Harmony

Toon Boom
Harmony V15.0
Paint Application User Guide

Toon Boom
Bring Your Stories To Life

Legal Notices

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Publication Date

01-15-2020

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Table of Contents

User Guide

The Harmony core functionality are explained in this User guide. All the steps required to create and complete a project are covered in the following chapters with concept descriptions and detailed step-by-step procedures focused on the task at hand.

Detailed parameter descriptions for all buttons, commands, and functions are covered in the Reference guide and Preference guide. Some of them are explained here where necessary to the understanding of a given concept or procedure.

Chapter 1: Project Creation

Once Harmony Paint is installed, you are ready to start the application and paint! In this chapter, you will learn about starting the application, as well as opening and saving scenes

About the Database Structure in Harmony Server

Harmony Server has a client-server configuration linked through a network. Although the user is working on a client machine, all of the data is saved on the server.

You can compare the Harmony Server structure to a filing cabinet. Every element is structured and follows a strictly organized hierarchy.

The following production structure hierarchy is used:

- **Environment**: Production, project, feature film, series—see

- **Job:** Episode and sequence from each environment

- **Scene:** Scene from each job

- **Element:** Layers and columns from each scene

- **Drawing:** Drawings from each element
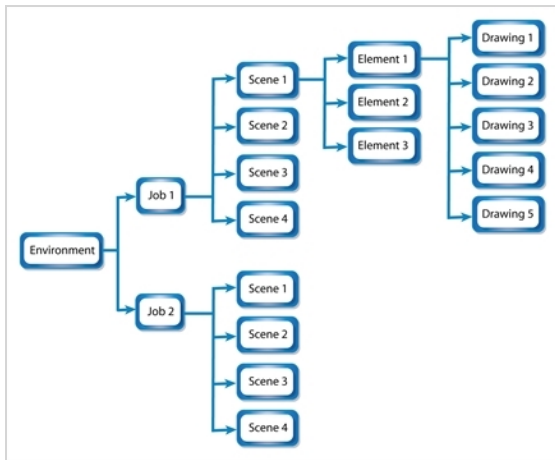
If you imagine the environment as a filing cabinet containing all the folders and information, then the following structure is used:

- The job is a drawer in the filing cabinet containing all the folders related to the drawer's topic.

- The scenes are the folders contained in that drawer

- The elements are the papers contained in the folder

- The drawings are the information contained on the paper

A Harmony Server scene can only be saved inside the structure. This maintains structural organization so nothing is lost. By adhering to this structure, every user working in the database always knows where to find the scenes to work on.

Environment Structure

Before you create or save any elements in your production, you should decide upon a project name. This should reflect the content or title. Use the name to create the project's environment, where you will store all of your

production elements.

For example, the environment could be called **`adventure_movie`**. An environment can be used for movies, series, commercials, student work database, etc.

For a series, you can create an environment with the same name as the series, such as **`smith_family`**. Then you can create a job per episode: **`smep_001`**, **`smep_002`**, and so on. Here is what the letters and numbers represent:

- **`sm:`** The first two letters of the name smith

- **`ep:`** Episode

- **`001:`** The number of the episode

For commercials, which are rather short, you can create an environment, such as **`commercials`**. Then you can create one job per commercial: toothpaste, soap, car, and so on. As commercials are short and do not require splitting into episodes or sequences, you can group them all in the same environment.

For a database of student's work, you can create an environment and name it with the class or group name, such as **`gr402a`**. Then you can create one job per student: **`smith_john`**, **`robertson_jane`**. And then store the different student exercises in separate scenes under their job name.

About Scene Creation for Harmony Paint

When working in Harmony Paint, you cannot create scenes or drawings. You can only edit existing drawings in existing scenes. To create scenes, you must use the Control Center module. To create drawings, you must use Harmony and, optionally, Scan.

For documentation on how to use Control Center, Harmony and Scan, refer to the User Guide for your edition of Harmony.

Starting Harmony Paint

You can run Paint from your operating system's desktop.

> ⚠️ **WARNING**
>
> On macOS, Harmony and its other applications will not run on the first time unless you right-click on the application, then select **Open**. You will be prompted to confirm a security exception, which will require administrative privileges.

How to start Harmony Paint

1. Do one of the following:

   - **Windows**: Start > Programs > Harmony 15.0 [Edition] > Paint

   - **macOS**: Applications > Toon Boom Harmony 15.0 [Edition] Network > Paint

   - **GNU/Linux**: Applications > Toon Boom Harmony 15.0 [Edition] > Paint

   The Paint application launches and displays a splash screen. After the splash screen, the log-in dialog box appears—see *Connecting to the Database* on page 20.

Connecting to the Database

Before you can work in HarmonyPaint via Harmony Server, you must be connected to the Harmony database.

How to connect to the Harmony database

1. Start Paint—see [Starting Harmony Paint](#).

2. In the **User Name** field, type in your Harmony username.
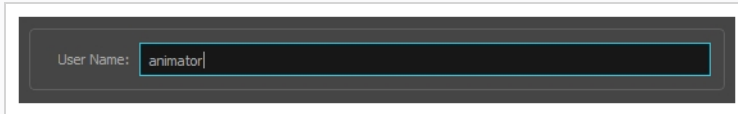
> **NOTE**
>
> This username should be provided to you by your project lead or system administrator.

3. Click on **OK**.

   The main application window appears. You can now load drawings so you can work on them—see [Loading Drawings and Elements in Harmony Paint](#)

Loading Drawings and Elements in Harmony Paint

Once you launch Harmony Paint, you need to load a scene's drawings from the Database Selector, in order to start the ink and paint process. The drawings must have previously been created and scanned.

There are two ways of loading drawings:

- **Open Drawings**: You can select individual drawings to open.

- **Open Elements**: You can open all the drawings in one or several elements.

Opening Drawings in Harmony Paint

This option will let you load drawings from one element at a time, for quick ink and paint on a single layer animation.

How to open drawings in Harmony Paint

1. Once Harmony Paint is launched and you are logged in, select **File > Open Drawings**. Press Ctrl + O (Windows/Linux) or ⌘ + O (macOS).

   The Database Selector opens, displaying the Environments available from the Harmony database.
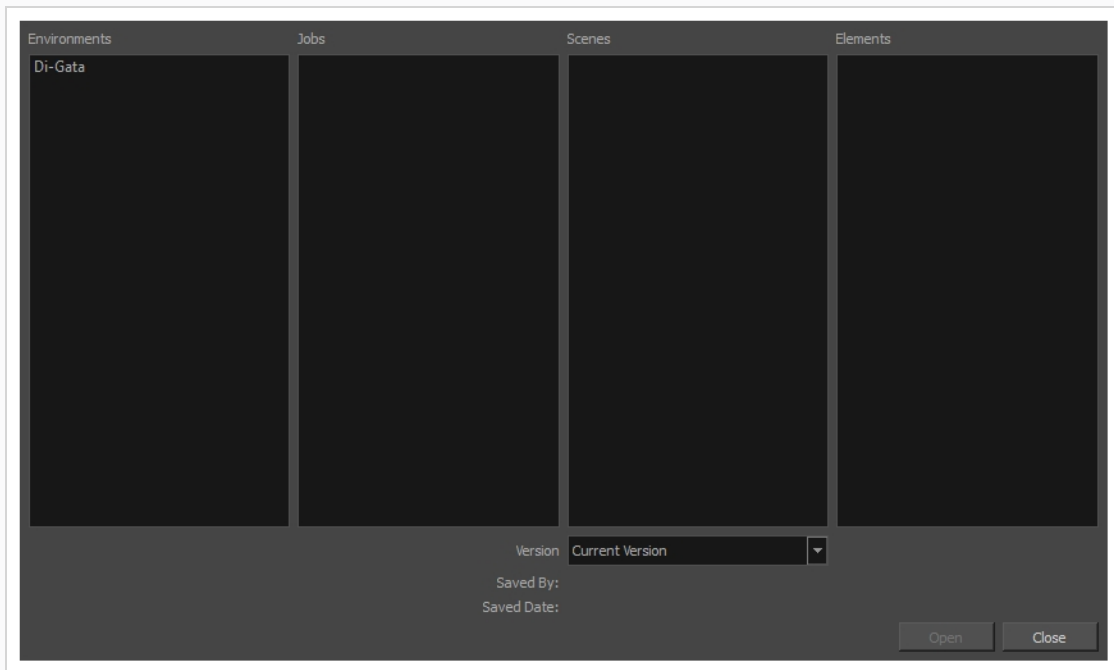
2. Select the Environment, Job, Scene and Element where the drawings you need to paint are located.
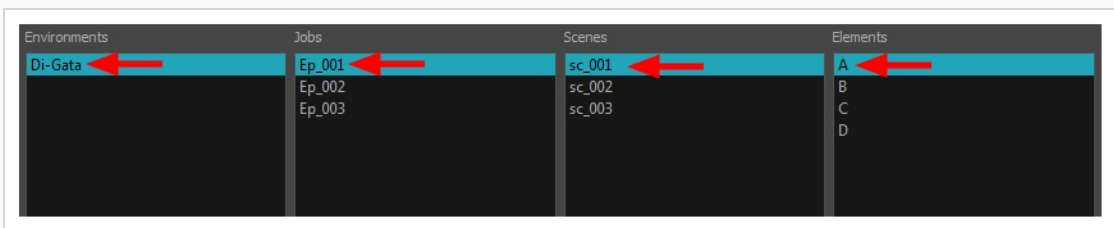
3. Choose the version you want to open from the Version drop-down menu.
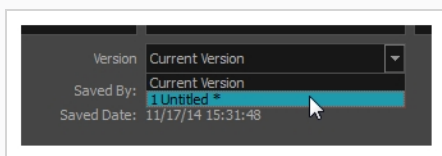
- The Saved By and Saved Date fields display the user who was the last to save the selected scene and the date of the last save.
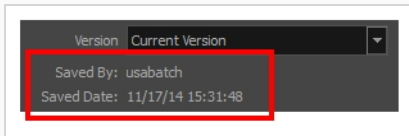
4. Click on the Open button.

   The Drawings Selector dialog box opens.
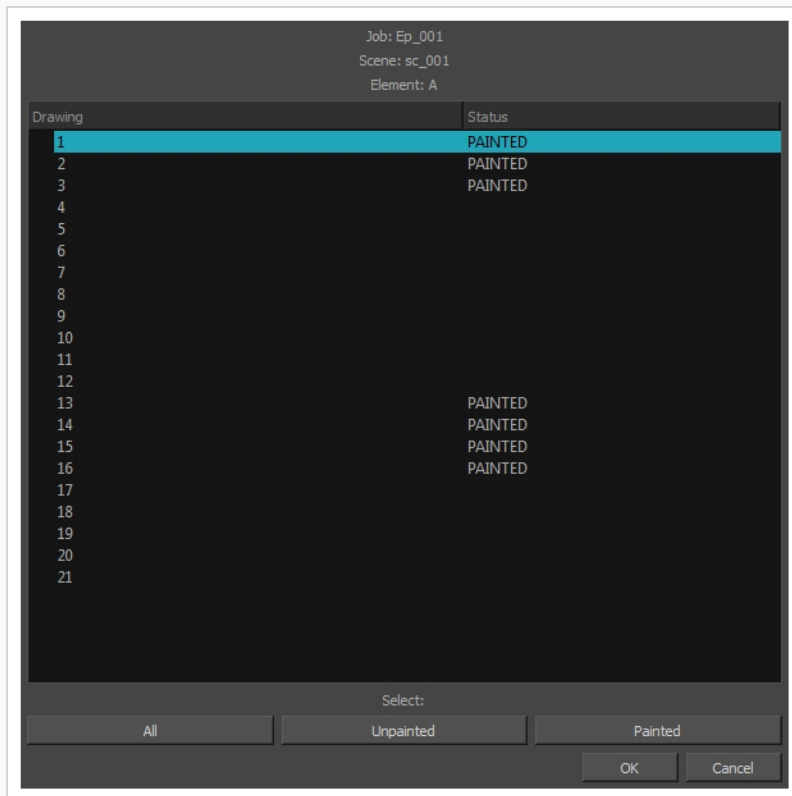
5. Select the desired drawings from the drawings list:

   - Click on a single drawing to select it.

   - You can create a continuous multiple selection by holding the Shift key.

   - You can create a multiple selection by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.

   - Click on the All button to select all the drawings that are listed in the Drawings Selector.

   - Click on the Unpainted button to select all the drawings whose status appears as UNPAINTED.

- Click on the Painted button to select all the drawings whose status appears as PAINTED.

6. Click **OK**.

   The selected drawings appear in the Drawing Thumbnails view

7. Use the Control panel to navigate between the previous and next drawings. Press F and G.

   You are now ready to ink and paint!

Opening Elements in Harmony Paint

This option will let you load drawings from several elements at once. This can be useful when an animation is separated in many layers, to insure that they are well aligned and that the painted shapes and lines fit together. A good example of this would be a dialogue with the chin and mouth separated from the rest of the head.

How to open elements in Paint

1. Once Harmony Paint is launched and you are logged in, select **File > Open Elements**. Press Ctrl + E (Windows/Linux) or ⌘ + E (macOS).

   The Database Selector opens, displaying the Environments available from the Harmony database.
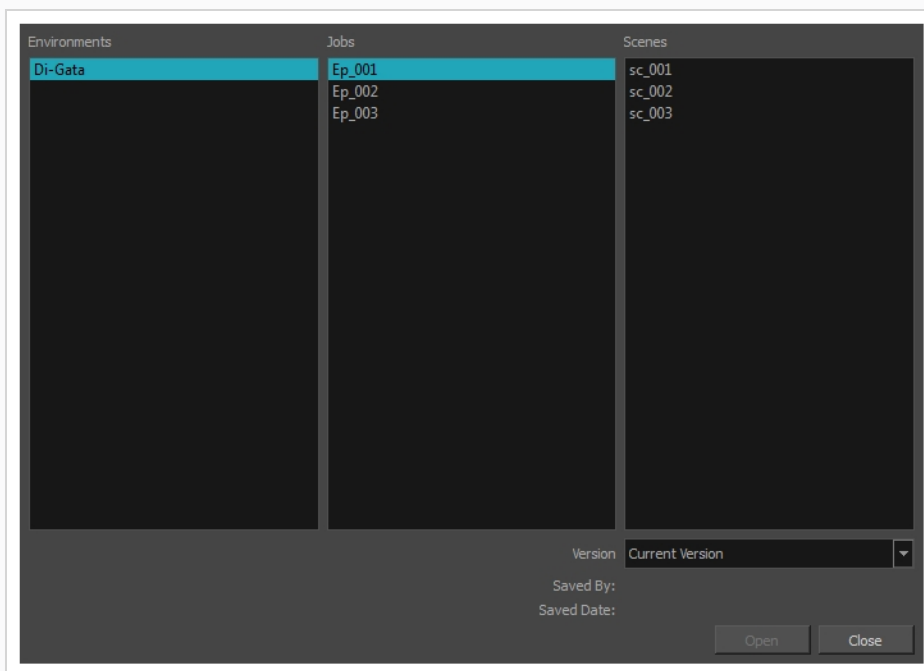
2. Select the Environment, Job and Scene where the elements containing the drawings you need to paint are located.
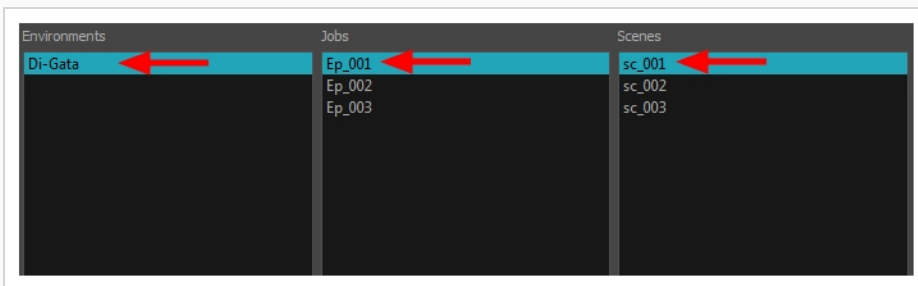
3. Choose the version you want to open from the Version drop-down menu.
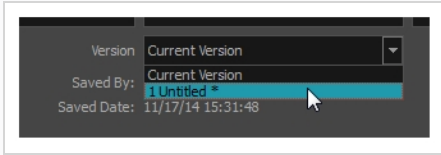
- The Saved By and Saved Date fields display the user who was the last to save the selected scene and the date of the last save.
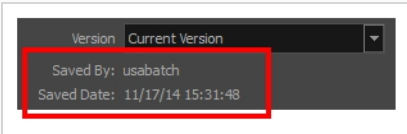
4. Click on the **Open** button.

    The Open Elements dialog box opens.
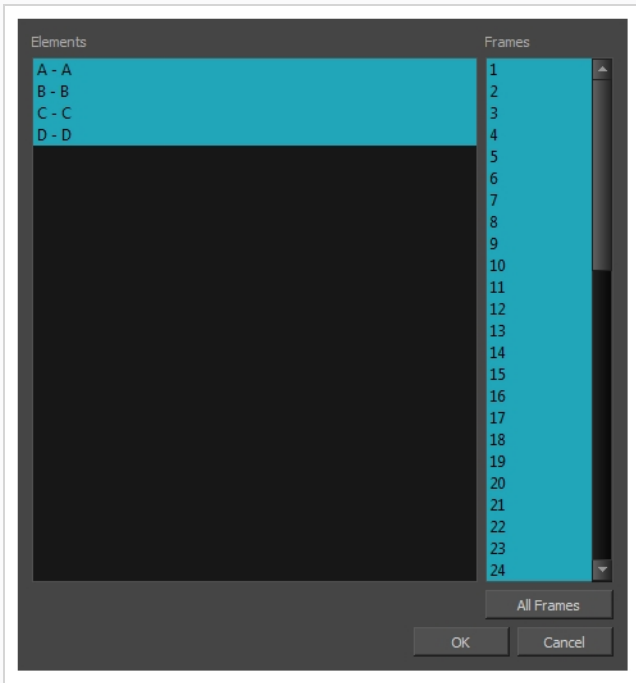
5. Select the elements you need to paint from the Elements list:

    - You can create a continuous multiple selection by holding the Shift key.

    - You can create a multiple selection by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.

6. Select the frames you wish to load from the Frames list:

    - You can create a continuous multiple selection by holding the Shift key.

    - You can create a multiple selection by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.

- Click on the All Frames button to load all the frames of the scene.

7. Click **OK**.

   The Drawing Thumbnails view is hidden and your selected elements are loaded in Harmony Paint.

