> <p>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.</p> <p>You can also import eraser tips that you exported from Harmony, so you can share them with colleagues.</p>
Minimum and Maximum Size	<p>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.</p>

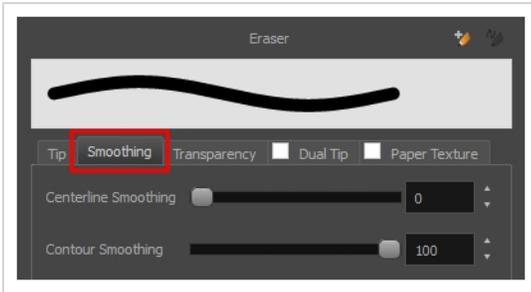
	<ul style="list-style-type: none"> <li>• <b>Maximum Size:</b> Defines the maximum width of the stroke.</li> <li>• <b>Minimum Size:</b> Defines the minimum width of the stroke in relation to and as a percentage of the maximum size.</li> </ul> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b> 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.</p> </div>
<p>Roundness and Angle</p>	<p>The Roundness and Angle parameters allow you to change the shape and orientation of the tip.</p> <ul style="list-style-type: none"> <li>• <b>Roundness:</b> Squashes the height of the tip from its centre point. 100% roundness = the native height of the tip. A smaller percentage will make the brush tip look flatter and more narrow. The squashing is NOT relative to the angle value—if the tip is rotated, the squashing function still uses the brush tip's original orientation.</li> <li>• <b>Angle:</b> Rotates the brush tip counter-clockwise. 0° = the tip's native orientation.</li> </ul> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px; text-align: center;">  </div>
<p>Hardness</p>	<p>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.</p> <p>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.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px; text-align: center;">  </div>
<p>Spacing</p>	<p>Defines the amount of space between each stamp of the eraser. A</p>

	<p>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.</p> <p>Spacing is only evident when making a continuous stroke.</p> 
Randomness	<p>The Randomness parameters let you create a varied bitmap eraser stroke. Refining these options can give your stroke a lovely, non-mechanical look.</p>
Random Size	<p>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.</p>  <div data-bbox="711 1541 1430 1808" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
Random Angle	<p>Sets the range for random rotation around the set Angle value. For</p>

	<p>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).</p> 
<p>Random Spacing</p>	<p>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).</p> 

## Smoothing Tab

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

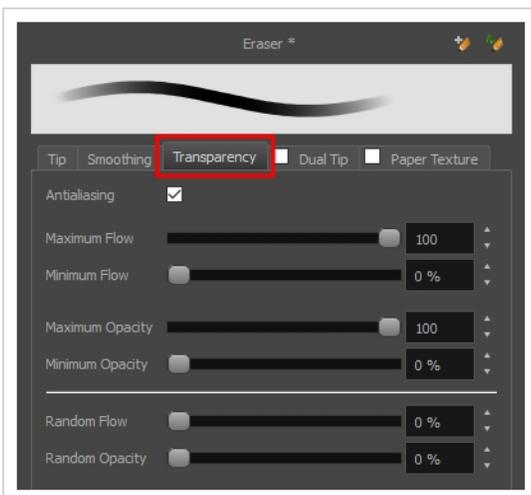
**NOTE**

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

Tool Name	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.

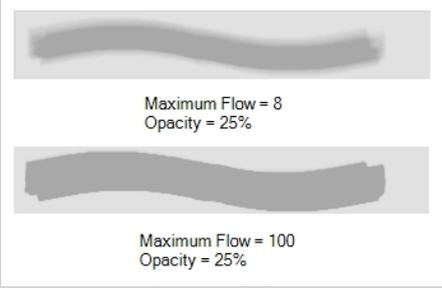
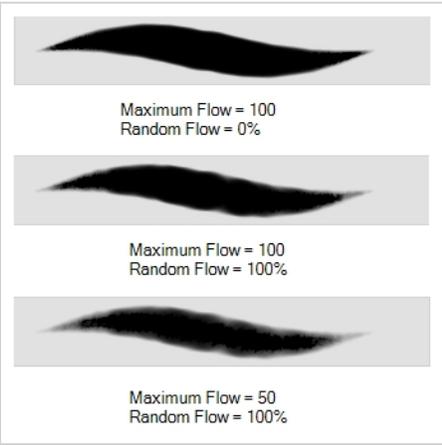




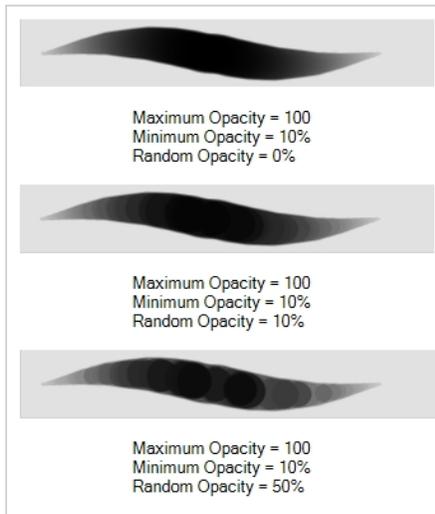
**NOTE**

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.

Tool Name	Description
<p>Antialiasing</p>	<p>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.</p> <p>If antialiasing is disabled, the eraser will either fully erase pixels or leave them intact.</p> <div data-bbox="574 751 1430 892" style="border: 1px solid green; padding: 5px; margin-top: 10px;">  <p><b>NOTE</b> When disabled, all other options in the Transparency tab are disabled.</p> </div>
<p>Maximum and Minimum Flow</p>	<p>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.</p> <ul style="list-style-type: none"> <li>• <b>Maximum Flow:</b> Sets the maximum rate at which colour and texture are applied as you create a fluid stroke.</li> <li>• <b>Minimum Flow:</b> 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.</li> </ul> <div data-bbox="574 1398 1016 1690" style="border: 1px solid gray; padding: 10px; margin-top: 10px;">  </div>
<p>Maximum Opacity and Minimum Opacity</p>	<p>The Maximum and Minimum Opacity parameters are where you set the opacity range for an eraser mark. This works with the pressure sensitivity of a pen tablet.</p> <ul style="list-style-type: none"> <li>• <b>Maximum Opacity:</b> Sets the transparency limit of the eraser mark when the pressure is heavy.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Minimum Opacity:</b> 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.</li> </ul> 
Randomness	<p>The 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.</p>
Randomness Flow	<p>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.</p>  <div data-bbox="574 1583 1430 1818" style="border: 1px solid green; padding: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
	392

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.



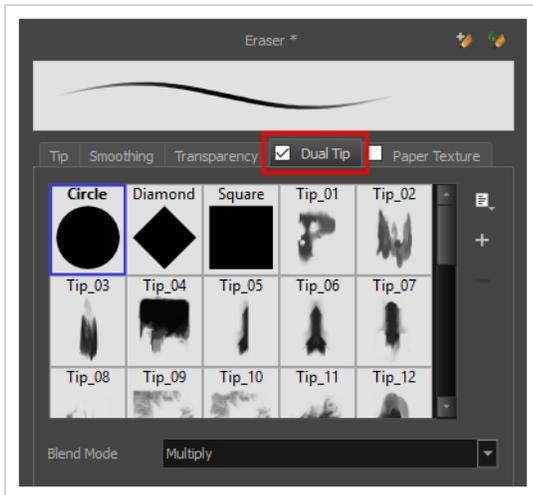
#### NOTE

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

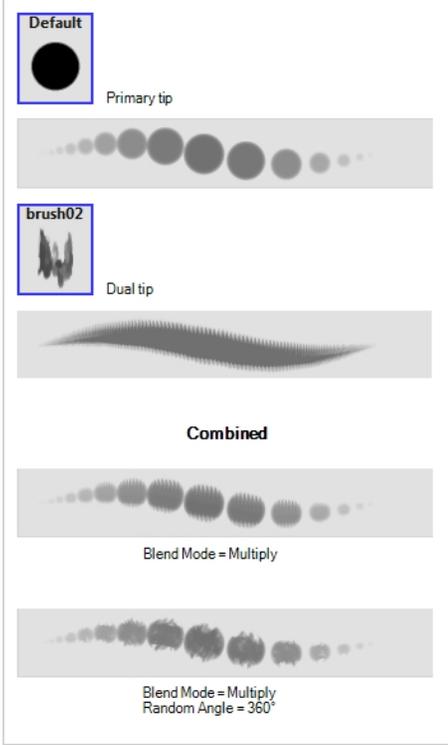
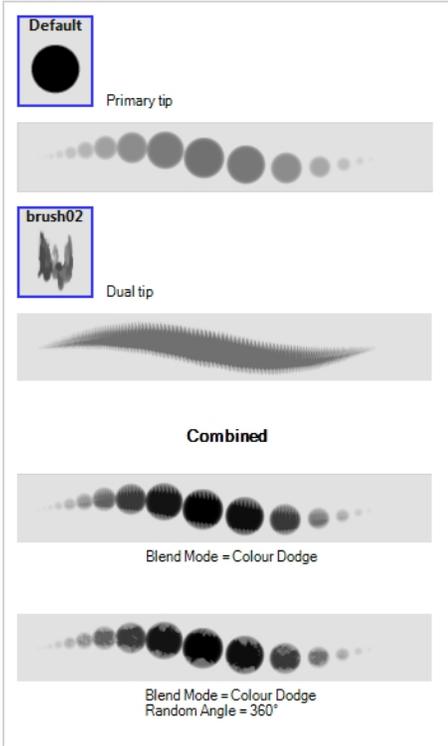
The Dual Tip tab lets you set the parameters for creating a dual tip eraser. The primary bitmap eraser tip and the dual tip always work together. You can set the parameters for the primary tip in the Tip tab and those for the dual tip in the Dual Tip tab. The Blend mode you select determines how the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

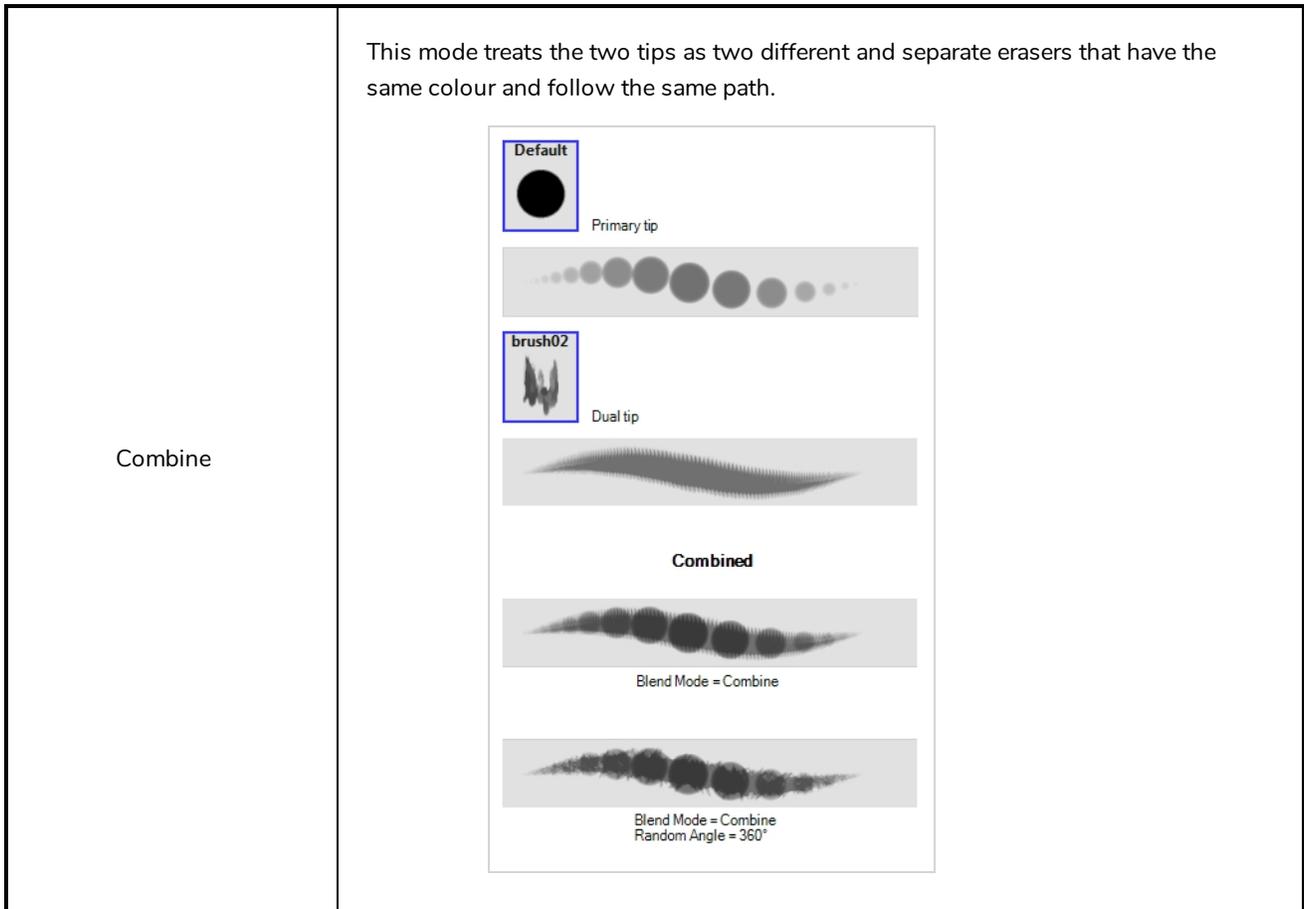
By default, the Blend Mode is set to Multiply and the Random Angle to 360°.

**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**.

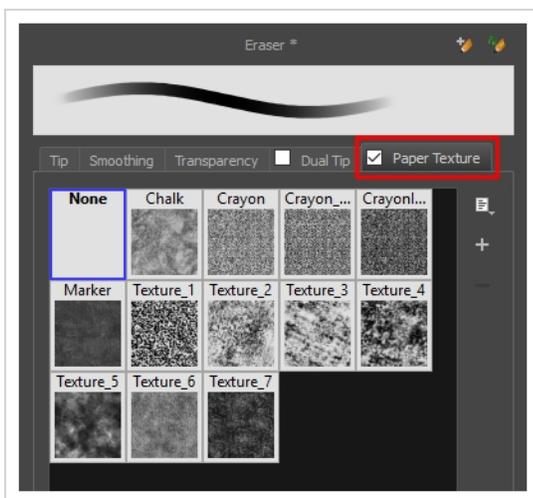
Tool Name	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your eraser uses a dual tip. If this checkbox is unchecked, the options in the Dual Tip tab will be disabled.
Blend Mode	The Blend modes let you decide how the primary tip and the dual tip are combined.
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.

	 <p><b>Default</b> Primary tip</p> <p><b>brush02</b> Dual tip</p> <p><b>Combined</b> Blend Mode = Multiply</p> <p>Blend Mode = Multiply Random Angle = 360°</p>
<p>Colour Dodge</p>	<p>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.</p>  <p><b>Default</b> Primary tip</p> <p><b>brush02</b> Dual tip</p> <p><b>Combined</b> Blend Mode = Colour Dodge</p> <p>Blend Mode = Colour Dodge Random Angle = 360°</p>



## 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.





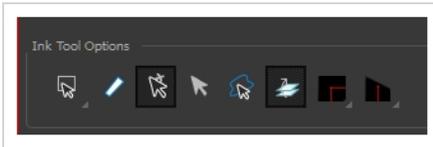
**NOTE**

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**.

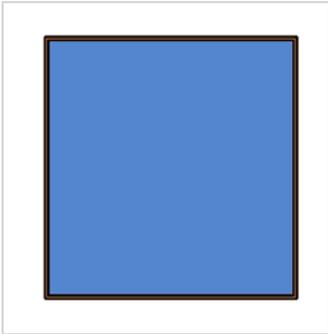
Tool Name	Description
Enable/Disable	The checkbox inside the tab allows you to decide whether or not your eraser uses a paper texture. If this checkbox is unchecked, the options in the Paper Texture tab will be disabled.
Texture Scale	Increase or decreases the size of the paper texture.
Additive	<p>This 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.</p> <div data-bbox="521 947 989 1243" style="text-align: center;"> <p>Additive enabled      Additive disabled</p> </div>
Aligned	<p>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.</p> <div data-bbox="521 1453 1174 1850" style="text-align: center;"> <p>Aligned enabled      Aligned disabled</p> </div>

## Ink Tool Properties

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

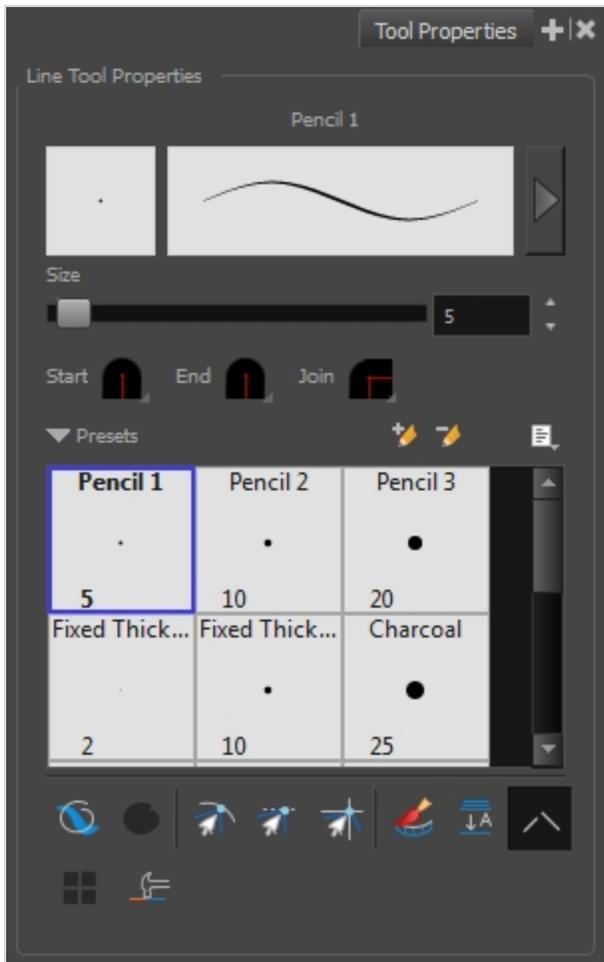


Icon	Tool Name	Tool
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Show Inkable Lines	<p>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.</p>
	Be Smart on Connecting Lines	<p>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.</p>

		<div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This option only works if the Ink tool is in Hover mode.</p> </div>
	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	<p>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.</p> 
	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.

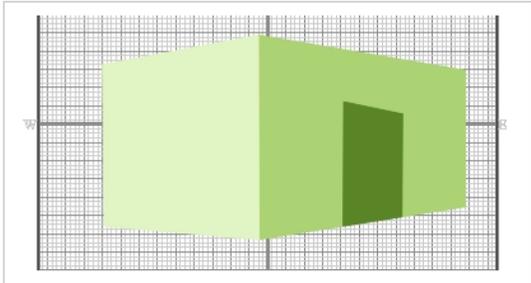
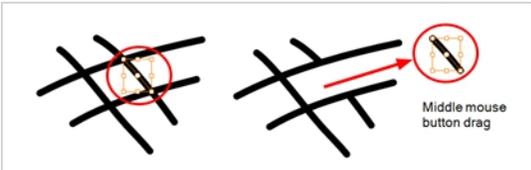
## Line Tool Properties

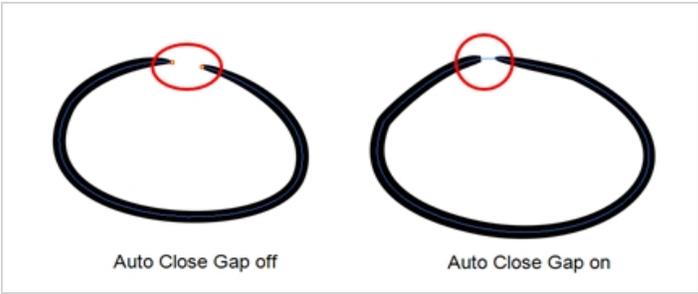
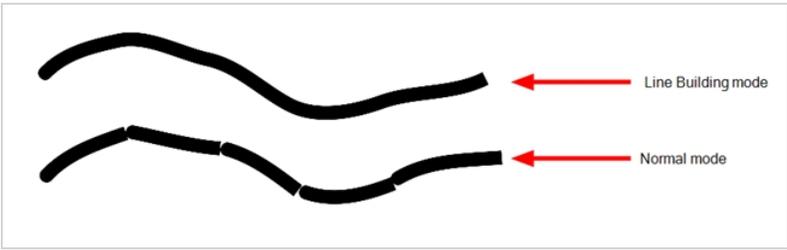
When you select the Line tool, its properties and options appear in the Tool Properties view. There are a few less options available when working on a bitmap layer.



Icon	Tool Name	Description
	Previewing the Stroke	The Preview area lets you see a preview of the stroke your drawing tool will make. 
	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.

		 <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>
	<p>Presets</p>	<p>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.</p> <p>All tools using pencil lines share the same preset list. Therefore, the Polyline, Line, Rectangle, Ellipse, and Pencil tools share the same preset list.</p>
	<p>New Brush</p>	<p>Creates a new preset based on the current brush properties.</p>
	<p>Delete Brush</p>	<p>Deletes the currently selected preset.</p>
	<p>Rename Brush</p>	<p>Deletes the currently selected preset.</p>
	<p>Import Brushes</p>	<p>Allows you to import brush presets exported from Harmony.</p>
	<p>Export Brushes</p>	<p>Allows you to export your brush presets into an <b>.xml</b> file.</p>
	<p>Small Thumbnail, Large Thumbnail, and Stroke View</p>	<p>Allows you to display the presets as small square thumbnails, large square thumbnails or a list of stroke preview.</p>
	<p>Draw Behind</p>	<p>When enabled, your brush strokes will appear behind the existing artwork. Note that they will appear over your artwork while drawing your stroke, until you release the brush.</p>

		 <p>Orange stroke appears behind existing black stroke</p>
	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. 
	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.  <p>Middle mouse button drag</p>

		<div data-bbox="672 212 732 281" style="float: left; margin-right: 10px;">  </div> <p><b>NOTE</b></p> <p>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.</p>
	<p>Auto-Close Gap</p>	<p>When using the pencil tool, you can automatically close strokes with an invisible stroke.</p> <div data-bbox="646 569 1344 863" style="text-align: center;">  <p style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>Auto Close Gap off</span> <span>Auto Close Gap on</span> </p> </div> <p>It is recommended to keep this option enabled when drawing with the Pencil tool.</p>
	<p>Line Building Mode</p>	<p>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.</p> <p>In this mode, you can draw lines in small increments and the tips merge into one single stroke.</p> <div data-bbox="646 1268 1433 1518" style="text-align: center;">  </div> <div data-bbox="672 1577 732 1646" style="float: left; margin-right: 10px;">  </div> <p><b>NOTE</b></p> <p>This mode only works with pencil lines or the line tool.</p>
	<p>Use Stored Colour Gradient</p>	<p>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,</p>

		then clicking on Store Colour Gradient  in the Tool Properties view.
	Draw Circle	Enable this option to draw perfect circle (ratio 1:1) without holding any keyboard shortcuts. As an alternative, you can hold down the Shift key.

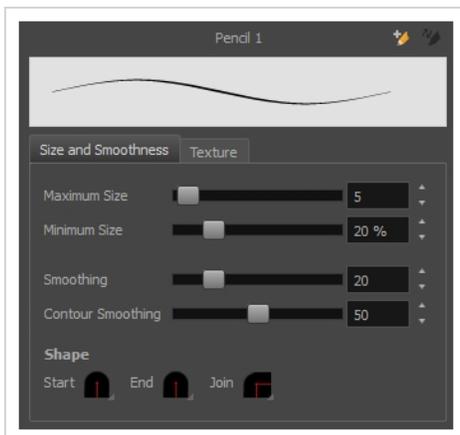
## Pencil Properties Dialog

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.

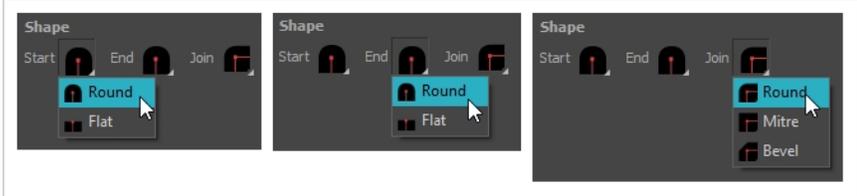


## Size and Smoothness Tab

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.



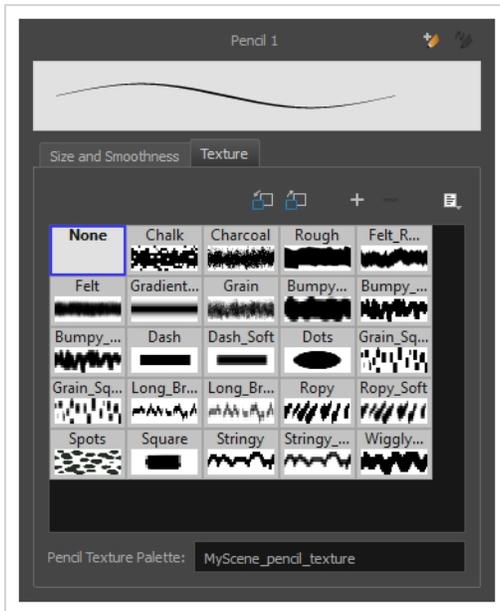
Tool Name	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke 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.

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 your contour shape of your brush strokes.
Shape	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>

## 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 518.

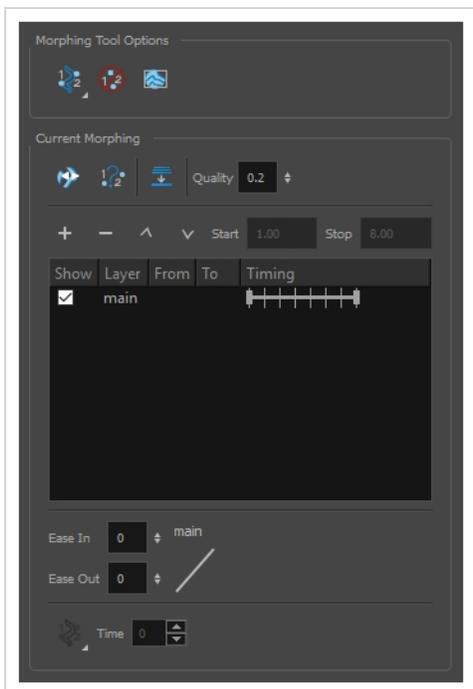


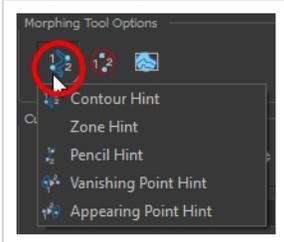
Icon	Tool Name	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, 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 selected pencil texture palette, for

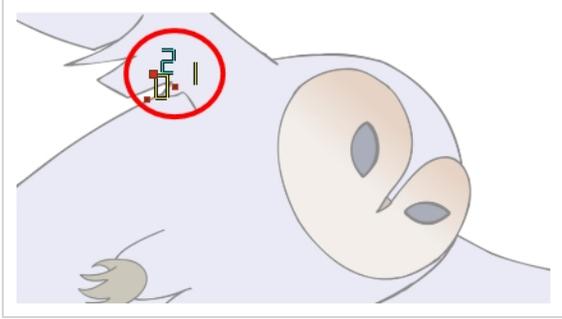
		reference. To select a different pencil texture palette, you must select it in the Colour view—see <a href="#">Colour View on page 518</a> .
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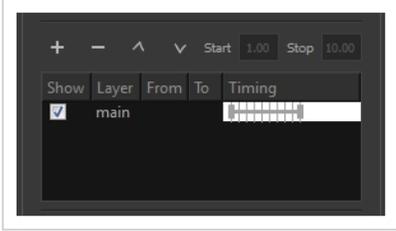
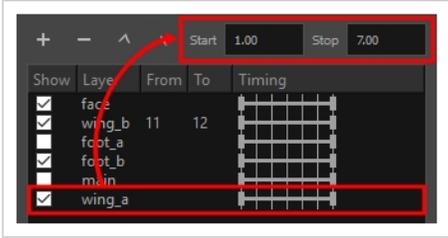
## Morphing Tool Properties

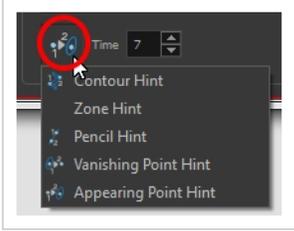
As you create and adjust your morphing sequences, you will often use the Tool Properties view. Using this view allows you to do things such as toggle between your key drawings, adjust the easing or select a hint type.