8. Enable the Light Table 💡 option from the Drawing view toolbar to display all the drawing layers.

   The selected layer are displayed in original colours and the other layers are displayed as washed out colours.
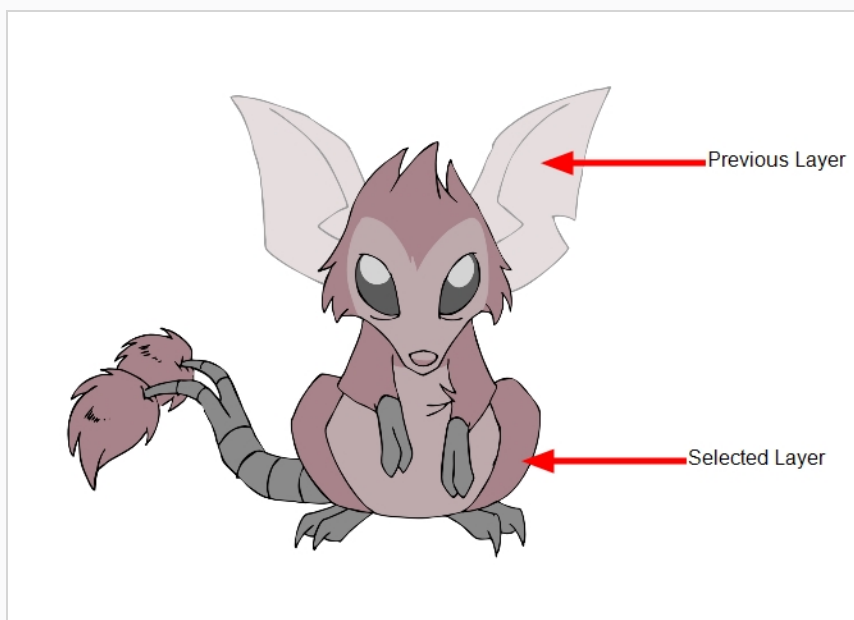
9. Use the Control Panel to navigate between previous and next layers. Press H and J.

10. Use the Control panel to navigate between previous and next drawings. Press F and G.

   You are now ready to ink and paint!

Saving a Scene in Harmony Paint

It is important to regularly save your scene. As you make changes to a scene, an asterisk (*) appears in the title bar beside the scene name to indicate that the scene contains unsaved changes.

In Harmony Paint, you can only make changes to drawings in a scene, not to the scene's structure or set-up. When you save in Harmony Paint, all the changes you made to the loaded drawings are saved to the database.

How to save a scene

1. Do one of the following

   - In the top menu, select **File > Save**.

   - Press Ctrl + S (Windows/Linux) or ⌘ + S (macOS).

Advanced Saving in Harmony Paint

Use the Advanced Save dialog box to save specific drawings, palettes and palette lists as a version of your scene.

How to use the Advanced Save dialog box

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

   The Advanced Save dialog appears.

   For information on the parameters in the Advanced Save Dialog Box, refer to the *Advanced Save Dialog Box* topic of the Reference guide.

Verifying a Scene's Integrity

The Check Files commandVerifies the integrity of the drawing and palette files in your project. Use the Check Files dialog box to verify that the data is consistent, correct, and accessible.

How to open the Check Files dialog box

1. From the top menu, select **File > Check Files**.
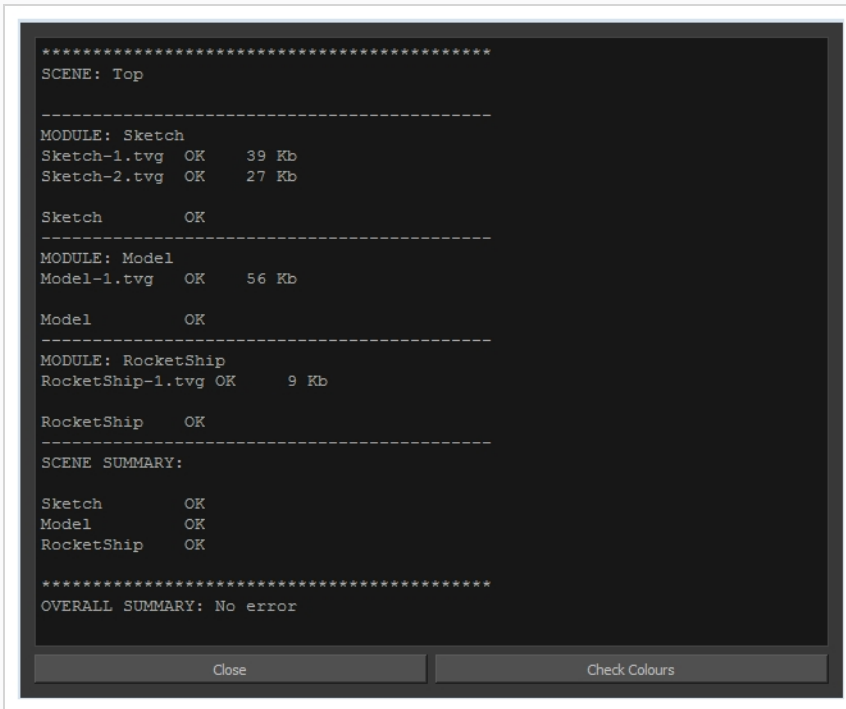
2. Click **Check Colours** to open the Check Colours dialog box.

    The Check Colours dialog box checks the palette integrity and displays the colour recovery data.
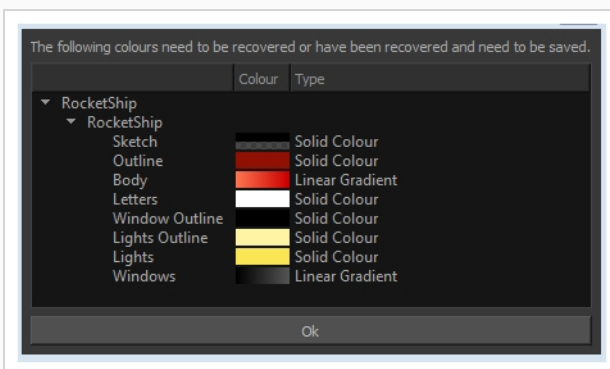
Chapter 2: Interface

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Knowing how to manage the Toon Boom Harmony interface helps you to work efficiently and organize your workspace conveniently. There are a series of views and toolbars you can use as you perform different operations. Usually, each person has a specific way of working in the interface and prefer particular views and toolbars. In this chapter, you will learn about the main elements of the interface and how to manage them.

> **NOTE**
>
> To learn more about each view's properties, see the Reference guide.
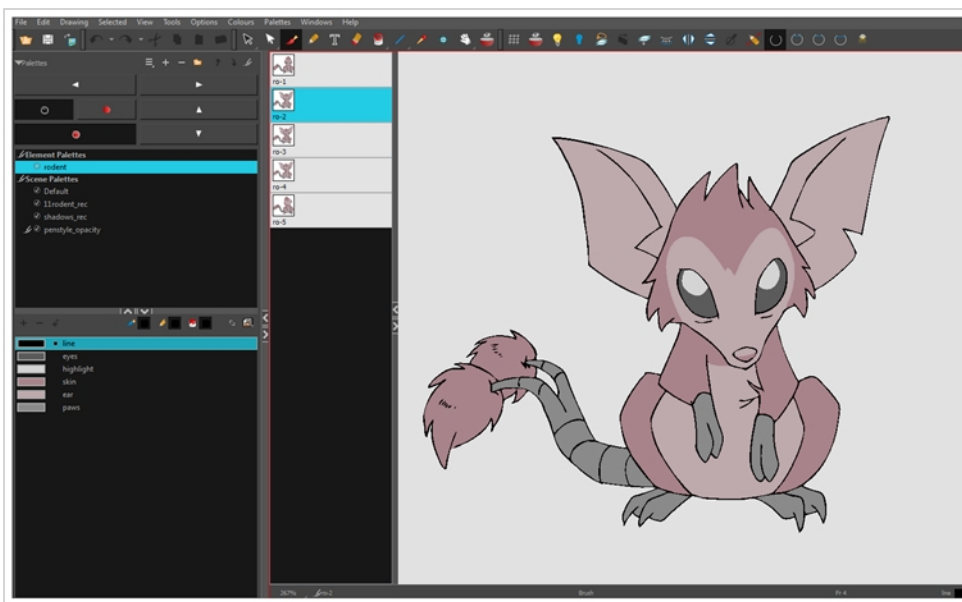
Changing the Theme Colours

The Harmony interface is set to a dark theme by default. You have the option of switching to a light theme.

How to change the interface theme

1. From the top menu, select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS) .

   The Preferences dialog box opens.

2. Select the **General** tab.

3. In the Options section, deselect the **Use Dark StyleSheet** option to use the light theme.

4. Restart Harmony.
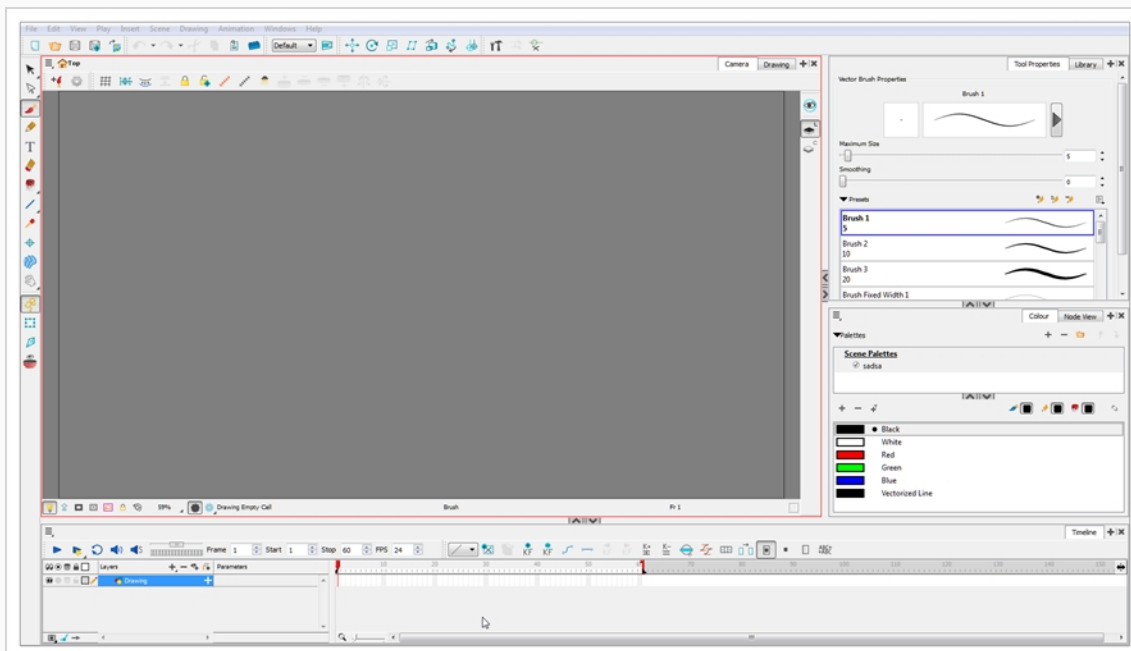
Changing the User Interface Language

Harmony is available in English, Spanish, Japanese, and Chinese. Harmony will automatically change to you OS language if it corresponds to one of these four languages. If you would like to start Harmony in one of those language independently from your OS, you can do so by launching it from a command prompt terminal with a parameter that specifies the desired language.

How to start Harmony using a specific user interface language

1. Start a termninal, command prompt, or shell on your OS.

2. Using the change drive command (cd), navigate to the Harmony executable file location:

   - Windows: `cd "C:\Program Files (x86)\Toon Boom Animation\Toon Boom Harmony 15.0 [Edition]\win64\bin"`

   - macOS (Stand Alone): `cd "/Applications/Toon Boom Harmony 15.0 [Edition]/tba/macosx/bin"`

   - macOS (Server): `cd "/Applications/Toon Boom Harmony 15.0 [Edition] Network/tba/macosx/bin"`

   - GNU/Linux: `cd /usr/local/ToonBoomAnimation/harmony[Edition]_ 15.0/lnx86_64/bin`

3. To start Harmony in a specific language, type in the name of the Harmony application including the language argument (-lang) and language code (two letters):

   - Windows:

     - English: `HarmonyPremium.exe -lang en`

     - Chinese: `HarmonyPremium.exe -lang zh`

     - Japanese: `HarmonyPremium.exe -lang ja`

     - Spanish: `HarmonyPremium.exe -lang es`

   - macOS:

     - English: `./Harmony\ Premium -lang en`

     - Chinese: `./Harmony\ Premium -lang zh`

     - Japanese: `./Harmony\ Premium -lang ja`

     - Spanish: `./Harmony\ Premium -lang es`

- GNU/Linux:

  - English: `./HarmonyPremium -lang en`

  - Chinese: `./HarmonyPremium -lang zh`

  - Japanese: `./HarmonyPremium -lang ja`

  - Spanish: `./HarmonyPremium -lang es`

4. Press Enter/Return to validate and launch Harmony in the desired language.

About Menus

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Harmony contains three types of menus from which you can access many commands and options:

Top Menu

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

The top menu contains the following categories:

- File
- Edit
- View
- Drawing
- Selected
- Tools
- Options
- Colours
- Palettes
- Frames
- Columns
- Windows
- Help

On macOS, there is also a Harmony [Edition] category that contains the following commands:

- Preferences
- About
- Quit

View Menu

A view menu contains commands specifically related to that view.

To access a view menu, click the Menu ☰ button in the top-left corner of a view.
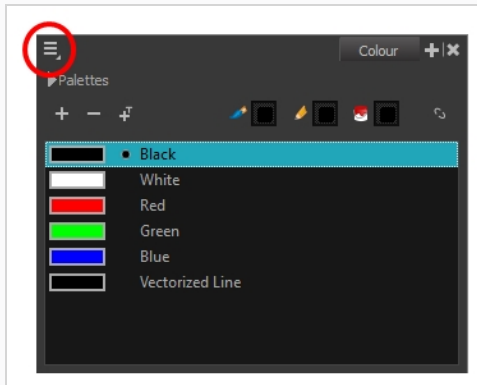
A view menu is available in the following views:

- Colour

Quick Access Menu

A quick access menu lets you open a list of the commands you will use most often.

To access this menu, right-click anywhere in a view.

Nautilus © Gava Productions and Indiana Productions
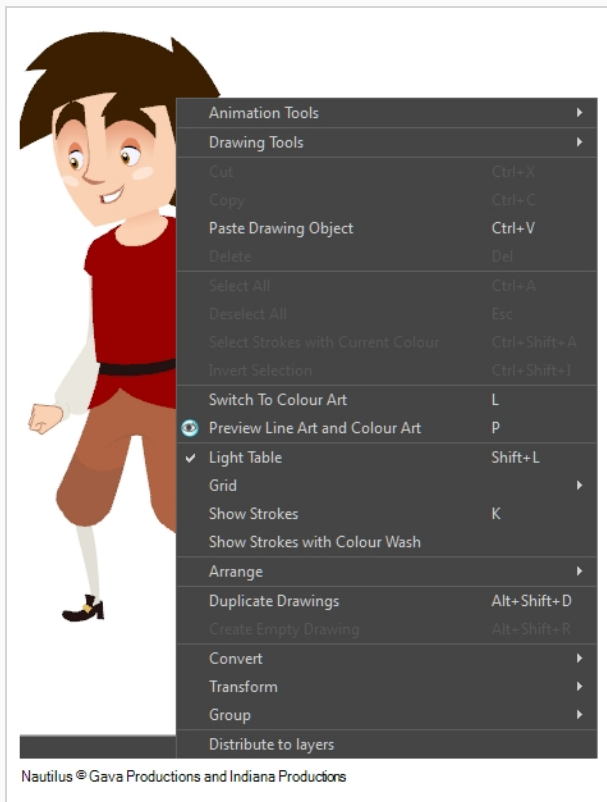
About Toolbars

Harmony contains toolbars which, by default, are located at the top of the interface. Some of the views also have their own toolbars which you can move around. You can reposition the toolbars to suit your work style or hide unused ones.

> **NOTE**
>
> Throughout this section, there may be slight differences between your interface and the illustrations in this guide. This is because the images are taken from Harmony Premium.

You can display or hide toolbars using the menus. The Toolbar menu only contains the View toolbars of the views that are displayed in the workspace. As you show or hide views in your workspace, the Toolbar menu updates.

The top toolbars can also be displayed directly in a view. Only one instance of each toolbar can be displayed. If a toolbar is already displayed in the top area and you decide to display it in a view, the selected toolbar will move from the top area to the view.

The toolbars in any of the views can be customized with your favourite tools. Using the Toolbar Manager dialog box, you can organize different toolbars to suit your working style.

If the default toolbar does not contain the tools you require, you can customize the toolbar.

Adding Toolbars

You can add toolbars simply by using menus.

How to add or close a toolbar

1. Select **Windows > Toolbars >** *toolbar*.

   - You can right-click anywhere in the toolbar area to access Harmony toolbars. View toolbars, however, are not available by right-clicking the toolbar area. You can access the toolbar of any open and active view by right-clicking in the view's top area or the Windows menu.

Moving Toolbars

You can move toolbars simply by dragging them to a new location.

How to move a toolbar

1. Select the toolbar you want to move by clicking its anchor point and dragging it into a view toolbar area or another position in the top or side interface toolbar area.
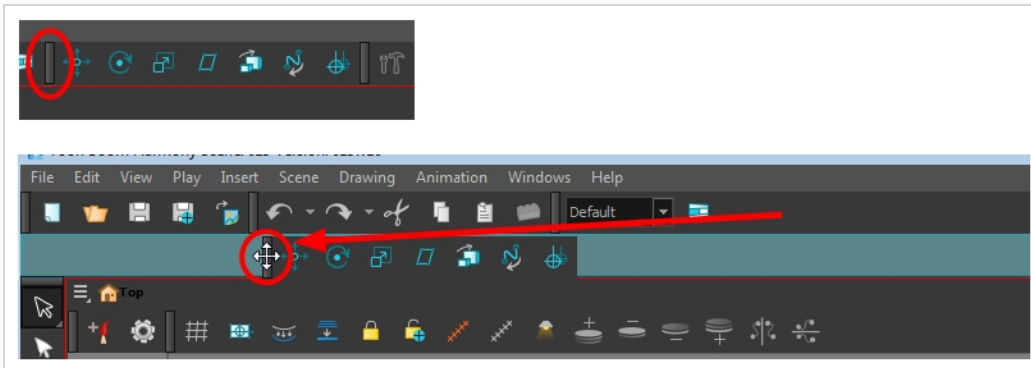
2. When a highlighted zone appears showing an available location for the toolbar, release the mouse button and drop the toolbar into position.
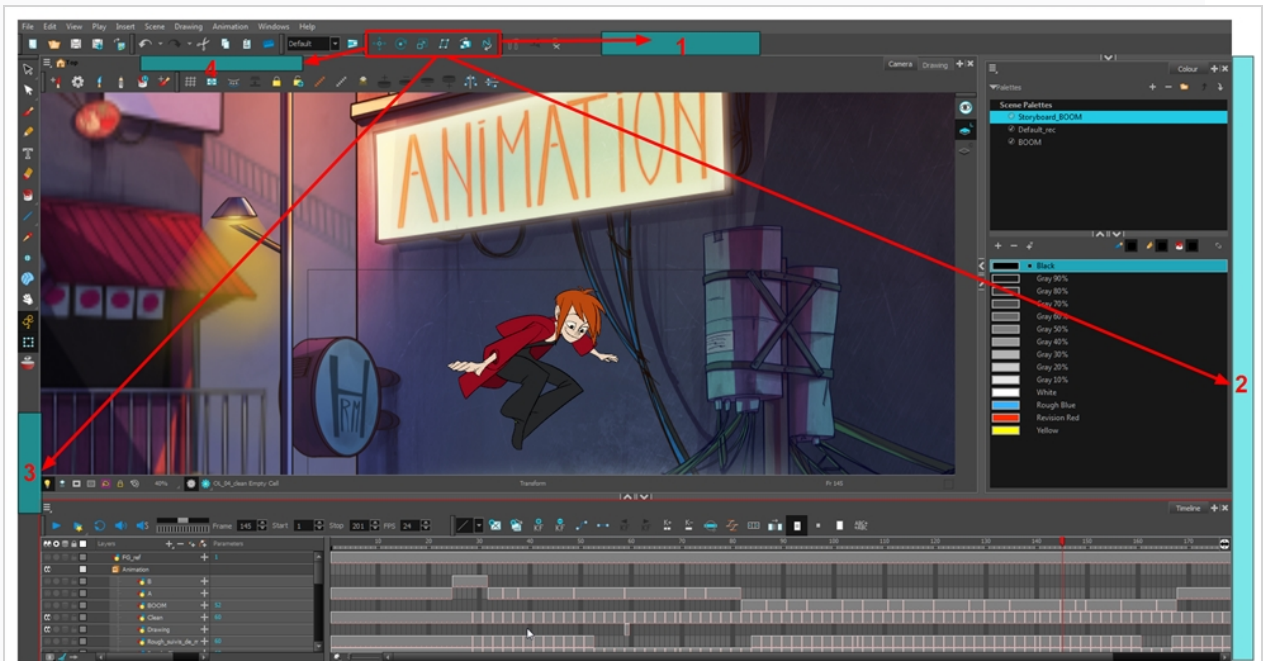
Resizing Toolbars

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You can resize a toolbar by sliding its tail-end.