Icon	Tool Name	Description
	Hint Type	<p>The Hint Type drop-down menu allows you to select the correct hint to remedy any problem areas in your drawing.</p>  <p>You can have more than one hint type in your drawings. You can mix all of the hint types in your morphing sequence.</p>
	Do not Pick Transparency	<p>The Hide Hints button temporarily hides the hint points from the key drawings. Use this option when you have a series of hint points hiding some lines you would like to see.</p>

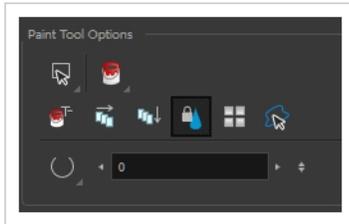
		
	<p>Show Morphing in Place</p>	<p>The Show Morphing In Place option is used with morphing layers. Enabling this option prevents the currently selected morphing layer from being shown on top of the others and maintains the correct layer ordering.</p>
	<p>Suggest Hints</p>	<p>The Suggest Hints option is used to automatically set Automatically sets hint points on key drawings as a help tool. If you're not sure where to set hints, you can use this option. It will set the main hints which you can then fine tune.</p>
	<p>Switch Between Drawings</p>	<p>The Switch Between Drawings button is used to toggle Toggles between the two key drawings in your morphing sequence. This option is useful while setting hints. You can use the default keyboard shortcut F4 to toggle between your drawings.</p>
	<p>Flatten</p>	<p>The Flatten option is used when you have to morph a sequence with a semi-transparent or transparent colour in it.</p>
	<p>Quality</p>	<p>The Quality setting is used to make the lines of the morphed drawings smoother. Adjust this parameter when you are doing an extreme close up of your animation.</p> 
	<p>Morphing Layers</p>	<p>The Morphing Layers option is used when working with morphing layers. You can add, remove and manage your different morphing layers in this space.</p>

		 <p>To create new drawings, double-click on the blank area under the <b>From</b> section to create the source drawing and the <b>To</b> section for the destination drawing and type a different value than the ones used for the main layer.</p>
+	Add Layer	Adds a new Morphing layer.
-	Delete Layer	Deletes the selected Morphing layer.
^	Move Up	Moves the new layer up in the stack.
v	Move Down	Moves the new lower up in the stack.
	Start	<p>Indicates the start frame of the selected Morphing layer.</p> 
	Stop	Indicates the end frame of the selected Morphing layer.
	Ease in and Ease out	<p>The Easing option is used to adjust the starting and ending velocity of your morphing sequence so that the motion is smooth and not mechanical.</p> <p>You can adjust the Ease In and Ease Out value by dragging your cursor up and down or typing a new value. The values go from -1.0 to 1.0.</p>

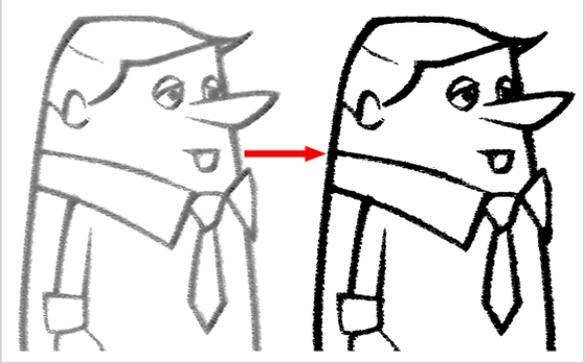
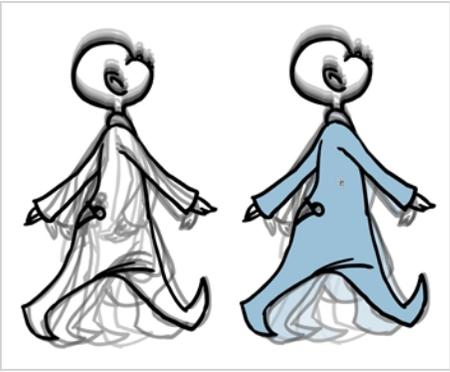
		
	<p>Convert Hints</p>	<p>The Convert Hints option is used to switch the type of the selected hint points. This option is useful when you position hints and then realize they are not the right type. You can select them and convert them to the correct type instead of deleting them and setting new ones.</p>  <p>Use the Morphing tool to select the hints and then convert them by going to the Tool Properties view and selecting the new hint type from the Convert Hints drop-down menu.</p>
	<p>Time</p>	<p>The Time field is used to set the timing on Appearing Point and Vanishing Point hints. These hints are used to set the trajectory of appearing and vanishing objects, With the Time field, select your Appearing Point or Vanishing Point hint and type the frame number on which the object will start its appearing or vanishing animation.</p> 

## Paint Tool Properties

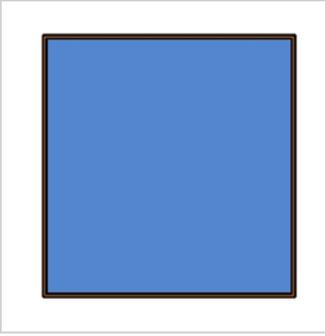
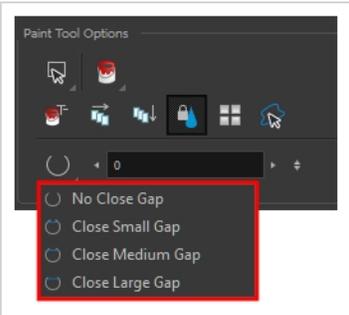
When you select the Paint tool, its properties and options appears in the Tools Properties view.



Icon	Tool Name	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Paint Modes	<p>The Paint tool has four different modes available:</p> <ul style="list-style-type: none"> <li>• The Paint mode paints everything it touches, including empty and filled zones.</li> <li>• The Paint Unpainted mode paints only empty zones. Any line or filled zone will remain unchanged.</li> <li>• The Repaint mode paints everything it touches except empty zones. Any zone that is not painted will remain intact.</li> <li>• The Unpaint mode unpaints everything it touches, including empty and filled zones.</li> </ul>

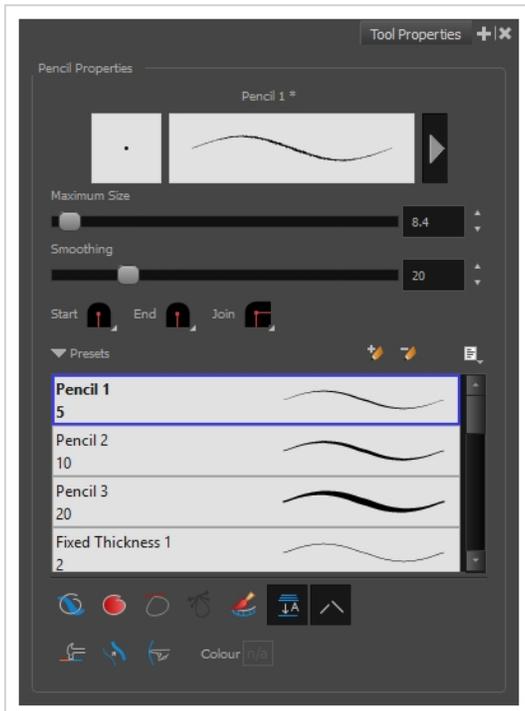
	<p>Paint and Remove Textures</p>	<p>The Paint and Remove Texture option is used when you vectorized images as greyscale texture style. An image vectorized as texture is a mix of bitmap filling encapsulated in a vector-based frame. Painting a textured zones with the Paint tool will change the tint of 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.</p> 
	<p>Apply to Multiple Drawings</p>	<p>The Apply to Multiple Drawings option is used for fast painting in hand-drawn animation. When you want to paint several drawings in a same layer at once, such as a walk cycle, you can enable this option and make a selection in the Camera or Drawing view. All the closed zones located within your Paint tool selection are painted with the selected colour swatch.</p>  <p>You do not need to enable the Onion Skin preview to use this option. The option will stay enabled only for the next action. If you want to use it again, you must click on the Apply to Multiple Drawings button again, or press Alt + A.</p>
	<p>Apply to All Visible</p>	<p>The Apply to All Visible Drawings option is used to</p>

	Drawings	<p>paint several drawings on separated layers on the current frames. If you have a character broken in several layers, you can enable this option to paint all your layers at once. The operation is only applied on the current frame. This option will stay enabled only for the next action. If you want to use it again, you must click on the Apply to All Visible Drawings button again.</p> <div data-bbox="852 499 1430 667" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This option is only available in the Camera view and does not affect symbols.</p> </div>
	Respect Protected Colour	<p>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.</p> <p>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.</p>
	Use Stored Colour Gradient	<p>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.</p> <div data-bbox="852 1388 1198 1759" style="border: 1px solid gray; padding: 5px;">  </div>
	Select Newly Painted, Repainted, and Unpainted	<p>In the Paint tool properties, this option keeps a selection highlighted around the latest painted zone</p>

	<p>Contours/Lines</p>	<p>after using the Paint, Repaint, Unpaint, or Paint Unpainted tool.</p> 
	<p>Close Gap</p>	<p>The Close Gap option has four modes available. When the option is enabled, Harmony will consume more resources while painting.</p>  <ul style="list-style-type: none"> <li>• No Close Gap: The moment a zone has a gap in it, the Paint tool will not fill the area.</li> <li>• Close Small Gap: If a zone has a small gap in it, the Paint tool will fill the area. You can zoom out to make the gap appear smaller and the Paint tool will paint.</li> <li>• Close Medium Gap: If a zone has a medium gap in it, the Paint tool will fill the area. You can zoom out to make the gap appear smaller and the Paint tool will paint.</li> <li>• Close Large Gap: If a zone has a large gap in it, the Paint tool will fill the area. You can zoom out to make the gap appear smaller and the Paint tool will paint.</li> </ul>

## Pencil Tool Properties

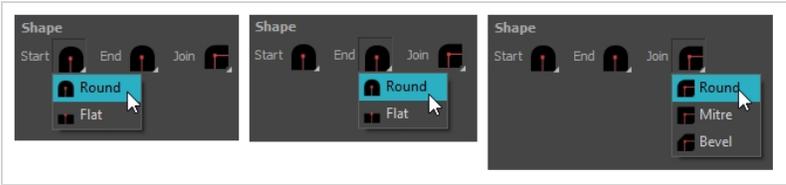
When you select the Pencil  tool, its properties and options appears in the Tool Properties view.



## 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.

Icon	Tool Name	Description
	Preview Area	<p>The Preview area lets you see a preview of the stroke your drawing tool will make.</p> 
	Pencil Properties Dialog	<p>The arrow button right of the preview area opens the Pencil Properties dialog.</p>  <p>While the Tool Properties view only gives you access to a few of the</p>

		<p>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 <a href="#">Pencil Properties Dialog</a> section below.</p>
	Maximum Size	<p>Defines the maximum width of the pencil line.</p> <p>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.</p>
	Smoothing	<p>Defines the number of control points added to the centre line. The fewer the control points the smoother (but less faithful) the line.</p>
	Shape	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>

## Pencil Presets

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

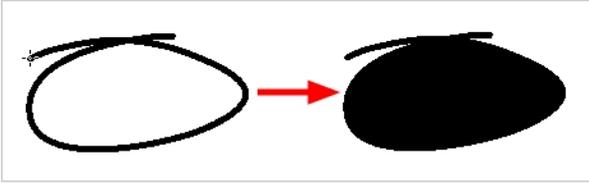
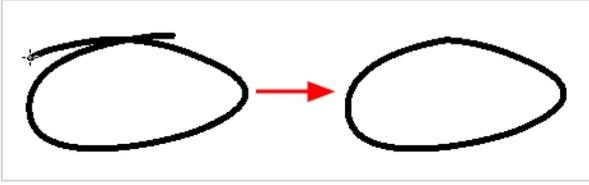
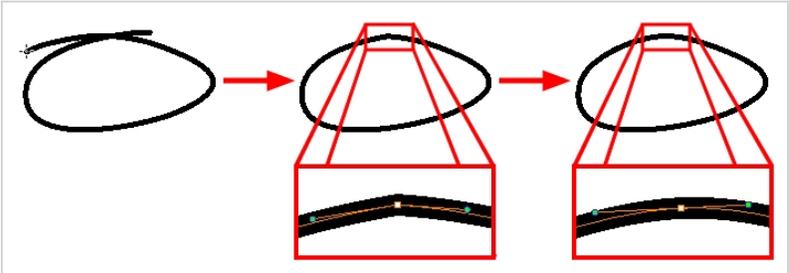
Icon	Tool Name	Description
	Presets list	<p>Harmony provides a variety of pencil presets and thickness stencils and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw and design for efficiency and consistency.</p> <p>A thickness stencil saves the thickness information across the length of the line. When drawing with a thickness stencil, the pressure sensitivity</p>

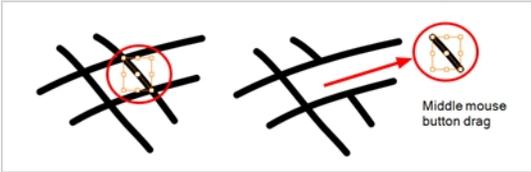
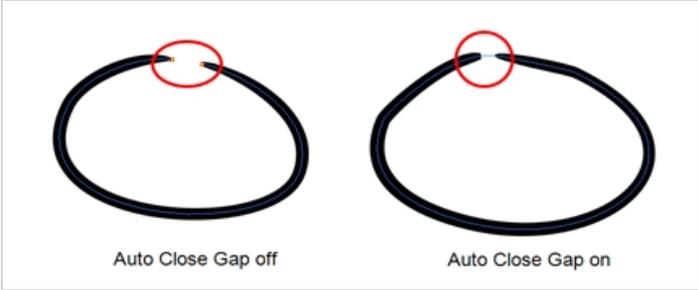
		<p>of the tablet is discarded. A thickness stencil can be used while drawing, or applied afterwards.</p> <p>You also have the possibility to apply different textures to your lines by either using the default presets or importing your own.</p> <p>You can export the pencil presets that you have created 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.</p>
	New Preset	Creates a new preset based on the current brush properties.
	Delete Preset	Deletes the currently selected preset.
	Presets Menu	Gives access to more options for managing presets.
	Rename Brush	Deletes 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 <b>.xml</b> 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. This is the default setting.

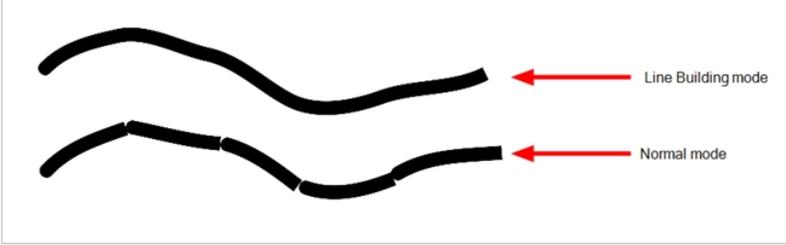
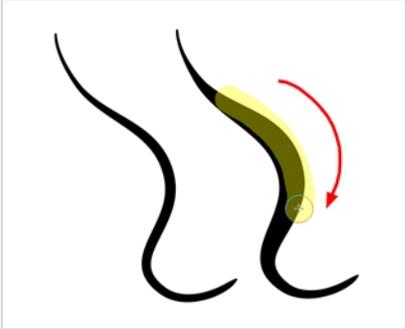
## Drawing Options

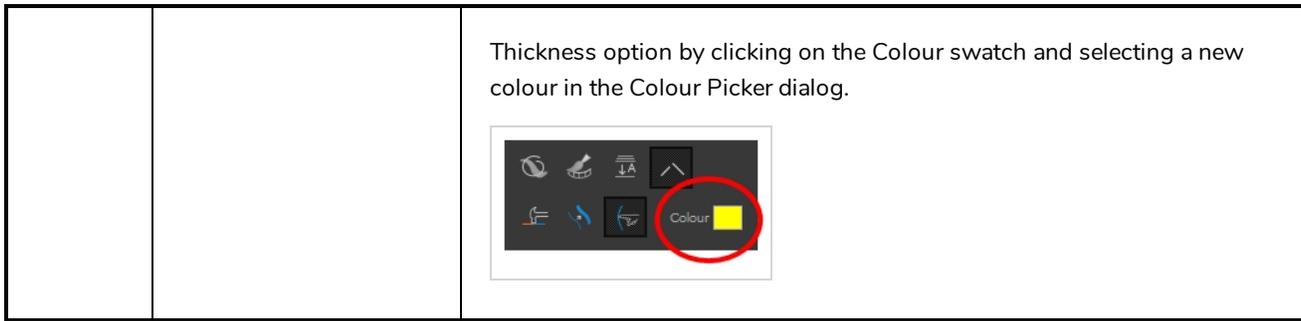
These options affect the way your drawing strokes are integrated into your artwork.

	Draw Behind	<p>When enabled, your brush strokes will appear behind the existing artwork. Note that they will appear over your artwork while drawing your stroke, until you release the brush.</p>  <p>Orange stroke appears behind existing black stroke</p>
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	<p>Auto Fill</p>	<p>When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour.</p>  <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>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 .</p> </div>
	<p>Trim Extra Lines</p>	<p>When enabled, drawing a closed shape will automatically remove the outstanding lines.</p> 
	<p>Align Handles After Trim</p>	<p>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.</p> 
	<p>Automatically Create Colour Art</p>	<p>As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.</p>

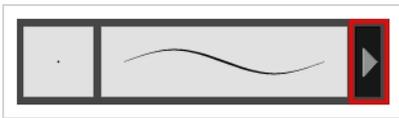
		
	<p>Auto-Flatten Mode</p>	<p>By default, when drawing on a vector layer, each new stroke is created as a separate drawing object, which can be edited independently from other parts of the artwork. When enabled, the Auto-Flatten option automatically merges strokes into existing artwork.</p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>
	<p>Auto-Close Gap</p>	<p>When using the pencil tool, you can automatically close strokes with an invisible stroke.</p>  <p>It is recommended to keep this option enabled when drawing with the Pencil tool.</p>
	<p>Line Building Mode</p>	<p>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.</p> <p>In this mode, you can draw lines in small increments and the tips are merge into one single stroke.</p>

		 <div data-bbox="646 472 1432 611" style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This mode only works with pencil lines or the line tool.</p> </div>
	<p>Auto Adjust Thickness</p>	<p>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. You do not have to add extra points and adjust the position and Bezier handles.</p>  <p>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.</p>
	<p>Line Pushing Mode</p>	<p>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.</p> <p>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.</p>
	<p>Colour</p>	<p>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</p>



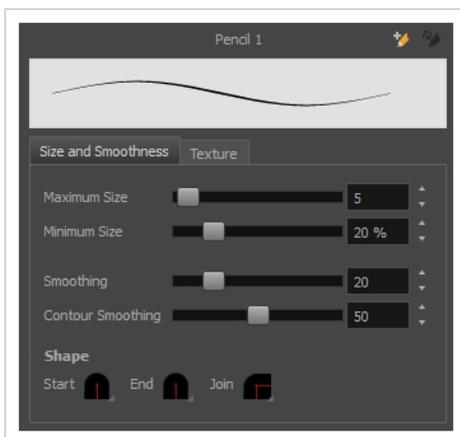
## Pencil Properties Dialog

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.

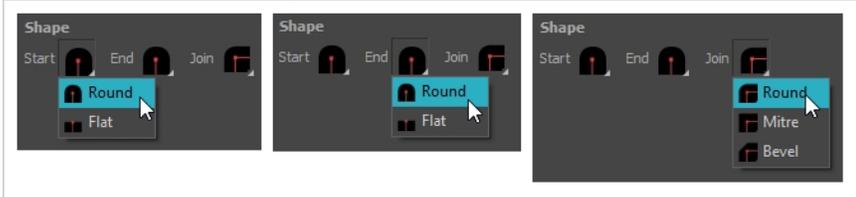


## Size and Smoothness Tab

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.



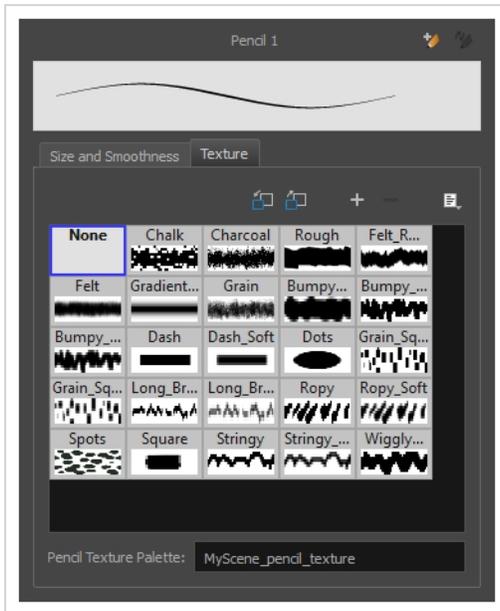
Tool Name	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke 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.
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 your contour shape of your brush strokes.
Shape	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>

## 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 518.

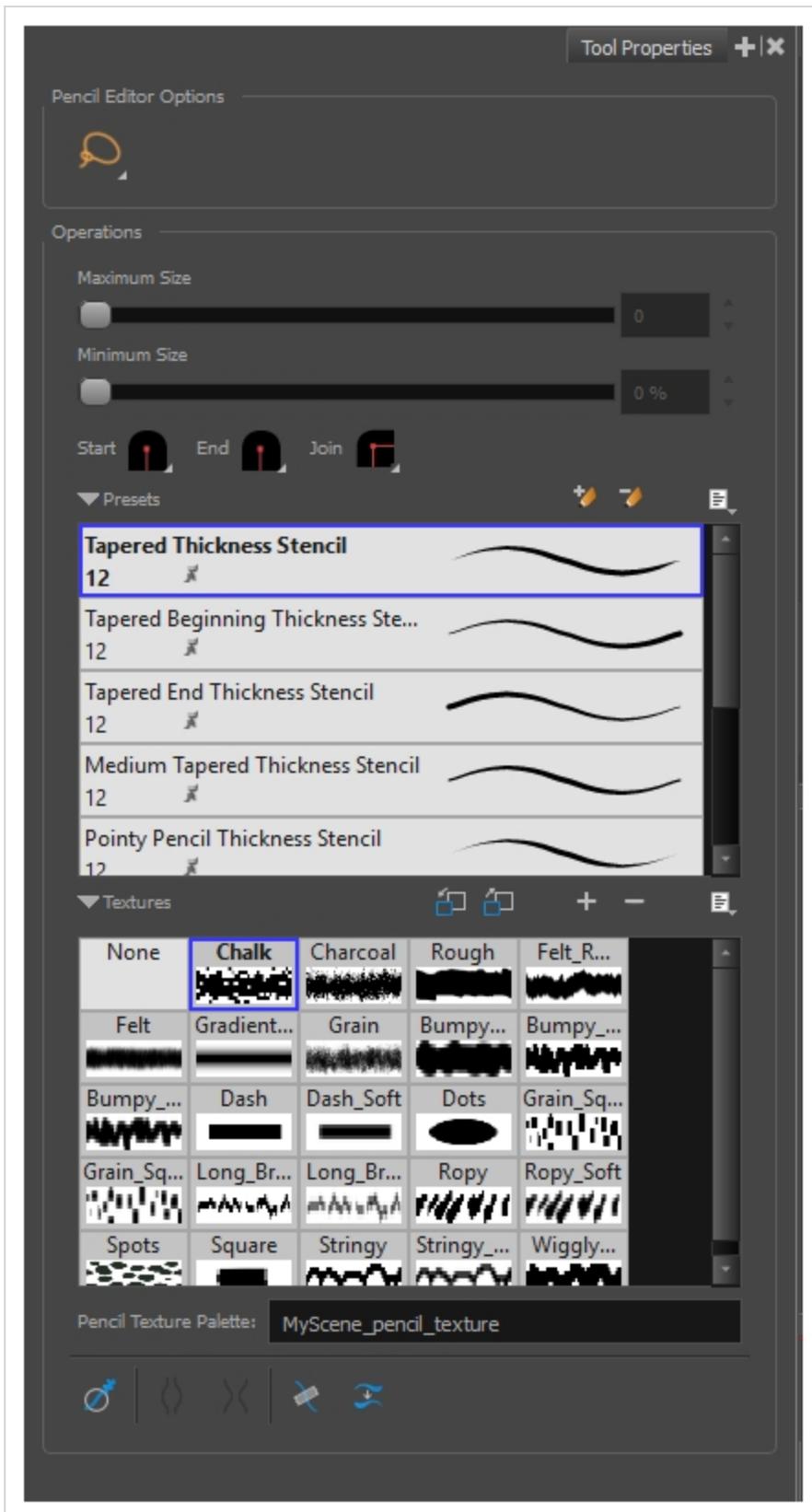


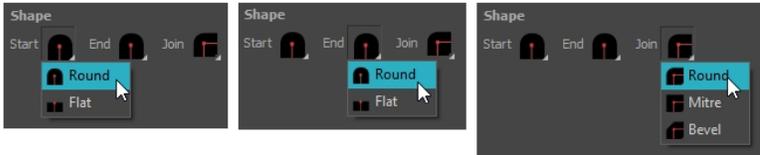
Icon	Tool Name	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, 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 selected pencil texture palette, for

		reference. To select a different pencil texture palette, you must select it in the Colour view—see <a href="#">Colour View on page 518</a> .
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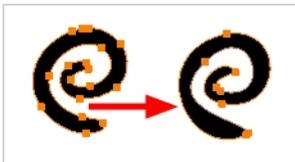
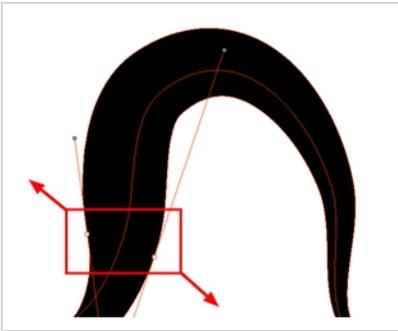
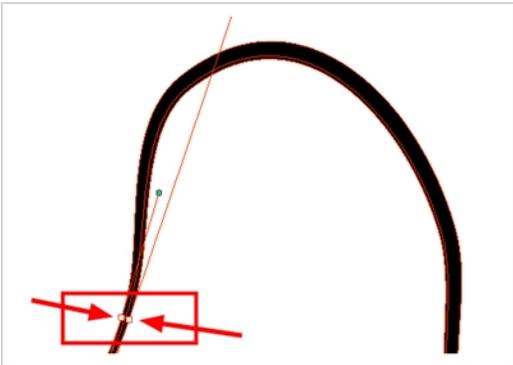
## Pencil Editor Tool Properties

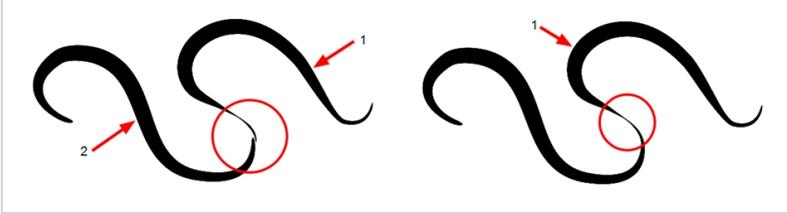
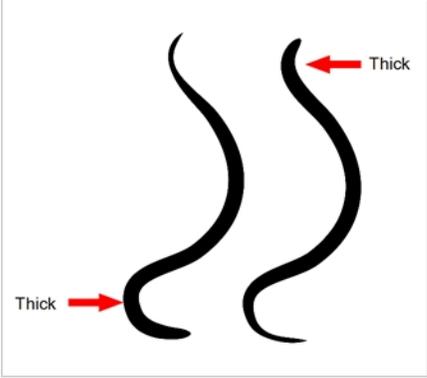
When you select the Pencil Editor tool, its properties and options appear in the Tool Properties view.



Icon	Tool Name	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div data-bbox="646 378 1429 546" style="border: 1px solid #add8e6; padding: 10px;">  <b>TIP</b>            When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.         </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div data-bbox="646 699 1429 867" style="border: 1px solid #add8e6; padding: 10px;">  <b>TIP</b>            When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.         </div>
	Maximum Size	<p>Defines the maximum width of the pencil line.</p> <p>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.</p>
	Minimum Size	<p>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-between the maximum and minimum size will be resized proportionally.</p>
	Shape	<p>You can adjust the start, end, and join style of a pencil line.</p> <div data-bbox="646 1398 1429 1579" style="border: 1px solid #ccc; padding: 10px;">  </div> <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>

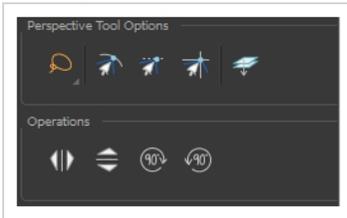
	Presets	<p>Harmony provides a variety of pencil presets and thickness stencils and also lets you create and save your own. It is a good idea to create and save pencils with precise sizes and parameters when you draw and design for efficiency and consistency.</p> <p>A thickness stencil saves the thickness 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.</p> <p>You also have the possibility to apply different textures to your lines by either using the default presets or importing your own.</p> <p>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.</p>
	New Brush	Allows to create a new preset from the selected pencil line.
	Delete Brush	Deletes the currently selected preset.
	Rename Brush	Deletes 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	<p>The Smooth operation lets you smooth out selected drawing strokes and remove extra points.</p> <ul style="list-style-type: none"> <li>From the top menu, select <b>Drawing &gt; Optimize &gt; Smooth</b> or press <b>Alt + Shift + S</b>.</li> </ul> 
	Pump Pencil Pressure	<p>The Pump Pencil Pressure option is used to increase the line thickness of a selected area on a pencil line.</p> 
	Deflate Pencil Pressure	<p>The Deflate Pencil Pressure option is used to decrease the line thickness of a selected area on a pencil line.</p> 
	Merge Pencil Lines	Pencil lines are central vector lines and it might be difficult to match pencil line's tips properly to align them and make it look like it is one

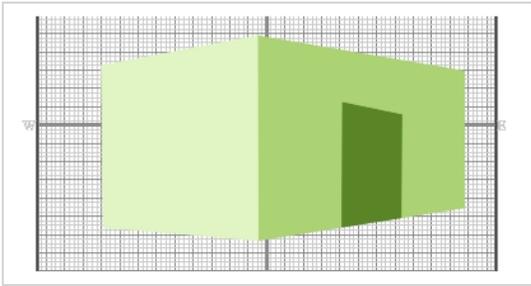
		<p>single line. With the Select tool, you can select several pencil lines and merge them as one single object using the Merge Pencil Lines option. The ends of your lines are adjusted to form one single line.</p> 
	<p>Reverse Pencil Thickness</p>	<p>The Reverse Pencil Thickness option inverts the thick 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.</p> 

## Perspective Tool Properties

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



Icon	Tool Name	Description
Selection Tool Options		
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Snap to Contour	<p>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.</p>
	Snap and Align	<p>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.</p>
	Snap to Grid	<p>Snaps your selection following the currently enabled</p>

		<p>grid.</p> 
	Apply to Line and Colour Art	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p> <div style="border: 1px solid green; padding: 5px;"> <p> <b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</p> </div>
	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.

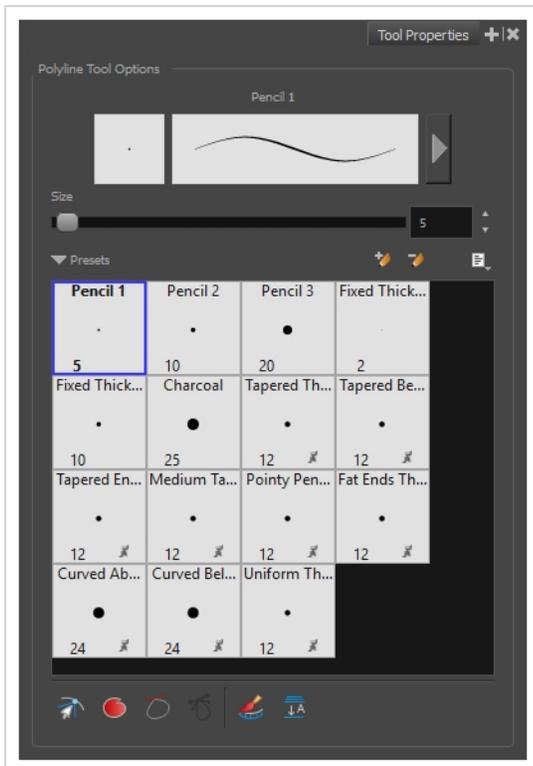
## Polyline Tool Properties

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



### NOTE

Like other shape tools, the Polyline 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.



## Pencil Properties

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.

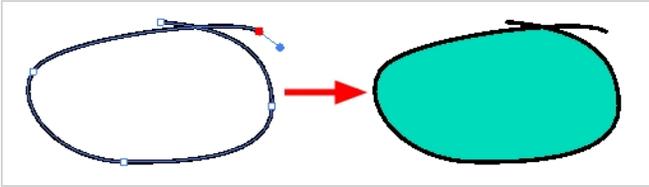
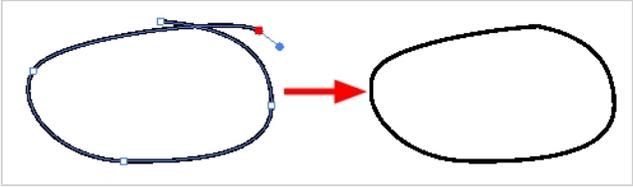
		 <p>While the Tool Properties view only gives you access to the pencil size, a list of pencil presets and other drawing options, the Pencil Properties dialog gives you access to all the available options for your pencil's shape and texture. For more information on the Pencil Properties dialog, see the <a href="#">Polyline Tool Properties</a> section below.</p>
	Size	Defines the width of the pencil line used to draw the shape.

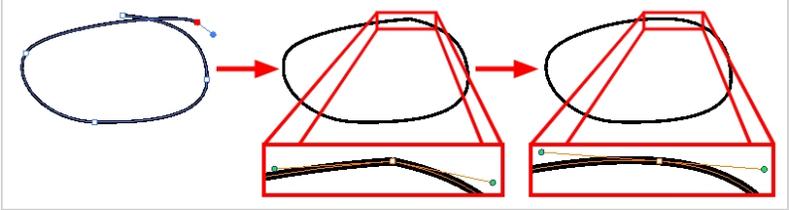
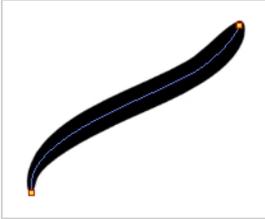
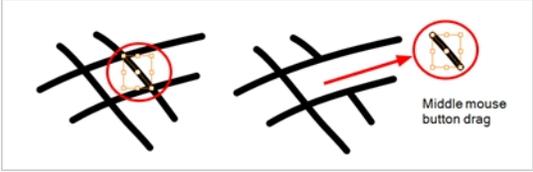
## Pencil Presets

Icon	Property	Description
	Presets list	<p>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.</p> <p>All tools using pencil lines share the same preset list. Therefore, the Polyline, Line, Rectangle, Ellipse, and Pencil tools share the same preset list.</p>
	New Preset	Creates a new preset based on the current brush properties.
	Delete Preset	Deletes the currently selected preset.
	Presets Menu	Gives access to more options for managing presets.
	Rename Brush	Deletes 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 <b>.xml</b> 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. This is the default setting.

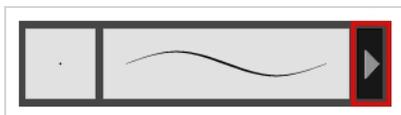
## Drawing Options

Icon	Property	Description
	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.
	Auto Fill	<p>When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour.</p>  <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>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 .</p> </div>
	Trim Extra Lines	<p>When enabled, drawing a closed shape will automatically remove the outstanding lines.</p> 
	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.

		
	<p>Automatically Create Colour Art</p>	<p>As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.</p> 
	<p>Auto-Flatten Mode</p>	<p>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.</p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>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.</p> </div>

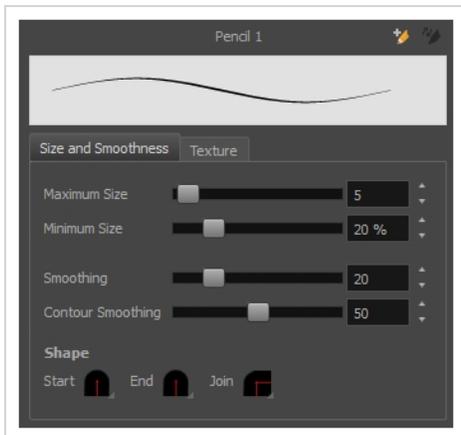
## Pencil Properties Dialog

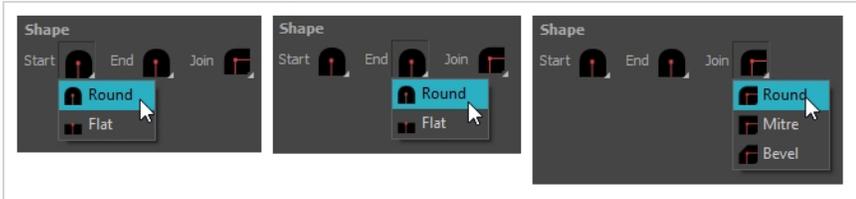
The Polyline tool draws the same type of line as the Pencil tool. Hence, you can configure the Polyline tool's lines using the Pencil Properties dialog, which you can open by clicking on the arrow button right of the stroke display area in the Tool Properties view.



## 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.



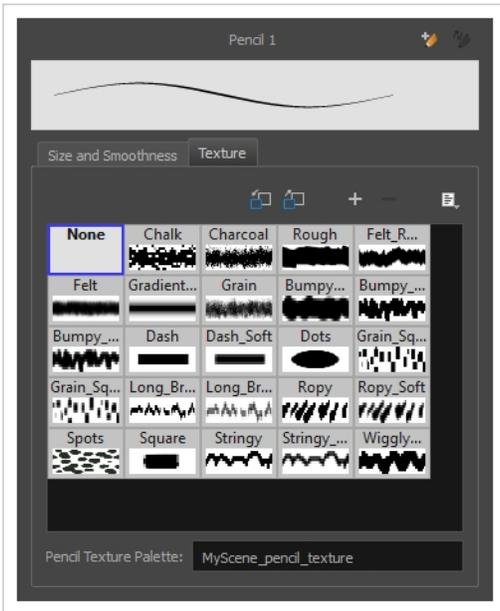
Tool Name	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke 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.
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	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>
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## 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 518](#).

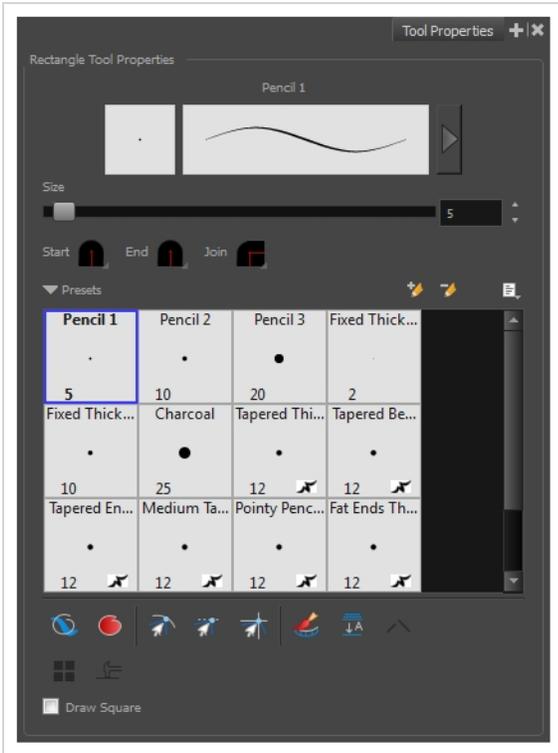


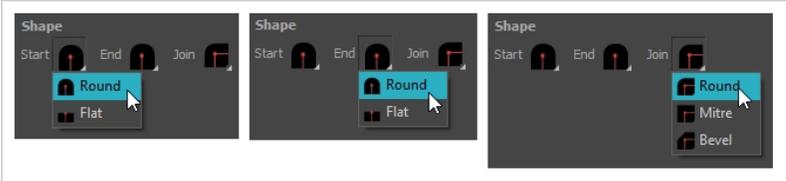
Icon	Tool Name	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, 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 selected pencil texture palette, for reference. To select a different pencil texture palette, you must select it in the Colour view—see <a href="#">Colour View on page 518</a> .

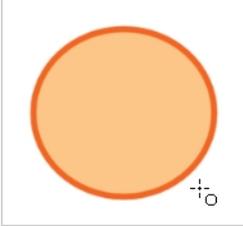
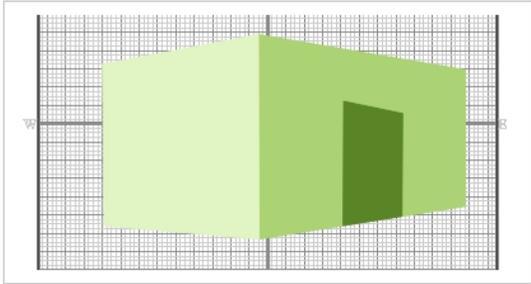
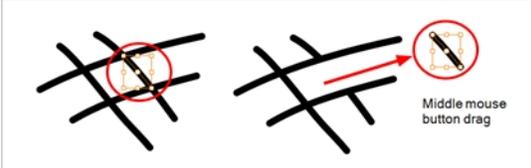
## Rectangle Tool Properties

When you select the Rectangle tool, its properties and options appear in the Tool Properties view. There are a few less options available when working on a bitmap layer.



Icon	Tool Name	Description
	Previewing the Stroke	<p>The Preview area lets you see a preview of the stroke your drawing tool will make.</p> 
	Size	<p>Defines the width of the pencil line used to draw the rectangle.</p>
	Shape	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip</li> </ul>

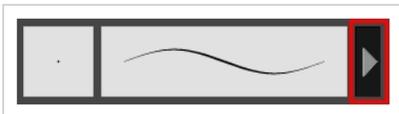
		<p>you drew. You can choose between Round or Flat style.</p> <ul style="list-style-type: none"> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> Lets you select the joint style. The joints are 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.</li> </ul>
	Presets	<p>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.</p> <p>All tools using pencil lines share the same preset list. Therefore, the Polyline, Line, Rectangle, Ellipse, and Pencil tools share the same preset list.</p>
	New Brush	Creates a new preset based on the current brush properties.
	Delete Brush	Deletes the currently selected preset.
	Rename Brush	Deletes 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 <b>.xml</b> file.
	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.
	Draw Behind	<p>When enabled, your brush strokes will appear behind the existing artwork. Note that they will appear over your artwork while drawing your stroke, until you release the brush.</p>  <p>Orange stroke appears behind existing black stroke</p>
	Automatic Filling	Use the Automatic Filling option to automatically fill your shape with the selected colour as you draw. By default, the Shape tool creates the outline of an empty shape that you can later fill using the Paint tool. This option is unavailable for the line tool.

		
	<p>Snap to Contour</p>	<p>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.</p>
	<p>Snap and Align</p>	<p>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.</p>
	<p>Snap to Grid</p>	<p>Snaps your selection following the currently enabled grid.</p> 
	<p>Automatically Create Colour Art</p>	<p>As you draw in the Line Art layer, the Automatically Create Colour Art option instantly creates the corresponding strokes in the Colour Art layer.</p> 
	<p>Auto-Flatten Mode</p>	<p>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.</p> 

		 <b>NOTE</b> 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	Enable this option to draw perfect square (ratio 1:1) without holding any keyboard shortcuts. As an alternative, you can hold down the Shift key.

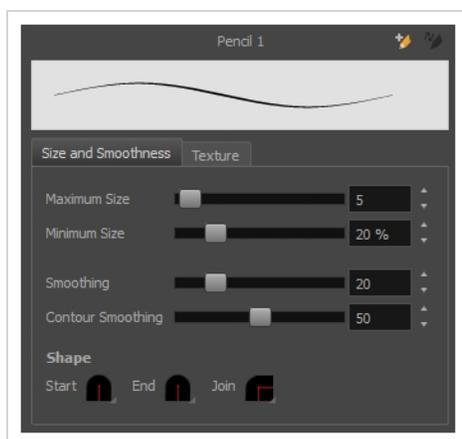
## Pencil Properties Dialog

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.

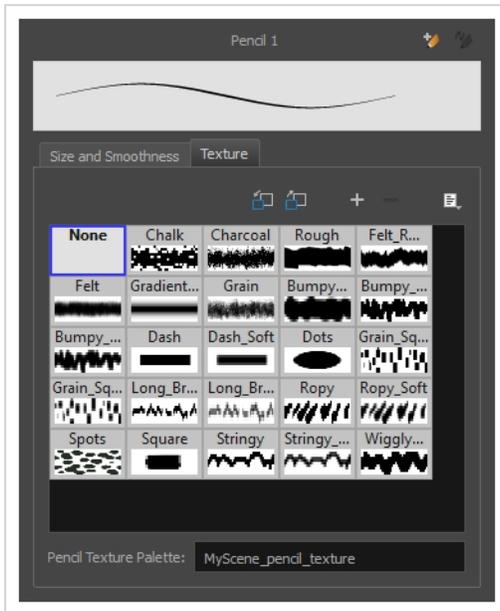


Tool Name	Description
Maximum Size	Defines the maximum size of the pencil line. If the tool is used with a pressure sensitive pen tablet, the width of the stroke will vary between its maximum size and minimum size depending on the amount of pressure used. If used with a mouse, the width of the stroke 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.
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	<p>You can adjust the start, end, and join style of a pencil line.</p>  <ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>

## 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 518](#).

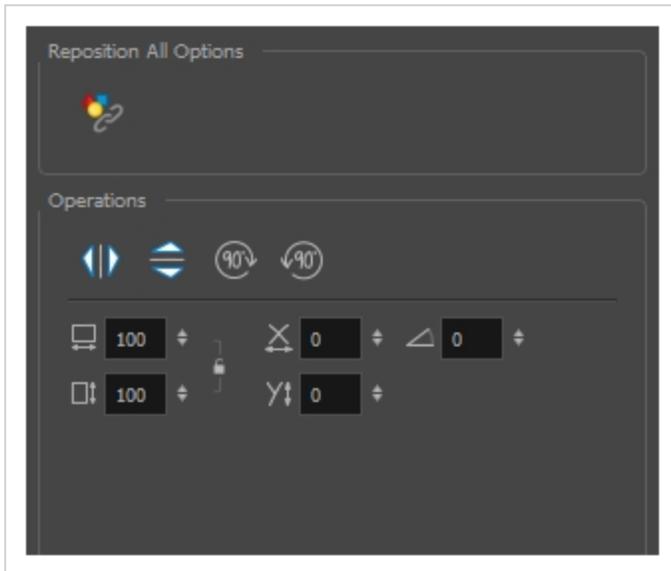


Icon	Tool Name	Description
	Use as Default Pencil Texture Palette	Sets the currently selected pencil texture palette as the default pencil texture palette in your user preferences. The default pencil texture palette is added to every scene you create in Harmony. The palette is copied in your preferences, 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 selected pencil texture palette, for

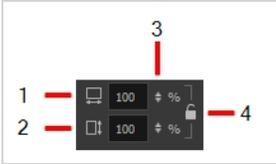
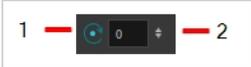
		<p>reference. To select a different pencil texture palette, you must select it in the Colour view—see <a href="#">Colour View on page 518</a>.</p>
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## Reposition All Drawings Tool Properties

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

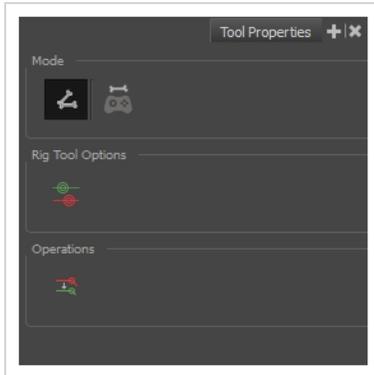


Icon	Option	Description
	Apply to Synced Drawing Layers	When working on a synced layer, the tool is applied to the current layer and all the layers that are synced to it. This option only works in the Camera view.
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current 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. 

		<ol style="list-style-type: none"> <li>1. <b>X:</b> Type a value in this field to reposition your selection along the X-axis.</li> <li>2. <b>Y:</b> Type a value in this field to reposition your selection along the Y-axis.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the X or Y value field.</li> </ol>
	<p>Width and Height</p>	<p>Use the Width and Height operation fields to enter specific values to resize the selected shape with precision.</p>  <ol style="list-style-type: none"> <li>1. <b>Width:</b> Type a value in this field to resize the width of your selection.</li> <li>2. <b>Height:</b> Type a value in this field to resize the height of your selection.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Width or Height fields.</li> <li>4. <b>Lock icon:</b> Click the lock icon to lock or unlock the ratio between the Width and Height values.</li> </ol>
	<p>Angle</p>	<p>The Angle operation lets you to enter specific values and accurately rotate the selected shape.</p>  <ol style="list-style-type: none"> <li>1. <b>Angle:</b> Type a degree value in this field to rotate your selection.</li> <li>2. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Angle value field.</li> </ol>

## Rigging Tool Properties

In the Tool Properties view, you can customize not only the behaviour of the tool but also the settings of the deformers that you will create.



### Mode

Name	Button	Description
Bone Mode		Sets the Rigging tool to create Bone deformers.
Game Bone Mode		Sets the Rigging tool to create Game Bone deformers.

### Options

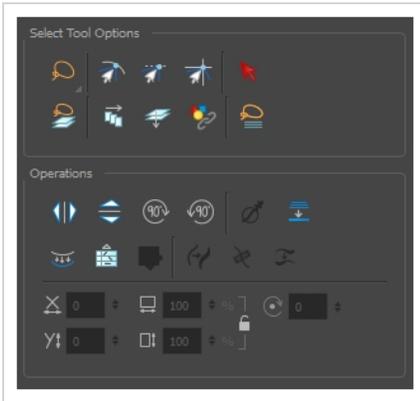
Parameter	Button	Description
Show All Manipulators (Show All Controls)		Lets you immediately see the resting position in red (Setup) and the animated position in green.

### Operations

Name	Button	Description
Reset Deform (Reset Current Keyframe)		Copies the resting position of the deformation skeleton to the current frame.

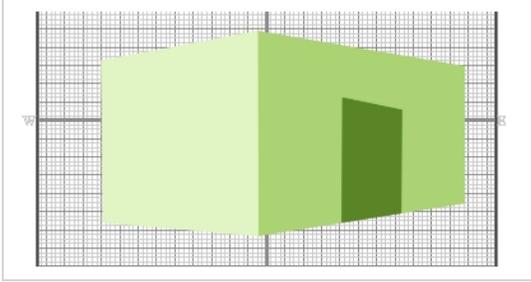
## Select Tool Properties

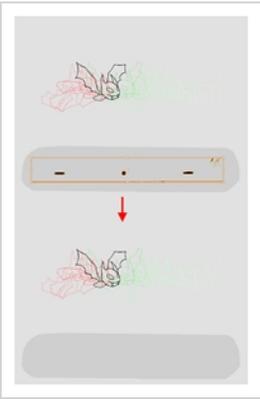
When you use the Select tool, its properties and options appear in the Tool Properties view.



## Tool Options

Icon	Tool Name	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Snap to Contour	<p>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.</p>
	Snap and Align	<p>Snaps the selected anchor point to any existing line while displaying temporary rulers as a guide that you</p>

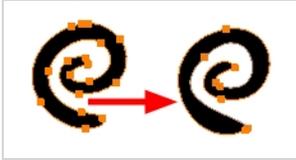
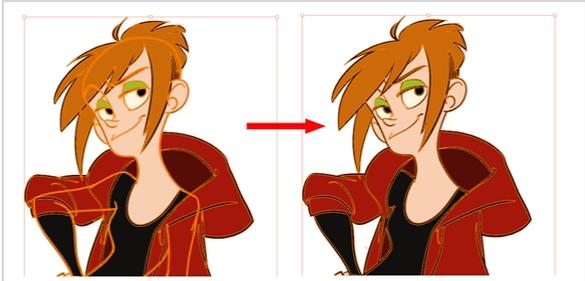
		can also snap your anchor point to.
	Snap to Grid	<p>Snaps your selection following the currently enabled grid.</p> 
	Select by Colour	<p>Lets you select all the zones and lines in your drawing painted with the same colour swatch.</p>  <p>In the Camera or Drawing view, click on any zone or line in your drawing. All zones and lines of the same colour are selected. Click the Select tool again to return to the regular Select mode.</p> <div style="border: 1px solid green; padding: 5px;"> <p> <b>NOTE</b></p> <p>Only the zones painted with the <b>SAME</b> colour swatch will be selected. If another zone is coloured with the exact same RGB value (same colour), but not painted with the same colour swatch, it will not be selected.</p> </div>
	Permanent Selection	<p>Lets you maintain a selection over 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</p>

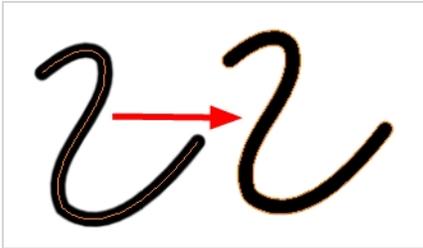
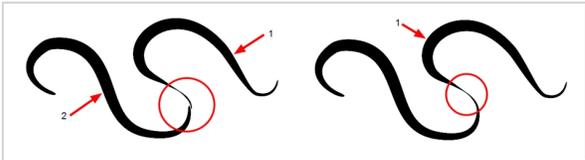
		<p>from other drawing layers. This option can be used to simultaneously delete artwork inside or outside of the selection on several drawings when combined with the Apply to Multiple Drawings option.</p> 
	<p>Apply to Multiple Drawings</p>	<p>The Apply to Multiple Drawings option is used to perform an action on all the drawings contained in a layer. With the Select tool, this option can be used to select and remove vector shapes on all the drawings contained in a layer. To use it, activate Permanent Selection option and make a selection that can be applied to all your drawings. Then, activate the Apply to Multiple Drawings option and press delete. This will delete all the shapes that would have been selected by the permanent selection on every drawing in the layer. This can be used for example to remove dirt and registration on the same areas of all the drawings simultaneously on a layer.</p> <p>The Apply to Multiple Drawings option disables itself after each action.</p> 
	<p>Apply to Line and Colour Art</p>	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p>

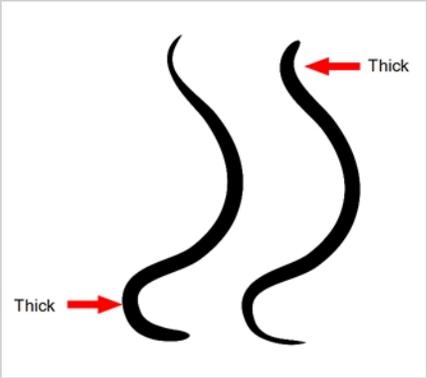
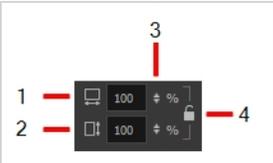
		 <b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.
	Apply to Synced Drawing Layers	When working on a synced layer, the tool is applied to the current layer and all the layers that are synced to it. This option only works in the Camera view.
	Works on Single Drawing	<p>By default, when you draw a selection box in the Camera view, the Select tool will select only the drawing strokes of the current drawing. If you prefer the Select tool to select all the strokes on all layers, you can disable the Works on Single Drawing option in the Tool Properties view or disable the Select tool Works on Single Drawing preference. To do this, go to the top menu, select <b>Edit &gt; Preferences &gt; Camera</b> (Windows/Linux) or <b>Harmony Advanced &gt; Preferences &gt; Camera</b> (macOS) and uncheck the Select tool Works on Single Drawing option.</p> 

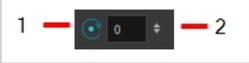
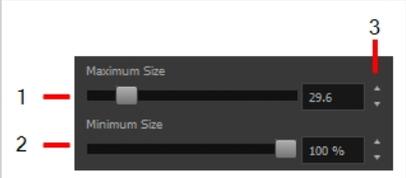
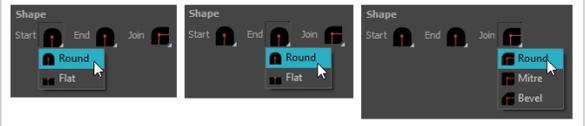
## Operations

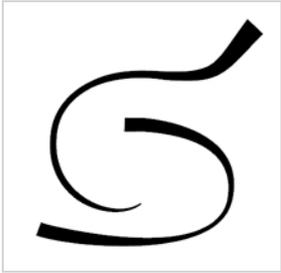
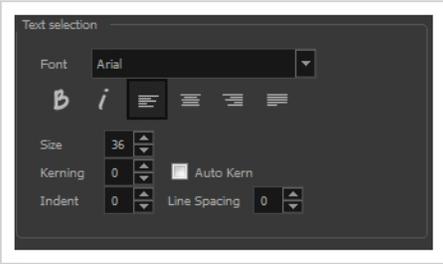
Icon	Tool Name	Description
	Flip Horizontal	Flips the current selection horizontally.
	Flip Vertical	Flips the current selection vertically.
	Rotate 90 Degrees CW	Rotates the current selection 90 degrees clockwise.
	Rotate 90 Degrees CCW	Rotates the current selection 90 degrees counter-

		clockwise.
	Smooth	<p>Smooth out selected drawing strokes and remove extra points.</p> 
	Flatten	<p>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.</p> 
	Create Colour Art from Line Art	<p>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.</p> <p>You can also configure this option to create the invisible strokes on any of the four embedded layers.</p>
	Distribute to Layers	<p>The Distribute to Layers option is used to separate the selected art strokes and send them to new drawing layers. In the Camera view, once you have drawn your artwork, you can select the strokes you want to distribute using the Select tool and click on the Distribute to Layers button; you can also select <b>Drawing &gt; Distribute to Layers</b>. It will automatically take every stroke from the drawing selection made in the Camera view and separate them into a different layer for each. If an artwork is composed of several</p>

		<p>strokes, you must group them using <b>Edit &gt; Group &gt; Group</b> before using the Distribute to Layers option. This option cannot be done from the Drawing view.</p>
	Store Colour Gradient	<p>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.</p>
	Pencil to Brush	<p>Converts the selected centre line pencil strokes into contour strokes brush lines.</p> 
	Merge Pencil Lines	<p>Pencil lines are central vector lines and it might be difficult to match pencil line's tips properly to align them and make it look like it is one single line. With the Select tool, you can select several pencil lines and merge them as one single object using the Merge Pencil Lines option. The ends of your lines are adjusted to form one single line.</p>  <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>Points must be close enough to be merged. If there is a large gap between the lines, they will not be merged.</p> </div>
	Reverse Pencil Thickness	<p>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</p>

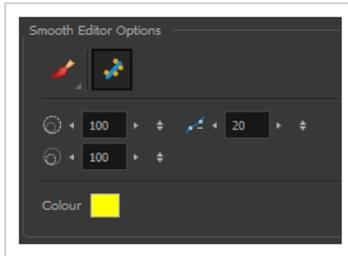
		<p>thinnest, and it will apply the thinnest to the thickest.</p> 
	<p>Offset X and Y</p>	<p>Use the Offset X and Offset Y operation fields to enter specific values and precisely reposition the selected shape.</p>  <ol style="list-style-type: none"> <li>1. <b>X:</b> Type a value in this field to reposition your selection along the X-axis.</li> <li>2. <b>Y:</b> Type a value in this field to reposition your selection along the Y-axis.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the X or Y value field.</li> </ol>
	<p>Width and Height</p>	<p>Use the Width and Height operation fields to enter specific values to resize the selected shape with precision.</p>  <ol style="list-style-type: none"> <li>1. <b>Width:</b> Type a value in this field to resize the width of your selection.</li> <li>2. <b>Height:</b> Type a value in this field to resize the height of your selection.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Width or Height fields.</li> </ol>

		<p>4. <b>Lock icon:</b> Click the lock icon to lock or unlock the ratio between the Width and Height values.</p>
	Angle	<p>The Angle operation lets you to enter specific values and accurately rotate the selected shape.</p>  <ol style="list-style-type: none"> <li>1. <b>Angle:</b> Type a degree value in this field to rotate your selection.</li> <li>2. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Angle value field.</li> </ol>
	Adjusting the Pencil Line Thickness	<p>When you select a pencil line with the Select tool, additional options appear in the Tool Properties view.</p> <p>Use the Adjusting the Pencil Line Thickness operation field to resize the selected centreline strokes. This operation is not permitted on contour line shapes, such as brush strokes or shape fills.</p>  <ol style="list-style-type: none"> <li>1. <b>Minimum Size:</b> Type a value in this field to set the minimum thickness of the selected centreline stroke.</li> <li>2. <b>Maximum Size:</b> Type a value in this field to set the maximum thickness of the selected centreline stroke.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value contained in the Thickness value field.</li> </ol>
	Pencil Line Shape	<p>You can adjust the start, end, and join style of a pencil line.</p> 

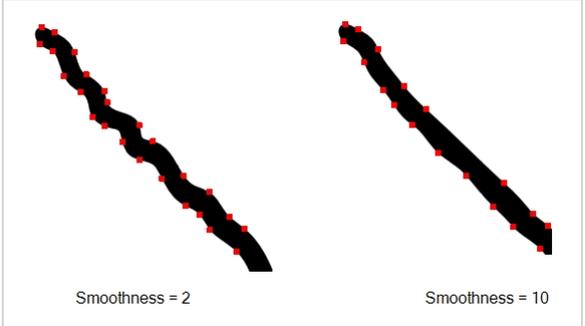
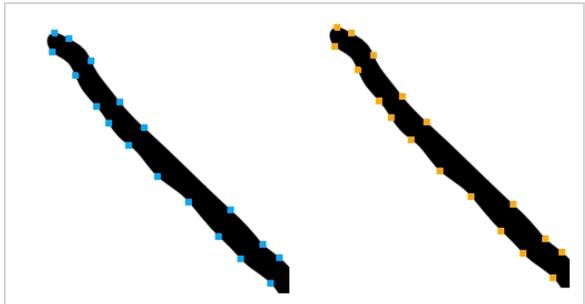
		<ul style="list-style-type: none"> <li>• <b>Start:</b> Lets you select the style of the start tip, which is the first tip you drew. You can choose between Round or Flat style.</li> <li>• <b>End:</b> Lets you select the style of the end tip, which is the last tip you drew. You can choose between Round or Flat style.</li> <li>• <b>Join:</b> 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.</li> </ul>
	<p>Pencil Stencils</p>	<p>Gives you the flexibility to change the style and thickness of your pencil lines even after they are drawn. You can apply preset pencil stencils or create your own.</p> 
	<p>Adding Texture to a Pencil Line</p>	<p>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.</p>
	<p>Adjusting the Text Selection</p>	<p>When you select text with the Select tool, the tool properties will display the Text tool options on the bottom of the view. You can also press Alt + 9 to display only the Text properties in the Tool Properties view—see <a href="#">Text Tool Properties on page 464</a>.</p> 

## Smooth Editor Tool Properties

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

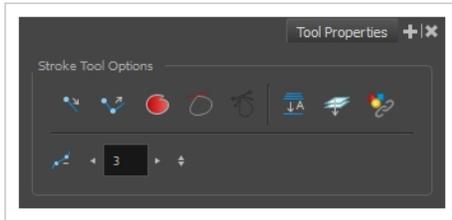


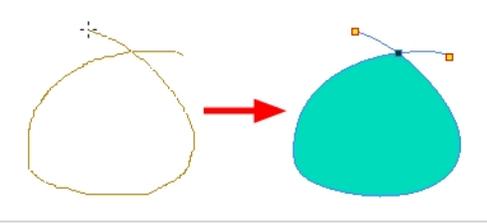
Icon	Tool Name	Description
	Smoothing Style	<p>The Smoothing Style options allow you to smooth a portion of your drawing by tracing a smoothing stroke over the zone to optimize or by selecting an area of the drawing with the Marquee or Lasso.</p> <p>Note that by default, the Smooth Editor tool colour is yellow, it was changed to orange for screen grab clarity.</p>
	Show Control Points	<p>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.</p>
	Minimum Size and Maximum Size	<p>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.</p> <p>This options is available while using the Brush Smoothing  style.</p>

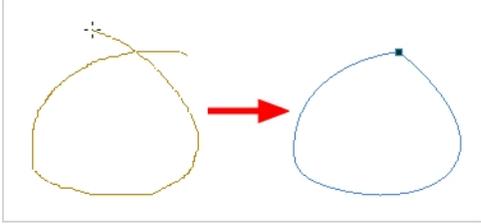
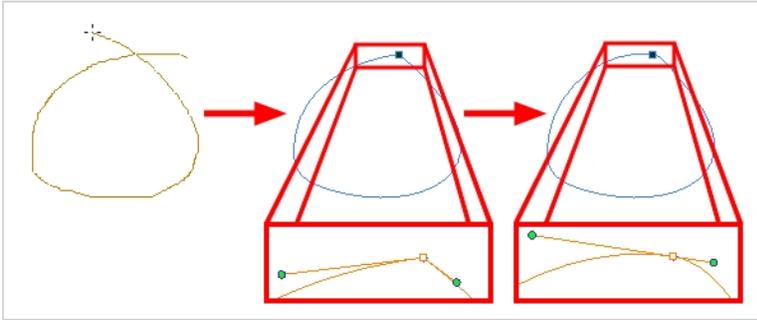
		<ul style="list-style-type: none"> <li>• <b>Maximum and Minimum Size:</b> Defines the maximum and minimum width of the stroke.</li> <li>• <b>Up/Down arrows:</b> Use the up and down arrows to set the minimum and maximum size value.</li> </ul>
	<p>Smoothness</p>	<p>The Smoothness impacts the strength of 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.</p> 
	<p>Colour</p>	<p>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.</p> 

## Stroke Tool Properties

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



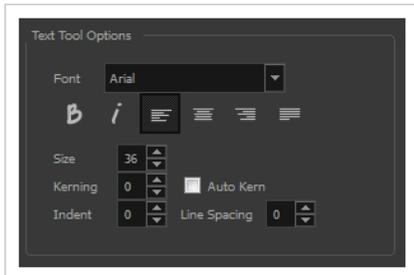
Icon	Tool Name	Description
	Draw Stroke as Straight Lines	Enable the Draw Stroke as Straight Lines option if you want the new strokes you draw to be a perfect straight line. Disable the option if you want the stroke to follow the mouse gesture.
	Connect Line Ends	Enable the Connect Line Ends option if 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	<p>When enabled, drawing a closed shape will automatically fill it with the currently selected Paint colour.</p>  <div style="border: 1px solid #00aaff; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>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 .</p> </div>
	Trim Extra Lines	When enabled, drawing a closed shape will automatically remove the outstanding lines.