How to resize a toolbar

1. Hide a portion of a toolbar by dragging another open toolbar over its tail-end.

2. Click on the arrows appearing at the end of the collapsed toolbar to expand it.
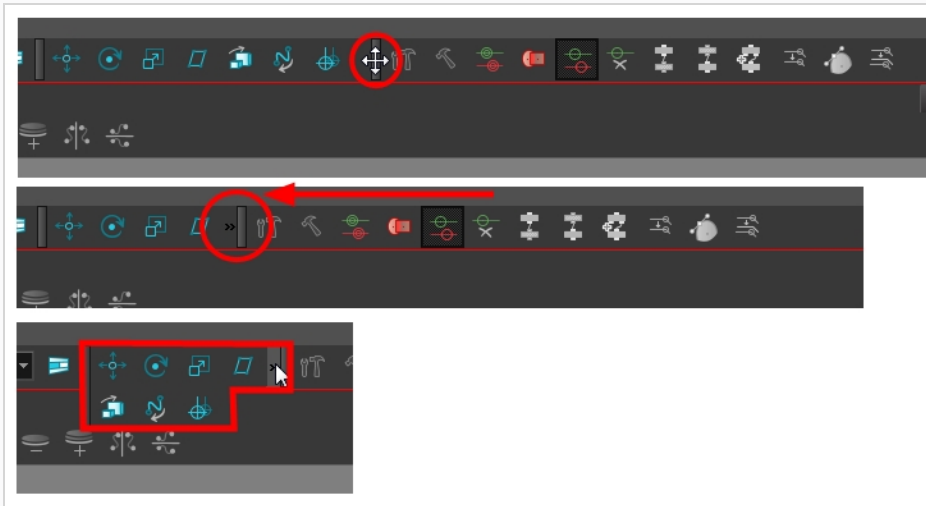
Customizing View Toolbars

You can customize a view toolbar to add, remove, and reorder icons.

How to customize a view toolbar

1. In the chosen view, right-click on any button in the toolbar where you want to add or subtract a new button. You can also reorder the buttons. Make sure the button you right-click on is active.

2. From the menu, select **Customize**.
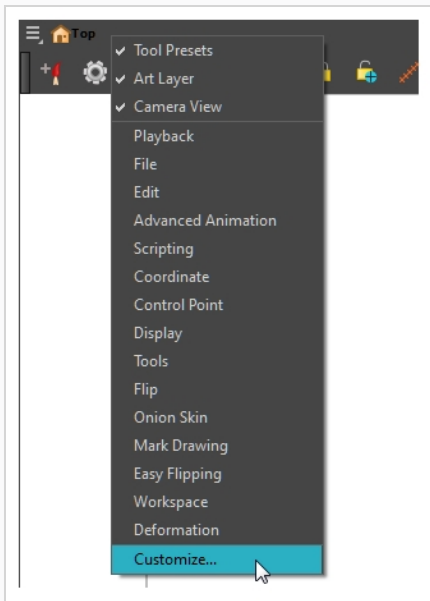
The Toolbar Manager window opens.

3. To add a new icon to your toolbar, select the tool or command from the Available Tools list and click the Right Arrow ▷ button to switch it to the Toolbar list.
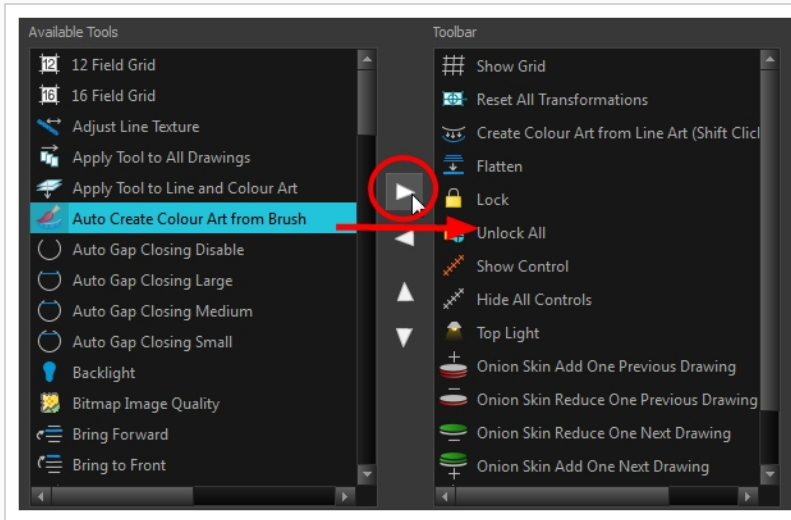
4. To remove an icon from your toolbar, select the tool or command in the Toolbar list and click the Left Arrow ◁ button to switch to the Available Tools list.
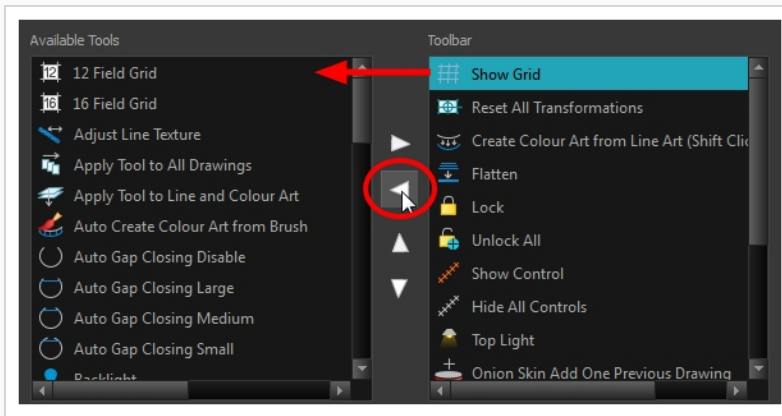
5. To reorder the icons in your toolbar, select the command to be moved from the Toolbar list and click the Up △ or Down ▽ buttons to move it to the correct location.
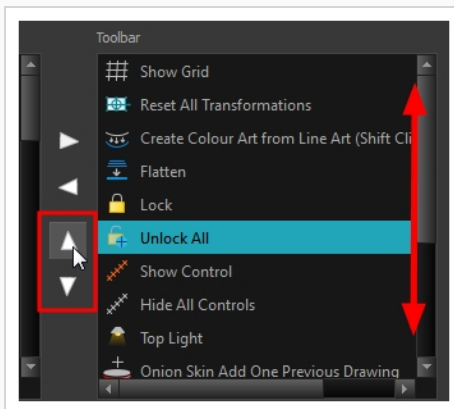
6. Click **OK** when you are finished.

About 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.
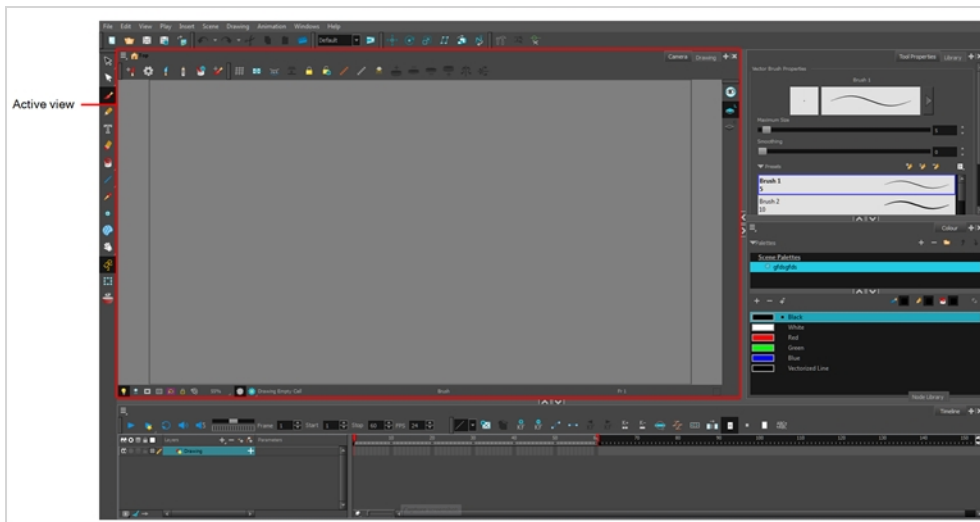
Workspace modifications are automatically saved when you exit the application, unless you disable the Automatically Save Workspace option in the Preferences dialog box.

Showing and Hiding Views

You can temporarily show and hide views using the collapsing buttons.

How to temporarily hide a view

1. On the edge of the window you want to hide, click the **Collapse/Expand** button.

   The view is compressed and only the Collapse/Expand button is visible.

2. Click the **Collapse/Expand** button again to redisplay the view.

Moving Views

T-HFND-003-011

You can move views by dragging their name tab to a new location.

Resizing Views

You can resize a view by sliding its edges.

How to resize a view

1. Place the pointer on the edge of the view to resize.

2. When you see the Resizing ⊩ icon, drag the side of the view to the desired size.
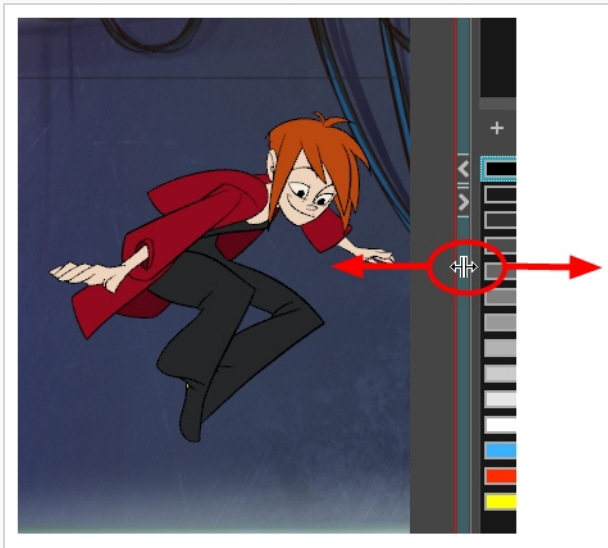
About Preferences

An important feature of Toon Boom Harmony is the Preferences dialog box. From here you can customize your interface, tool behaviour and shortcuts. Throughout this guide, you are often required to go to the Preferences dialog box to set parameters and options.

> **NOTE**
>
> To learn about the different preferences available, refer to the Preferences Guide.
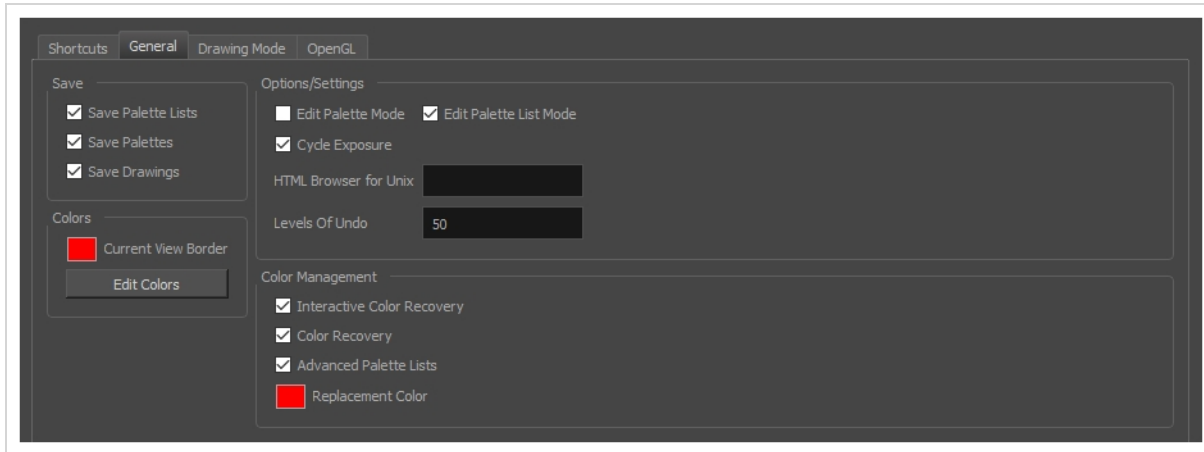
When using Harmony Stand Alone, your custom preferences are stored in the following location, depending on your operating system:

- **Windows:** C:\Users\[user_name]\AppData\Roaming\Toon Boom Animation\Toon Boom [Harmony Paint\full-1500-pref

  > **NOTE**
  >
  > On Windows, the AppData folder is hidden. To display it in Explorer, in the top menu, open the **View** pane and check the **Hidden Items** checkbox.

- **macOS:** /Users/[user_name]/Library/Preferences/Toon Boom Animation/Toon Boom [Harmony Paint/full-1500-pref

  > **NOTE**
  >
  > On macOS, the Library folder is hidden. To display it in Finder, hold down the Alt key.

- **GNU/Linux:** /home/[user_name]/Toon Boom Animation/Toon Boom [Harmony Paint/full-1500-pref/

When using Harmony Server, preferences are stored in your Harmony Server account's user space on the database server, in the following path:

- /USA_DB/users/[user_name]/Harmony Paint/full-1500-pref

How to open the Preferences dialog box

1. Do one of the following:

   - Windows or GNU/Linux: In the top menu, select **Edit > Preferences**.

   - macOS: In the top menu, select **Harmony [Edition] > Preferences**.

   - Press Ctrl + U (Windows/Linux) or ⌘ + U (macOS).

Loading Workspaces

You can load an existing workspace from the drop-down menu.

How to load a workspace

1. Do one of the following:

   - Select **Windows > Workspace > Workspace.**

   - Select a workspace from the Workspace toolbar.
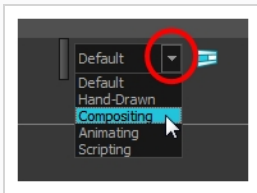
Creating Workspaces

You can create new workspaces through the Workspace Manager dialog box.

How to create a new workspace

1. Do one of the following:

    - In the Workspace toolbar, click the ▤ button.

    - From the top menu, select **Windows > Workspace > Workspace Manager**.

2. In the Available Workspaces list, select an existing workspace.
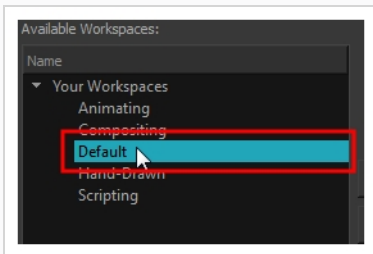
3. At the bottom of the Available Workspaces list, click the Add ➕ button to add a workspace.
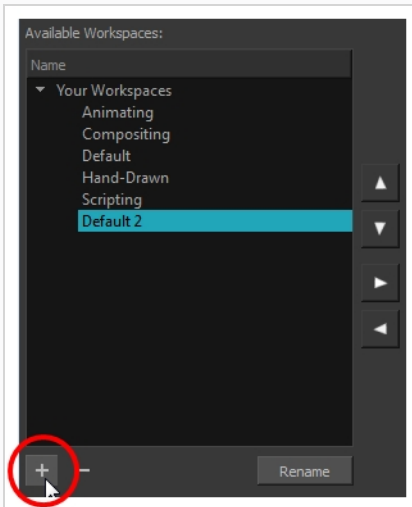
4. Select the new workspace that was created. Click **Rename** and give it a new name.

5. Select the new workspace and click the Right Arrow ▷ button to move it to the Workspace toolbar.

6. Click **OK**.

Renaming Workspaces

You can rename a workspace through the Workspace Manager dialog box.

How to rename a workspace

1. Do one of the following:

   - In the Workspace toolbar, click the ⊟ button.

   - From the top menu, select **Windows > Workspace > Workspace Manager**.

2. Choose the workspace to be renamed from the list.

3. Double-click on the workspace to be renamed or click the **Rename** button. This allows you to edit the name.
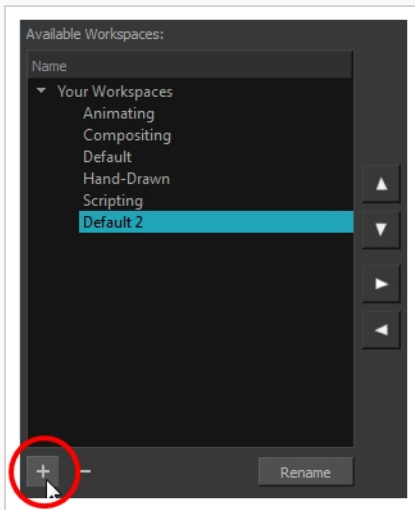
4. Type in the new name of the workspace.

5. Press the Enter/Return key to validate the name.

6. Click **OK**.

Saving Workspaces

You can either save your workspaces automatically or manually.

How to save your workspace as a new version

1. From the top menu, select **Windows > Workspace > Save Workspace As**.

   The Save Workspace As dialog box opens.

2. Type in a workspace name and click **OK**.

How to disable the Automatically Save Workspace preference

1. From the top menu, select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS) to open the Preferences dialog box.

2. Select the **General** tab.

3. In the Options section, deselect the **Automatically Save Workspace** option.

4. Click **OK**.

   The Save Workspace button appears in the Workspace toolbar.

How to save a workspace manually

1. Do one of the following:

   - In the Workspace toolbar, click the Save Workspace button.

   - You can also select **Windows > Workspace > Save Workspace**.

Deleting Workspaces

You can delete a workspace through the Workspace Manager dialog box.

How to delete a workspace

1. Do one of the following:

    - In the Workspace toolbar, click the ⊟ button.

    - From the top menu, select **Windows > Workspace > Workspace Manager**.

2. In the Workspace Manager, select the workspace to be deleted and click the Left Arrow ◁ button to move it to the Available Workspaces list.
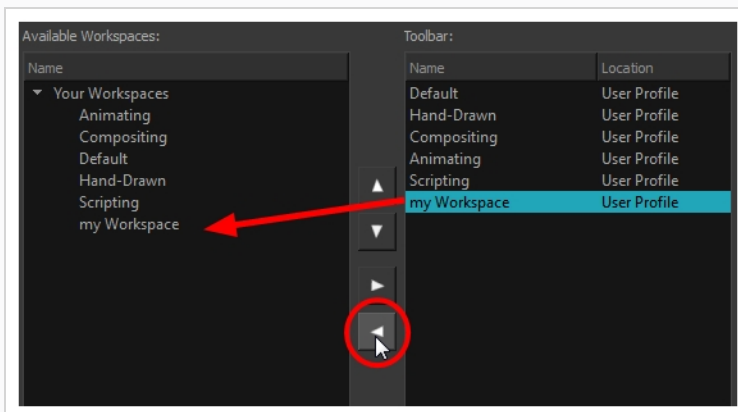
3. Select the workspace from the Available Workspaces list, then click the Delete ─ button to delete the workspace.