		
	<p>Align Handles After Trim</p>	<p>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.</p> 
	<p>Auto-Flatten Mode</p>	<p>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.</p>
	<p>Apply to Line and Colour Art</p>	<p>Allows you to perform drawing operations on both the Line Art and Colour Art layers of your drawing simultaneously.</p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p><b>NOTE</b> If you have Overlay and Underlay Art layers enabled, they will also be affected when this option is enabled.</p> </div>
	<p>Apply to Synced Drawing Layers</p>	<p>When working on a synced layer, the tool is applied to the current layer and all the layers that are synced to it. This option only works in the Camera view.</p>
	<p>Smoothness</p>	<p>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.</p>

## Text Tool Properties

Use the Text tool's properties to select the font type and other formatting options you want to apply to the text.

If you already wrote your text, you must first use the Text tool and select the text portion you want to format. You can modify the parameters of an entire text box using the Select tool.



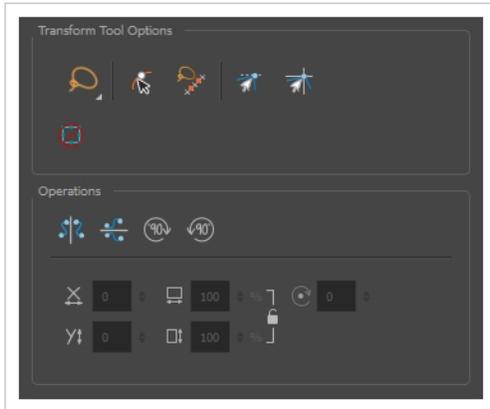
Icon	Tool Name	Description
	Font Type	Use the Font drop-down menu to select a font. OTF fonts are supported. 
<b>B</b>	Bold	Use this option to bold your text selection. 
<i>i</i>	Italic	Use this option to italicize your text selection. 
	Left Alignment	Use this option to left align the paragraph.

		<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>LOREM IPSUM DOLOR SIT AMET,  CONSECTETUR ADIPISCING  ELIT. AENEAN VESTIBULUM,  METUS AC FERMENTUM  PORTTITOR, ODIO TURPIS  PORTTITOR NIBH, ID  CONSEQUAT MAGNA LIGULA ET  ELIT. CURABITUR SOLLICITUDIN  ELIT AC LOREM MOLLIS ACC  UMSAN.</p> </div>
	<p>Centered Alignment</p>	<p>Use this option to center align the paragraph.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>LOREM IPSUM DOLOR SIT AMET,  CONSECTETUR ADIPISCING  ELIT. AENEAN VESTIBULUM,  METUS AC FERMENTUM  PORTTITOR, ODIO TURPIS  PORTTITOR NIBH, ID  CONSEQUAT MAGNA LIGULA ET  ELIT. CURABITUR SOLLICITUDIN  ELIT AC LOREM MOLLIS ACC  UMSAN.</p> </div>
	<p>Right Alignment</p>	<p>Use this option to right align the paragraph.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>LOREM IPSUM DOLOR SIT AMET,  CONSECTETUR ADIPISCING  ELIT. AENEAN VESTIBULUM,  METUS AC FERMENTUM  PORTTITOR, ODIO TURPIS  PORTTITOR NIBH, ID  CONSEQUAT MAGNA LIGULA ET  ELIT. CURABITUR SOLLICITUDIN  ELIT AC LOREM MOLLIS ACC  UMSAN.</p> </div>
	<p>Justified Alignment</p>	<p>Use this option to justify align the paragraph.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>LOREM IPSUM DOLOR SIT AMET,  CONSECTETUR ADIPISCING  ELIT. AENEAN VESTIBULUM,  METUS AC FERMENTUM  PORTTITOR, ODIO TURPIS  PORTTITOR NIBH, ID  CONSEQUAT MAGNA LIGULA ET  ELIT. CURABITUR SOLLICITUDIN  ELIT AC LOREM MOLLIS ACC  UMSAN.</p> </div>
	<p>Font Size</p>	<p>Enter a size for the text.</p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>small text <b>big text</b></p> </div>
	<p>Kerning</p>	<p>Use the kerning field to modify the spacing between letters and characters. You</p>

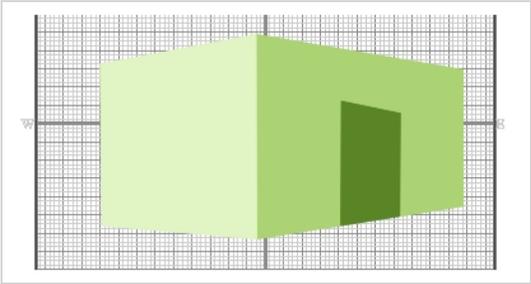
		<p>can select the Auto Kern option to set the kerning automatically based on the font's predefined standard. A negative value decreases spacing between each character, creating a letter overlap and a positive value increases it.</p> <div data-bbox="561 317 1143 600" style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> </div> </div>
	Indent	<p>Enter a value in the Indent field to increase or decrease the indentation on the first line of your text. A positive value sets the first line of your paragraph farther to the right and a negative value sets it farther to the left.</p> <div data-bbox="561 800 1143 989" style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> </div> </div>
	Line Spacing	<p>Enter a value in the Line Spacing field to decrease or increase the space between each line of text.</p> <div data-bbox="561 1146 1143 1367" style="border: 1px solid black; padding: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> <div style="width: 45%;"> <p> Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean vestibulum, metus ac fermentum porttitor, odio turpis porttitor nibh, id consequat magna ligula et elit. Curabitur sollicitudin elit ac lorem mollis acc umsan.</p> </div> </div> </div>

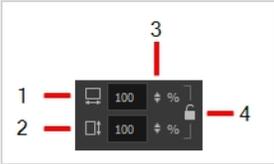
## Transform Tool Properties

When selecting the Transform tool, several options are available in the Tool Properties view.



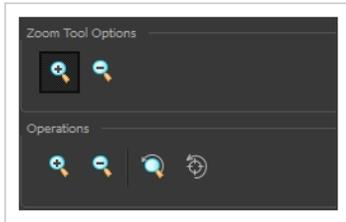
Icon	Tool Name	Description
	Lasso	<p>Sets the selection mode to Lasso, which allows you to select multiple items by drawing a lasso around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Marquee mode.</p> </div>
	Marquee	<p>Sets the selection mode to Marquee, which allows you to select multiple items by drawing a rectangle around them.</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p> <b>TIP</b> When this option is enabled, you can press and hold the Alt key to temporarily use Lasso mode.</p> </div>
	Peg Selection Mode	<p>In the Camera view, the Peg Selection Mode limits the selection to peg layers instead of drawing layers. This mode is useful when you have created a character rig using peg layers for each drawing. That way, you do not accidentally select the drawing layer when you want to animate on the peg.</p> <p>When disabled, the Transform tool selects the drawing layers.</p>
	Control Selection Mode	<p>When enabled, it is possible to select one or several controls displayed in the Camera by drawing a lasso/marquee around them. By default, drawing a lasso or marquee with the Transform tool</p>

		selects layers.
	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. 
	Hide Manipulator Controls	The Hide Manipulator Controls button lets you hide the bounding box and manipulator controls from the Camera view when an element is selected.
	Flip Horizontal	Flips the current selection horizontally. You can also select <b>Animation &gt; Flip &gt; Flip Horizontal</b> from the top menu or press 4 or 5.
	Flip Vertical	Flips the current selection vertically. You can also select <b>Animation &gt; Flip &gt; Flip Vertical</b> from the top menu or press 4 or 5.
	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 ad Y	Use the Offset X and Offset Y operation fields to enter specific values and precisely reposition the selected shape.  <ol style="list-style-type: none"><li>1. <b>X</b>: Type a value in this field to reposition your selection along the X-axis.</li></ol>

		<ol style="list-style-type: none"> <li>2. <b>Y:</b> Type a value in this field to reposition your selection along the Y-axis.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the X or Y value field.</li> </ol>
	<p>Width and Height</p>	<p>Use the Width and Height operation fields to enter specific values to resize the selected shape with precision.</p>  <ol style="list-style-type: none"> <li>1. <b>Width:</b> Type a value in this field to resize the width of your selection.</li> <li>2. <b>Height:</b> Type a value in this field to resize the height of your selection.</li> <li>3. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Width or Height fields.</li> <li>4. <b>Lock icon:</b> Click the lock icon to lock or unlock the ratio between the Width and Height values.</li> </ol>
	<p>Angle</p>	<p>The Angle operation lets you to enter specific values and accurately rotate the selected shape.</p>  <ol style="list-style-type: none"> <li>1. <b>Angle:</b> Type a degree value in this field to rotate your selection.</li> <li>2. <b>Up/Down arrows:</b> Use the up and down arrows to modify the value in the Angle value field.</li> </ol>

## Zoom Tool Properties

When you select the Zoom tool, its 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 5: 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.

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## Top Toolbars

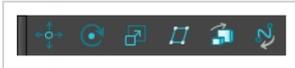
Harmony has a series of toolbars that are added by default at the top of the interface. These toolbars can be moved on the sides of the interface as well as within specific views.

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

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## Advanced Animation Toolbar

The Advanced Animation toolbar contains tools to position and animate layers. The Scale, Translate and Rotate tools can be used to reposition the permanent pivot position of a layer. Unlike the Transform tool, each tool in the Advanced Animation toolbar performs a single operation, either rotate, scale, translate or scale in relation to the camera distance.



### How to access the Advance Animation toolbar

1. Select **Windows > Toolbars > Advanced Animation**.

Icon	Tool Name	Description
	Translate	Lets you move the selected element along the X and Y axes.
	Rotate	Turns a selected element around its pivot point.
	Scale	Increases or decreases the size of a selected element. You can scale an object up to make it larger or down to make it smaller. Press Shift to scale the element while maintaining its proportions.
	Skew	Slants the selected element.
	Maintain Size	Keeps elements the same size aspect ratio in the Camera view as you move them towards or away from the camera.
	Spline Offset	Lets you reposition the visual trajectory without offsetting or modifying your animation. By default, the trajectory is located at 0,0,0 fields. If your elements were drawn in a different location than the centre of the drawing area, it will look like the trajectory is not aligned with your drawing. Also, if you have several elements attached to one trajectory, you might want your trajectory to be at a different location to represent the group's motion better.

## Art Layer Toolbar

The Art Layer toolbar lets you access the art layers. By default, only the Line Art and Colour Art are displayed. A drawing is composed of two layers, a line layer and a colour layer. The colour layer is always placed under the line layer. These layers are accessible in the Drawing or Camera view (using drawing tools). When you view the final drawing, you will see the final composition of the lines and colours, not two separate layers.



You can draw and paint in all layers. If you prefer to work in a single layer, everything can be done in the Line Art layer.

You can change your preferences to enable the advanced use of layers and have access to four layers instead of two:

- Overlay
- Line Art
- Colour Art
- Underlay

### How to access the Art Layer toolbar

1. Select **Windows > Toolbars > Art Layer**.

### How to enable the Support Overlay and Underlay Arts option

1. Select **Edit > Preferences** ( Windows/Linux ) or **Harmony Advanced > Preferences** ( macOS ).
2. In the Preferences dialog box, select the **Advanced** tab.
3. In the Advanced Options section, select the **Support Overlay and Underlay Arts** option.
4. Click **OK**.

Icon	Tool Name	Description
	Preview Line Art and Colour Art	Displays all Art layers.

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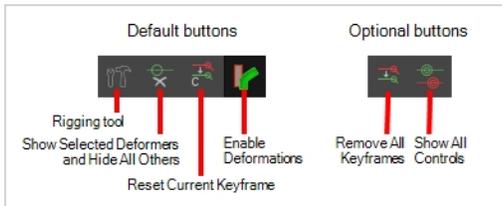
	Overlay Art	Makes the Overlay Art layer current.
	Line Art	Makes the Line Art layer current.
	Colour Art	Makes the Colour Art layer current.
	Underlay Art	Makes the Underlay Art layer current.

## Deformation Toolbar

T-RIG-007-009

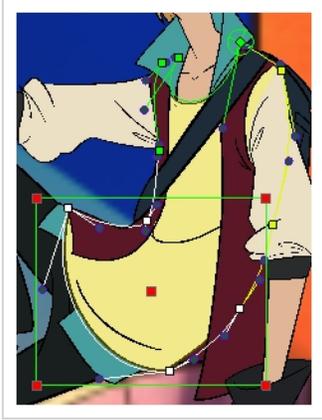
The Deformation toolbar contains the various tools and options used to create a deformation rig. This toolbar is displayed in the default interface.

By default, the Deformation toolbar only contains the essential options. If you right-click on the toolbar and select **Customize**, you can add additional buttons.



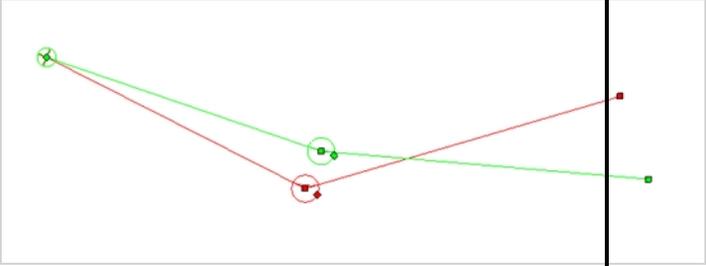
### Default Buttons

Icon	Tool Name	Description
	Rigging Tool	The Rigging tool is used to create a Bone deformation chain. You also use it to set up the resting position.  To learn more about the Rigging tool's properties, see <a href="#">Rigging Tool Properties on page 450</a> .
	Show Selected Deformation Chains and Hide All Others	Displays the deformer manipulators for the selected drawings or selected deformers in the Camera view, and hides all other deformer manipulators.
	Show Manipulator	When several points from a curve or envelope deformation chain are selected, this displays a manipulator bounding box around them. Using this manipulator, you can move, rotate and scale the selected points together.

		
	Reset Current Keyframe	<p>The Reset Current Keyframe copies the resting position, the original setup of your skeleton before undergoing any deformation, to your current frame. Once you have created a deformation chain, you can use the Rigging tool to adjust the position and appearance of the rig to fit the element. When the skeleton is in place, you can use the Reset Current Keyframe button to reset the current frame position to the resting position.</p>
	Enable Deformations	<p>The Enable Deformations button allows you to display your drawings in their original state or with deformations while creating additional drawings. Depending on the artwork you need to create, you might need to refer to the other images either deformed or in their original position.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b></p> <p>Disabling deformations is only a display mode. Although drawings will not appear deformed in the Camera view, even in Render View mode, they will still be deformed in the rendered images.</p> </div>

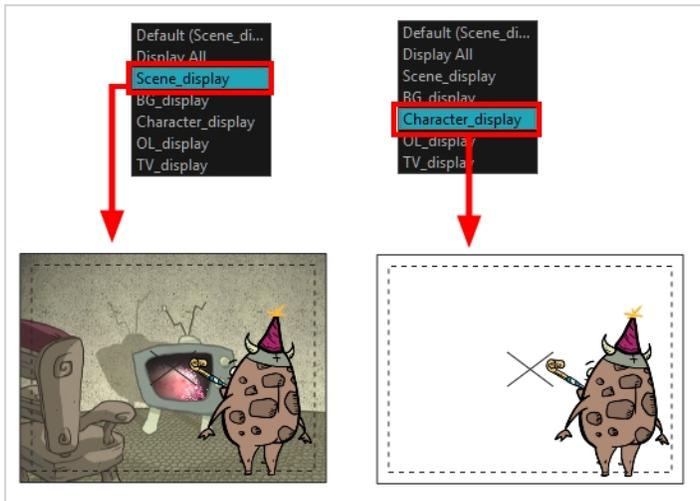
## Optional Buttons

Icon	Tool Name	Description
	Remove All Keyframes	The Remove All Keyframes option removes all keyframes on the selected deformation chain.

	<p>Show All Controls</p>	<p>The Show All Controls button lets you visualize the resting position in red (Setup mode) and the active position (Animation) in green at the same time</p> 
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## Display Toolbar

The Display toolbar lets you select the different Display nodes available in the node system.



Harmony Advanced doesn't allow you to add Display nodes. The display selection feature is only available for the possible scenario that you need to use a specific Display node created by a Harmony Premium user.

When your scene does not have a Display node, it is automatically set to Display All which uses the Timeline view ordering and shows floating nodes from the Node view. You can also set your scene to use Display All using the Display toolbar.



### NOTE

If you try to add a peg or other transformation layer in the Timeline view without having a layer selected, an error message will display. Make sure to change to Display All. The peg layer will be floating in the Node view and will not be visible in the Timeline view. The Timeline view shows only layers that are connected to the Composite node.

If you switch to Display All, you run the risk of not realizing when you have floating nodes that are not connected to your composite. For this reason, it is not recommended to work in Display All mode.

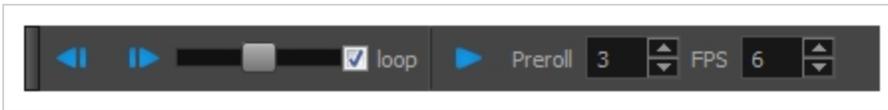
### How to access the Display toolbar

1. Select **Windows > Toolbars > Display**.

## Easy Flipping Toolbar

T-LAY-003-007

The Easy Flipping toolbar lets you rapidly flip through drawings in the Drawing view as is done with paper drawings. In order for the features in this toolbar to work, you must be in the Drawing view.



### How to access the Easy Flipping toolbar

1. Select **Windows > Toolbars > Easy Flipping**.

Icon	Tool Name	Description
	Previous Drawing	Displays the previous drawing of your animation.
	Next Drawing	Displays the next drawing of your animation.
	Slider	Lets you flip forwards or backwards through your drawings by moving the slider.
	Loop	Displays drawings in the first frame after you reach the last frame of your animation.
	Easy Flip	Automatically flips through the drawings based on the FPS.
	Preroll	Sets the number of drawings to be flipped through before the starting drawing. The starting drawing is determined by the position of the red playhead in the Timeline view.
	FPS	Sets the speed of playback in the units of frames per second.

## 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
	New (Harmony Stand Alone)	Creates a new scene while closing any scene already open. The New Scene dialog box opens, asking for directory, name, and resolution information.
	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.
	Save As	<p>Saves the current file with a different name and at a different location.</p> <p>Saves the current state of a scene as another scene. The Save As window prompts you for a new name and a different location for this scene before saving it. This will create a complete scene directory for the new scene.</p> <div style="border: 1px solid green; padding: 5px; margin-top: 10px;"> <p> <b>NOTE</b> The scene name <b>cannot</b> exceed 23 characters.</p> </div>
	Import Images	Imports bitmap images which you can choose to vectorize.

## Flip Toolbar

The Flip toolbar lets you determine the type of drawing to include in your flipping selection. You can flip through the key, breakdown or in-between drawings individually, or view a combination.



### How to access the Easy Flipping toolbar

1. Select **Windows > Toolbars > Easy Flipping**.

Icon	Tool Name	Description
	Show Key Drawings	Displays key drawings when flipping through drawings.
	Show Breakdown Drawings	Displays breakdown drawings when flipping through drawings.
	Show In-between Drawings	Displays in-between drawings when flipping through drawings.
	Show Retake Key Drawings	Displays retake key drawings when flipping through drawings.
	Show Retake Breakdown Drawings	Displays breakdown retake drawings when flipping through drawings.
	Show Retake In-between Drawings	Displays retake in-between drawings when flipping through drawings.

## Game Toolbar

The Game toolbar contains tools for setting anchors and props, as well as exporting to sprite sheets and Easel JS.



### How to access the Game toolbar

1. Do one of the following:

- In the top menu, select **Windows > Toolbars > Game**.
- Right-click on any existing toolbar and select **Game**.

Icon	Tool Name	Description
	Toggle Anchor	<p>Adds or remove the Anchor property for the selected layer. When a layer is an anchor, its pivot point is exported as an anchor in Unity. A prop can be attached to the anchor to follow the anchor's animation. Since the anchor is the layer's pivot, it will move and rotate with the anchor layer's movement as well as its parent layers' movement.</p> <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b> You can see whether a layer has the Anchor property in the Metadata Editor view—see <a href="#">Metadata Editor View on page 540</a></p> </div>
	Toggle Prop	<p>Adds or remove the Prop property for the selected layer. When a layer is a prop, it is exported as a prop to Unity. A prop can be attached to an anchor on your character, which makes it follow the anchor's animation.</p> <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b> You can see whether a layer has the Prop property in the Metadata Editor view—see <a href="#">Metadata Editor View on page 540</a></p> </div>
	Export to Sprite Sheets	<p>Opens the Export to Sprite Sheets dialog, from which you can export your scene as a rigged sprite sheet that can be imported in Unity and which can have props and anchors—see <a href="#">Export to Sprite Sheet Dialog Box on page 60</a>.</p>

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Icon	Tool Name	Description
	Export to Easel JS	Opens the Export to Easel JS dialog, from which you can export your scene as a rendered sprite sheet that can be imported in Unity—see <a href="#">Export to Easel JS Dialog Box</a> on page 51.

## Mark Drawing Toolbar

The Mark Drawing toolbar lets you identify drawings such as key, breakdown and in-between. The drawing identification feature can help the animator stay well organized and save time when identifying key, breakdown or in-between drawings in the Xsheet and Timeline views.



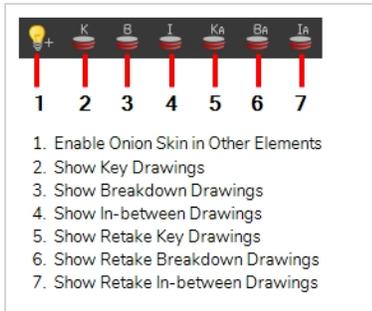
### How to access the Mark Drawing toolbar

1. Select **Windows > Toolbars > Mark Drawings**.

Icon	Tool Name	Description
	Mark as Key Drawing	Identifies the selected drawing as a key drawing.
	Mark as Breakdown Drawing	Identifies the selected drawing as a breakdown drawing.
	Mark as In-between Drawing	Identifies the selected drawing as an in-between drawing.
	Mark as Retake Key Drawing	Identifies the selected drawing as a key retake drawing.
	Mark as Retake Breakdown Drawing	Identifies the selected drawing as a breakdown retake drawing.
	Mark as Retake In-between Drawing	Identifies the selected drawing as a in-between retake drawing.

## Onion Skin Toolbar

The Onion Skin toolbar displays previous and subsequent drawings. When designing or animating, it is useful to see previous drawings. By default, previous drawings appear in a shade of red and next drawings are displayed in green. In the Onion Skin toolbar, you can select the type of drawing to display.



### NOTE

You can change the default onion skin display colours in the Preferences dialog box.

For tasks related to this toolbar, see .

### How to access the Onion Skin toolbar

1. Select **Windows > Toolbars > Onion Skin**.

Icon	Tool Name	Description
	Enable Onion Skin in Other Elements	Displays previous and next drawings in other layers than the current one. In the Drawing view, use the Enable Onion Skin in Other Elements feature to see the previous and next drawings of the layers visible in Light Table mode.
	Show Key Drawings	Displays all drawings marked as key drawings.
	Show Breakdown Drawings	Displays all drawings marked as breakdown drawings.
	Show In-between Drawings	Displays all drawings marked as in-between drawings.
	Show Retake Key	Displays all key drawings marked to be retaken.

Icon	Tool Name	Description
	Drawings	
	Show Retake Breakdown Drawings	Displays all breakdown drawings marked to be retaken.
	Show Retake In-between Drawings	Displays all in-between drawings marked to be retaken.

## Playback Toolbar

The Playback toolbar lets you play back animation and sound. Use it to scrub the sound to create your lip-sync, loop the playback, navigate through frames, and change the playback range and speed.



Name	Button	Description
Play		Plays the scene in the Camera or Drawing view. You can also select <b>Play &gt; Play</b> or <b>Stop</b> from the top menu.
Render and Play		Renders your scene's frames, then opens the rendered frames in Harmony Play for playback. This allows you to preview your scene's animation in real time, with the effects rendered and with no risk of slowdown. You can click and hold this button to switch its mode to <b>Record and Play</b> or <b>Test SWF Movie</b> .
Record and Play		Exports your scene as it appears in the Camera view into a movie file, then opens it in your workstation's default video player. This allows you to preview your animation without any risk of slowdown, but it does not preview the effects in your scene. However, it is much faster than Render and Play.
Test SWF Movie		Quickly exports your scene as a Flash Movie ( <b>.swf</b> ), then opens it in your workstation's default web browser.
Enable Loop		If pressed, your scene will repeat indefinitely when playing. Otherwise, it will stop when the end is reached. You can also select <b>Play &gt; Loop</b> from the top menu.
Enable Sound		When pressed, your scene's soundtrack will play during playback. You can also select <b>Play &gt; Enable Sound</b> from the top menu.
Enable Sound Scrubbing		When pressed, you will hear a sample of your scene's soundtrack at the current frame when moving your scene's playhead in the Timeline view. This allows you to easily situate where the action is relative to the

Name	Button	Description
		<p>sound track.</p> <p>You can also select <b>Play &gt; Enable Sound Scrubbing</b>.</p>
Jog Frames		<p>Allows you to quickly play your scene forward or backward to preview your animation.</p> <p>Moving the handle towards the right will play your scene forward, while moving it towards the left will play your scene backward.</p> <p>The closer to the edge you move the handle, the faster the playback will be, allowing you to dose the speed at which your scene is played. When the handle is at the edge, your scene will play at its actual framerate.</p> <p>Once the head is released, it returns to the middle and playback stops.</p>
Frame		<p>Lets you manually enter the current frame number, setting the playhead's position.</p>
Start		<p>Let's you manually enter the number of the first frame to play during playback.</p> <div data-bbox="696 1119 1430 1293" style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>You can also click on <b>Start</b> (just left of the input field) to quickly set the Start frame to the current frame.</p> </div>
Stop		<p>Let's you manually enter the number of the first frame to play during playback.</p> <div data-bbox="696 1446 1430 1621" style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> <b>TIP</b></p> <p>You can also click on <b>Stop</b> (just left of the input field) to quickly set the Stop frame to the current frame.</p> </div>
FPS (Frames per second)		<p>Lets you set the amount of frames that should be played during every second of playback, which is how the playback speed is determined.</p>

Name	Button	Description
		<div data-bbox="695 283 1430 453" style="border: 1px solid #c8e6c9; padding: 10px;"> <b>NOTE</b> This does not change the frames per second setting in your scene's resolution settings.</div>

## Scripting Toolbar

The scripting toolbar allows you to create buttons that run functions in your scripts. You can add one button for each function you want to be able to run, and clicking on the button will instantly run the script function your linked it to.



### How to add the Scripting toolbar to your workspace

1. Do one of the following:
  - In the top menu, select **Windows > Toolbars > Scripting**.
  - Right-click on any existing toolbar and select **Scripting**.

Icon	Tool Name	Description
	Manage Scripts	Opens the Scripts Manager dialog box where you can add scripts and functions to your Scripting toolbar.
	Stop Script	Stops the execution of a script launched from the Scripting toolbar.

## Tool Presets Toolbar

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



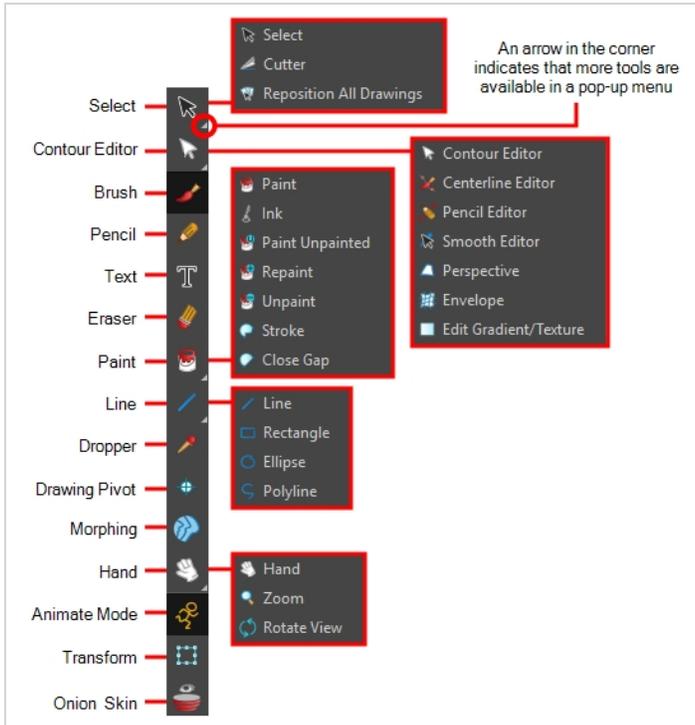
### How to access the Tool Presets toolbar

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 all the main tools you need to work in Harmony. In the default workspace, this toolbar is located on the left-most side of the interface. A small triangle at the lower-right corner of a tool indicates additional tools under the main tool. To access these tools, hold down the left mouse button until the additional tools appear, then select one.

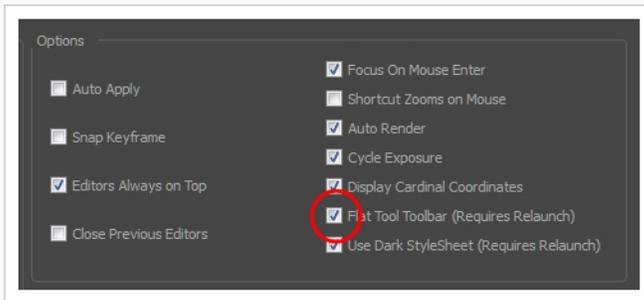


By default, the Tools toolbar displays several of its tools in pop-up menus that must be opened. It is possible to make the Tools toolbar display every tool in its individual button instead by enabling the Flat Tools Toolbar preference. This makes the selection of tools quicker. However, because there 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

- Do one of the following:
  - Select **Edit > Preferences** (Windows/Linux) or **Harmony Advanced > 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.

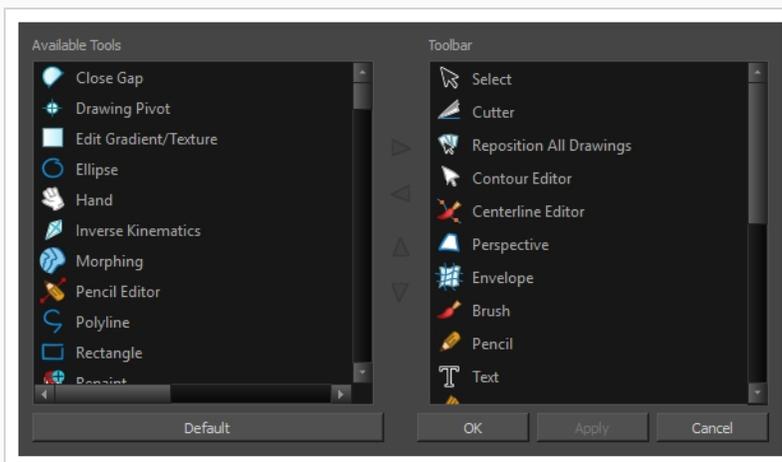


4. Click **OK** and restart Harmony.

## 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.

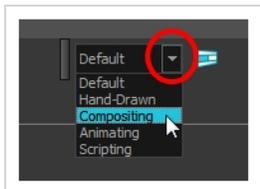
Cutter		Allows you to cut a part of your artwork, then reposition, scale, rotate and skew it.
Reposition All Drawings		Allows you to reposition, scale, rotate and skew all drawings in the current layer.
Contour Editor		Allows you to edit the vector contours of brush strokes, pencil lines and shapes in 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.
Animate Mode		Enables the Animate mode which records the position, rotation, scale, skew, etc. of objects as keyframes in the Timeline view. Turn off the Animate mode to reposition objects for the entire scene. When the Animate mode is disabled, keyframes are not created when an object's parameters change.
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.

## 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

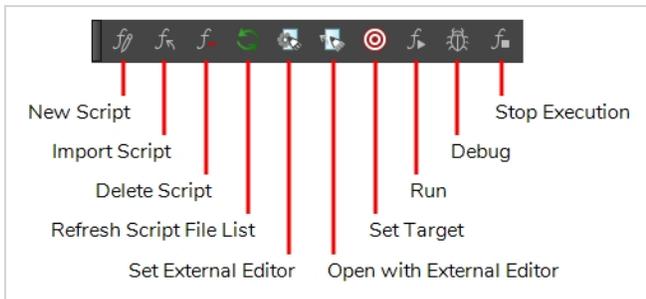
Harmony has a series of view specific toolbars that are only available in a given view. These toolbars can be moved only within their view.

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

Script Editor View Toolbar .....	502
Timeline View Toolbar .....	506
Xsheet View Toolbar .....	508

## Script Editor View Toolbar

The Script Editor toolbar gives you quick access to some commonly used commands for editing and testing scripts in the Script Editor view—see [Script Editor View](#) on page 546.



### How to access the Script Editor toolbar

1. Add the Script Editor view to your workspace by doing one of the following:
  - In the top-right corner of an existing view, click on the **+** Add View button and select Script Editor.
  - In the top menu, select **Windows > Script Editor**.
2. Click on the Script Editor view to set the focus on it.
3. In the top menu, select **Windows > Toolbars > Script Editor**.

Icon	Button	Description
	New Script	<p>Creates a new script. When you click on this button, you are first prompted to type in a name for the script. Then, you will be prompted to select which location to save the script in:</p> <ul style="list-style-type: none"> <li>• <b>User:</b> Saves the script to your user preferences. You will be able to run and edit the script from any scene as long as you are logged in as the same user.</li> </ul> <div style="border: 1px solid green; padding: 10px; margin: 10px 0;"> <p> <b>NOTE</b></p> <p>If you are using Harmony Stand Alone, the script will be saved to the preferences for your account on your computer. If you are using Harmony Server, the script will be saved to the preferences for your Harmony database user.</p> </div> <ul style="list-style-type: none"> <li>• <b>Global:</b> If you are using Harmony Server, select this option to save the script to the Harmony database's global script directory. Anyone who is logged in to the database will be able to edit and run this script.</li> </ul>

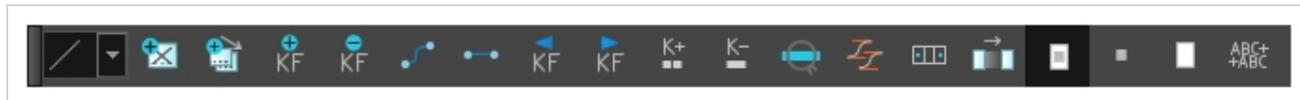
Icon	Button	Description
		<ul style="list-style-type: none"> <li>• <b>Environment:</b> If you are using Harmony Server, select this option to save the script to the current scene's environment. Anyone will be able to edit and run the script as long as they are working on a scene inside this environment.</li> <li>• <b>Job:</b> If you are using Harmony Server, select this option to save the script to the current scene's job. Anyone will be able to edit and run the script as long as they are working on a scene inside this job.</li> <li>• <b>Scene:</b> Save the script to the scene's <b>scripts</b> sub-folder. Anyone will be able to edit and run the script when working on this specific scene.</li> </ul> <div data-bbox="558 663 1430 806" style="border: 1px solid #90EE90; padding: 5px;">  <p><b>NOTE</b> For more information on script locations, see <a href="#">Script Editor View</a>.</p> </div>
	<p>Import Script</p>	<p>Allows you to import a script from your machine into Harmony. When you click on this button, you are prompted to browse for and select a script on your file system. Then, you are prompted to select which location to import the script in:</p> <ul style="list-style-type: none"> <li>• <b>User:</b> Saves the script to your user preferences. You will be able to run and edit the script from any scene as long as you are logged in as the same user.</li> </ul> <div data-bbox="639 1121 1430 1354" style="border: 1px solid #90EE90; padding: 5px;">  <p><b>NOTE</b> If you are using Harmony Stand Alone, the script will be saved to the preferences for your account on your computer. If you are using Harmony Server, the script will be saved to the preferences for your Harmony database user.</p> </div> <ul style="list-style-type: none"> <li>• <b>Global:</b> If you are using Harmony Server, select this option to save the script to the Harmony database's global script directory. Anyone who is logged in to the database will be able to edit and run this script.</li> <li>• <b>Environment:</b> If you are using Harmony Server, select this option to save the script to the current scene's environment. Anyone will be able to edit and run the script as long as they are working on a scene inside this environment.</li> <li>• <b>Job:</b> If you are using Harmony Server, select this option to save the script to the current scene's job. Anyone will be able to edit and run the script as long as they are working on a scene inside this job.</li> <li>• <b>Scene:</b> Save the script to the scene's <b>scripts</b> sub-folder. Anyone will be able to edit and run the script when working on this specific scene.</li> </ul>

Icon	Button	Description
		<div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTE</b> For more information on script locations, see <a href="#">Script Editor View</a>.</p> </div>
	Delete Script	<p>Deletes the selected script.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>You cannot delete a script if it is in the Application Resources location, as those are scripts that are installed with Harmony.</li> <li>If you delete a script that was originally in Application Resources but which you copied to another location so you could make changes to it, the original version of the script in the Application Resources folder will be restored to the list.</li> </ul> </div>
	Refresh Script File List	<p>Refresh the list of scripts in the Script Editor. If there are new scripts in your user preferences or your scene's scripts sub-folder, click on this button to be able to open them in the Script Editor.</p>
	Set External Editor	<p>Allows you to type in the path and name for your preferred text editing software.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>On macOS, only typing the name of your preferred text editing software is enough if that application supports the AppleScript Open Document protocol.</li> <li>On Windows and GNU/Linux, unless your text editor is in your system's <b>PATH</b> environment variable, you will have to type in the full path to the editor.</li> </ul> </div>
	Open with External Editor	<p>Opens the selected script in the chosen external text editing software.</p>
	Set Target	<p>Prompts you to select which script and which function to use with the  Run and  Debug buttons.</p>
	Run	<p>Runs the target script and function.</p>

Icon	Button	Description
		<div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• If you have not set a target script and function, you will be prompted to set one when you click on this button.</li> <li>• You can set or change the target script and function by clicking on the  Set Target button.</li> <li>• If you are editing &lt;&lt;&lt;Sandbox&gt;&gt;&gt;, this button will simply run what you typed into the sandbox, regardless of whether another target is set.</li> </ul> </div>
	<p>Debug</p>	<p>Open the target script and function in the Qt Script Debugger, in which you can test and debug the function.</p> <div style="border: 1px solid #c8e6c9; padding: 10px;">  <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>• If you have not set a target script and function, you will be prompted to set one when click on this button.</li> <li>• You can set or change the target script and function by clicking on the  Set Target button.</li> <li>• If you are editing &lt;&lt;&lt;Sandbox&gt;&gt;&gt;, this button will simply debug what you typed into the sandbox, regardless of whether another target is set.</li> </ul> </div>
	<p>Stop Execution</p>	<p>If a script is currently running, this interrupts its execution.</p>

## Timeline View Toolbar

The 3D Graph toolbar works in conjunction with the elements in the 3D Graph view.



Button	Name	Description
	Set Ease Type	
	Create Empty Drawing	
	Duplicate Drawing	
	Insert Keyframe	
	Delete Keyframes	
	Set Motion Keyframe	
	Set Stop-Motion Keyframe	
	Go to Previous Keyframe	
	Go to Next Keyframe	
	Add Key Exposure	
	Delete Key Exposure	
	Centre On Selection	
	Set Ease for Multiple Parameters	
	Create Keyframes On	Opens the Create Keyframes On dialog box, where you can set the options to create a new keyframe every x number of frames.

	Fill Empty Cells	
	Paste Mode: All Drawing Attributes	
	Paste Mode: Keyframes Only	
	Paste Mode: Exposures Only	
	Add Prefix or Suffix	

## How to access the Timeline view toolbar

You can add the Timeline view toolbar to the Timeline view by:

- Going to the top menu and selecting **Windows > Toolbars > Timeline view**.
- right-clicking on the space at the top of the Timeline view and selecting **Timeline view**.





## Chapter 6: 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.

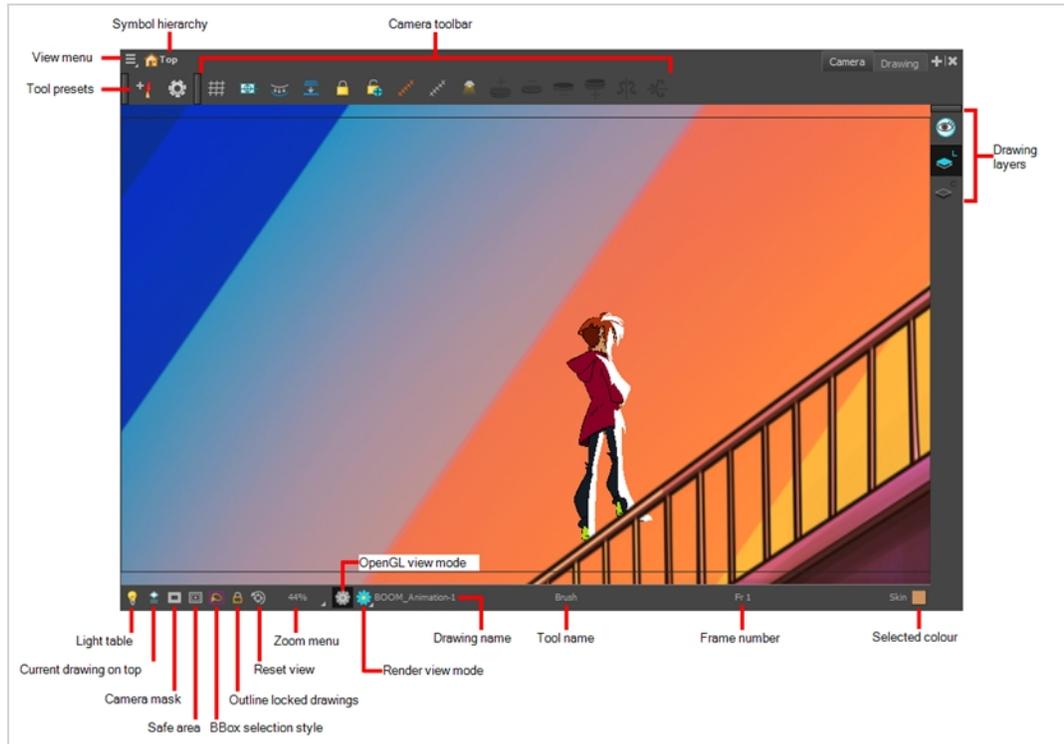
When a view is active, a red rectangle appears around the view. Keyboard shortcuts and top menu options are associated with the active view. If a menu option is greyed out, it means it does not apply to the layer, drawing or other type of selection or the option does not apply to the active view.

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## Camera View

The Camera view is the centre of operations in Harmony. In this view, you can draw, paint, animate, set up your scene, manipulate objects, open symbols and preview your animation.

The Camera view also has a top and bottom toolbar that you can use to navigate in the view, change the display mode or go up your symbol hierarchy.



### How to access the Camera view

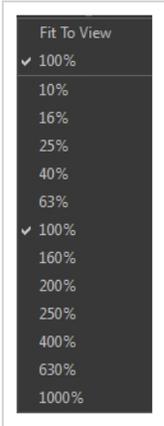
Do one of the following:

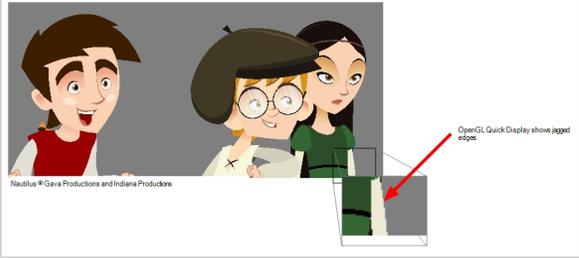
- From the top menu, select **Windows > Camera**.
- From any of the other views, click the Add View **+** button and select **Camera**.

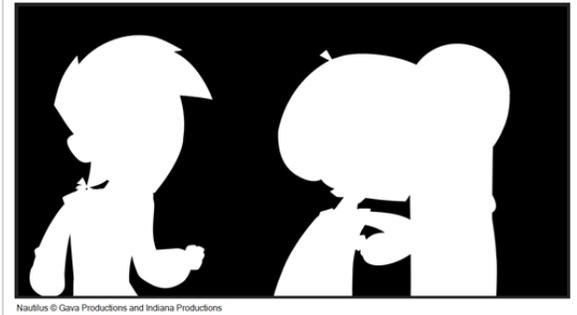
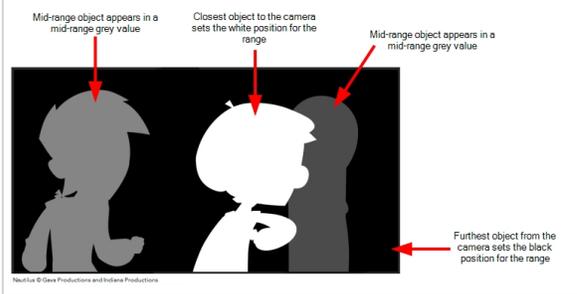
Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use in the Camera view to draw, animate or set up the scene.

	Editing Stack	<p>The Editing Stack menu displays the names of the symbols and their hierarchy when you are editing a symbol. You can click on the different names to go back up to the different parent symbols or the top/current project.</p>
	Camera View Toolbar	<p>The Camera View toolbar contains all the tools and options you can use in the Camera view to draw, animate or set up the scene. The toolbar can be displayed or hidden by right-clicking on it and selecting or deselecting the Camera View toolbar.</p>
	Light Table	<p>When you have a drawing layer or drawing selected, the Light Table button allows you to fade the colours of the other layers so you can see the current artwork better as you edit with a drawing tool. Note that the light table does not work when using a layer editing tool, such as the Transform tool.</p>  <p><small>Nautilus © Gava Productions and Indiana Productions</small></p>
	Current Drawing on Top	<p>When this button is enabled, the drawing that you are currently editing with a drawing tool is temporarily displayed in front of all the other elements. The actual scene is not modified.</p>  <p><small>Nautilus © Gava Productions and Indiana Productions</small></p>
	Camera Mask	<p>The Camera Mask button shows or hides Displays a black mask around the scene's frame to avoid seeing the unnecessary artwork. This option is handy when you're animating and setting up the scene. It allows you to see your scene's composition better.</p>

		<p>You can also access this from the top menu by selecting <b>View &gt; Show &gt; Camera Mask</b>.</p> 
	<p>Safe Area</p>	<p>The Safe Area button shows or hides Displays the TV safety zone and the centre of the camera frame. The safe area adapts to the scene resolution, as well as the safety zone and frame's centre.</p> <p>You can also access this feature from the top menu by selecting <b>View &gt; Show &gt; Safe Area</b>.</p> 
	<p>BBox Selection Style</p>	<p>When you select an object in the Camera view with the Transform tool, a bounding box always appears around the object and the artwork is tinted in fuchsia, red or yellow. Enabling this option will only keep the bounding box and remove the colour tint.</p> 
	<p>Outline Locked Drawings</p>	<p>Drawings that are locked in the Timeline view (cannot be selected in the Camera view) are displayed as wireframes.</p>

		
	<p>Reset View</p>	<p>The Reset View button resets any panning, zooming or rotation done in the Camera view and returns the display to the initial settings. You can also press Shift + M.</p>
	<p>Zoom Menu</p>	<p>The Zoom menu lets you enlarge or reduce the Camera or Drawing view display.</p> <p>To make the camera frame size always match the size of your view, select the <b>Fit to View</b> option. Click the drop-down arrow and select a zoom level or press 1 and 2.</p> 
	<p>OpenGL View Mode</p>	<p>The OpenGL View Mode button switches the Camera view to fast display, letting you see your animation play in real time. The OpenGL display requires less memory. The final look of your effects is not shown in the OpenGL View Mode. You must switch to the Render View Mode to see your effects.</p>

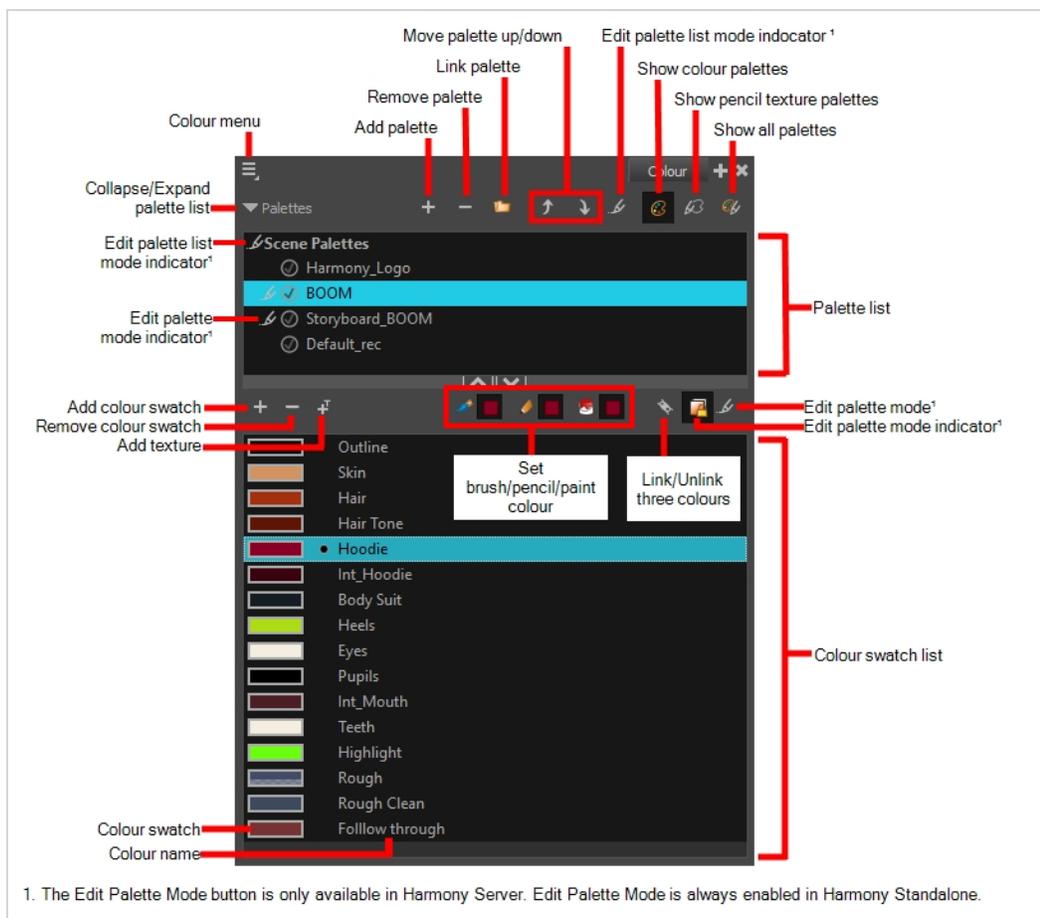
		 <p>A screenshot of a 3D scene featuring three cartoon characters (a boy in a red vest, a girl with glasses, and a girl in a green dress) looking at a tablet. The scene is rendered in a low-quality mode, showing significant aliasing and jagged edges. A red arrow points to the jagged edges of the tablet, with a text label 'OpenGL Quick Display shows jagged edges'.</p>
	<p>Render View Mode</p>	<p>The Render View Mode button switches the Camera view to a fully rendered display showing the final image of the current frame. If a modification is done to your current frame or if you move to a different frame, click the <b>Update Preview</b> button to update the display if your preview does not update automatically. The Render View Mode display lets you see the final look of your frames including effects and antialiasing. You cannot play back your scene in Render View Mode. To see your scene fully rendered and to play it back, you must press the Render and Play button in the Playback toolbar.</p>  <p>A screenshot of the same 3D scene as above, but rendered in a high-quality mode. The characters and the tablet are now smooth and antialiased, with no visible jagged edges. The background is also more detailed and smooth.</p>
	<p>Matte View Mode</p>	<p>The Matte View Mode button switches the Camera view to a matte display showing the alpha channel of the elements in your scene. The transparency level ranges from 0 to 100 percent. Zero percent is completely transparent and represented by black and 100 percent is completely opaque and represented by white. Everything in between these extremes has a transparency level somewhere between 1 and 99 percent and is represented in various shades of grey.</p> <ul style="list-style-type: none"> <li>To access the Matte View mode, click on the Render View button and select Matte View from the drop-down menu.</li> </ul>

		
	Depth View Mode	<p>The Depth View mode displays images in a relative white to black gradient scale. The object(s) closest to the camera are displayed in white and the object(s) furthest from the camera are displayed in black. If the position of the last object changes along the z-axis, that object will still remain black, so long as it retains its position as the object the farthest back. It does not matter where that object is in 3D space, it just matters what its position is relative to the other object in the same space. The objects closest and farthest from the camera set the range of the white to black scale. All the other objects fall somewhere in between.</p>  <ul style="list-style-type: none"> <li>To access the Depth View mode, click on the Render View button and select Depth View from the drop-down menu.</li> </ul>
	Drawing Name	<p>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 <b>Empty Cell</b> text is shown in the field.</p>
	Tool Name	<p>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</p>

		<p>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.</p>
	Frame Number	<p>The Frame Number field displays the number of the current frame.</p>
	Selected Colour	<p>The colour swatch displays the currently selected colour in the Colour view.</p>

## 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	<p>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.</p> 
	Link Palette	<p>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.</p> <p>If you want to import a palette as a copy into your scene's palette library, right-click on your palette list and select <b>Import</b>. You can also link to a palette in any location on your machine or network by selecting <b>Link to External</b>.</p>
	Order Palette List	<p>Moves palettes further up or down the palette list.</p> <p>If a palette has been cloned, the highest palette among the original palette and its clone(s) will be used by Harmony. This can be overridden by using a Colour-Override effect—see <a href="#">Colour-Override Layer on page 288</a>.</p>
	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.

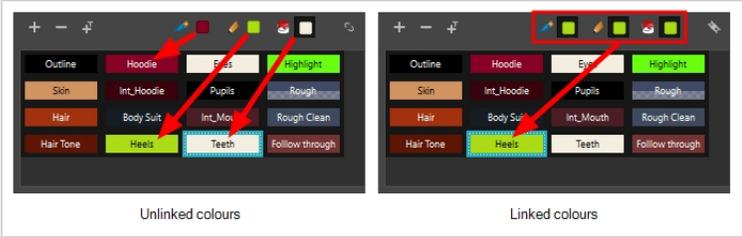
		<div style="border: 1px solid green; padding: 10px;">  <p><b>NOTE</b> In Harmony Stand Alone, you can always modify your scene's palette list. On Harmony Server, you must unlock your palette list before making modifications to it.</p> </div>
	Show Colour Palettes	Shows only colour palettes in the palette 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.

## Colour Swatch List Panel

Icon	Option	Description
+	Add Colour	Adds a new colour swatch to the bottom of your colour list.
-	Remove Colour	<p>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.</p> 
+	Add Texture	<p>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.</p>

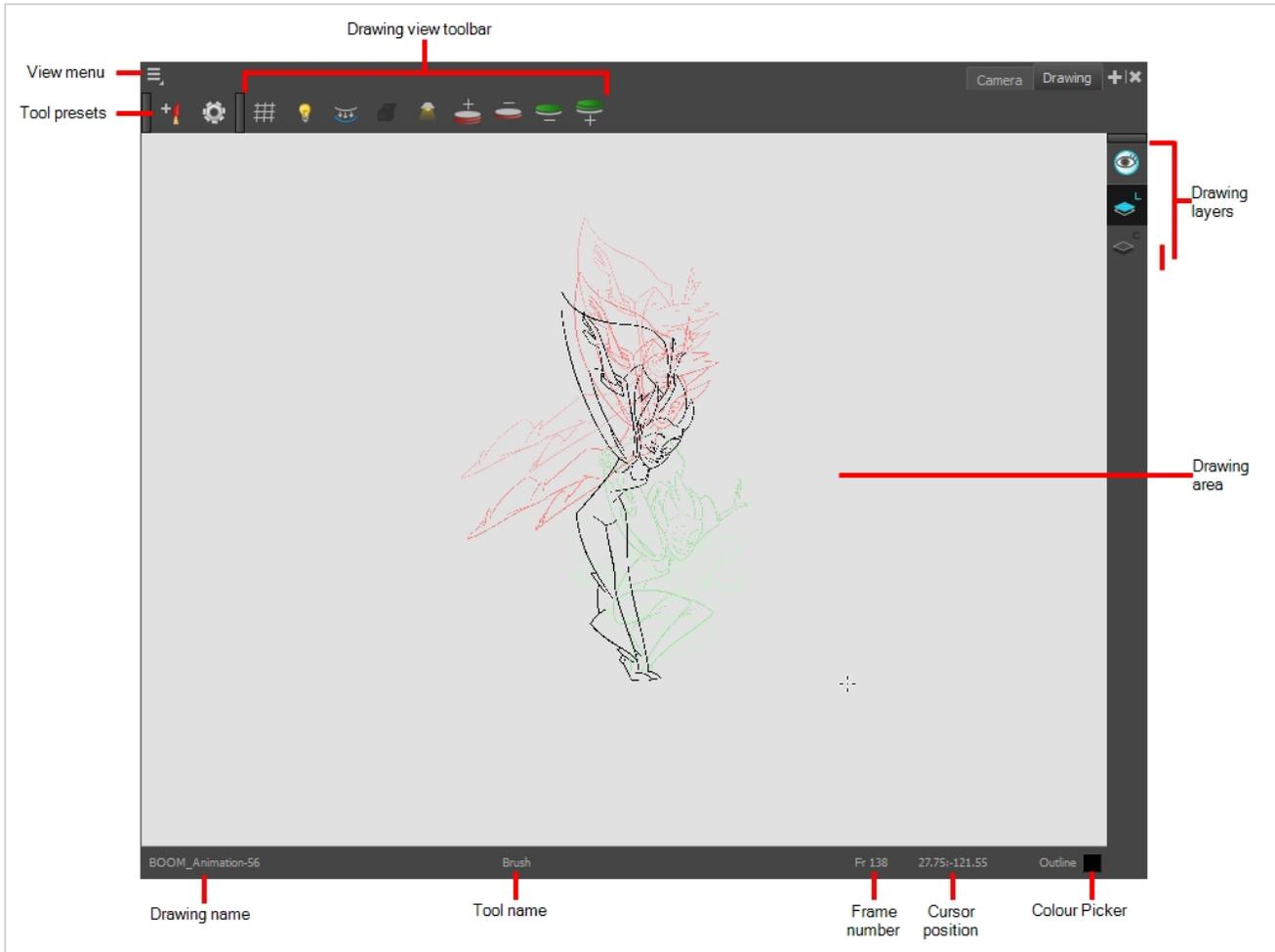
		
	<p>Set Current Brush Colour</p>	<p>When enabled, the colour you select in the colour view will be selected for the Brush tool.</p>
	<p>Set Current Pencil Colour</p>	<p>When enabled, the colour you select in the colour view will be selected for the Pencil tool, as well as other tools that create pencil lines, such as the Line, Rectangle, Ellipse and Polyline tools.</p>
	<p>Set Current Paint Colour</p>	<p>When enabled, the colour you select in the colour view will be selected for the Paint tool.</p>
	<p>Link/Unlink Three Colours</p>	<p>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.</p> 
	<p>Edit Palette Mode</p>	<p>In Harmony Server, this allows you to get the modifying rights to the selected palettes.</p> <p>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</p>

		<p>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.</p>												
	<p>Edit Palette Mode Indicator</p>	<p>In Harmony Server, this icon appears when you have the modifying rights on the currently selected palette.</p> <div data-bbox="690 485 1430 653" style="border: 1px solid #90EE90; padding: 10px;"> <p> <b>NOTE</b> In Harmony Stand Alone, you can always modify your palettes.</p> </div>												
	<p>Colour Swatch Name</p>	<p>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.</p> <div data-bbox="690 835 894 974" style="border: 1px solid #ccc; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 10px; background-color: #8B4513; border: 1px solid #000;"></td><td style="padding-left: 5px;">Skin</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #FFD700; border: 1px solid #000;"></td><td style="padding-left: 5px;">Teeth</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #90EE90; border: 1px solid #000;"></td><td style="padding-left: 5px;">Horns</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #696969; border: 1px solid #000;"></td><td style="padding-left: 5px;">Helmet</td></tr> </table> </div> <div data-bbox="690 1010 1430 1178" style="border: 1px solid #90EE90; padding: 10px;"> <p> <b>NOTE</b> Two colours can have the same name. Harmony identifies colours by an identification number.</p> </div>		Skin		Teeth		Horns		Helmet				
	Skin													
	Teeth													
	Horns													
	Helmet													
	<p>Colour Swatch</p>	<p>Also referred to as <i>colour pots</i>, 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.</p> <div data-bbox="690 1360 907 1545" style="border: 1px solid #ccc; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; height: 10px; background-color: #FF0000; border: 1px solid #000;"></td><td style="padding-left: 5px;">Colour 2</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #00FF00; border: 1px solid #000;"></td><td style="padding-left: 5px;">Colour 3</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #0000FF; border: 1px solid #000;"></td><td style="padding-left: 5px;">Colour 4</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #FFA500; border: 1px solid #000;"></td><td style="padding-left: 5px;">colour 5</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #FF8C00; border: 1px solid #000;"></td><td style="padding-left: 5px;">colour 6</td></tr> <tr><td style="width: 20px; height: 10px; background-color: #FFFFFF; border: 1px solid #000;"></td><td style="padding-left: 5px;">colour 7</td></tr> </table> </div>		Colour 2		Colour 3		Colour 4		colour 5		colour 6		colour 7
	Colour 2													
	Colour 3													
	Colour 4													
	colour 5													
	colour 6													
	colour 7													

## Drawing View

In Harmony, you can draw in both the Drawing or Camera views. Although the two views are similar, there are some differences when it comes to drawing.