4. Click **OK**.

Showing and Hiding Workspaces

You can show and hide workspaces from your drop-down list through the Workspace Manager dialog box.

How to show a workspace

1. Do one of the following:

   - In the Workspace toolbar, click the ▣ button.

   - From the top menu, select **Windows > Workspace > Workspace Manager**.

2. In the Available Workspaces list, select the workspace to be displayed and click the Right Arrow ▷ button to move it to the Workspace toolbar.

3. Click **OK**.

How to hide a workspace

1. Do one of the following:

   - In the Workspace toolbar, click the ▣ button.

   - From the top menu, select **Windows > Workspace > Workspace Manager**.

2. In the Workspace Manager, select the workspace to be hidden and click the Left Arrow ◁ button to move it to the Available Workspaces list.

3. Click **OK**.

Reordering Workspaces

You can reorder workspaces in your drop-down list through the Workspace Manager dialog box.
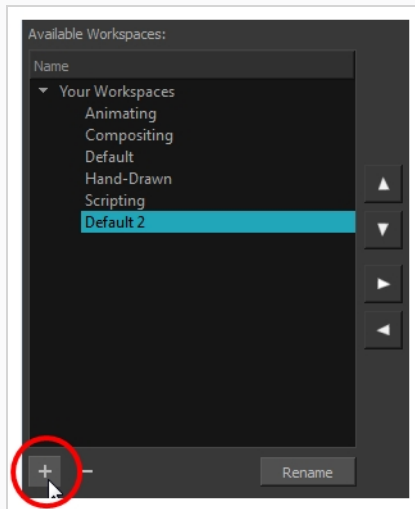
How to reorder workspaces

1. Do one of the following:

   - In the Workspace toolbar, click the ▣ button.

   - From the top menu, select **Windows > Workspace > Workspace Manager**.
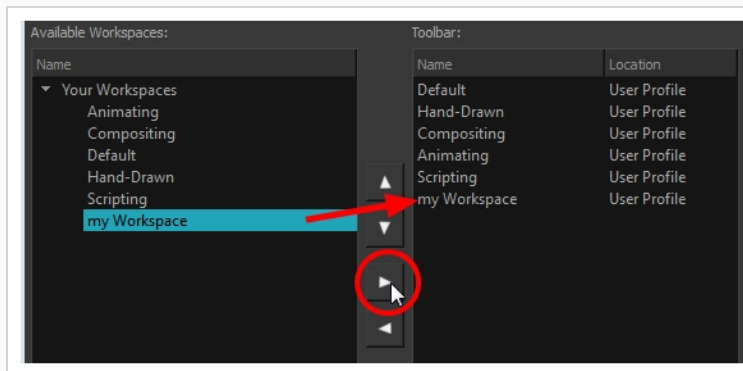
2. In the Workspace toolbar, select the workspace to be reordered and on the Up △ or Down ▽ buttons to move it up or down.
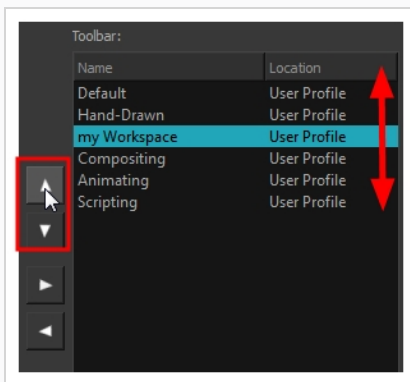
3. Click **OK**.

Restoring the Default Workspace

You can restore modified workspaces to their original layout.

How to restore the default workspaces

- Select **Windows > Restore Default Workspace**.

About Interface Navigation

Toon Boom Harmony lets you zoom in, zoom out, rotate, pan and reset views for easy navigation of the interface.

Command	Action	Access Methods
Zoom In	Zooms in the view.	**View > Zoom In** Press 2 Roll the mouse wheel up (except in the Timeline and Xsheet views)
Zoom Out	Zooms out the view.	**View > Zoom Out** Press 1 Roll the mouse wheel down (except in the Timeline and Xsheet views)
Zoom In or Out	Zooms in or out of the view.	Roll the middle mouse button up or down. Hold down the Spacebar and the middle mouse button while dragging the mouse up or down.
Pan	Moves the view horizontally or vertically.	Hold down the Spacebar and drag in the direction you want to pan the view.
Reset Pan	Resets the view's pan to its default position.	**View > Reset Pan** Press Shift + N
Reset View	Resets the view to its default position.	**View > Reset View** Press Shift + M
Reset Rotation	Resets the view's rotation to its default position.	**View > Reset Rotation** Press Shift + X
Reset Zoom	Resets the view's zoom to its default position.	**View > Reset Zoom**

Rotate View	Rotates the view.	Press Ctrl + Alt (Windows/Linux) or Ctrl + ⌘ (macOS) and drag in the direction you want to rotate the view.
Rotate 30 CW	Rotates the Camera view 30 degrees clockwise, like an animation table.	**View > Rotate View CW**
Rotate 30 CCW	Rotates the Camera view 30 degrees counter-clockwise, like an animation table.	**View > Rotate View CCW**
Toggle Quick Close-up	Instantly multiplies the view's Zoom Factor by 4. For example, if the Camera View's Zoom Factor is at 100%, this will make it toggle between 400% and 100%.	Shift + Z

Accessing the Documentation

T-HFND-001-004

The Harmony documentation can be accessed from the Help menu.

How to access the Harmony Paint documentation

1. From the top menu, select Help > Online Help.

Chapter 3: Drawing

Harmony has many powerful tools, views, and features for sketching, drawing and animating with ease. This chapter describes the main assets needed when drawing , as well as tips on how to start and use these tools efficiently.

About Drawing Tools

Harmony has a wide array of drawing tools and drawing features to allow flexible design, work methods and styles.

Here are the drawing tools available in Harmony, followed by the types of layer on which they are supported. If you are editing a vector layer, then all of the tools are available to you. If you are drawing on a bitmap layer, some tools are not available. When tools are not available, they are grayed out in the Tools toolbar.

Icon	Tool Name	Vector Layer	Bitmap Layer
	Select	•	•
	Cutter	•	•
	Reposition All Drawings	•	
	Contour Editor	•	
	Centerline Editor	•	
	Pencil Editor	•	
	Smooth Editor	•	
	Perspective	•	
	Envelope		
	Edit Gradient/Texture	•	
	Brush	•	•

	Pencil	•	
	Text	•	•
	Eraser	•	•
	Paint	•	•
	Ink	•	
	Paint Unpainted	•	•
	Repaint	•	
	Unpaint	•	•
	Stroke	•	
	Close Gap	•	
	Line	•	•
	Rectangle	•	•
	Ellipse	•	•
	Polyline	•	
	Dropper	•	•

Each drawing tool has a series of options to customize its behaviour and drawing style. When you select a tool, the Tool Properties view displays the properties of the currently selected tool, where you can configure your drawing tool's behavior and style, if applicable.

About the Brush Tool

T-HFND-004-003

The Brush tool is pressure sensitive and lets you create a contour shape with a thick and thin line effect, as if it was created with a paint brush.

With the Brush tool, you can draw solid vector strokes or textured bitmap strokes, depending on your brush properties. Solid vector brush strokes are made of a vector shape filled with a solid colour, making them limited in terms of art style, but lightweight and easy to manage. Textured brush strokes can have a bitmap brush tip, a bitmap paper texture, and various settings such as hardness, randomness, antialiasing and transparency. Hence, they can be used to draw in various art styles, add natural-looking details to your drawing and reproduce the feel of a real brush stroke.

When drawing on vector layers, you can use the Select Tool, Contour Editor, Smooth Editor, Perspective and Envelope tool to scale your brush strokes or to tweak their shape. If your strokes contain a bitmap texture, Harmony will scale or deform the texture to fit the new shape of your brush. If your brush is scaled up or deformed in a way that takes more volume, Harmony will automatically generate new pixels for the textures, which might cause them to lose quality.

On vector layers, textured vector brush strokes are composed of a greyscale bitmap mask applied to their colour. Hence, their colour can be repainted or updated as easily as with solid vector brush strokes. Changing the colour used to paint a textured vector brush stroke from the colour palette will update the colour in textured vector brush stroke, as it would with solid vector brush strokes, all the while preserving its texture.

You can also create dynamic brushes, which allow you to use artwork created in Harmony as if it was a brush tip or a stamp.

Drawing with the Brush Tool

In the Drawing view, you can draw on any drawing layer type with the Brush tool.

How to draw with the Brush tool on a vector layer

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Brush ✎ tool or press Alt + B.

3. In the Tool Properties view, set the Maximum Size to the desired brush size.

> **NOTE**
>
> If you are drawing with a mouse, your strokes will always be at their maximum size. If you are using a pressure-sensitive tablet, your strokes will vary in size depending on the pressure of your pen, ranging between 25% to 100% of the maximum size.

4. In the Colour view, click a colour swatch to select a colour.
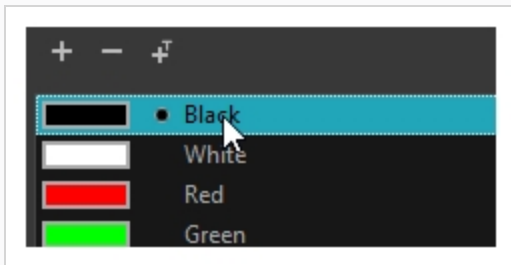
5. In the Drawing or Camera view, start drawing.

How to draw with the Brush tool on a bitmap layer

1. In the Drawing Thumbnails panel, select a bitmap drawing.

2. In the Tools toolbar, select the Brush ✎ tool or press Alt + B.

3. In the Tool Properties view, set the Maximum Size to the desired brush size. If you are drawing with a mouse, your strokes will always be at their maximum size. If you are using a pressure-sensitive tablet, your strokes will vary in size depending on the pressure of your pen, ranging between 25% to 100% of the maximum size by default.

4. In the Colour view, select a colour.
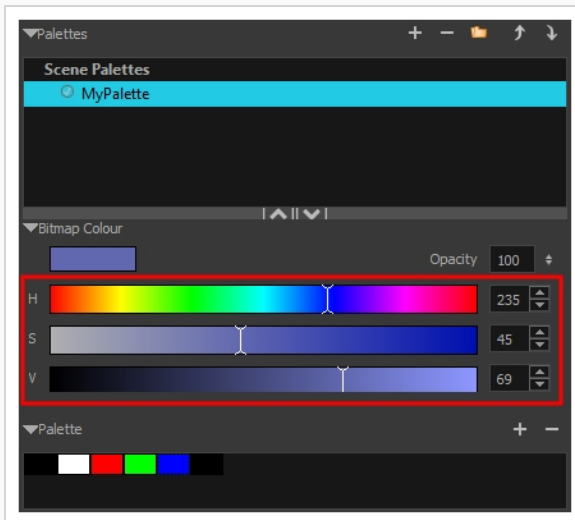
5. If you would prefer using Red/Green/Blue sliders, you can switch between HSV and RGB sliders by doing one of the following:

   - Select **Colour > Bitmap Colour Sliders > HSV Sliders** or **RGB Sliders**.

   - Right-click on the colour sliders and select **RGB Sliders** or **HSV Sliders**.
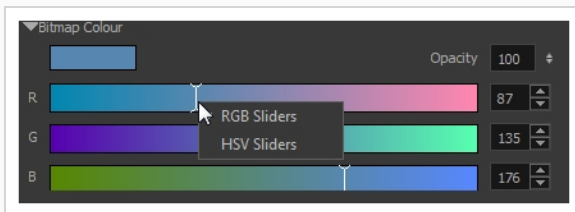
> 📝 **NOTE**
>
> Although you can use colours from your colour palette to paint on a bitmap layer, colours used in a bitmap drawing layer are not linked to their colour swatch in the palette. This means that, contrary to vector drawing, updating the colours in your colour palette will not update your bitmap drawings with the new colours.

6. In the Camera or Drawing view, start drawing.
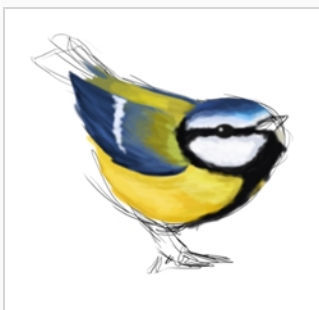
> **NOTE**
>
> You can hold Ctrl (Windows/Linux) or ⌘ (macOS) while drawing to force your stroke to be a closed shape. This will automatically draw a straight line between the beginning and the end of your stroke.
>
>
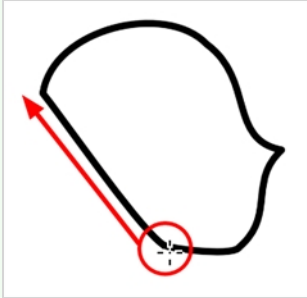
Creating a Solid Brush

When drawing with the Brush tool on a vector layer, you can use either solid vector brushes or textured vector brushes. By default, your brush will be a solid vector brush. A solid vector brush creates a vector shape and simply fills it with the selected colour, making lightweight, simple crisp strokes.

A solid vector brush's tip can be shaped like a circle, a diamond or a square, and can be configured to have a specific size, aspect ratio and angle. Also, solid vector brushes can be automatically smoothed by Harmony as you draw.

If you are drawing on a bitmap layer, you can only use textured brushes. You can create a textured brush that makes solid looking strokes, but they can not be automatically smoothed by Harmony, nor can they tweaked with vector tools such as the Contour Editor.

How to create a solid vector brush

1. In the Tools toolbar, select the Brush 🖌 or Eraser 🖌 tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

   The Brush Properties dialog opens.
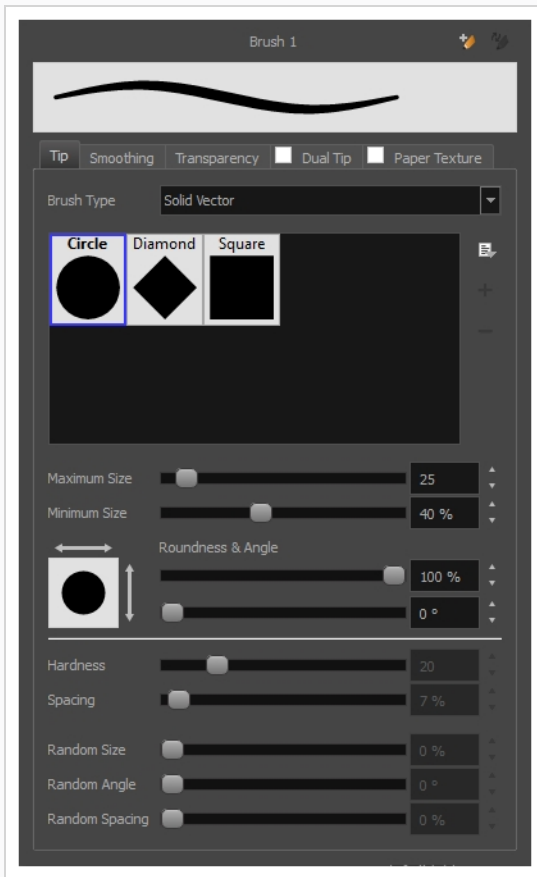
1. In the **Brush Type** dropdown list, select **Solid Vector**.

2. In the brush tip list, select either **Circle**, **Diamond** or **Square**.

3. Use the **Maximum Size** slider to set the maximum size of your brush tip.

> **NOTE**
>
> When drawing with a mouse, your brush is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your brush's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

4. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the size of your brush when using your pen with very little pressure. The minimum size is set to a percentage of your brush tip's maximum size, which is 25% by default. If you don't want the pressure on your pen to affect the brush size, set this parameter to 100%.

5. If you want your brush tip to have uneven dimensions, use the **Roundness** slider to shrink the brush tip vertically all the while preserving its horizontal size.

6. If you want your brush tip to be at an angle, use the **Angle** slider to rotate your brush tip.

7. Click on the **Smoothing** tab.
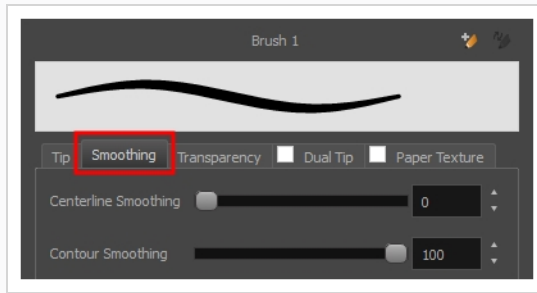
8. Use the **Centerline Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce your drawing precision and to round sharp corners into curves.

9. Use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's contour. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

10. Either close or set aside the Brush Properties dialog.

11. In the Drawing view, start drawing to test your brush settings.

Creating a Textured Brush

T-LAY-001-004

Using textured brushes, you can create an infinite range of fuzzy, textured and watercolour lines. You can use bitmap brush tips, adjust your line's hardness and opacity, combine two tips and apply a paper texture to your brush strokes so as to adapt the Brush tool to a variety of art styles and create natural-looking brush strokes.

When drawing on a vector layer, brushes are solid vector brushes by default. You can however create a textured vector brush which combines both Harmony's vector and bitmap drawing capabilities. You can tweak textured vector brush strokes using various vector editing tools such as the Contour Editor, the Smooth Editor, the Perspective and the Envelope tools, and Harmony will resample the textures inside your brush strokes with each modification.

If you are drawing on a bitmap layer, your brush is always textured. You can configure a textured brush to look crisp and solid if desired, but brush strokes on a bitmap layer cannot be tweaked or smoothed.

Configuring a Textured Brush Tip

T-ANIMPA-002-002

The Brush tool supports two types of brush tips: Solid and Textured. Solid brush tips are plain shapes that can be used to draw vector shapes filled with a solid color, whereas textured brush tips are bitmap images with various shapes and opacity levels that can be used to create natural-looking brush strokes.

Square-shaped solid brush   P-shaped textured brush
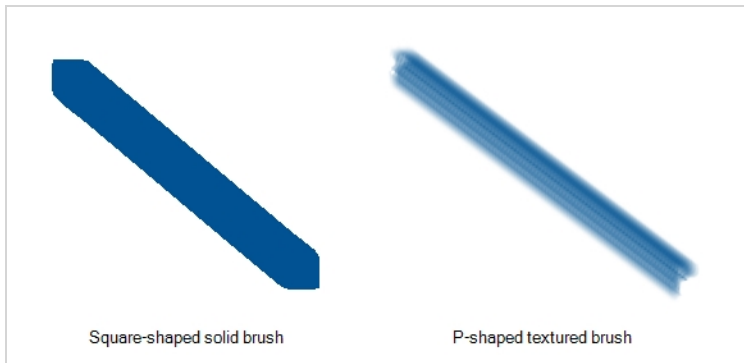
Solid brush tips are not customizable. The selection is limited to either a circle, diamond or square-shaped brush tip, the proportions and angle of which can be adjusted. While Harmony also comes bundled with preset textured brush tips, it is also possible to create and use your own textured brush tips.

How to configure a textured brush tip

1. In the Tools toolbar, select the Brush ✏ tool or press Alt + B.

2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

4. In the **Brush Tip** list, select the desired brush tip. If you want to create your own brush tip, see

5. Use the **Maximum Size** slider to set the maximum size of your brush tip.

> **NOTE**
>
> When drawing with a mouse, your brush is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your brush's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

6. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the size of your brush when using your pen with very little pressure. The minimum size is set to a percentage of your brush tip's maximum size, which is 25% by default. If you don't want the pressure on your pen to affect the brush size, set this parameter to 100%.

7. If you want your brush tip to have uneven dimensions, use the **Roundness** slider to shrink the brush tip vertically all the while preserving its horizontal size.

8. If you want your brush tip to be at an angle, use the **Angle** slider to rotate your brush tip.

9. Use the **Hardness** slider to set how much of the outer part of your brush tip should fade to transparency. If you set it to 100 %, the brush will be completely solid. If you set it to 0 %, the brush will only be opaque in its center, and will gradually become transparent towards its edges.

10. Use the **Spacing** slider to set how much distance you must drag your brush before Harmony prints the brush tip onto your canvas, relative to your brush's size. The default setting is 7%, which produces a relatively realistic brush stroke-like result. If this setting is too low, your brush strokes might feel too thick and opaque. If this setting is too high, your strokes will look like the brush tip has been stamped repeatedly over your canvas instead of dragged on it.

11. If you want the size of your brush tip to vary each time it's printed on your canvas, set the **Random Size** setting to any value above 0 %.

12. If you want the angle of your brush tip to be random each time the tip is printed on your canvas, set the **Random Angle** setting to any value above 0 °.

13. If you want the spacing between each instance of the brush tip to be random, set the **Random Spacing** setting to any value above 0 %.

14. If you want the spacing between each instance of the brush tip to be random, set the **Random Spacing** setting to any value above 0 %.

15. In the Drawing view, start drawing to test your brush settings.

It is also possible to use textures when drawing with the Pencil tool. Those textures follow the angle of your pencil lines, which may create more interesting results depending on your desired drawing style. For more information, see *About Pencil Line Textures* on page 124.

Adding a Brush Tip

In the Brush or Eraser Properties dialog, you will find a set of default brush tips which are bundled with Harmony, but you can also create your own brush tips, then export your collection or import an existing set.

To make your own brush tip, you must first create an image file containing the brush tip, either in Harmony or in a third party software, like Adobe Photoshop, then import it into Harmony. A brush tip must be a greyscale image. Colors in brush tips are not acknowledged by Harmony, as brush tips only use the colour you are painting with in Harmony. Your brush tip should also not contain transparency, as Harmony determines the brush tip's transparency based on its black, white and grey levels. Its black parts will appear 100% opaque, its white parts will appear 100% transparent, and its grey parts will appear semitransparent.

You can import brush tips in any image format supported by Harmony. It is recommended to create brush tips in a resolution ranging from 100 x 100 pixels to 400 x 400 pixels.

Brush tips are shared between the brush tool and the eraser tool. Like paper textures and brush presets, paper textures are saved in your preferences. You can also export your brush tips into an `.xml` file, and import them on a different workstation, allowing you to share your brush tips between the different people collaborating on your project.

How to add a brush tip

1. In the Tools toolbar, select the Brush 🖌 or Eraser 🖌 tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the eraser tool.

4. Do one of the following:

   - Click on the Paper Texture menu icon ▤ and select **Add**.

   - Click the Add Paper Texture button.
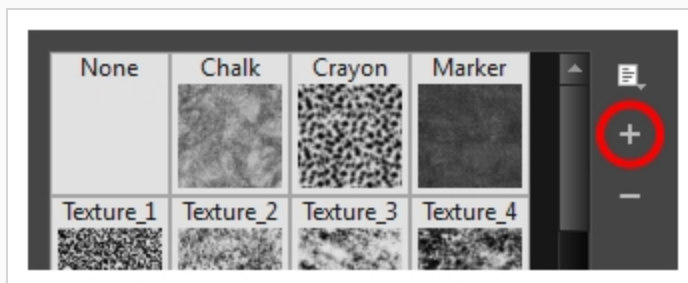
5. In the file browser window, navigate to the location of your texture image file and select it.

6. Click **Open** to import the file into the Paper Texture library.

   By default, an imported texture is given the name of the image file.

Renaming Brush Tips

You can rename your bitmap brush tips to keep your list organized.

How to rename a brush tip

1. In the Tools toolbar, select the Brush 🖌 or Eraser 🖌 tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the eraser tool.

4. Select the brush tip you wish to rename.

5. Click on the Paper Texture menu icon ☰ and select **Rename**.

6. In the Rename dialog box that appears, type in the new name of the brush tip.

7. Click **OK**.

Deleting Brush Tips

You can delete unnecessary brush tips to keep your list organized.

How to delete a brush tip

1. In the Tools toolbar, select the Brush 🖌 or Eraser 🖌 tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the

eraser tool.

4. Select the brush tip you wish to delete.

5. Do one of the following:

   - Click on the Paper Texture menu icon ▤ and select **Delete**.

   - Click the Delete ━ button.

> **NOTE**
>
> You can delete any brush tip in the Paper Texture library, including the default paper textures, except for the three solid brush tips: Circle, Diamond and Square. Also, brush tips will not get deleted if they are used in a brush preset.

Exporting Brush Tips

You can export brush tips to share, backup or install on a new computer.

How to export brush tips

1. In the Tools toolbar, select the Brush 🖌 or Eraser 🖌 tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the eraser tool.

4. Click on the Paper Texture menu icon ▤ and select **Export**.

   The Export Tips and Textures dialog opens. This dialog allows you to export both your textured brush tips and your paper textures.
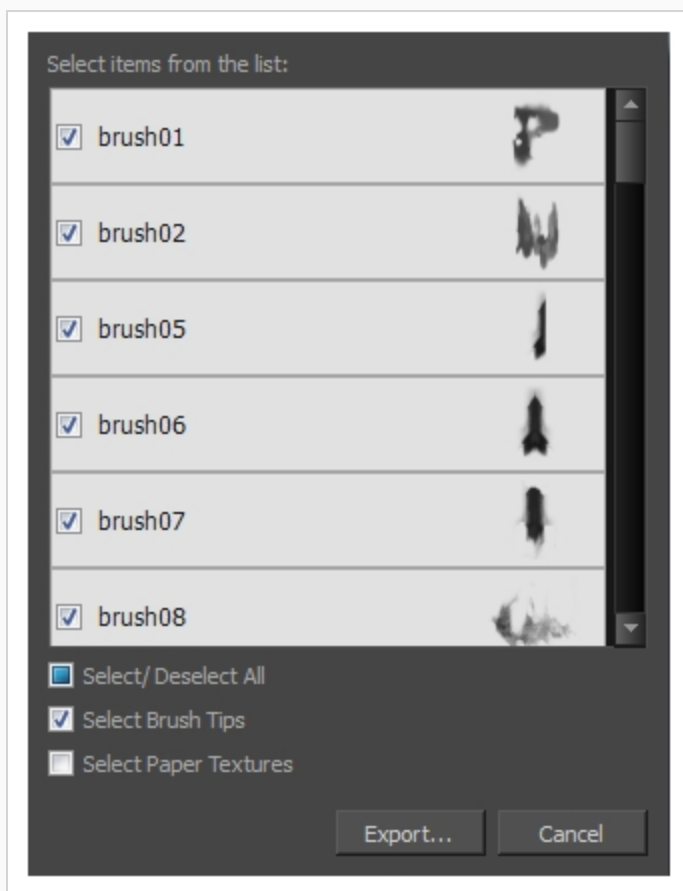
5. By default, both your brush tips and your paper textures are selected for export. If you only wish to export your brush tips, uncheck the **Select Paper Textures** option.

6. Click **Export**.

7. In the Export Textures window that appears, browse to a location where you want save the `.xml` file and give it a name.

8. Click **Save**.

Importing Brush Tips

You can import Harmony brush tips you previously exported.

How to import brush tips

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

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the eraser tool.

4. Click on the Paper Texture menu icon ⊟ and select **Import**.

5. In the browser window that appears, navigate to and select the `.xml` file in which you exported your brush tips.

6. Click **Open.**

    In the Import Tips and Textures dialog box appears.
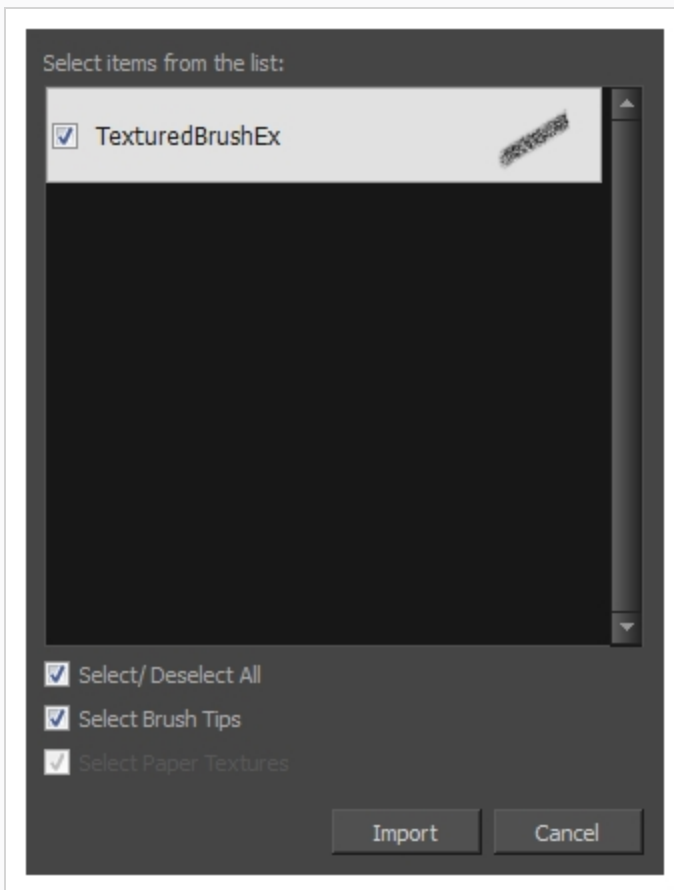
7. If the selected `.xml` file also contains paper textures, they will be selected for import along with the brush tips by default. If you wish to only import the paper textures, uncheck the **Select Paper Textures** option.

8. Click **Import**.

    The imported brush tips appear in the Brush Tips Library.

Changing the Brush Tip Display

You can display your preset list as thumbnails or a list.

How to change the Brush Tips thumbnail display

1. In the Tools toolbar, select the Brush ✏ or Eraser ✏ tool.

2. In the Tool Properties view, click the arrow button to open the Brush/Eraser Properties dialog.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** if you are using the brush tool or the **Eraser Type** to **Textured Eraser** or **Textured, Preserve Vector** if you are using the eraser tool.

1. Click on the Brush Tips menu icon ▤ .

2. Select one of the following options:

   - **Small Thumbnail:** Displays brush tips in a grid of small thumbnails.

   - **Large Thumbnail:** Displays brush tips in a grid of large thumbnails with their name. The default view setting.

   - **List View:** Displays brush tips in a list, with their name on the left and their texture on the right of each row.

Configuring Smoothing for a Textured Brush

If you are drawing on a vector layer, the Brush Properties dialog will have a Smoothing tab, which allows to configure how Harmony automatically smooths your brush strokes. If you are drawing on a bitmap layer, this topic is not applicable, as bitmap layers do not support automatic smoothing.

How to configure a textured brush's smoothing

1. In the Brush Properties dialog, open the **Smoothing** tab.
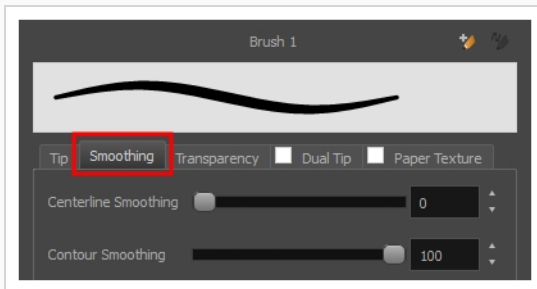
2. Use the **Centerline Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce your drawing precision and to round sharp corners into curves.

3. Use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's contour. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

4. In the Drawing view, start drawing to test your brush settings.

Configuring Antialiasing and Transparency for a Textured Brush

A textured brush can be either antialiased or not antialiased. Without antialiasing, your brush strokes will only create fully opaque artwork. With antialiasing enabled, you also have the option to set the flow and opacity of your brush, allowing you to simulate the effect of inks and paints with various consistencies.

> **NOTE**
>
> If you are working on a vector layer, make sure the **Brush Type** option in the Tip tab is set to **Textured Vector Brush** to enable the textured brush options.

How to configure a brush's antialiasing and transparency settings

1. In the Brush Properties dialog, open the **Transparency** tab.

2. If you want your brush to have antialiasing or transparency, enable the **Antialiasing** option.

   > **NOTE**
   >
   > If the Antialiasing option is disabled, all Transparency settings will be disabled, and your brush will only create fully opaque artwork.

3. Use the **Maximum Flow** slider to set the consistency of your brush strokes. A lower flow will make your stroke more transparent towards the extremities and more opaque in its center, whereas a higher flow will make your stroke consistently opaque.

4. If you are using a pressure-sensitive pen tablet, use the **Minimum Flow** slider to set the percentage of the maximum flow that you want your brush to use when using your pen with very little pressure. If you don't want the pressure on your pen to affect the flow, set this parameter to 100%.

5. Use the **Maximum Opacity** slider to set the maximum opacity of your brush strokes.

6. If you are using a pressure-sensitive pen tablet, use the **Minimum Opacity** slider to set the percentage of the maximum opacity that you want your brush to use when using your pen with very little pressure. If you don't want the pressure on your pen to affect the opacity, set this parameter to 100%.

7. If you want the **Flow** of your brush to be randomized, set the Random Flow setting to any value over 0 %.

8. If you want the **Opacity** of your brush to be randomized, set the Random Opacity setting to any value over 0 %.

9. In the Drawing view, start drawing to test your brush settings.

Configuring a Textured Brush with a Dual Tip

Textured brushes can also have a dual tip. A dual tip is a secondary tip that can be blended into your primary tip in various blend modes, with its own full set of tip settings.
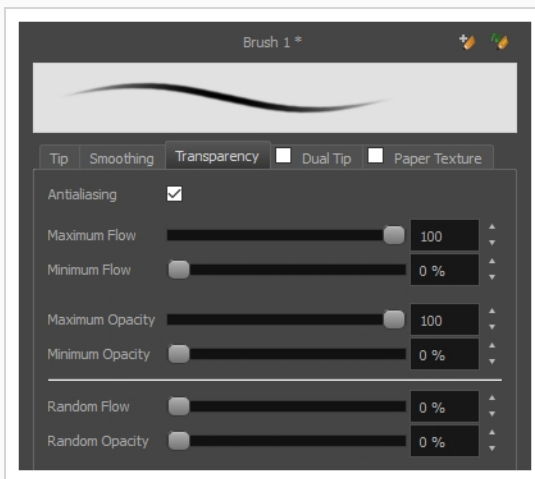
> **NOTE**
>
> If you are working on a vector layer, make sure the **Brush Type** option in the Tip tab is set to **Textured Vector Brush** to enable the textured brush options.

How to configure a brush with a dual tip

1. In the Brush Properties dialog, click on the **Dual Tip** tab.

2. Check the check box in the **Dual Tip** tab to enable the Dual Tip functionality.
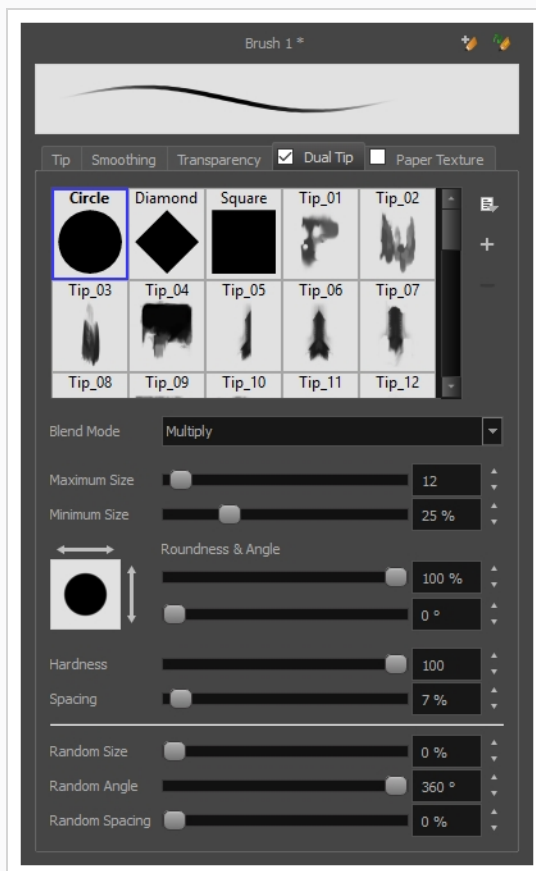
3. In the **Brush Tip** list, select the desired brush tip. If you want to create your own brush tip, see *Adria a Brush Tip* on page 76.

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4. In the Blend Mode drop-down list, select the algorithm with which you want your secondary tip to blend into your primary tip:

   - **Multiply** will draw the least opaque pixel of either brush tip, making more spaced out, inconsistent strokes.

   - **Color Dodge** will add the opacity of the pixels in both brush tips, making more opaque strokes.

   - **Combine** will draw the most opaque pixel of either brush tip, combining the tip shapes without increasing their opacity.

5. Use the **Maximum Size** slider to set the maximum size of your brush tip.

> **NOTE**
>
> When drawing with a mouse, your brush is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your brush's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

6. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the size of your brush when using your pen with very little pressure. The minimum size is set to a percentage of your brush tip's maximum size, which is 25% by default. If you don't want the pressure on your pen to affect the brush size, set this parameter to 100%.

7. If you want your brush tip to have uneven dimensions, use the **Roundness** slider to shrink the brush tip vertically all the while preserving its horizontal size.

8. If you want your brush tip to be at an angle, use the **Angle** slider to rotate your brush tip.

9. Use the **Hardness** slider to set how much of the outer part of your brush tip should fade to transparency. If you set it to 100 %, the brush will be completely solid. If you set it to 0 %, the brush will only be opaque in its center, and will gradually become transparent towards its edges.

10. Use the **Spacing** slider to set how much distance you must drag your brush before Harmony prints the brush tip onto your canvas, relative to your brush's size. The default setting is 7%, which produces a relatively realistic brush stroke-like result. If this setting is too low, your brush strokes might feel too thick and opaque. If this setting is too high, your strokes will look like the brush tip has been stamped repeatedly over your canvas instead of dragged on it.

11. If you want the size of your brush tip to vary each time it's printed on your canvas, set the **Random Size** setting to any value above 0 %.

12. If you want the angle of your brush tip to be random each time the tip is printed on your canvas, set the **Random Angle** setting to any value above 0 °.

13. If you want the spacing between each instance of the brush tip to be random, set the **Random Spacing** setting to any value above 0 %.

14. If you want the spacing between each instance of the brush tip to be random, set the **Random Spacing** setting to any value above 0 %.

15. In the Drawing view, start drawing to test your brush settings.

Configuring a Brush with a Paper Texture

T-ANIMPA-002-004

Paper textures are bitmap textures that you can apply to your brush strokes as you draw. They act as transparency filters that are tiled over your brush strokes to make them look grainy, as if you were drawing on a rough paper surface. While Harmony comes bundled with preset paper textures, it is also possible to create and use your own paper textures.