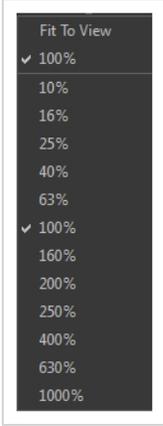
Only the selected drawing is displayed by default in the Drawing view. You can use features, such as the light table to display the current drawing of all the enabled layers of your scene in washed-out colours, or the Onion Skin to display the previous and next drawings of the currently selected drawing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

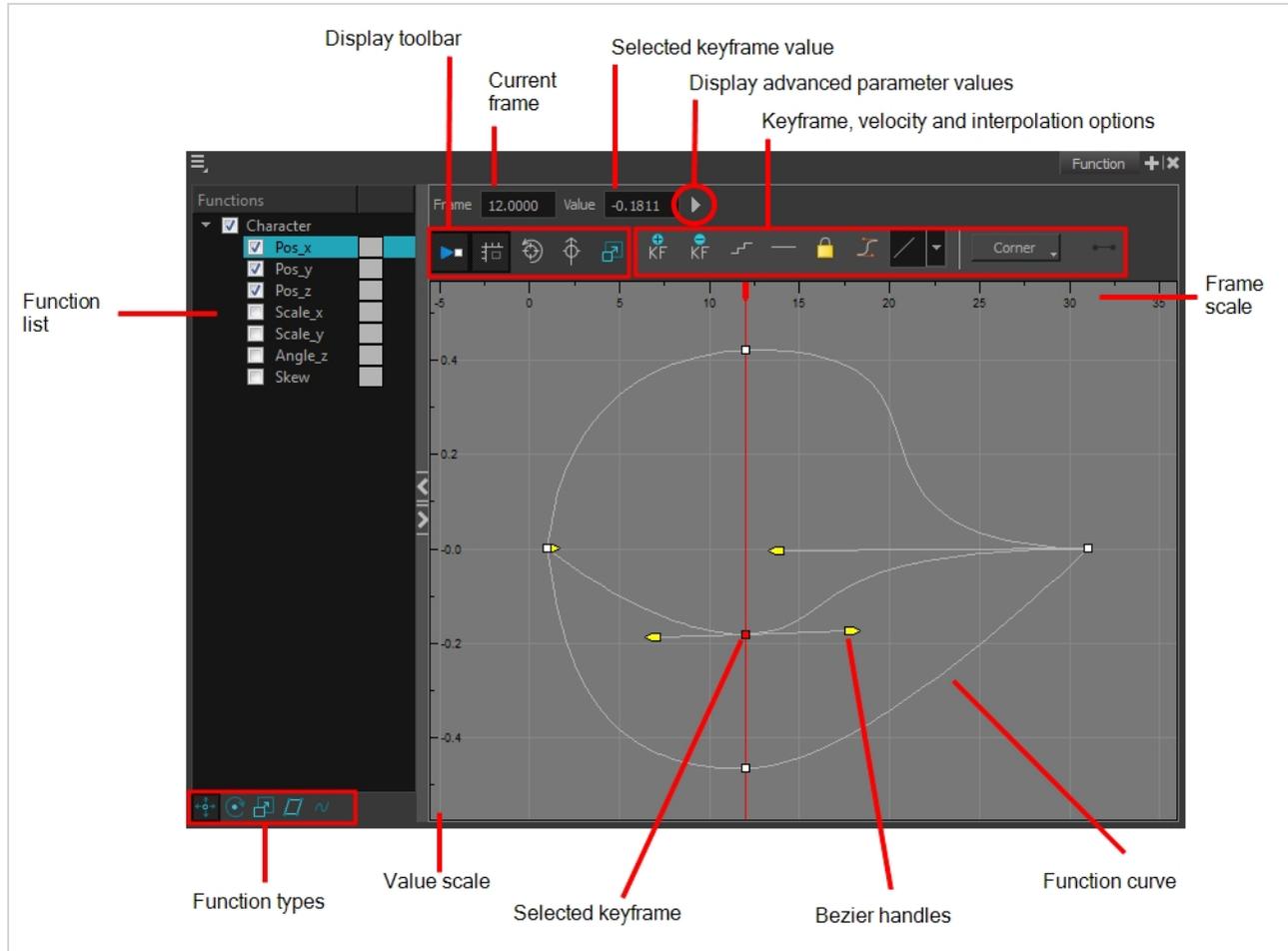
Icon	Section	Description
	View Menu	<p>The View menu contains all the tools and options that you can use in the Drawing view to draw, animate and paint.</p>
	Drawing Area	<p>This is the main space in the Drawing view. It is where you draw and where the drawings are displayed.</p>
	Zoom Menu	<p>The Zoom menu lets you enlarge or reduce the Camera or Drawing view display.</p> <p>To make the camera frame size always match the size of your view, select the <b>Fit to View</b> option. Click the drop-down arrow and select a zoom level or press 1 and 2.</p> 
	Drawing Name	<p>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 <b>Empty Cell</b> text is shown in the field.</p>
	Tool Name	<p>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.</p>

---

	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.

## Function View

The Function view lets you edit function curves and parameters. It contains a visual graph for adding, removing, and editing keyframes, as well as adjusting the velocity. The Function view allows you to display multiple functions in the background as a reference.



### How to access the Function view

Do one of the following:

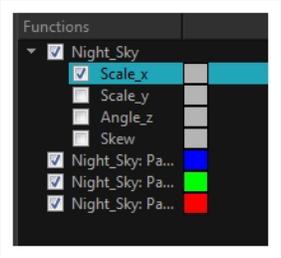
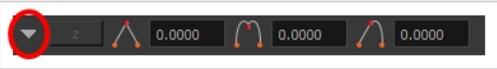
- From the top menu, select **Windows > Function**.
- From any of the other views, click the Add View **+** button and select **Function**.

### How to display functions in the Function view

1. Open the Function view.

The Function view is blank until you select the layer containing the functions you want to display.

2. To display a function in the Function view, click on the layer containing the functions to adjust in the Timeline view.
3. To select the functions you want to edit, select them in the Function list.

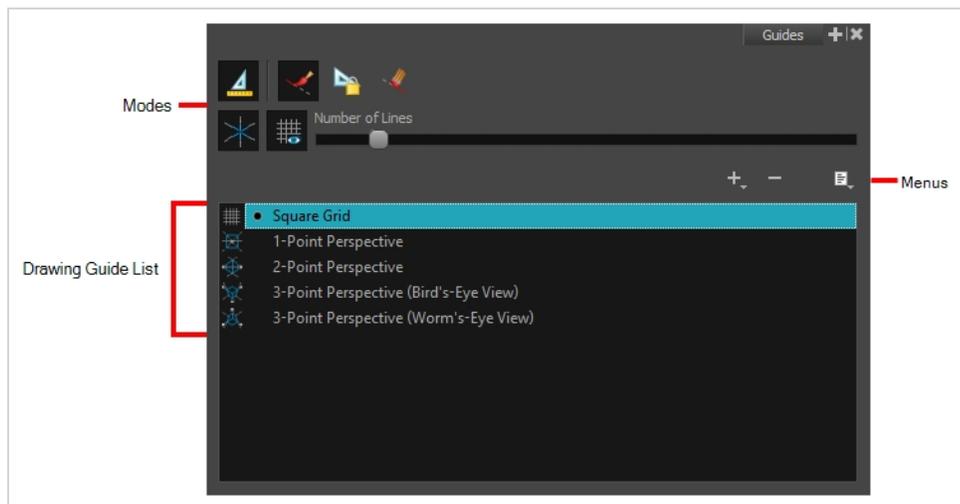
Parameter	Description
Function List	 <p>When selecting a layer in the Timeline view, all the corresponding functions are displayed (if any). Select the functions you want to see and edit, and hide the ones you don't.</p>
Display Toolbar	Allows you to modify how the editing area is displayed. You can hide the grid, disable the synchronization with the current frame, reset the zoom level and normalize the function display by stacking them one over the other to compare them regardless of their value range.
Current Frame	Displays the current scene frame.
Selected Keyframe Value	Displays the value of the selected keyframe.
Display Advanced Parameter Values	 <p>Displays the Projection, Bias, Tension and Continuity parameters to adjust the curve around the selected keyframe.</p>
Keyframe, Velocity and Interpolation Options	This toolbar lets you add and delete keyframes, adjust the velocity curve, adjust the segments to motion or stop-motion keyframes and set the velocity to create steps instead of a constant progression.
Function Types	This toolbar lets you click on the different function types to enable or disable all the listed functions of that type.
Value Scale	Displays the value range for the displayed editing area. It can be referenced to know the value of a keyframe.

Selected Keyframe	The selected keyframe is displayed in red. When selected, the keyframe values are displayed in the corresponding fields.
Bezier Handles	The Bezier handles let you adjust the ease in and ease out of each keyframe. The more the handle is pulled out horizontally, the slower the animation will be. The more the handle is pulled out vertically, the faster the animation will be.
Function Curve	The thin line going from keyframe to keyframe is the actual curve. The section of a curve located between two keyframes is called a segment.
Frame Scale	The Frame Scale displays the frame range for the displayed editing area. It can be referenced to know the current frame of a keyframe.

## Guides View

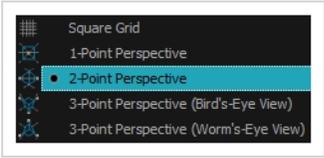
The Guides view enables you to manage drawing guides for a given storyboard panel. Use Drawing Guides to assist you in creating a drawing with perspective.

Guides can be added, selected, renamed, deleted, cut, copied, pasted and reordered. Guides can also be exported to a file and re-imported later.



Icon	Name	Description
Options		
	Enable Guide	Enables or disables drawing guides.
	Align with Guide	<p>When enabled:</p> <ul style="list-style-type: none"> <li>The Brush, Pencil, Line and (optionally) Eraser tools are constrained by the Drawing Guide to draw/erase straight lines only.</li> </ul> <p>When disabled:</p> <ul style="list-style-type: none"> <li>The drawing tools are not constrained by the Drawing Guide, allowing you to do freehand strokes. The guide acts as a visual aid only.</li> </ul>
	Lock Guide	Locks the editing of a Drawing Guide to prevent its accidental modification while drawing.
	Enable Guide with Eraser	Toggles the use of Drawing Guides with the Eraser tool.

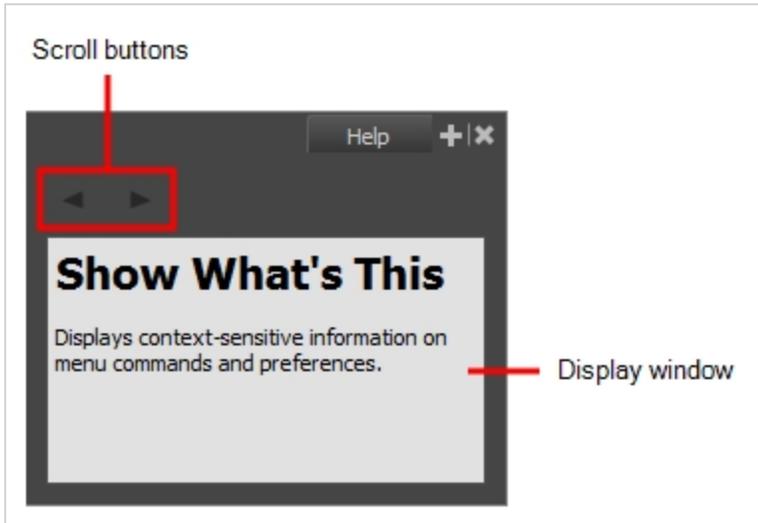
Icon	Name	Description
	Full Cursor Display	When enabled: <ul style="list-style-type: none"> <li>• Drawing Guide axes extend to the edge of the drawing area.</li> </ul> When disabled: <ul style="list-style-type: none"> <li>• Drawing Guide axes are short.</li> <li>• Drawing Guide axes disappear while drawing a stroke.</li> </ul>
	Show Reference Lines	Toggles the display of a visual reference consisting of lines that converge towards the vanishing point(s).
	Number of Lines	Adjusts the amount of reference lines to display. <div data-bbox="570 768 824 850" style="border: 1px solid gray; padding: 2px; margin: 5px 0;">  </div>
<b>Guides List</b>		
	New Guide	Allows you to add a guide to the scene's guides list. You can add a guide of one of the following types: <ul style="list-style-type: none"> <li>• Square grid</li> <li>• 1-point perspective</li> <li>• 2-point perspective</li> <li>• 3-point perspective (bird's eye view)</li> <li>• 3-point perspective (worm's eye view)</li> </ul>
	Delete Guide	Deletes the selected Drawing Guide(s) from the scene's guides list.
	Guides View Menu	Opens a menu with the following commands:
	Rename Guide	Renames the selected Drawing Guide.
	Cut	Cuts the selected Drawing Guide(s) from the list and adds it to the clipboard.
	Copy	Copies the selected Drawing Guide(s) to the clipboard.

Icon	Name	Description
	Paste	Pastes Drawing Guide(s) from the clipboard to the scene's guides list. Pasted guides are inserted under the selected guide.
	Import Guides	Imports Drawing Guides from a source file and inserts them at the bottom of the scene's guides list. Duplicate guides are filtered out to avoid cluttering the list.
	Export Selected Guides	Exports the selected Drawing Guide(s) to a destination file.
	Drawing Guides List	<p>Displays the scene's list of guides and allows you to select which guide to display and use.</p>  A screenshot of a software menu titled "Drawing Guides List". The menu is dark-themed and contains five items, each with a small icon to its left. The items are: "Square Grid" (with a grid icon), "1-Point Perspective" (with a 1-point perspective icon), "2-Point Perspective" (with a 2-point perspective icon and a blue highlight bar), "3-Point Perspective (Bird's-Eye View)" (with a 3-point perspective icon), and "3-Point Perspective (Worm's-Eye View)" (with a 3-point perspective icon).

## 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**.

## Layer Properties View

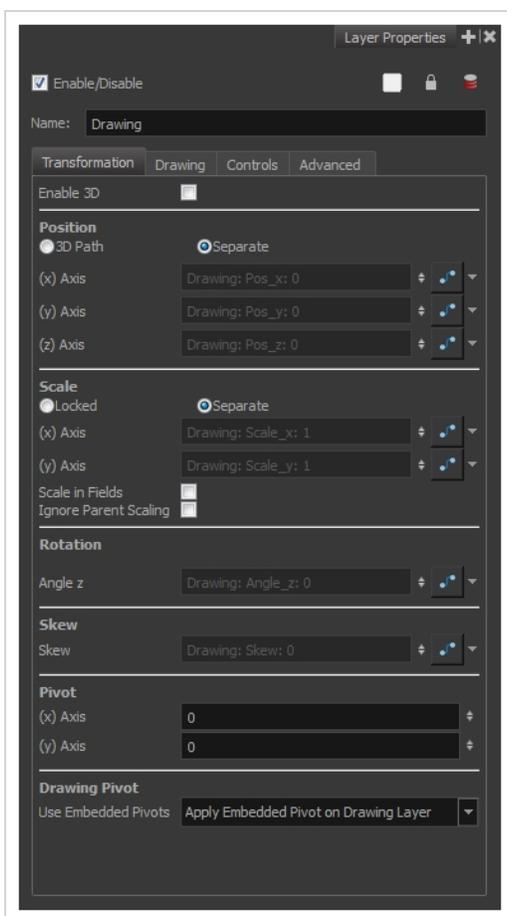
The Layer Properties editor or view lets you adjust the properties of a layer in the Timeline view. The Layer Properties can be viewed as a floating window or as a view (docked).

Each layer has its own set of properties that can be modified, including effect and peg layers. Display the Layer Properties editor or view if you want to modify some of the layer's properties, such as the name or the antialiasing quality.



### NOTE

To know more about the parameters displayed in the Layer Properties view, see [Layers](#) on page 268.



### How to access the Layer Properties view

Do one of the following:

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

### How to access the Layer Properties editor

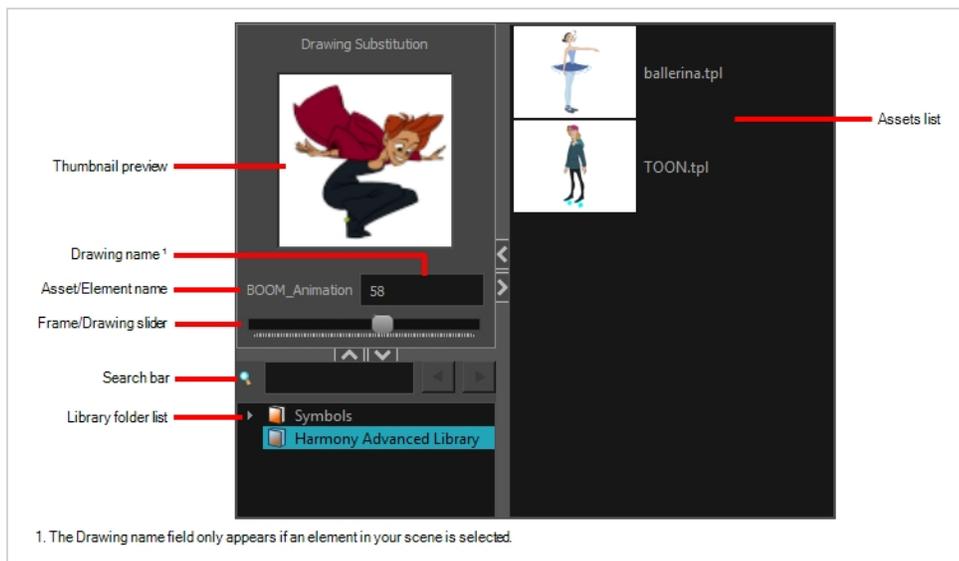
- Double-click on a layer in the Timeline view
- Right-click on a layer in the Timeline view and select **Layer Properties**.
- Select a layer in the Timeline view and press Shift + E.

## Library View

The Library view is used to store elements such as animation, drawings, backgrounds and character models so as to reuse in different scenes and projects. You can also use the Library view to create and store symbols, as well as to store and import images and sound files.

To reuse elements from a scene in other scenes, you must create a template so that you can import it into different scenes. Templates can contain anything from a single drawing to a whole scene structure. You can create a template by creating it in a scene, then copying the elements you want in your template into a library. The resulting template is structured like a mini-scene that contains only the elements you copied into it. A template does not have any dependencies on the scene it was originally created in. Hence, it can safely be imported in any other scene.

Additionally, the Library view's Drawing Substitution panel allows you to quickly change the current frame's exposure to one of the existing drawings in a layer. This is especially useful for animating a cut-out character's mouths, hands, eyelids and other such body parts which typically contain several drawings to choose from.

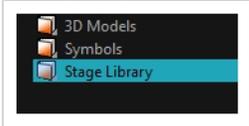


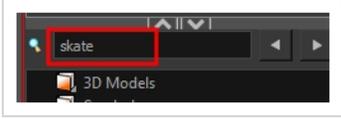
### How to access the Library view

Do one of the following:

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

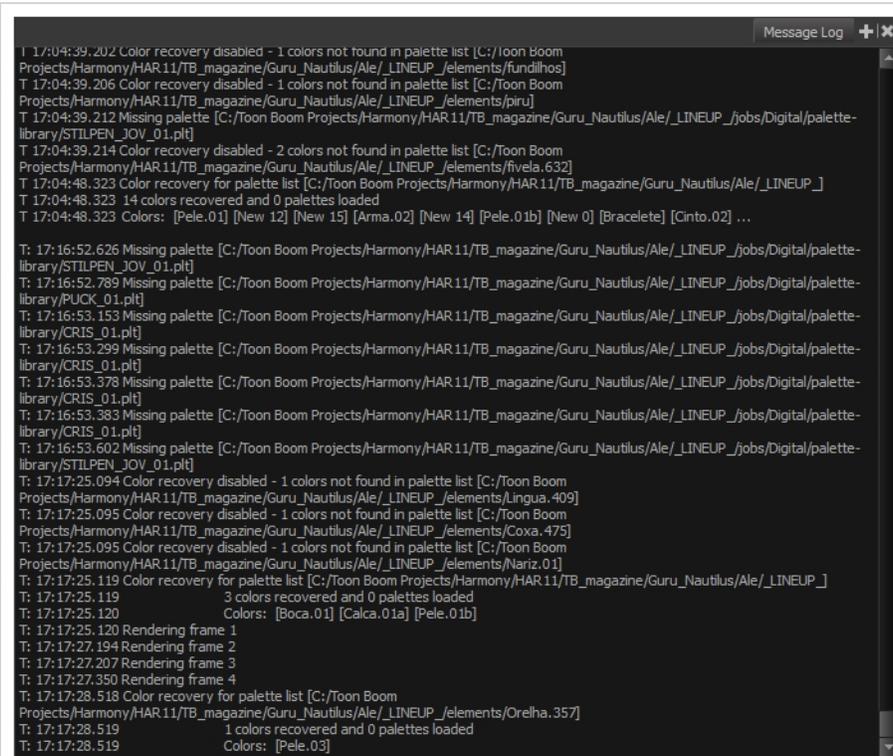
Icon	Section	Description
	View Menu	The Library menu lets you access commands related to the Library view, importing .swf movies and

		<p>Illustrator files, add a new folder, and refresh the library's content.</p>
	<p>Preview Window</p>	<p>The Preview window lets you see the content of the currently selected template or symbol in the Template/Symbol list.</p> 
	<p>Preview Playback</p>	<p>The Preview Playback button lets you play back the content of the selected template or symbol if it contains more than one frame. Press the Play button to play back the preview.</p>
	<p>Library Folder List</p>	<p>The Library Folder List displays all the folders linked to the Library view.</p>  <p>There are two default folders:</p> <ul style="list-style-type: none"> <li>• <b>Symbols:</b> This folder is the only folder containing symbols. You can organize it by adding subfolders inside.</li> <li>• <b>Harmony Advanced Library:</b> This is a default folder found on the hard drive in your user documents. This folder can contain templates, but no symbols.</li> </ul> <p>You can link new library folders to the Library view and organize them with subfolders.</p>
	<p>Library Search tool</p>	<p>When working on a movie or series, you will probably end up with many templates and symbols in your library. Using the Search tool, you can quickly find the templates and symbols in your folders.</p>

		
	Template/Symbol List	<p>The Template/Symbol list displays the templates or symbols contained in the selected library folder. You can display the templates by right-clicking the symbols' thumbnails and selecting <b>View &gt; Thumbnails</b>.</p>

## 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.



```

T 17:04:39.202 Color recovery disabled - 1 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/fundilhos]
T 17:04:39.206 Color recovery disabled - 1 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/piru]
T 17:04:39.212 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/STILPEN_JOV_01.plt]
T 17:04:39.214 Color recovery disabled - 2 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/fivela.632]
T 17:04:48.323 Color recovery for palette list [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_]
T 17:04:48.323 14 colors recovered and 0 palettes loaded
T 17:04:48.323 Colors: [Pele.01] [New 12] [New 15] [Arma.02] [New 14] [Pele.01b] [New 0] [Bracelete] [Cinto.02] ...

T 17:16:52.626 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/STILPEN_JOV_01.plt]
T 17:16:52.789 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/PUICK_01.plt]
T 17:16:53.153 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/CRIS_01.plt]
T 17:16:53.299 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/CRIS_01.plt]
T 17:16:53.378 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/CRIS_01.plt]
T 17:16:53.383 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/CRIS_01.plt]
T 17:16:53.602 Missing palette [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/jobs/Digital/palette-
library/STILPEN_JOV_01.plt]
T 17:17:25.094 Color recovery disabled - 1 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/Lingua.409]
T 17:17:25.095 Color recovery disabled - 1 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/Coxa.475]
T 17:17:25.095 Color recovery disabled - 1 colors not found in palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/Nariz.01]
T 17:17:25.119 Color recovery for palette list [C:/Toon Boom Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_]
T 17:17:25.119 3 colors recovered and 0 palettes loaded
T 17:17:25.120 Colors: [Boca.01] [Calca.01a] [Pele.01b]
T 17:17:25.120 Rendering frame 1
T 17:17:27.194 Rendering frame 2
T 17:17:27.207 Rendering frame 3
T 17:17:27.350 Rendering frame 4
T 17:17:28.518 Color recovery for palette list [C:/Toon Boom
Projects/Harmony/HAR11/TB_magazine/Guru_Nautilus/Ale/_LINEUP_/elements/Orelha.357]
T 17:17:28.519 1 colors recovered and 0 palettes loaded
T 17:17:28.519 Colors: [Pele.03]

```

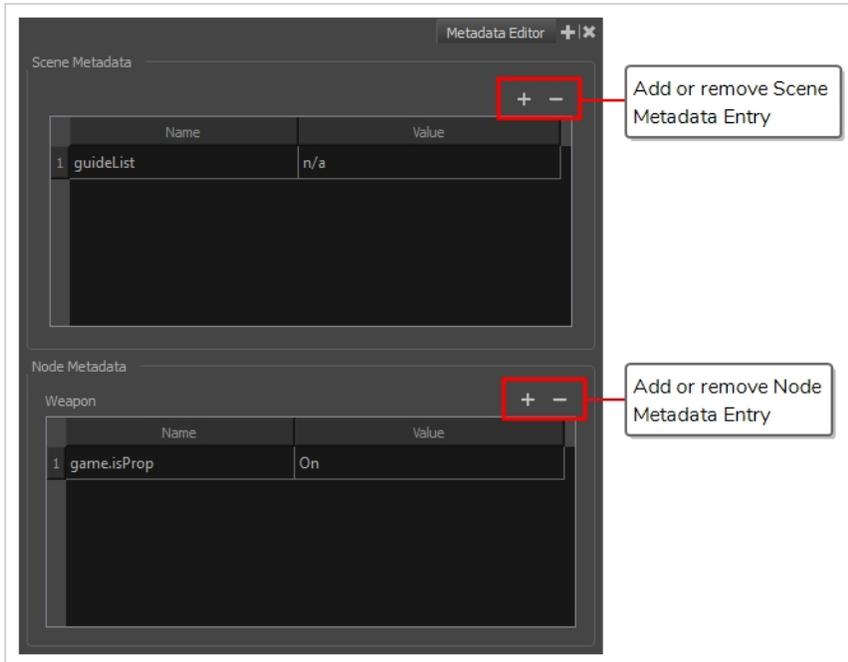
### How to access the Message Log view

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**.

## Metadata Editor View

The Metadata Editor view allows you to view and modify the information for props and anchors when creating a game character or asset in Harmony. It displays your scene's metadata as well as the metadata for the currently selected layer and allows you to add, remove or change the value of metadata nodes.



Usually, you do not need to manually add or modify metadata for a game character or asset using the Metadata Editor. The commands available in the Game toolbar can be used to define props and anchors, which will automatically fill your scene and layers with the proper metadata. The Metadata Editor is however useful for visualizing the way Harmony stores this information, to tweak it as necessary and to debug any issue that could occur when exporting a game asset to Unity.



### IMPORTANT

You should avoid using any character but letters, numbers, dashes and underscores in the Metadata Editor.

### How to access the Metadata Editor view

- In the top-right corner of a view, click the Add View **+** button and select **Metadata Editor**.
- In the top menu, select **Windows > Metadata Editor**.