How to configure a brush with a paper texture

1. In the Brush Properties dialog, click on the **Paper Texture** tab.

2. Check the check box in the **Paper Texture** tab to enable paper textures.
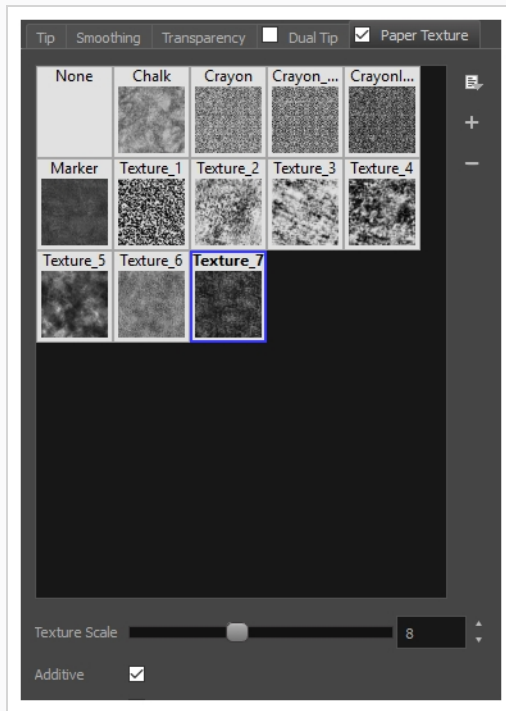
3. In the paper texture list, select the desired paper texture. If you wish to create your own paper texture, see _Adding a Paper Texture_ on page 89.

4. Using the **Texture Scale** slider, select the scaling factor at which to scale the paper texture when applying it to your brush strokes.

5. If you want your brush strokes to get more opaque as you drag your brush or when you draw over them, enable the **Additive** option.

6. If you want the paper texture to always be aligned to the same grid regardless of where you draw your strokes, enable the **Aligned** option. Otherwise, your paper textures will be positioned relative to where you start your drawing stroke, and if you draw two strokes one over the other, their paper textures will clash with each other.

7. In the Drawing view, start drawing to test your brush settings.

It is also possible to use textures when drawing with the Pencil tool. However, those textures follow the shape of the line instead of tiling over your strokes. For more information, see _About Pencil Line Textures_ on page 124

Adding a Paper Texture

In the Brush Properties dialog, you will find a set of default paper textures which are bundled with Harmony, but you can also create your own paper textures, then export your collection or import an existing set.

To make your own paper texture, you must first create an image file containing the texture, either in Harmony or in a third party software, like Adobe Photoshop, then import it into Harmony. A paper texture must be a greyscale image. Colors in paper textures are not acknowledged by Harmony, as paper textures are applied onto the colour you are painting with in Harmony. Your texture should also not contain transparency, as

Harmony determines the texture's transparency based on its black, white and grey levels. When drawing with a paper texture, its black parts will appear 100% opaque, its white parts will appear 100% transparents, and its grey parts will appear semitransparent.

You can import brush tips in any image format supported by Harmony. It is recommended to create paper textures in a resolution ranging from 100 x 100 pixels to 400 x 400 pixels.

Like brush tips and brush presets, paper textures are saved in your preferences. You can also export your paper textures into an `.xml` file, and import them on a different workstation, allowing you to share your textures between the different people collaborating on your project.
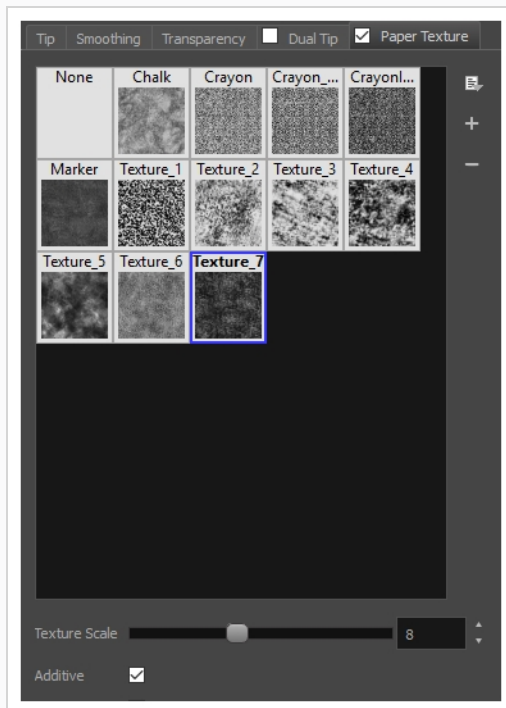
How to add a paper texture

1. In the Tools toolbar, select the Brush ✎ tool or press Alt + B.

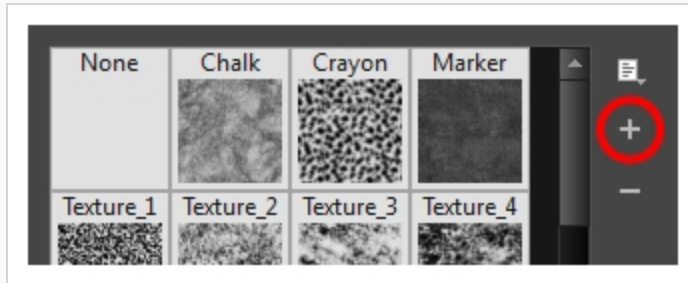2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

   1. Click on the **Paper Texture** tab.

   2. Check the check box in the **Paper Texture** tab to enable paper textures.

1. In the Brush Properties dialog, do one of the following:

    -   From the Paper Texture menu, select **Add**.

    -   Click the Add Paper Texture button.

2. In the browser window that appears, navigate to where you saved your texture file.

3. Click **Open** to import the file into the Paper Texture library.

    By default, an imported texture is given the name of the image file.

Renaming a Paper Texture

You can rename your paper textures to keep your list organized.
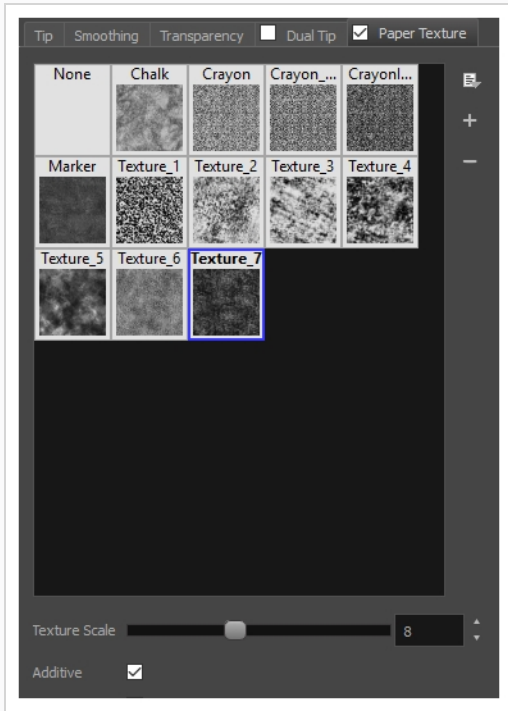
How to rename a paper texture

1. In the Tools toolbar, select the Brush 🖌 tool or press Alt + B.

2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.
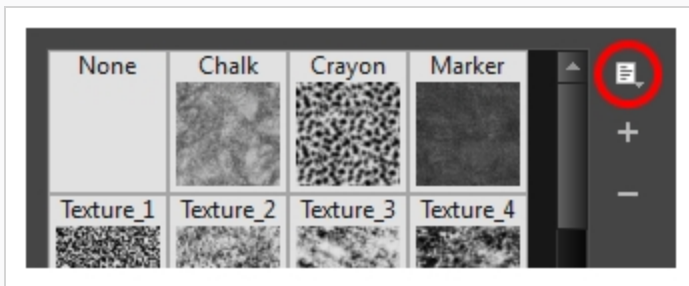

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.
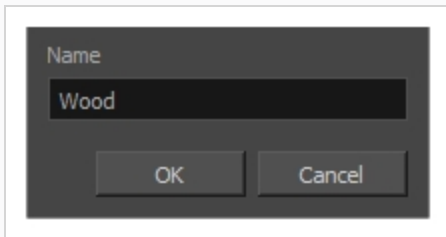
1. Click on the **Paper Texture** tab.

2. Check the check box in the **Paper Texture** tab to enable paper textures.

3. Select the texture you want to rename.

4. Click on the Paper Texture menu icon ▤ and select **Rename**.

5. In the Rename Texture dialog box that appears, type in the new name for the texture.

6. Click **OK**.

Deleting Paper Textures

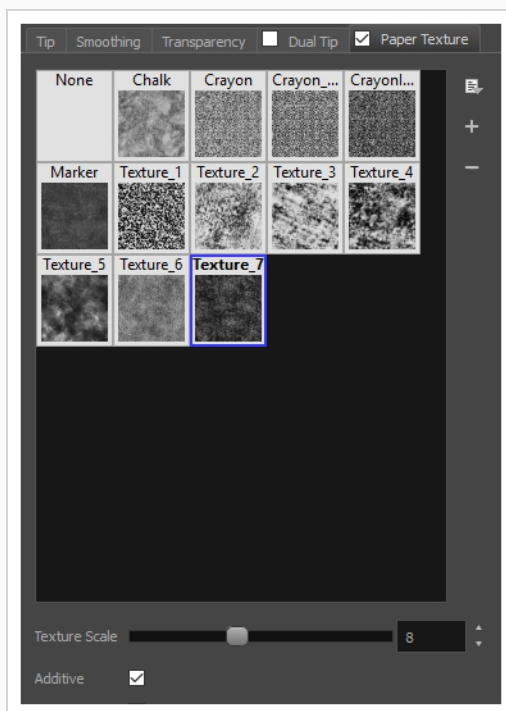You can delete unnecessary paper textures from your preset list.

How to delete a paper texture

1. In the Tools toolbar, select the Brush ✐ tool or press Alt + B.

2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

   1. Click on the **Paper Texture** tab.

   2. Check the check box in the **Paper Texture** tab to enable paper textures.

1. Select the texture you want to delete.

2. Do one of the following:

   - Click on the Paper Texture menu icon ▤ and select **Delete**.

   - Click the Delete ─ button.

> **NOTE**
>
> You can delete any paper texture in the Paper Texture library, including the default paper textures, as long as no brush preset is using that paper texture.

Exporting Paper Textures

You can export paper textures into an `.xml` file which will contain their name and bitmap texture. This can be useful if you wish to back up or share your paper textures.

How to export paper textures

1. In the Tools toolbar, select the Brush ✏ tool or press Alt + B.

2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.
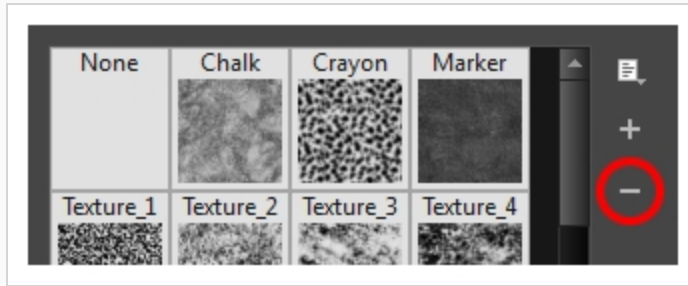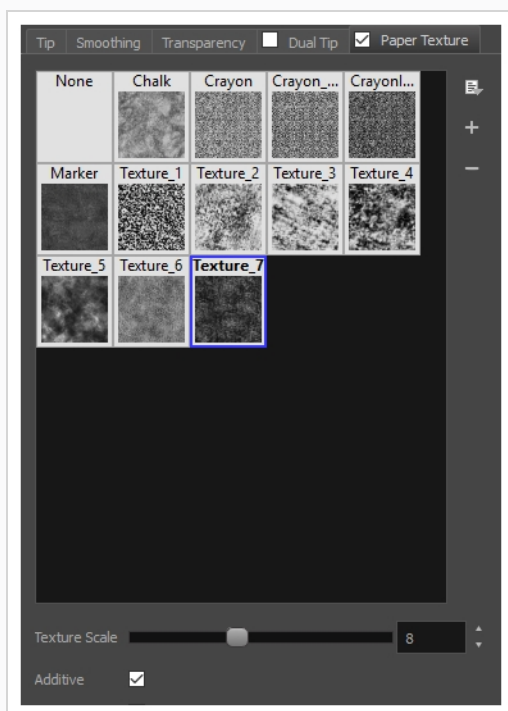

3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

4. Click on the **Paper Texture** tab.

5. Check the check box in the **Paper Texture** tab to enable paper textures.

6. Click on the Paper Texture menu icon ☰ and select **Export**.

    The Export Tips and Textures dialog opens. This dialog allows you to export both your textured brush tips and your paper textures.

7. By default, both your brush tips and your paper textures are selected for export. If you only wish to export your paper textures, uncheck the **Select Brush Tips** option.

8. Click on the **Export** button.

9. In the Export Textures dialog that appears, browse to a location where you would like to save the .xml file, then type in the desired file name.

10. Click **Save**.

Importing Paper Textures

You can import paper texture presets you previously exported from Harmony.

How to import paper textures

1. In the Tools toolbar, select the Brush ✏ tool or press Alt + B.

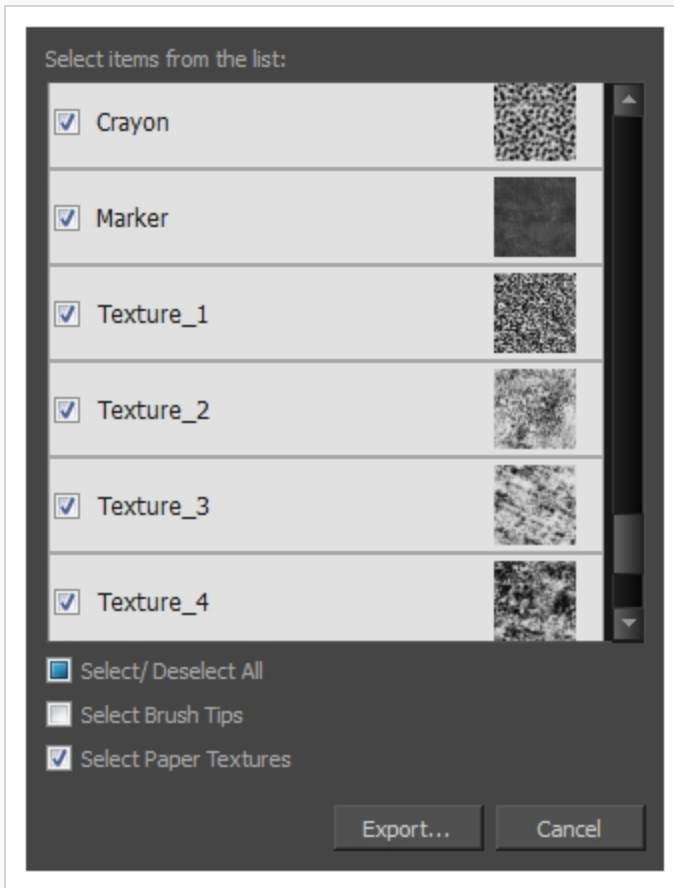2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

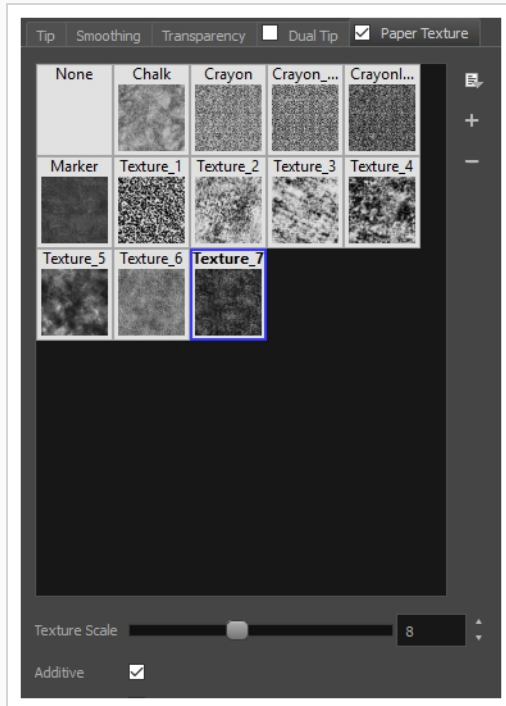3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

4. Click on the **Paper Texture** tab.

5. Check the check box in the **Paper Texture** tab to enable paper textures.

6. Click on the Paper Texture menu icon ⊟ and select **Import**.

7. In the browser window that appears, navigate to and select the `.xml` file in which you exported your paper textures.

8. Click **Open.**

   In the Import Tips and Textures dialog box appears.

9. If the selected `.xml` file also contains brush tips, they will be selected for import along with the paper textures by default. If you only wish to import the paper textures, uncheck the **Select Brush Tips** option.

10. Click **Import**.

    The imported paper textures will appear in the Paper Texture Library.

Changing the Paper Texture Display

You can change the way the paper textures are displayed in the paper textures list of the Brush Properties dialog.

How to change the Paper Texture thumbnail display

1. In the Tools toolbar, select the Brush ![brush icon] tool or press Alt + B.

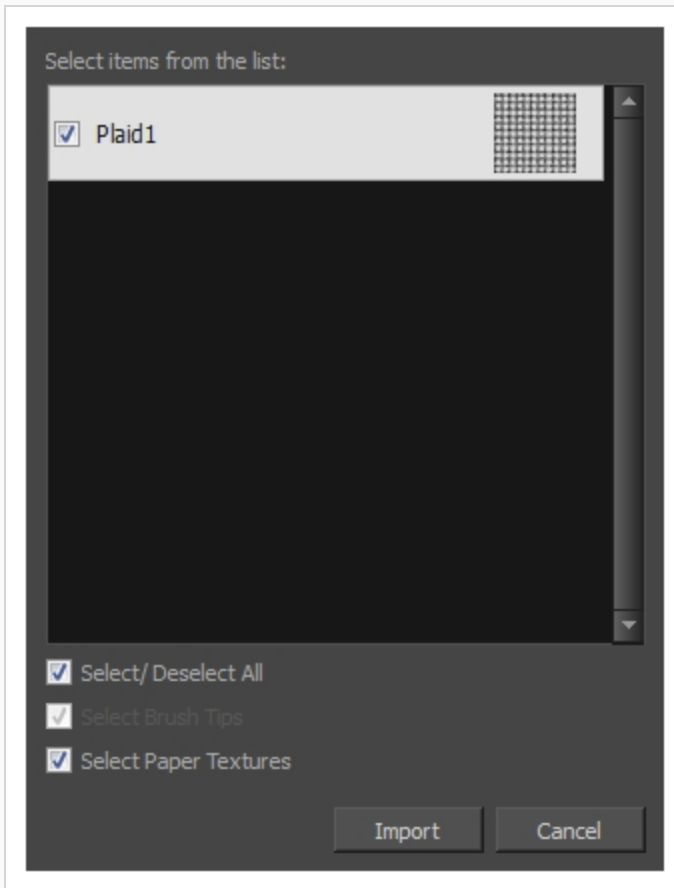2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

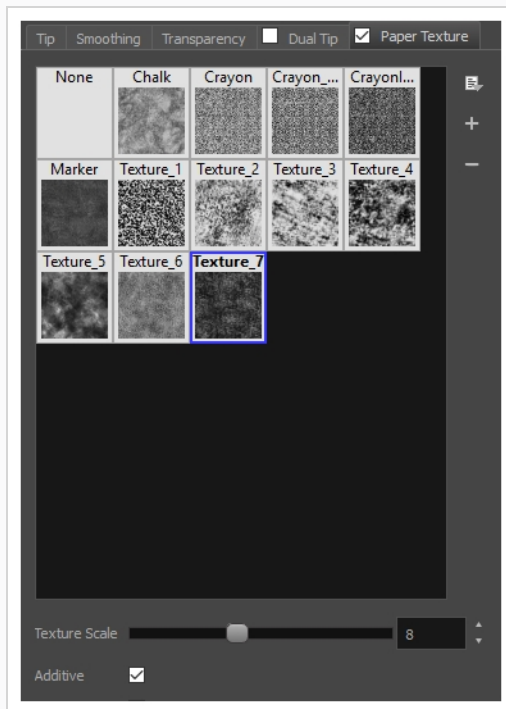3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.