Parameter	Description
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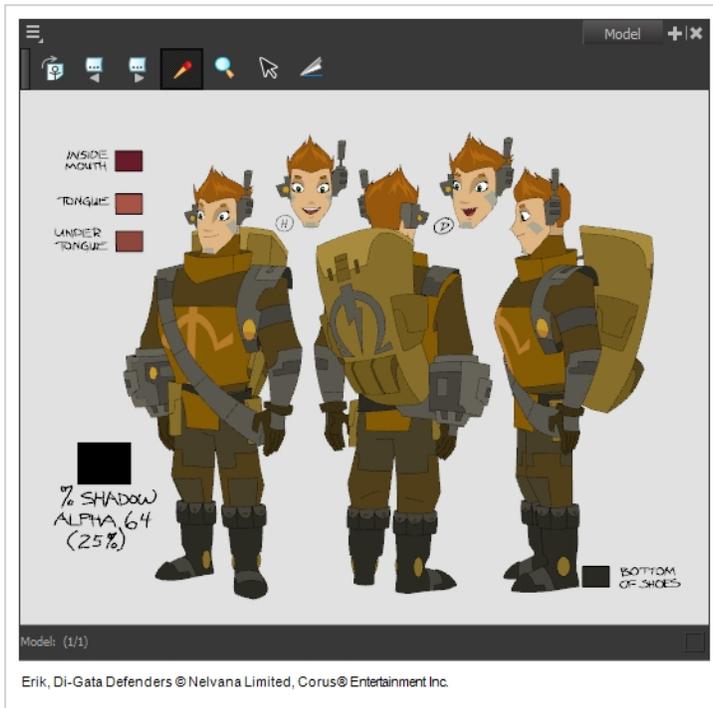
<p>Scene Metadata</p>	<p>Displays the metadata for the Harmony scene. Each entry has a name and a value.</p> <p>Typically, metadata for a scene includes the following entry:</p> <table border="1" data-bbox="565 298 1430 514"> <thead> <tr> <th data-bbox="565 298 748 388">Metadata</th> <th data-bbox="748 298 1430 388">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="565 388 748 514"><b>guideList</b></td> <td data-bbox="748 388 1430 514">This is a node in which the guides created in the Guide View are stored. This can be ignored—see <a href="#">Guides View</a>.</td> </tr> </tbody> </table>	Metadata	Description	<b>guideList</b>	This is a node in which the guides created in the Guide View are stored. This can be ignored—see <a href="#">Guides View</a> .				
Metadata	Description								
<b>guideList</b>	This is a node in which the guides created in the Guide View are stored. This can be ignored—see <a href="#">Guides View</a> .								
<p>Node Metadata</p>	<p>Displays the metadata for the currently selected layer. Each metadata entry has a name and a value.</p> <p>Typically, metadata for a node includes the following entries:</p> <table border="1" data-bbox="565 718 1430 1423"> <thead> <tr> <th data-bbox="565 718 902 808">Metadata</th> <th data-bbox="902 718 1430 808">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="565 808 902 1024"><b>game.isAnchor</b></td> <td data-bbox="902 808 1430 1024">When set to On, this sets the selected layer as an anchor. This means that, in Unity, the layer's pivot will be an anchor to which props can be attached. A prop will follow its anchor's movement.</td> </tr> <tr> <td data-bbox="565 1024 902 1178"><b>game.isProp</b></td> <td data-bbox="902 1024 1430 1178">When set to On, this sets the selected layer as a prop. In Unity, a prop can be attached to an anchor to follow its movement.</td> </tr> <tr> <td data-bbox="565 1178 902 1423"><b>game.&lt;metadata name&gt;</b></td> <td data-bbox="902 1178 1430 1423">When a layer has the <b>game.isProp</b> property, you can add any metadata node to it provided that the name of the metadata node starts with <b>game</b> followed by a period (.). This metadata will be exported to the list of metadata values for the prop, which can be used in Unity.</td> </tr> </tbody> </table>	Metadata	Description	<b>game.isAnchor</b>	When set to On, this sets the selected layer as an anchor. This means that, in Unity, the layer's pivot will be an anchor to which props can be attached. A prop will follow its anchor's movement.	<b>game.isProp</b>	When set to On, this sets the selected layer as a prop. In Unity, a prop can be attached to an anchor to follow its movement.	<b>game.&lt;metadata name&gt;</b>	When a layer has the <b>game.isProp</b> property, you can add any metadata node to it provided that the name of the metadata node starts with <b>game</b> followed by a period (.). This metadata will be exported to the list of metadata values for the prop, which can be used in Unity.
Metadata	Description								
<b>game.isAnchor</b>	When set to On, this sets the selected layer as an anchor. This means that, in Unity, the layer's pivot will be an anchor to which props can be attached. A prop will follow its anchor's movement.								
<b>game.isProp</b>	When set to On, this sets the selected layer as a prop. In Unity, a prop can be attached to an anchor to follow its movement.								
<b>game.&lt;metadata name&gt;</b>	When a layer has the <b>game.isProp</b> property, you can add any metadata node to it provided that the name of the metadata node starts with <b>game</b> followed by a period (.). This metadata will be exported to the list of metadata values for the prop, which can be used in Unity.								

## 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.



### How to access the Model view

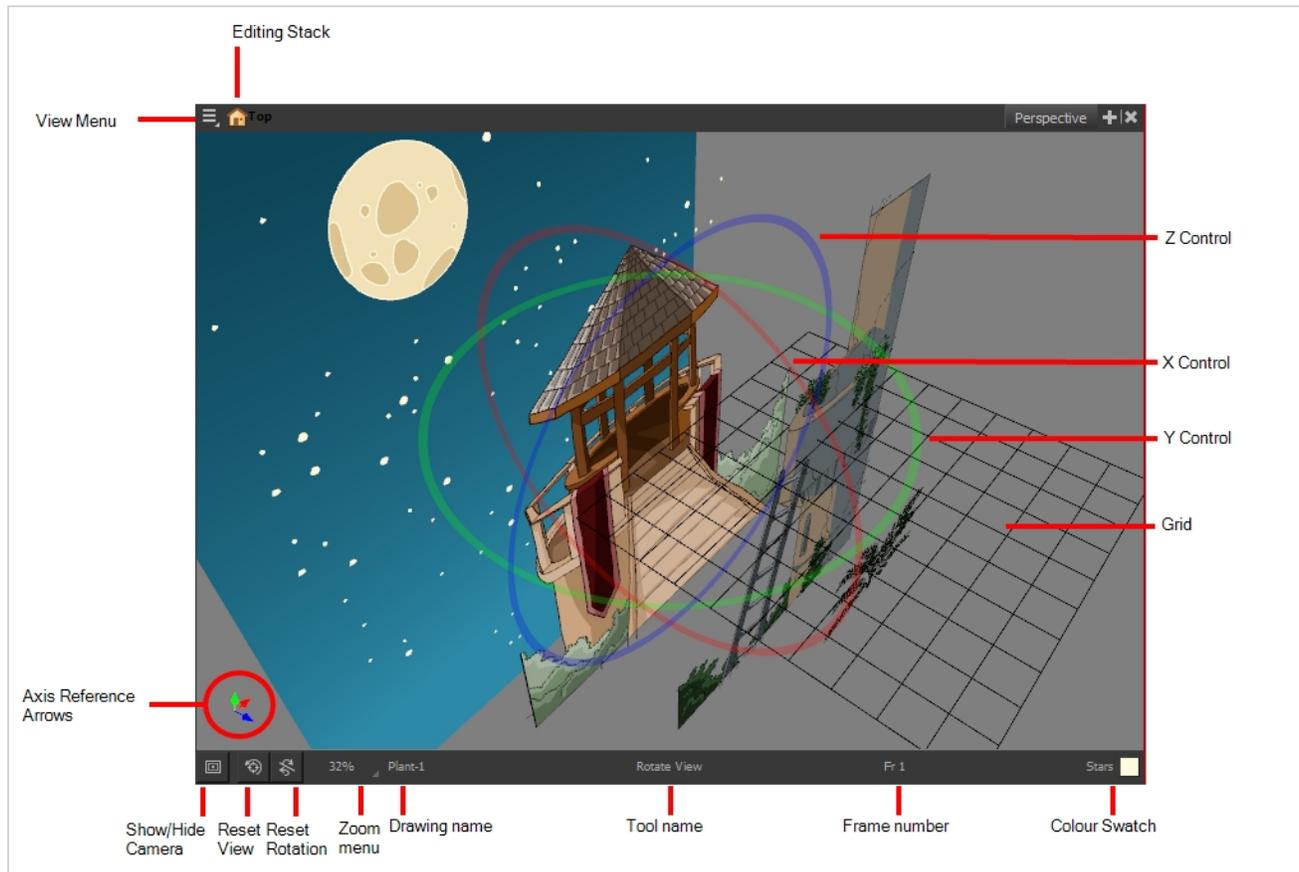
Do one of the following:

- 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.

# Perspective View

The Perspective view is used during scene setup. It allows you to see a multiplane scene’s orientation. The Perspective view is similar to a 3D display, as it lets you rotate the scene through all possible angles to understand the spacing between the elements. You can also position and rotate your layers and the camera inside the 3D display to achieve some 3D setup and camera moves.



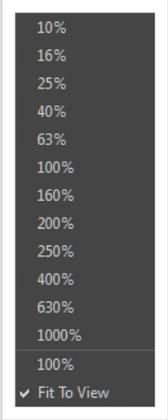
## How to access the Perspective view

Do one of the following:

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

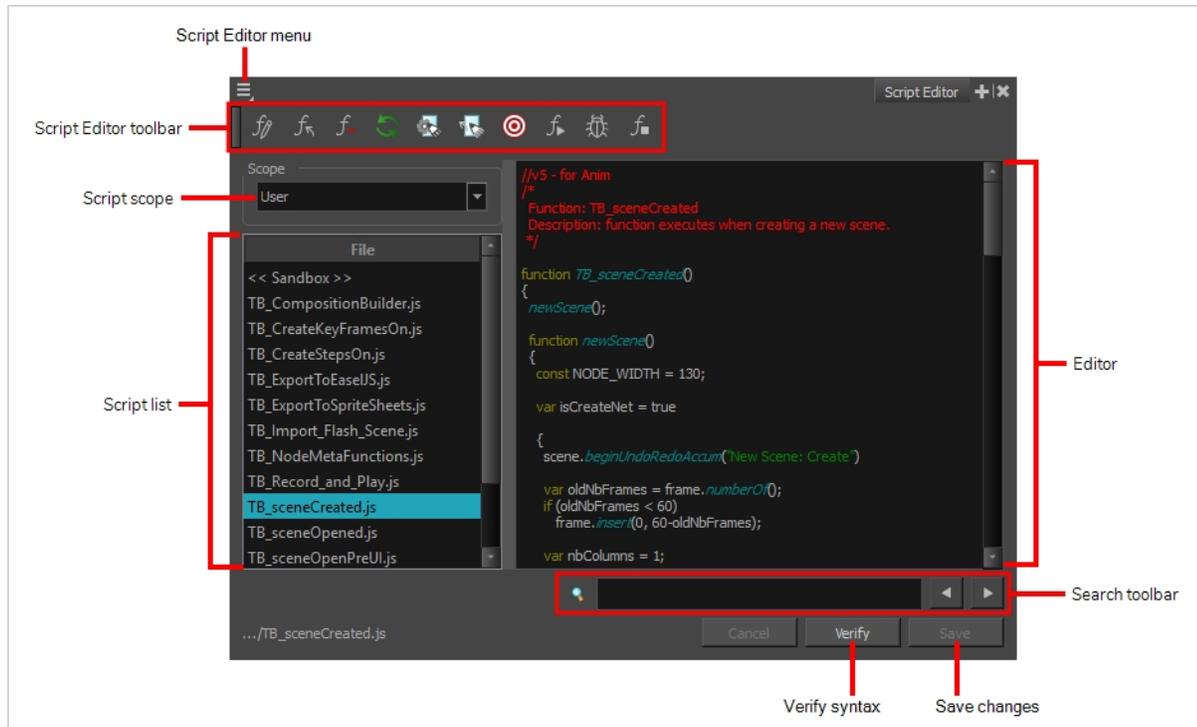
Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to work in the Perspective view.

	Editing Stack	The Editing Stack menu displays the names of the symbols and their hierarchy when you are editing a symbol. You can click on the different names to go back up to the different parent symbols or the top/current project.
	X Control	The red circle rotates the view on its X axis.
	Y Control	The green circle rotates the view on its Y axis.
	Z Control	The blue circle rotates the view on its Z axis.
	Grid	This is a perspective (3D) grid reference.
	Axis Reference Arrows	The axis reference arrows let you maintain your orientation when navigating in the Perspective view.
	Show/Hide Camera	Shows or hides camera frame in the Perspective view.
	Reset View	Resets the pan, rotation, and zoom of the Perspective view.
	Reset Rotation	Resets the rotation of the Perspective view.
	Zoom Menu	This field displays the current zoom level in the Perspective view. You can use the Zoom level drop-down menu to select a specific zoom level from the list. Zoom levels from 2.5% to 6400% are available; you can also select Fit To View to automatically use a zoom level that lets you see all your scene layers and information in the Perspective view at once.

		
	<p>Layer Name</p>	<p>This field displays the currently selected layer and drawing name.</p>
	<p>Tool Name</p>	<p>This field displays the currently selected tool.</p>
	<p>Frame Number</p>	<p>This field displays the currently selected frame of your animation.</p>
	<p>Colour Swatch</p>	<p>This field displays the currently selected colour in the palette.</p>

## Script Editor View

The Scripting view allows you to edit scripts to run in Harmony directly from the application. It displays a list of available scripts, from which you can select an existing script, edit it, test it and save it. The Script Editor will highlight the syntax of your script for easy reading.



### How to access the Script Editor view

Do one of the following:

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

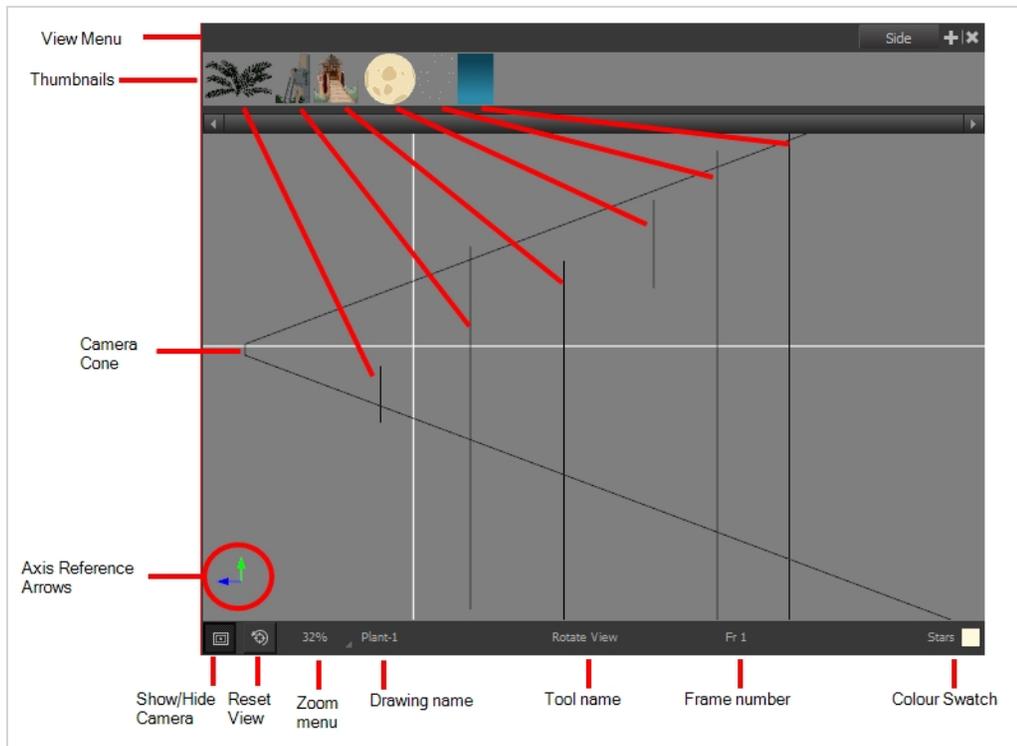
Parameter	Description
Scope	<p>The location of the scripts you are editing. The script editor can list, open and edit scripts from the two following scopes:</p> <ul style="list-style-type: none"> <li>• <b>User:</b> Scripts are saved alongside your user preferences. Those scripts can be loaded, executed and edited in any scene, but only as the currently logged-in user.</li> <li>• <b>Scene:</b> Scripts are saved to the <b>scripts</b> subfolder of the currently opened scene. This scope is for scripts that should be used in the scene specifically, but should be available to any user that opens the scene.</li> </ul>

	<div style="border: 1px solid green; padding: 10px;">  <b>NOTE</b>                  When using Harmony Stand Alone, user scripts are stored in the following location:                 <ul style="list-style-type: none"> <li>• <b>Windows:</b> <code>C:\Users\[username]\AppData\Roaming\Toon Boom Animation\Toon Boom Harmony Advanced\1500-scripts</code></li> <li>• <b>macOS:</b> <code>/Users/[username]/Library/Preferences/Toon Boom Animation/Toon Boom Harmony Advanced/1500-scripts</code></li> <li>• <b>GNU/Linux:</b> <code>/home/[username]/Toon Boom Animation/Toon Boom Harmony Advanced/1500-scripts</code></li> </ul>                 When using Harmony Server, user scripts are stored in the following location, depending on the level at which you save them:                 <ul style="list-style-type: none"> <li>• <b>User:</b> <code>/USA_DB/users/[username]/Harmony Advanced/1500-scripts</code></li> <li>• <b>Job:</b> <code>/USA_DB/jobs/[job_name]</code></li> <li>• <b>Environment:</b> <code>/USA_DB/environments/[environment name]</code></li> <li>• <b>Global:</b> <code>/USA_DB/scripts</code></li> </ul> </div>
<p>Script list</p>	<p>The list of script files. Selecting a script will open it in the editor and allow you to make changes to it.</p> <div style="border: 1px solid green; padding: 10px;">  <b>NOTE</b>                  The &lt;&lt; Sandbox &gt;&gt; item at the top of the list does not correspond to an actual script file. It is a temporary container to type and test code, but changes to the sandbox will not be saved.             </div>
<p>Editor</p>	<p>A syntax highlighting text editor in which the script is loaded and can be edited.</p>
<p>Search toolbar</p>	<p>Allows you to search for a keyword within the script.</p>
<p>Verify</p>	<p>Verifies that the script has no syntax error.</p>
<p>Save</p>	<p>Save the modifications to the script to its corresponding script file.</p>

## Side View

T-HFND-008-015

The Side view is used mainly for multiplane scenes and to position elements in 3D space. It allows you to see a scene's stage from the side. This lets the camera cone and spacing between the elements to be seen.

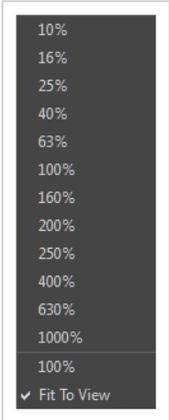


### How to access the Side view

Do one of the following:

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

Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to work in the Side view.
	Thumbnails	A thumbnail of each drawing layer in the scene. The order of the thumbnail images is based on each element's FB position in the scene space. You can see a representation of the FB position of each layer in the

		camera cone.
	Camera Cone	The camera cone represents the camera's position and field-of-view (FOV).
	Axis Reference Arrows	The axis reference arrows let you maintain your orientation when navigating in the view.
	Show/Hide Camera	Shows or hides camera frame in the Perspective view.
	Reset View	Resets the pan, rotation, and zoom of the Perspective view.
	Zoom Menu	<p>This field displays the current zoom level in the Perspective view. You can use the Zoom level drop-down menu to select a specific zoom level from the list. Zoom levels from 2.5% to 6400% are available; you can also select Fit To View to automatically use a zoom level that lets you see all your scene layers and information in the Perspective view at once.</p> 
	Layer Name	This field displays the currently selected layer and drawing name.
	Tool Name	This field displays the currently selected tool.
	Frame Number	This field displays the currently selected frame of your animation.
	Colour Swatch	This field displays the currently selected colour in the

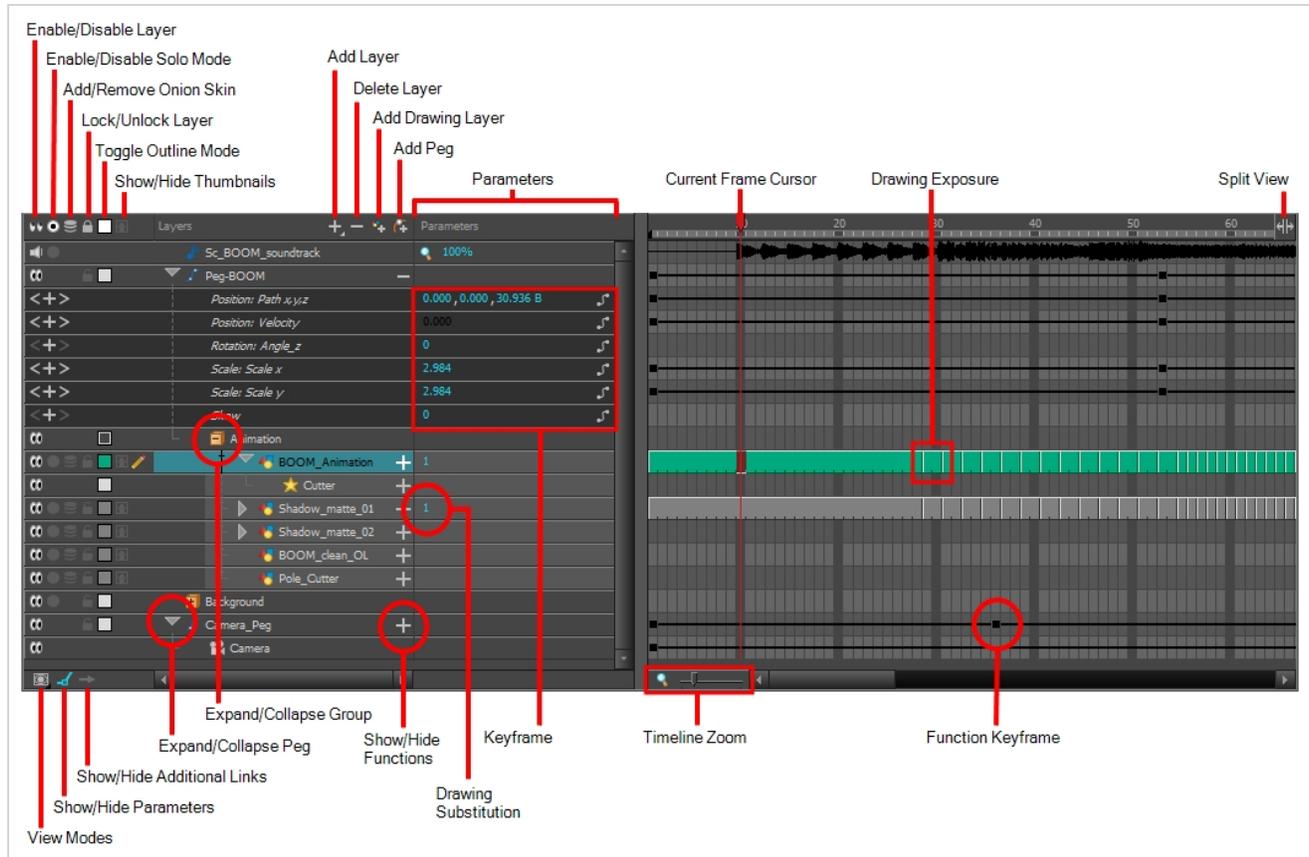
		palette.
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## Timeline View

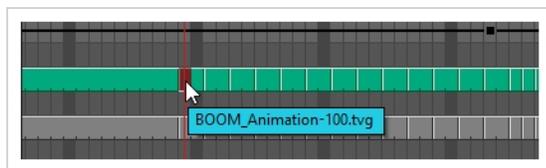
T-HFND-006-002

To set your animation timing, you will mostly work with the Timeline and Xsheet views. It's extremely useful to become familiar with the Timeline view, how it works, and its interface.

The Timeline view is the main view used when adjusting the timing of drawings, adding keyframes and ordering layers. The Timeline view displays layers, effects, sounds, keyframe values, scene length, layer names, drawings, keyframes, timing, and frames.



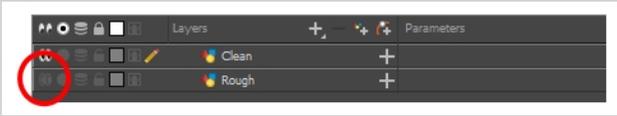
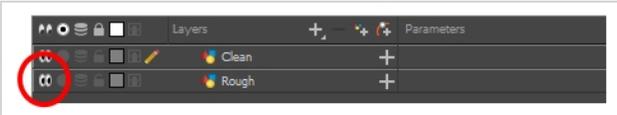
The Timeline view allows you to read your timing from left to right. It represents the scene's elements in their simplest form. You can also see the layers and their names, as well as the drawing's exposure. The drawing name is displayed when you place your pointer over the drawing's exposure.

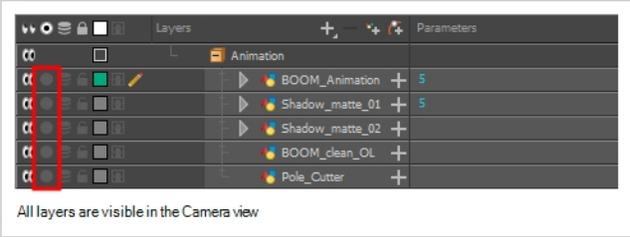
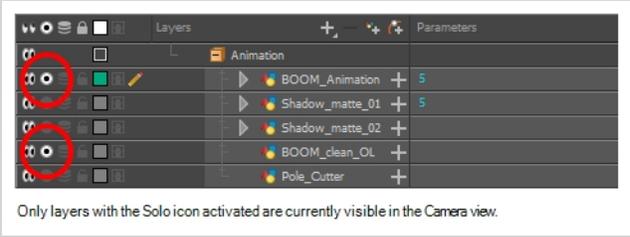
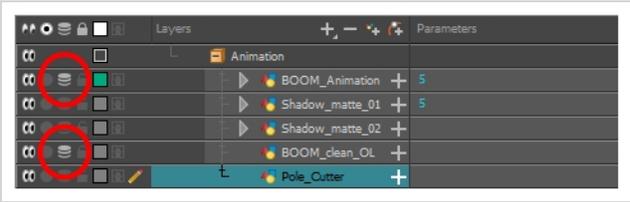


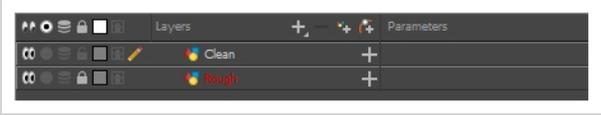
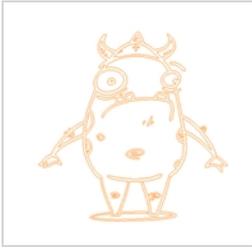
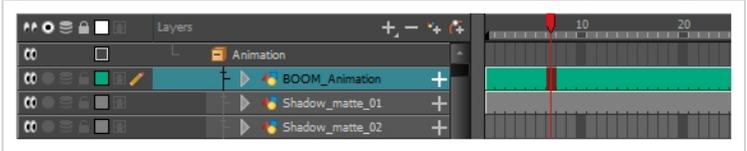
### How to access the Timeline view

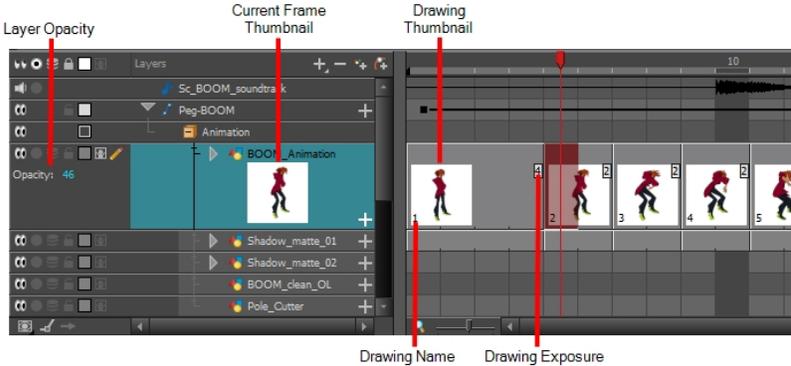
Do one of the following:

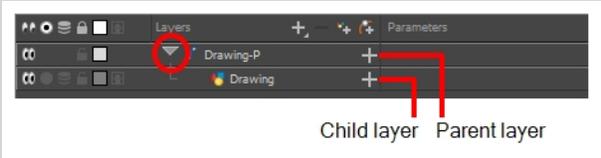
- From the top menu, select **Windows > Timeline**.
- From any of the other views, click the Add View **+** button and select **Timeline**.

Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to manage models.
	Enable/Disable Layer	<p>The Enable/Disable All button lets you enable or disable layers. Disabling a layer makes the scene behave as if it didn't exist, including when rendering the scene. For example:</p> <ul style="list-style-type: none"> <li>• A disabled drawing layer will be invisible.</li> <li>• A disabled sound layer will be mute.</li> <li>• A disabled peg layer will not affect the position of its child layers.</li> </ul> <p>To disable a layer, click the layer's Enable/Disable button or press D.</p>  <p>To enable a layer, click the layer's Enable/Disable button or press A.</p>  <div data-bbox="613 1276 1430 1451" style="border: 1px solid green; padding: 5px;"> <p> <b>NOTE</b></p> <p>Next to sound layers, the Enable/Disable layer button will look like this: .</p> </div> <div data-bbox="613 1476 1430 1650" style="border: 1px solid blue; padding: 5px;"> <p> <b>TIP</b></p> <p>You can enable or disable all layers by clicking on the Enable or disable all layers  button in the top row.</p> </div>
	Enable/Disable Solo Mode	Solo mode allows you to only view specific layers in the Camera view and hide all others. When solo mode is enabled on one layer, only this layer will be visible. If solo mode is enabled on several layers, and only these layers will be visible. If solo mode is not enabled on any layer, all enabled layers will be visible.