4. Click on the **Paper Texture** tab.

5. Check the check box in the **Paper Texture** tab to enable paper textures.

1. Click on the Paper Texture menu icon ▤ .

2. Select one of the following options:

   - **Small Thumbnail:** Displays paper textures in a grid of small thumbnails.

   - **Large Thumbnail:** Displays paper textures in a grid of large thumbnails with their names. The default view setting.

   - **List View:** Displays paper textures in a list, with their name on the left and their texture on the right of each row.

Setting the Textured Brush Resolution

An important thing to take in consideration when drawing with textured brushes is that, contrary to solid vector brushes, textured brushes store their texture in bitmap data, which is stored in individual pixels. This implies that, where solid vector artwork can be scaled and zoomed in without issue, textured brush strokes are resolution dependent, and are liable to lose quality and appear pixelated if they are enlarged or zoomed in.

By default, textured brush strokes have a pixel density of 100%. At this density, when your scene is not zoomed in and your artwork is not scaled up, each pixel in the textured brush strokes corresponds to one pixel in the rendered image. Scaling it up or zooming in will require Harmony to render several pixels using the same pixel from the brush stroke's texture, making the artwork lose quality.

Hence, before you start drawing using textured brushes, it is important to consider if you will need to zoom onto or scale up your artwork, and set the pixel density accordingly. For example, if you intend to scale your bitmap artwork up to 300%, or if you intend to zoom in from 12 fields to 4 fields, you should make sure the pixel density for your textured brush strokes is of at least 300% before you start drawing.

You can specify the pixel density for textured brushes at the scene level or at the drawing level:

- Setting the pixel density at the scene level will make newly created drawings have the specified pixel density, but it will not change the pixel density of existing textured artwork.

- Setting the pixel density at the drawing level will allow you to change the pixel density of existing drawings, but will not affect the pixel density of drawings created afterward.

> **NOTE**
>
> In Harmony Paint, you cannot set the pixel density of textured brush strokes for the whole scene, since Harmony Paint is only able to modify individual drawings. You can only change the pixel density of textured brush strokes in existing drawings. If you need to make this change for the whole scene, open the scene in Harmony and refer to the Harmony documentation.

> **NOTE**
>
> If you are drawing on a bitmap layer, you must set the pixel density and canvas size for bitmap artwork instead—see *Setting the Bitmap Resolution* on page 259.

How to change the pixel density for textured brushes strokes in existing drawings

1. In the Drawing Thumbnails panel, select the drawing for which you want to change the textured brush stroke resolution.

2. From the top menu, select **Drawing > Change Vector Drawing Brush Resolution**.

   The Change Vector Drawing Brush Textures Resolution dialog opens.
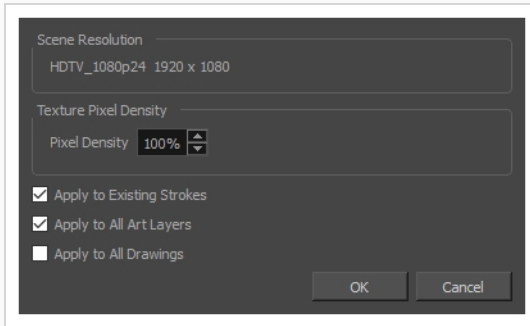
3. In the **Pixel Density** field, enter the desired percentage of pixel density. If you intend to scale or zoom in on your artwork, make sure your pixel density is set to be at least the factor by which your artwork will scaled or zoomed on. For example, if you intend to scale your artwork by 300%, you need to set the pixel density to at least 300%. If you intend to zoom in on your artwork from 12 fields to 6 fields, you need to set the pixel density to at least 200%. If you intend to do both, you need to set the pixel density to at least 600%, as the camera zoom and scaling factor will have a multiplying effect on the apparent scaling of your artwork.

4. If you want the specified pixel density to be applied on the existing textured brush strokes in the drawing, check the **Apply to Existing Strokes** option.

5. If you want the specified pixel density to be applied to all the drawing's art layers (ie: Line Art, Colour Art and, if enabled, Overlay Art and Underlay Art), check the **Apply to All Art Layers** option. Otherwise, only the currently active art layer will be affected.

6. If you want the specified pixel density to be applied to all drawings in the active layer, check the **Apply to All Drawings** option. Otherwise, only the current drawing will be affected.

7. Click **OK**.

   From now on, new brush strokes will be in the selected drawing will be in the specified pixel density.

> **NOTE**
>
> This does not change the default pixel density for the scene. New drawings will still be created with the scene's default pixel density.

About Brush Presets

Setting up your brush to perfectly reproduce the desired art style can require a lot of tweaking as well as trial and error. Once you have found the correct settings for your brush, you will want to reuse it throughout your project for consistency. You can do that by creating and using brush presets.
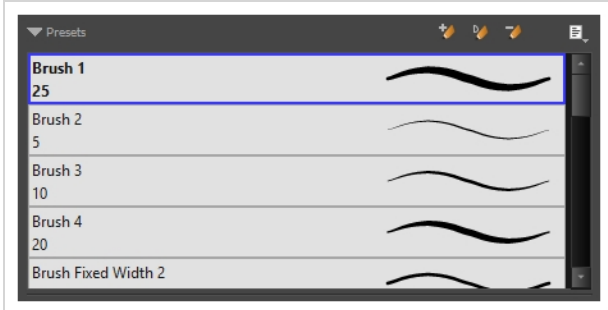
Harmony comes preloaded with many brush presets which you can select from the Tool Properties view. It is also possible to create your own brush presets by configuring your brush, then saving it as a preset.

Like brush tips and paper textures, brush presets are saved in your preferences. You can also export your brush presets into an `.xml` file, and import them on a different workstation, allowing you to share your brush presets between the different people collaborating on your project.

> **NOTE**
>
> Brush presets are not to be confused with brush tips and paper textures. Brush tips and paper textures are one of the many properties of a brush, whereas a brush preset contains all the properties of a brush.

> **NOTE**
>
> Brush presets for vector layers and for bitmap layers are separate. A brush preset created while working on a vector layer cannot be used when working on a bitmap layer, and vice versa.

Creating a Brush Preset

You can create your own custom brush presets by configuring your brush, then adding it as a preset.

How to create a brush preset

1. Make sure the current drawing layer is vector if you wish to create a vector brush preset, or bitmap if you wish to create a bitmap brush preset—see About Vector and Bitmap Layers

2. In the Tools toolbar, select the Brush 🖌 tool or press Alt + B.

3. Click on the Arrow button to open the Brush Properties dialog.

4. Configure your brush to be exactly how you wish to use it in the future—see Creating a Solid Brush or Creating a Textured Brush.

5. Do one of the following:

   - From the Brush Properties dialog, click on the New Brush Preset 🖊 button in the top-right corner.

   - In the Tool Properties view, click the New Brush Preset 🖊 button.

   - In the Tool Properties view, open the Brush Presets menu 🗐 and select **New Brush Preset**.

6. In the New Preset window, type a name for your new brush preset.

   Your new brush preset is added to the end of the list of brush presets.
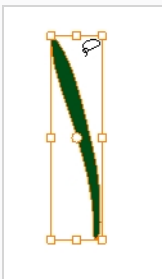
Creating a Dynamic Brush Preset

You can create dynamic brush presets allowing you to stamp custom patterns. You can either repeat the same pattern or loop a pattern made of several drawings.

How to create a new dynamic brush

1. In the Tools toolbar, select a drawing tool.

2. In the Drawing view, draw the pattern you want to use as your dynamic brush stamp.

3. In the Tools toolbar, click the Select ⬉ tool and select the parts of the drawing you want to repeat.

4. In the Tools toolbar, select the Brush 🖌 tool or press Alt + B.

5. In the Tool Properties view, do one of the following:

   - Click the Add Dynamic Brush 🖌 button.

   - Open the Brush Preset menu ▤ and select **New Dynamic Brush**.

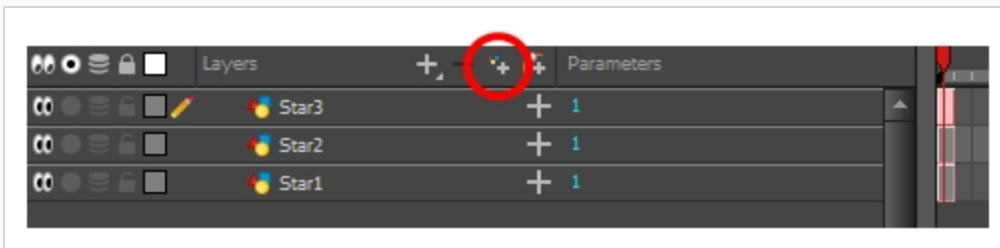   A new dynamic brush preset is added at the bottom of the Presets list.

6. Open the Brush Preset menu ▤ and select **Rename Brush**.

7. In the Rename Brush dialog box, type in a name for the new dynamic brush and click **OK**.

8. In the Drawing view, start drawing with your dynamic brush to quickly repeat a pattern.
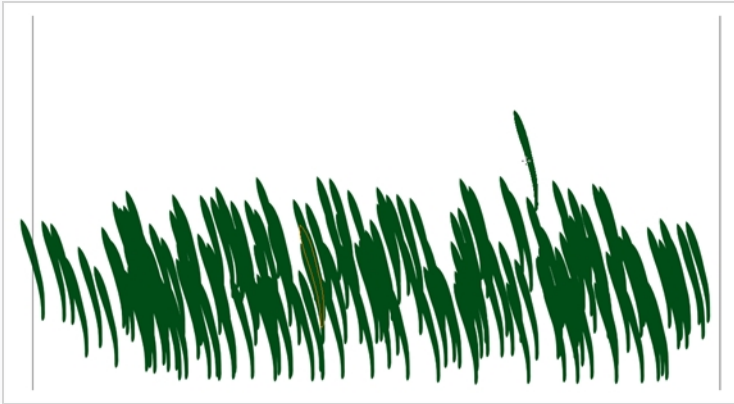
9. To adjust the scale of your pattern to make it bigger or smaller as you stamp it, adjust the Maximum Size value in the Tool Properties view.

## How to create a dynamic brush with multiple drawings

1. In the Timeline view, click the Add Drawing Layers ⁤ button to create the layers you want to use as patterns in your dynamic brush. Make sure to rename your layers.

2. In the Drawing view, draw the pattern.
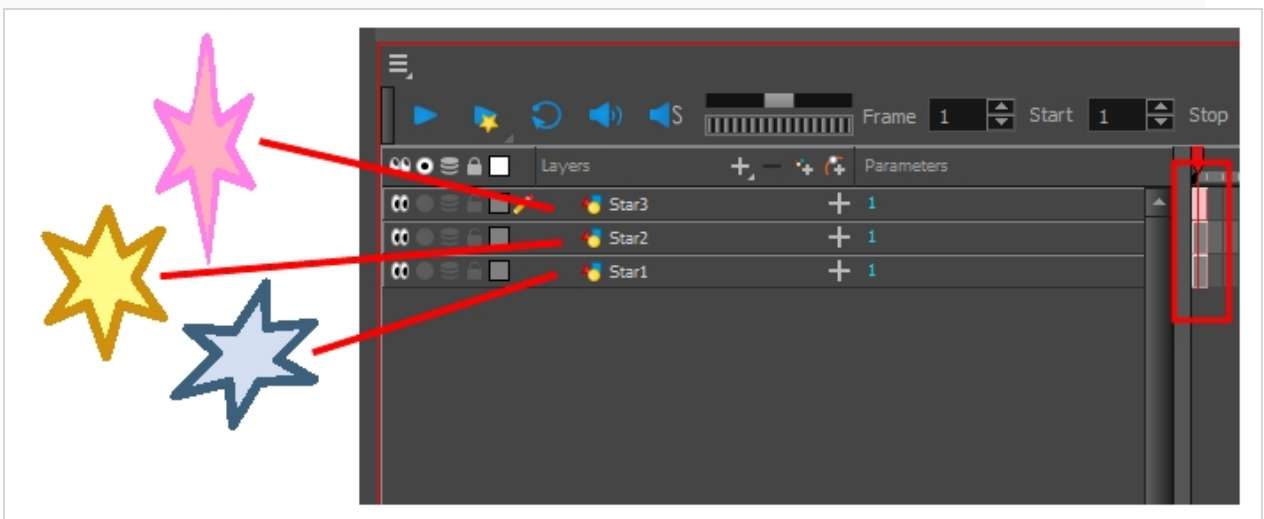
3. In the Tools toolbar, select the Select tool.

1. In the Tool Properties view, disable the Works on Single Drawing option to allow the Select tool to grab artwork on multiple layers.

2. In the Camera view, select all the drawings you want to add to your new dynamic brush.
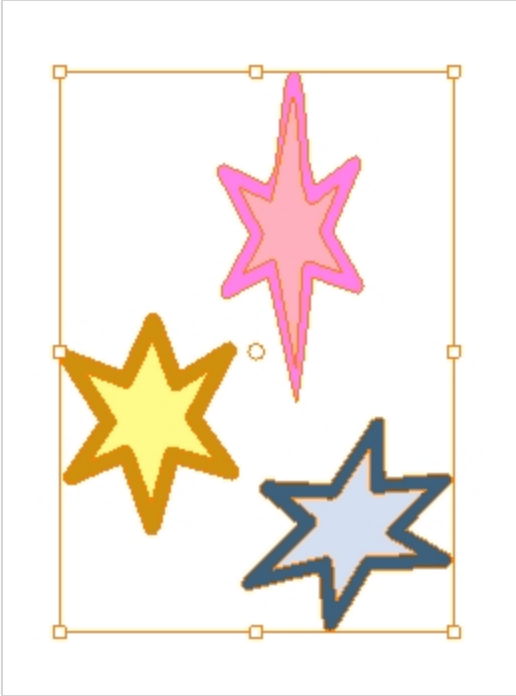
3. In the Tools toolbar, select the Brush tool or press Alt + B.

4. In the Tool Properties view, do one of the following:

   - Click the Add Dynamic Brush button.

   - Open the Brush Preset menu and select **New Dynamic Brush**.

   A new dynamic brush preset is added at the bottom of the Presets list.

5. Open the Brush Preset menu and select **Rename Brush**.

6. In the Rename Brush dialog box, type in a name for the new dynamic brush and click **OK**.

7. In the Drawing view, start drawing with your dynamic brush to quickly repeat a pattern. When you use this brush, you will cycle through the drawings.
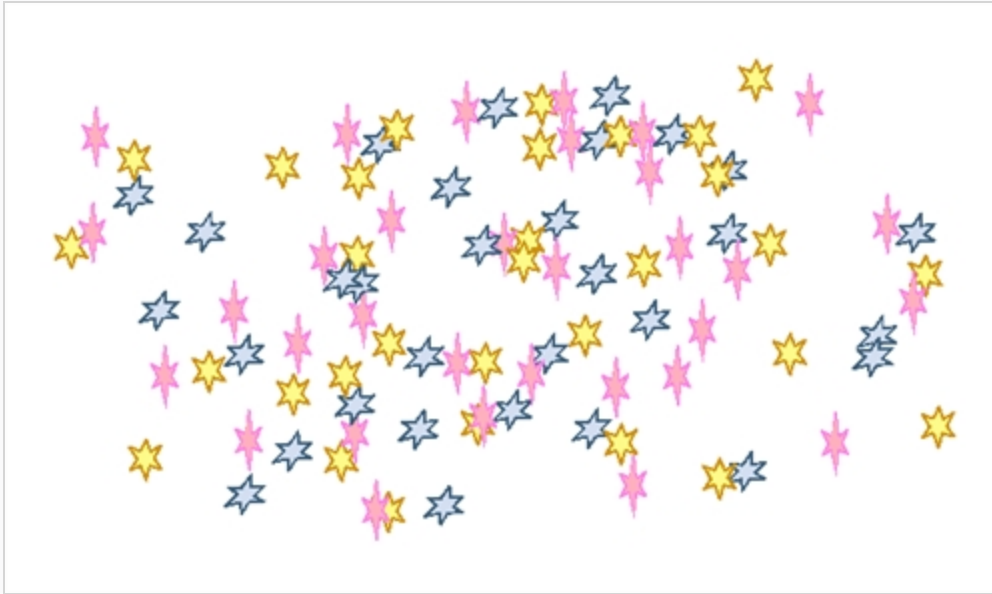
Selecting a Brush Preset

Harmony provides you with default brush presets available in the Tool Properties view.

How to select a brush preset

1. In the Tools toolbar, select the Brush 🖌 tool or press Alt + B.

2. In the Tool Properties view, select a brush preset from the Presets list.
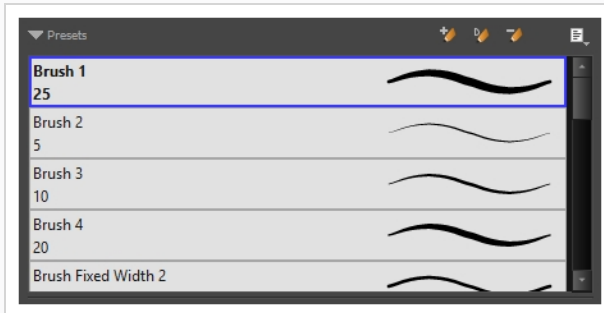
Updating a Brush Preset

If you want to modify the settings of an existing custom preset, you can do so by adjusting the parameters in the Tool Properties view, then updating your preset with your brush current's parameters.

How to update a brush preset

1. In the Tools toolbar, select the Brush 🖌 tool or press Alt + B.

1. In the Tool Properties view, select the Brush Preset you wish to update.

2. Click on the Arrow button to open the Brush Properties view.

3. Configure your brush to be exactly how you wish to use it in the future—see Creating a Solid Brush or Creating a Textured Brush.

4. Click on the Update Brush Preset 🖌 button in the upper-right corner of the Brush Properties dialog.

Renaming a Brush Preset

To keep your list comprehensive and organized, you can name your custom brush presets.

How to rename a brush preset

1. In the Tools toolbar, select the Brush ✐ tool or press Alt + B.

2. In the Tool Properties view, select a brush preset to rename.

3. Open the Brush Preset menu ▤ and select **Rename Brush**.
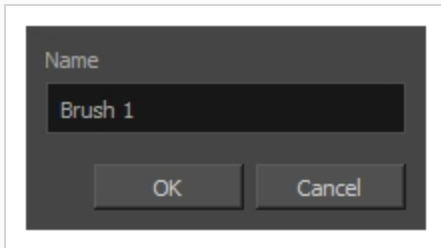
4. Type in a new name for the brush and click **OK**.

Deleting a Brush Preset

You can keep your preset list clean by deleting unwanted custom presets.

How to delete a brush preset

1. In the Tools toolbar, select the Brush ✎ tool or press Alt + B.

2. In the Tool Properties view, select the brush preset you want to delete.

3. Do one of the following:

   - Click the Delete Brush ✎ button.

   - Open the Brush Preset menu ≣ and select **Delete Brush**.

Exporting Brush Presets

You can export brush presets into an `.xml` file which will contain all of your brush's settings. This can be useful if you wish to back up or share your brush presets.

How to export pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush 🖌, Pencil ✏ or Eraser 🖌 tool.