		<p>You can also use solo mode on sound tracks. If solo mode is enabled on any sound tracks, only those sound tracks will play during playback.</p>  <p>All layers are visible in the Camera view</p>  <p>Only layers with the Solo icon activated are currently visible in the Camera view.</p> <div data-bbox="613 821 1430 1024" style="border: 1px solid #0070C0; padding: 10px;"> <p> <b>TIP</b></p> <p>When some layers are in solo mode, you can disable or re-enable solo mode on all layers that have it enabled by clicking on the Toggle solo mode on or off  button in the top row.</p> </div>
	<p>Add to/Remove from Onion Skin</p>	<p>For when the Onion Skin option is enabled, this allows you to enable or disable Onion Skin on specific layers.</p>  <div data-bbox="613 1409 1430 1581" style="border: 1px solid #0070C0; padding: 10px;"> <p> <b>TIP</b></p> <p>To activate the general Onion Skin preview, in the Tools toolbar, click the Onion Skin button</p> </div>
	<p>Lock/Unlock Layer</p>	<p>The Lock/Unlock Layer button lets you prevent the selection or editing of a layer in the Camera view. To select some of the layers without selecting others, in the Timeline view, lock the layers you do not want to select. When a layer is locked, its name is displayed in red.</p>

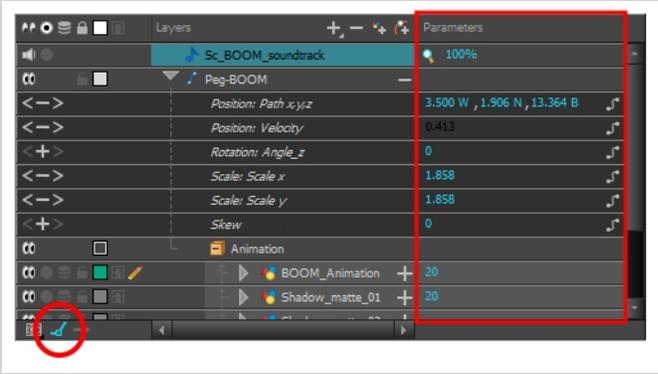
		 <p>In the top menu, there is a series of locking options. Select <b>Animation &gt; Lock</b> &gt; select one of the following:</p> <ul style="list-style-type: none"> <li>• <b>Lock:</b> Locks the currently selected element.</li> <li>• <b>Unlock:</b> Unlocks the currently selected element.</li> <li>• <b>Lock All:</b> Locks all the elements in the Camera view.</li> <li>• <b>Unlock All:</b> Unlocks all the elements in the Camera view.</li> <li>• <b>Lock All Others:</b> Locks all the elements in the Camera view except the currently selected one.</li> </ul>
	<p>Toggle Outline Mode / Change Track Colour</p>	<p>Each drawing layer has a little colour swatch that has two functionalities:</p> <ul style="list-style-type: none"> <li>• <b>Single-clicking</b> a layer's colour swatch toggles Outline mode on or off. Outline mode makes the layer display as nothing but the outlines of its vector shapes in the Camera view, allowing you to see the drawing's shape without it blocking the view of layers behind it.</li> </ul>  <ul style="list-style-type: none"> <li>• <b>Double-clicking</b> the layer's colour swatch opens a colour picker dialog that allows you to change the layer's track colour. The track colour displays in the layer's track in the Timeline view, allowing you to give special visibility to specific layers. It also determines the colour of the layer's outlines if it's in outline mode.</li> </ul> 
	<p>Show/Hide Thumbnails</p>	<p>Expands the layer to display a thumbnail of the drawing in the current frame, as well as for each drawing in the timeline.</p>

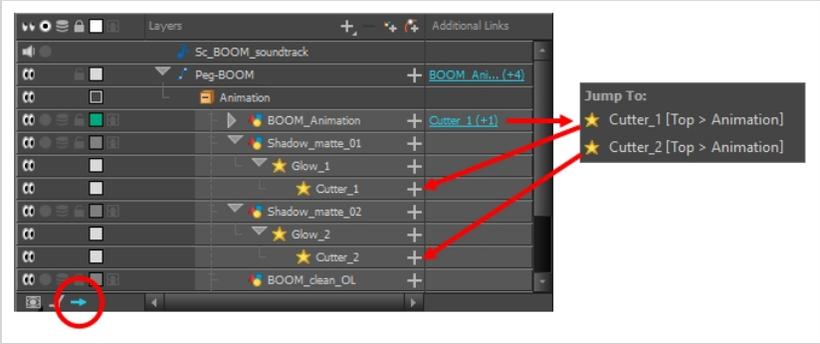
		<div data-bbox="613 191 1430 459" style="border: 1px solid green; padding: 10px; margin-bottom: 10px;">  <p><b>NOTE</b></p> <p>By default, the timeline's zoom level does not allow enough horizontal space to fully display the thumbnails of drawings exposed for one or two frames only. To see the thumbnails for drawings with short exposure, you must increase the timeline's zoom level—see <a href="#">Timeline Zoom on page 560</a>.</p> </div> <div data-bbox="613 485 1430 879" style="border: 1px solid gray; padding: 10px; margin-bottom: 10px;">  </div> <p>When a drawing layer is in Show Thumbnails mode:</p> <ul style="list-style-type: none"> <li>• An exposure indicator appears at the right of each exposed drawing in the timeline, indicating the amount of frames the drawing spans over.</li> <li>• An Opacity parameter appears to the left of the layer, allowing you to set the layer's opacity level.</li> </ul> <div data-bbox="613 1186 1430 1360" style="border: 1px solid blue; padding: 10px;">  <p><b>TIP</b></p> <p>You can show or hide thumbnails for all drawing layers by clicking on the Show/Hide All Thumbnails  button in the top row.</p> </div>
	<p>Opacity</p>	<p>Allows you to set the opacity level of the layer. Click and drag the value left or right to decrease or increase the layer's opacity.</p> <div data-bbox="613 1514 1430 1688" style="border: 1px solid green; padding: 10px; margin-top: 10px;">  <p><b>NOTE</b></p> <p>This parameter only displays for drawing layers that are in Show Thumbnails mode.</p> </div>
	<p>Active Drawing Layer Indicator</p>	<p>This icon appears next to the active drawing layer, which is the layer you draw on when using drawing tools.</p>

		<div style="border: 1px solid green; padding: 10px;">  <p><b>NOTE</b></p> <p>The active drawing layer is not always the selected layer. For example, if you select a drawing layer, then a peg layer, the peg layer will be the selected layer, but the active drawing layer will remain the last drawing layer you selected, until you select another drawing layer.</p> </div>
	<p>Add Layer</p>	<p>The Add Layers button lets you add new layers to the Timeline view. When you click the Add Layers button, a menu appears displaying the available layer types.</p>
	<p>Delete</p>	<p>The Delete Layers button lets you delete the currently selected layers in the Timeline view.</p>
	<p>Add Drawing Layer</p>	<p>The Add Drawing Layer button lets you automatically add a new drawing layer to the Timeline view. By default, the layer is named <b>Drawing</b>.</p>
	<p>Add Peg</p>	<p>The Add Peg button lets you add a peg layer to the timeline. If several layers are selected, a peg is added and parented to each layer.</p> 
	<p>Expand/Collapse</p>	<p>The Expand/Collapse button is used to display the children layers of a parent layer. Once a layer is parented to another layer, it is indented to the right and the Collapse/Expand Children button appears on the parent layer allowing you to show or hide the child layer.</p>  <p style="text-align: center;">Child layer    Parent layer</p>
	<p>Show/Hide Functions</p>	<p>The Show/Hide Functions button lets you display the functions embedded in each layer. The functions are the different coordinates and values used to record a layer's parameters at each frame. This information is stored on the function curves using keyframes.</p> <p>If the layer can be connected to another layer, for example to use a drawing layer as a matte, expanding a layer's functions will also list its possible connections. You can connect layers by dragging and dropping a layer onto</p>

		<p>another layer's connection.</p> 
	<p>Add/Remove Keyframe</p>	<p>Adds a keyframe at the current frame of the selected function or removes the keyframe at the current frame of the selected function, if there is one already.</p> <div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This button only displays for function layers.</p> </div>
	<p>Previous Keyframe</p>	<p>Moves the timeline cursor to the previous keyframe on the selected function.</p> <div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This button only displays for function layers.</p> </div>
	<p>Next Keyframe</p>	<p>Moves the timeline cursor to the next keyframe on the selected function.</p> <div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This button only displays for function layers.</p> </div>
	<p>Function Menu</p>	<p>Displays the Function menu, which allows you to create a new function for the function layer, or to link it to an existing shared function.</p> <div style="border: 1px solid green; padding: 5px;">  <p><b>NOTE</b> This button only displays for functions layers, in the Parameters column—see <a href="#">Show/Hide Parameters on page 559</a>.</p> </div>
	<p>Function Keyframe</p>	<p>A frame where the value for one or more of the layer's functions is preset. The position of each layers in key poses for digital animation is recorded in function keyframes. You can grab and move function keyframes as well as copy, cut, paste and delete them.</p>

		<div data-bbox="641 216 699 285" style="float: left; margin-right: 10px;"> </div> <p><b>TIP</b></p> <p>If you have a keyframe and a drawing selected simultaneously, and you wish to delete the keyframe without deleting the drawing's exposure by doing one of the following:</p> <ul style="list-style-type: none"> <li>• In the Timeline toolbar, click on the Delete Keyframe  button.</li> <li>• Press F7.</li> <li>• From the top menu, select <b>Animation &gt; Delete Keyframe</b></li> </ul>
	<div data-bbox="207 1018 245 1054" style="text-align: center;"> </div> <p style="text-align: center;">Split</p>	<p>The Split button lets you split the Timeline view in two sections, allowing you to see two different portions of the Timeline view. This can be useful if you need to often switch between two specific points of a lengthy scene.</p> <div data-bbox="613 953 1133 1243" style="text-align: center;"> </div>
	<div data-bbox="215 1381 240 1423" style="text-align: center;"> </div> <p style="text-align: center;">Drawing Exposure</p>	<p>In the Timeline view, when a drawing is exposed, it is represented by a grey block that extends from the first frame it is exposed to the last frame it is exposed.</p> <div data-bbox="613 1440 841 1497" style="text-align: center;"> </div>
	<div data-bbox="207 1703 245 1738" style="text-align: center;"> </div> <p style="text-align: center;">View Modes</p>	<p>Lets you choose between different view modes allowing you to decide which layers are listed in the Timeline view. This can be useful if you're working on a scene with a lot of layers, and you only want layers you will be working on to appear in the Timeline view so as to declutter it. The following view modes are available:</p> <ul style="list-style-type: none"> <li>• Normal View Mode  will show all the layers in your scene.</li> <li>• Selection Only Mode  will hide all the layers that are not currently selected, leaving only the currently selected layers in the Timeline</li> </ul>

		<p>view.</p> <ul style="list-style-type: none"> <li>View Tagged Layers  will only show layers which you have tagged.</li> </ul>  <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;">  <b>TIP</b>                  You can tag a layer by doing one of the following:                 <ul style="list-style-type: none"> <li>Right click on the layer and select <b>Tag &gt; Timeline Tag</b>.</li> <li>Open the Timeline view menu  and select <b>Edit &gt; Tag &gt; Timeline Tag</b>.</li> </ul> </div>
	<p>Show/Hide Parameters</p>	<p>Shows or hides the Parameters column, right of the Layers column. The Parameters column displays information on the layer at the current frame, depending on the type of layer it is:</p> <ul style="list-style-type: none"> <li>If the layer is a drawing, it displays the name of the drawing at the current frame.</li> <li>If the layer is a function, it displays the value of the function at the current frame.</li> <li>If the layer is a sound track, it displays the sound track's volume.</li> </ul>  <p>Using the mouse, you can drag the parameter left and right to change its value. This is especially useful for quickly changing a drawing's exposure at the current frame.</p>
	<p>Show/Hide Additional Links</p>	<p>Shows or hides the Additional Links column. The Additional Links column displays layers that are connected under the layer, but for other purposes than being the parent of those layers. For example, if a layer is used as the</p>

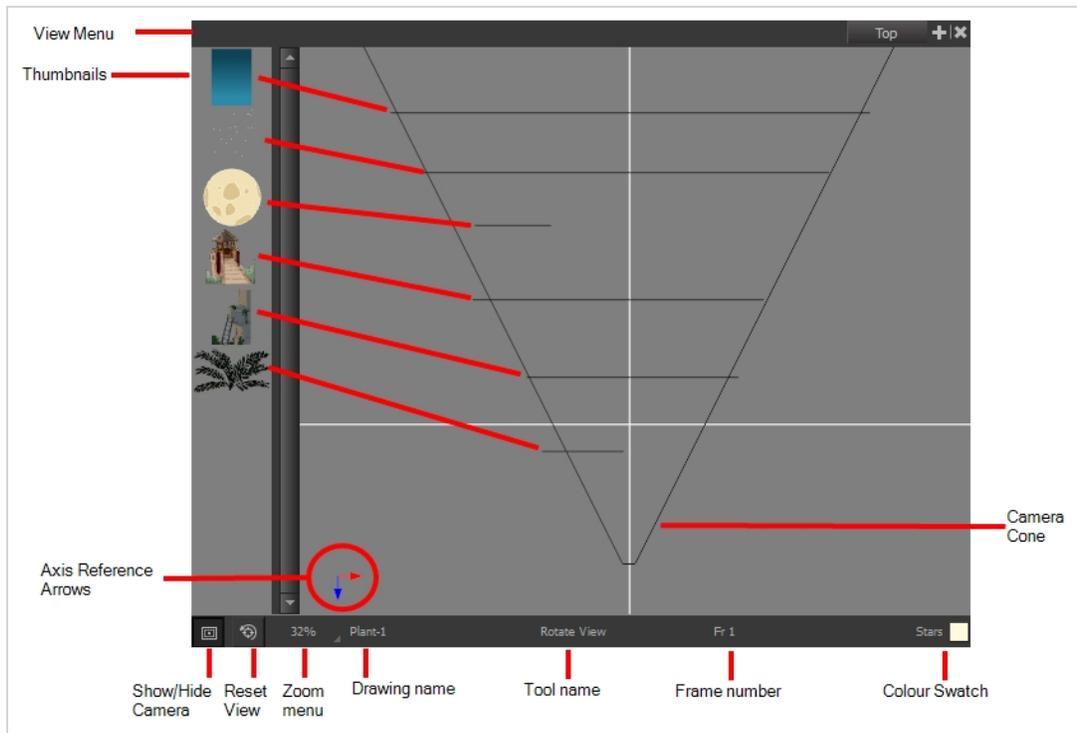
		<p>matte of an effect, the effect will be displayed in that layer's Additional Links.</p> <p>If more than one layers are in a layer's Additional Links, only the first of these layers will be displayed, followed by the amount of extra linked layers there are.</p> <p>By clicking on the Additional Links, you can open a menu listing the linked layers, and click on one of these layers to navigate to it.</p> <p>In the following example, the BOOM_Animation layer is used as the matte of Cutter_1 and Cutter_2:</p> 
	<p>Timeline Zoom</p>	<p>Reduces or increases the width of frames in the Timeline view. Move the slider right to increase the width or left to reduce it. You can also press 2 to zoom in and 1 to zoom out when the Timeline view is focused on.</p> <p>If you want to reset the Timeline view's zoom, click on the Timeline Zoom  icon left of the slider.</p>



## Top View

T-HFND-008-014

The Top view is used mainly for multiplane scenes and to position elements in 3D space. It allows you to see the scene's stage from above. This lets the camera cone and the spacing between the elements be seen.

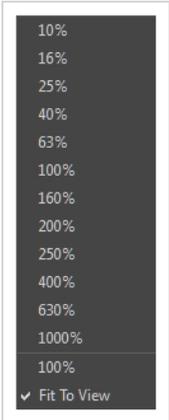


### How to access the Top view

Do one of the following:

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

Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to work in the Side view.
	Thumbnails	A thumbnail of each drawing layer in the scene. The order of the thumbnail images is based on each element's FB position in the scene space. You can see a representation of the FB position of each layer in the camera cone.

	Camera Cone	The camera cone represents the camera's position and field-of-view (FOV).
	Axis Reference Arrows	The axis reference arrows let you maintain your orientation when navigating in the view.
	Show/Hide Camera	Shows or hides camera frame in the Perspective view.
	Reset View	Resets the pan, rotation, and zoom of the Perspective view.
	Zoom Menu	<p>This field displays the current zoom level in the Perspective view. You can use the Zoom level drop-down menu to select a specific zoom level from the list. Zoom levels from 2.5% to 6400% are available; you can also select Fit To View to automatically use a zoom level that lets you see all your scene layers and information in the Perspective view at once.</p> 
	Layer Name	This field displays the currently selected layer and drawing name.
	Tool Name	This field displays the currently selected tool.
	Frame Number	This field displays the currently selected frame of your animation.
	Colour Swatch	This field displays the currently selected colour in the palette.

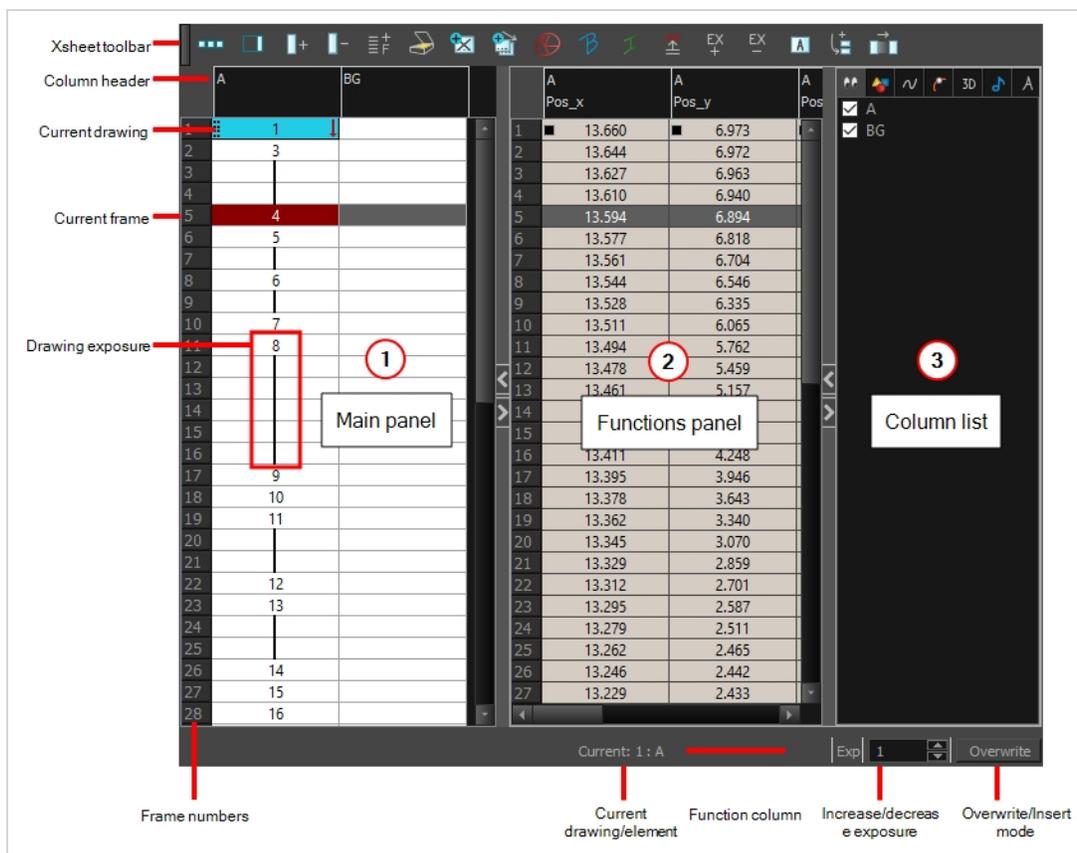
## Xsheet View

T-HFND-006-003

The Xsheet view lets you read the timing vertically by displaying it in a grid, with each drawing layer represented by a column, each frame of your scene represented by a row, and each exposed drawing displayed by its name in the cells. It is meant to work like a traditional animation exposure sheet.

Using the functions panel, you can also view the functions and keyframes of the motion paths for the selected column, with the value of those functions for each frame listed in the cells.

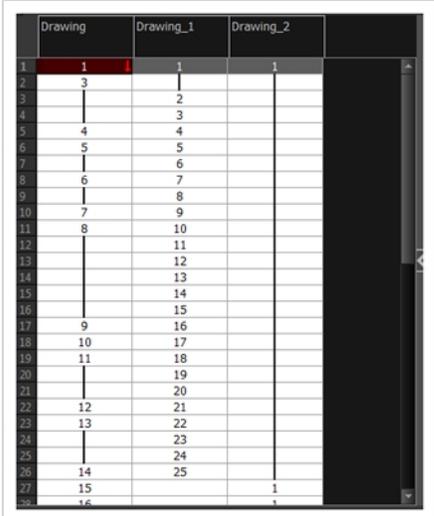
Contrary to the Timeline view, the Xsheet view does not display pegs, effects or layer hierarchy. Hence, it is optimized for traditional and paperless animation, whereas the Timeline view is optimized for digital or cut-out animation.

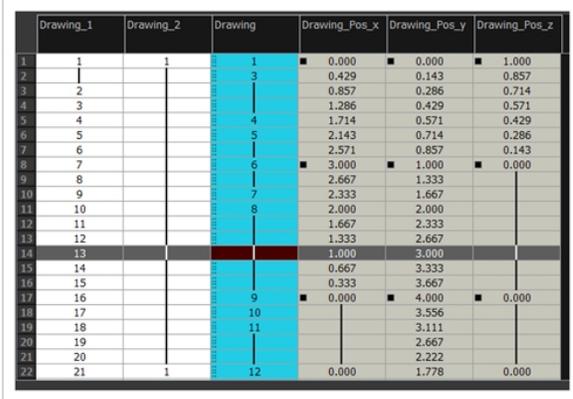
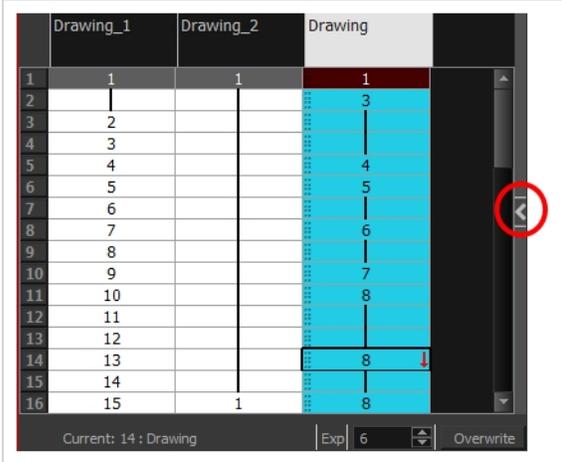


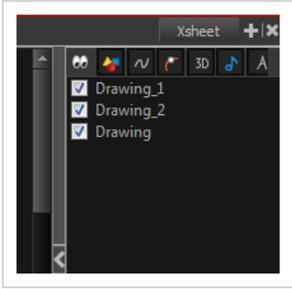
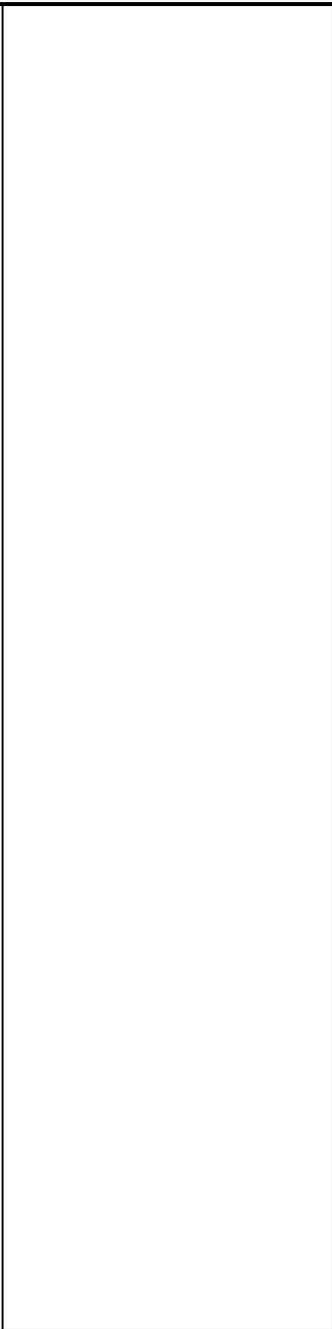
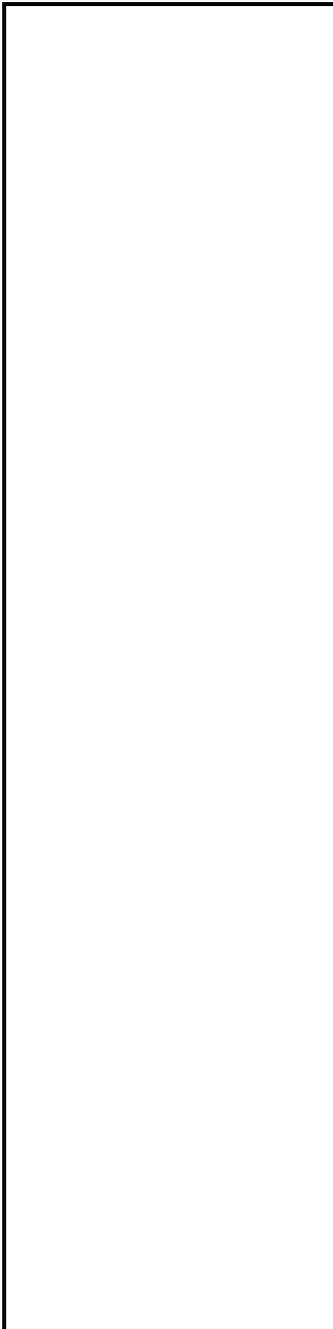
### How to access the Xsheet view

Do one of the following:

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

Icon	Section	Description
	View Menu	The View menu contains all the tools and options that you can use to manage columns and timing.
	View Toolbar	The view toolbar contains all the tools and options you can use in the Xsheet view to manage columns and timing.
	Xsheet Main Section	<p>The Xsheet view has three sections. By default, only the main section is visible. It displays the drawing layers, also known as <i>drawing columns</i>.</p>  <p>When using advanced compositing and animation techniques, unconnected functions (motion paths) also appear in the main section. Unconnected functions mean that some motion paths are not attached to any particular layer.</p> <p>When you reconnect functions to a layer, they are still visible in the main section.</p>

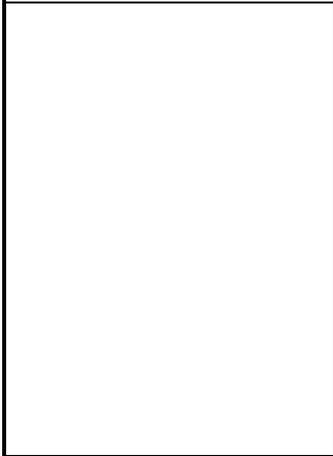
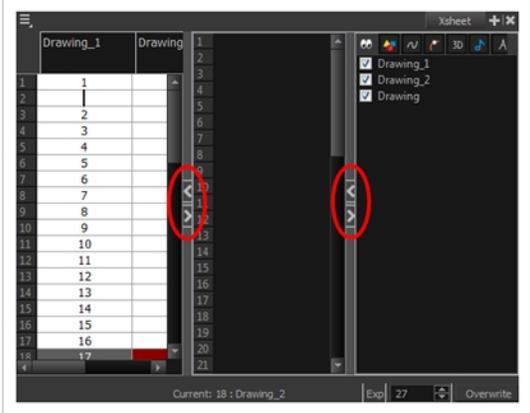
		
	<p>Functions Section</p>	<p>The Functions section is used for more advanced techniques. This section displays the functions (paths) related to the selected layer in the Timeline view. By default, the Functions section is hidden.</p> <p>In the Xsheet view, click the Expand button located on the right side of the main section. Click on the same button to collapse it. You can also use the Show Column List button in the Xsheet View toolbar. If you select a drawing column in the main section of the Xsheet view, the function columns will not be displayed. You must select the layer from the Timeline view.</p> 
	<p>Column List Section</p>	<p>The Column List section allows you to show and hide columns in the Xsheet view. When you hide a layer in the Xsheet view, it is also disabled in the Timeline view.</p>



You can use the Column List to hide individual columns or hide an entire column type (drawing or function) from the Xsheet view. By default, the Functions section is hidden.

In the Xsheet view, click the Expand button on the right side of the main section to show the Functions section. Click on the same button to collapse it. You can also use the Show Column List  button in the Xsheet toolbar.

Go to the Xsheet view menu and select **View > Show Column List**. Click the Expand button on the right side of the Functions section to display the Column List section.

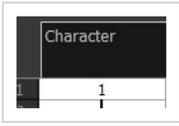
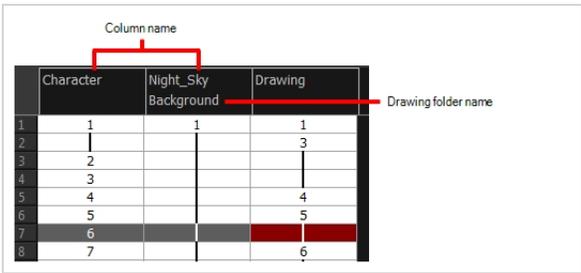
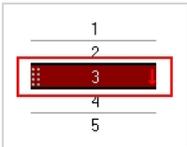


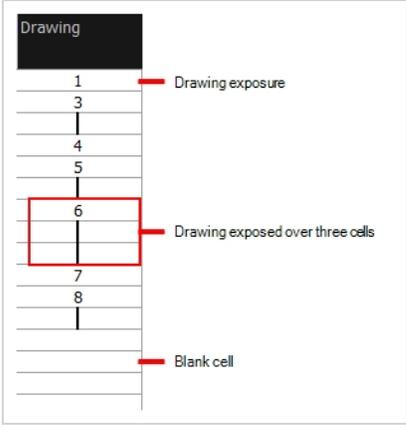
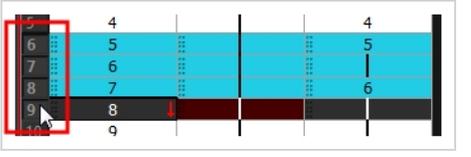
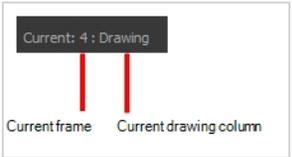
Column Header

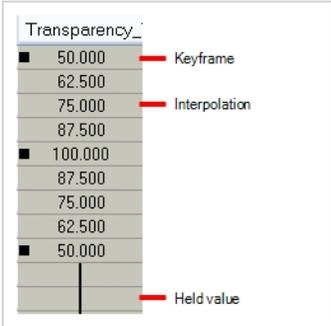
Each column available in the Xsheet view has a header displaying the column's name. The column's name is the same as the corresponding timeline layer. If you rename one or the other, they will both be renamed.

A quick access menu is available when you right-click. This menu contains the command affecting an entire column such as renaming, changing the default colour, or deleting a column.

The tooltip that appears when you hover at the top of each Xsheet column shows the folder path to the

		<p>source drawings for that column.</p>  <p>In Harmony, the column header shows the layer's name and the name of the drawing folder to which it is linked. If the name of the layer is the same as the drawing folder, the drawing folder's name will not be displayed. To modify the name of the element folder independently from the column and layer name, you must select the Advanced Element Mode option preference in the Advanced tab of the Preferences dialog box.</p> 
	<p>Current Drawing</p>	<p>A drawing selected in dark red indicates that the drawing is currently displayed in the Drawing and Camera views. The current drawing selection is not linked to the drawing displayed in the Camera view since drawings from each visible layer are displayed at once.</p> 
	<p>Current Frame</p>	<p>The darker frame appearing in the Xsheet view represents the current frame.</p> 
	<p>Drawing Exposure</p>	<p>In the drawing columns, you can see the drawing names and their exposure. You can use any alphanumeric symbol to name your drawing. When a drawing is exposed over more than one cell, a vertical</p>

		<p>black line is displayed to indicate the continuity of the exposure. When there is no drawing in a cell, the cell will be blank.</p> 
	<p>Frame Numbers</p>	<p>On the left side of the Xsheet view, the frame numbers are shown indicating where you are. These read vertically instead of being displayed horizontally as they are in the Timeline view.</p> <ul style="list-style-type: none"> <li>To go to a particular frame, click the frame number.</li> </ul>  <ul style="list-style-type: none"> <li>To select an entire range of frames, click and drag a selection downwards.</li> </ul> 
	<p>Current Frame Display</p>	<p>At the bottom-right of the Xsheet view, you can see the current frame number, as well as the column containing the drawing currently displayed in the Drawing view.</p> 

	<p>Functions Column</p>	<p>The functions columns are displayed in the Functions section of the Xsheet view. They represent the motion and rotation you applied to a drawing layer.</p> <p>A function column can also be related to an effect. Selecting the effect layer shows you the corresponding function column in the Xsheet view.</p> <p>The function columns display the position value or effect value on each cell. If there is a keyframe on a cell, a black square is displayed. Holding the same value for several frames displays a vertical black line.</p> 
	<p>Increase/Decrease Exposure</p>	<p>You can quickly increase or decrease the exposure of the selected cell by clicking on the up and down arrows in the Increase/Decrease Exposure field.</p> 
	<p>Overwrite/Insert Modes</p>	<p>The Overwrite/Insert button allows you to decide the way the values are inserted into the Xsheet.</p>