2. Open the Brush Preset menu 🗏 and select **Export Brushes**.

   The Export Tips and Textures dialog opens. This dialog allows you to export brush presets for the Brush, Pencil and Eraser tools.

3. By default, the presets for all your tools will be selected for export. If you only wish to export presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets.

4. Click **Export**.

5. In the Export Presets dialog that appears, browse to the location where you want to save the `.xml` file and enter its file name.
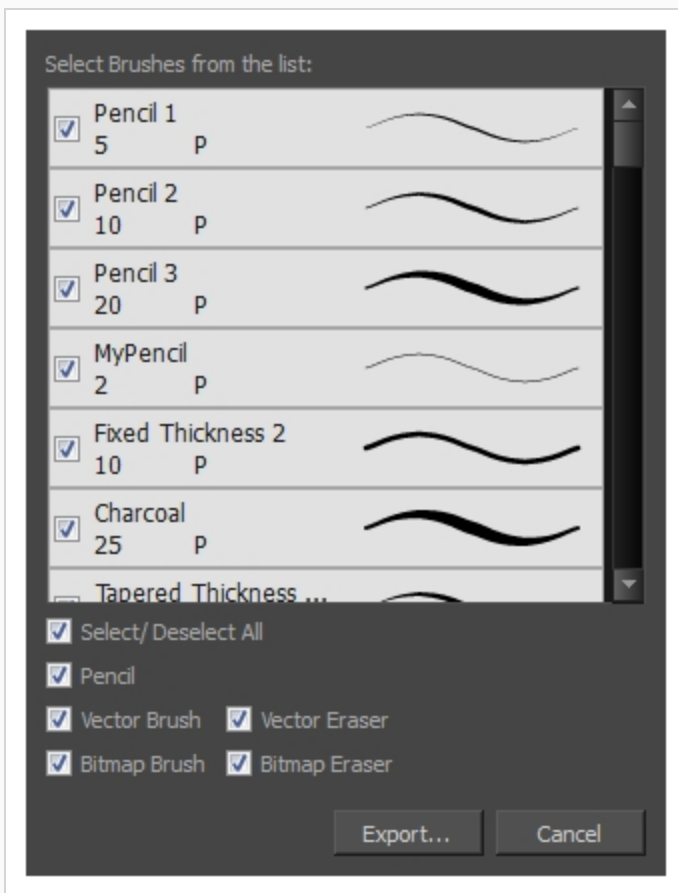
6. Click **Save**.

Importing Brush Presets

You can import brush presets that you previously exported from Harmony.

How to import pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush 🖌, Pencil 🖊 or Eraser 🖌 tool.

2. Open the Brush Preset menu ▤ and select **Import Brushes**.

3. In the browser window that appears, navigate to and select the `.xml` file in which you exported your brush presets.

4. Click **Open.**

   The Import Brushes dialog box opens.

5. By default, the presets for any tools included in the file will be selected for import. If you only wish to import presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets

6. Click **Import**.

The imported brush, eraser and pencil styles will appear in the Presets list.

Changing the Brush Preset Display

You can display your preset list as thumbnails or a list.

How to change the Brush Presets display

1. In the Tool Properties view, click on the Brush Presets menu button ▤ .

2. Select one of the following options:

   - **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.

Adjusting Texture Opacity

An advantage of using textured vector brushes on vector layers is that you can adjust their opacity afterward. Using the Adjust Line Texture Opacity dialog, you can adjust the opacity levels between the most opaque and the most transparent pixels in your textures.

How to adjust the line texture opacity

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Drawing view menu, select **Drawing > Adjust Line Texture Opacity**.

    The Adjust Line Texture Opacity dialog box opens.
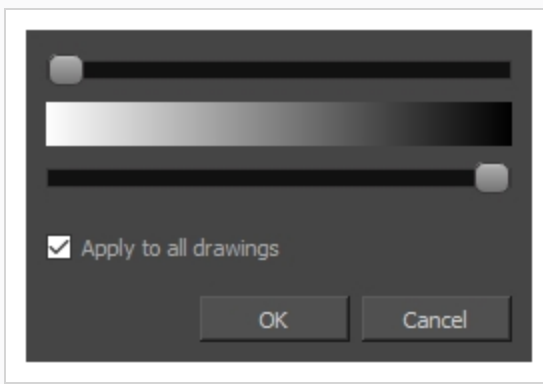
3. Do one of the following:

    -   Drag the upper slider towards the right to increase the transparency of the more transparent pixels.

    -   Drag the lower slider towards the left to increase the opacity of the more opaque pixels.

4. If you want to apply the changes to all drawings exposed on the layer, enable the **Apply to All Drawings** option.

5. Click **OK**.

About the Pencil Tool

T-HFND-004-004

The Pencil tool is for drawing the final images, such as character nodes, cut-out puppet and clean animation. The pencil creates a central vector shape. Pencil lines support pressure sensitivity and texture.

The Brush and Pencil tools are used for drawing and sketching. Both tools support pressure sensitivity, allowing you to create lines with variable thickness. The Brush tool produces contour vector lines. The Pencil and shape tools produce central vector lines. This means that a pencil line's control points (used to deform its shape) are located along the length of the central spine, while the Brush line's control points are located along the contour.
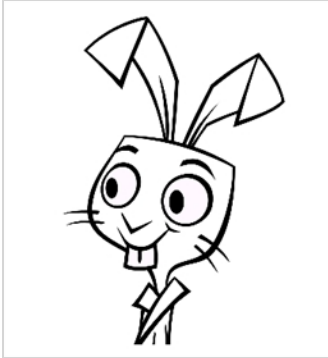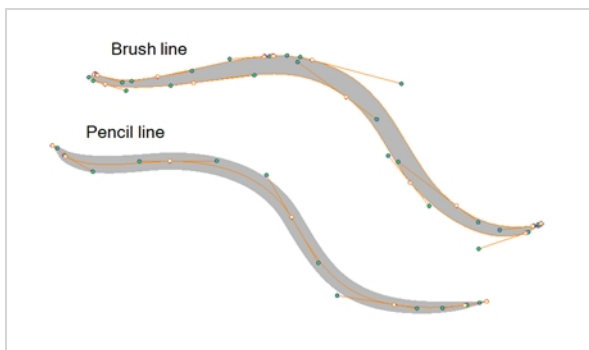

- If you draw with the Brush tool and want to modify the thickness variation, use the Contour Editor tool.

- If you draw with the Pencil tool and want to modify the thickness variation, use the Pencil Editor tool.

- You can also convert a brush zone into a pencil line with the Brush Stroke to Pencil Line option.

If you sketch a drawing using a semitransparent colour to get a paper-like feel, you should use the Brush tool, as it produces a more realistic and natural feel. Transparent pencil lines may not display the way you want when they overlap:

Pencil line   Brush line
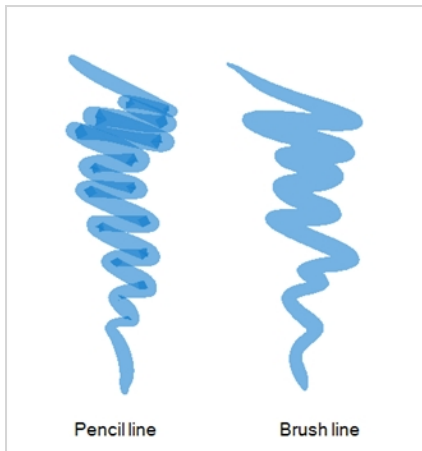
The pencil line is more appropriate for the final line of your clean drawings. Also, if you're drawing for digital animation and intend to use the Auto-Patch effect to connect the parts of your character model, you should use pencil lines for the Auto-Patch effect to work as expected.

Drawing with the Pencil Tool

T-HFND-004-004A

Using the Pencil tool, you can draw vector pencil lines which can be easily tweaked and reshaped as needed.

How to draw with the Pencil tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Pencil ✏ tool or press Alt + /.

3. In the Colour view, click a colour swatch to select a colour.
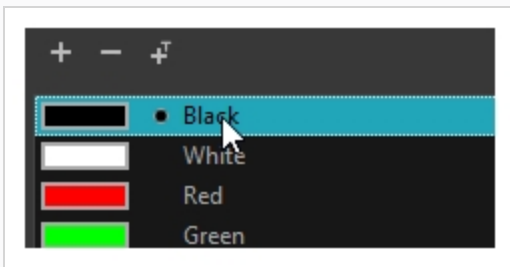
4. In the Drawing view, start drawing.

> **NOTE**
>
> You can press Shift + Alt as you draw to draw straight lines.

NOTE

Pencil lines are central vector lines. Sometimes, two pencil lines may look connected because their edges overlap, but if their centerline is not connected, they will be considered an open shape. To make sure the end of your stroke connects to the beginning of your stroke, hold the Alt key when you start or finish drawing a pencil line.

Creating a Pencil

You can configure a pencil's size, how much Harmony should automatically smooth your pencil lines when drawing, the shape of the tips and corners of your pencil line as well as its texture.

How to modify the pencil settings

1. In the Tools toolbar, select the Pencil ✏ tool or press Alt + /.

2. In the **Tool Properties** view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
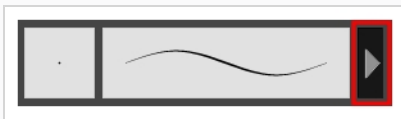
    The Pencil Properties dialog opens.
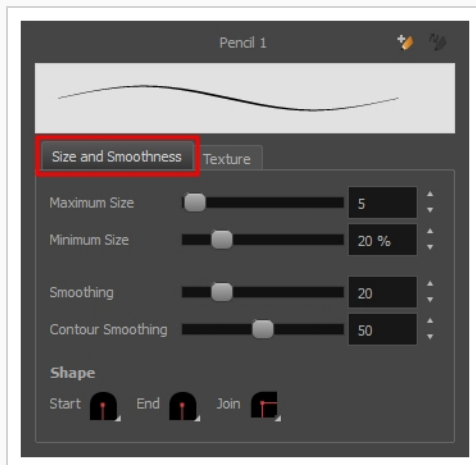
3. Use the **Maximum Size** slider to set the maximum size of your pencil line.
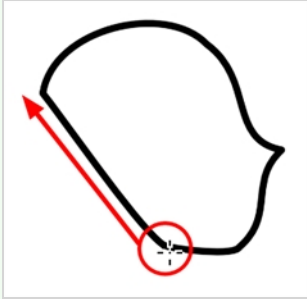
4. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the size of your pencil when using your pen with very little pressure. The minimum size is set to a percentage of your pencil's maximum size, which is 20% by default. If you don't want the pressure on your pen to affect the pencil size, set this parameter to 100%.

5. Use the **Centerline Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce your drawing precision and to round sharp corners into curves.

6. Use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's contour. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

7. Click on the **Shape** pop-up buttons to select whether you want the **Start** and **End** of your pencil lines to be **Round** or **Flat**, and whether you want the points and corners where pencil lines **Join** to be **Round**, **Mitre**-shaped or **Bevel**ed.
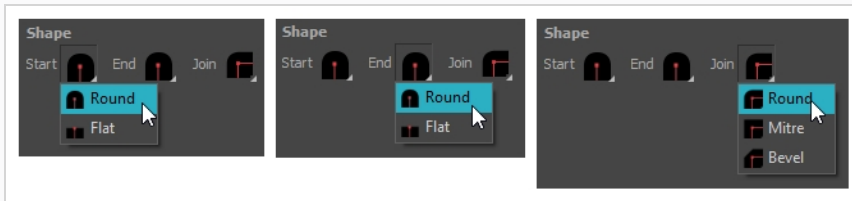
8. Click on the **Texture** tab.
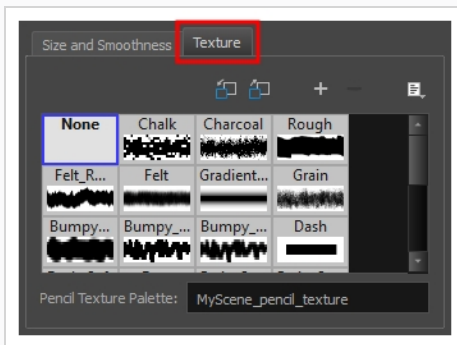
9. If you want your pencil line to have a texture, select the desired pencil line texture from the pencil line texture library. Otherwise, select None. For more information on pencil line textures, see *About Pencil Line Textures* on page 124.

10. Either close or set aside the Pencil Properties dialog.

11. In the Drawing view, start drawing to test your pencil settings.

About Pencil Line Textures

Just like the Brush tool, the Pencil tool also supports textures. However, there are important differences between the way brush textures and pencil textures work.

For one thing, a pencil line texture is applied with regard to the width and direction of the pencil lines. For example, if you draw a spiral with a dash texture, the dashes will follow the curves of the spiral, and if you draw a thicker line with the same texture, the dashes will be both longer and thicker.
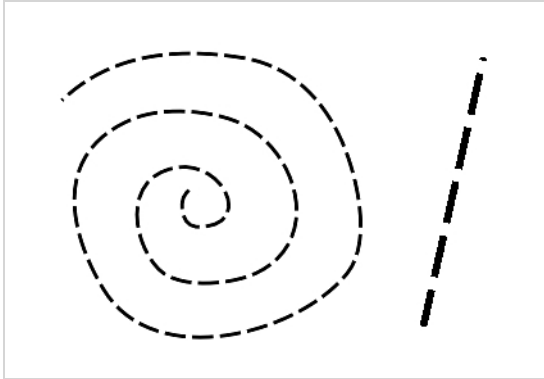
Like colours, pencil textures are stored in special palettes in your scene. While brush textures are stored in your artwork as bitmap data, pencil textures are stored in your artwork by linking the pencil line with its pencil texture in the palette. This means that if you scale or tweak your pencil line, the pencil texture will be generated again based on the new line's shape and the original texture. This also means that you are able to change the pencil texture of an existing pencil line or to apply a texture to a pencil line that does not already have one.

Scale with Select tool   Apply different texture
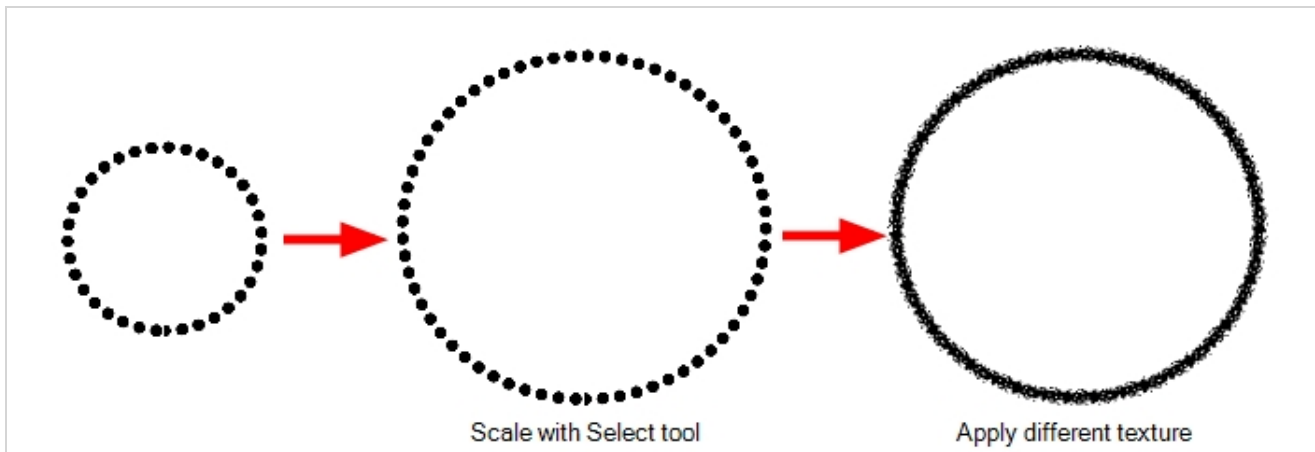
Pencil line textures can also be used with the Line, Rectangle, Ellipse and Polyline tools, as those tools also draw pencil lines.

Drawing with Pencil Textures

You can draw a textured pencil line by selecting the pencil texture, then drawing.

There are two ways to select a pencil texture line. You can select a pencil texture palette, then one of its pencil texture swatches in the Colour view, as you would do to select a colour, or you can select a pencil texture from the current pencil texture palette in the Pencil Properties dialog.

Your pencil texture will be combined with the selected colour to make a textured colour line.

> **NOTE**
>
> You can also draw with textured pencil lines with the Line, Rectangle and Ellipse tools.

How to draw with a textured pencil line using the Colour view

1. In the Tools toolbar, select the Pencil 🖍 tool or press Alt + /.

2. In the Colour view, select the colour with which you wish to draw.

3. In the Colour view, click on the Show Pencil Texture Palettes 🖋 button to display your pencil texture palettes.
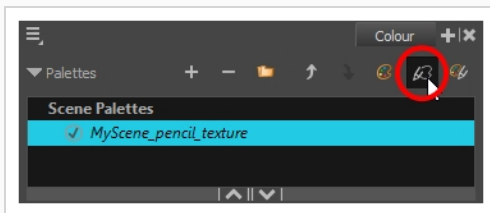
4. In the palette list, select the pencil texture palette containing the desired pencil texture.
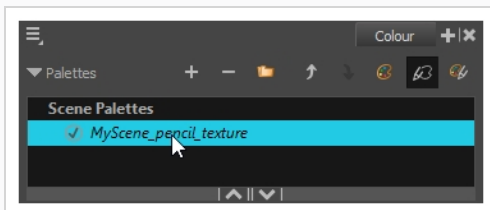
5. In the swatch list, select the pencil texture you want to use.
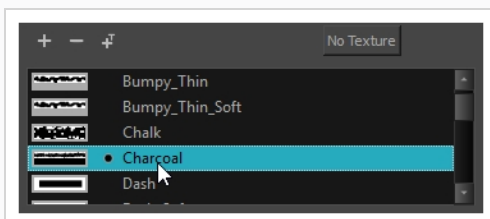
6. In the Drawing view, draw a pencil line.

How to draw with a textured pencil line using the Pencil Properties dialog

1. In the Colour view, select the colour with which you wish to draw.

2. In the Tools toolbar, select the Pencil ✐ tool or press Alt + /.

3. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
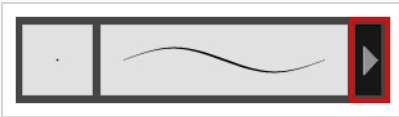
4. In the Pencil Properties dialog, click on the **Texture** tab.

> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

5. In the Texture library, select a texture for the pencil.

6. In the Drawing view, draw a pencil line.

Applying a Pencil Textures to a Pencil Line

You can apply a pencil texture to an existing pencil line. You can also change a textured pencil line's texture by following the same steps.

> **NOTE**
>
> You can also apply pencil line textures on artwork created with the Line, Rectangle, Ellipse and Polyline tools.

How to apply a pencil line texture to an existing pencil line using the Colour view

1. In the Tools toolbar, select the Select ↖ tool or press Alt + S.

2. In the Drawing view, select a pencil line.
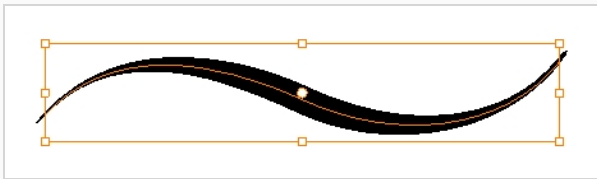
3. In the Colour view, click on the Show Pencil Texture Palettes ⌇⌇ button to display your pencil texture palettes.
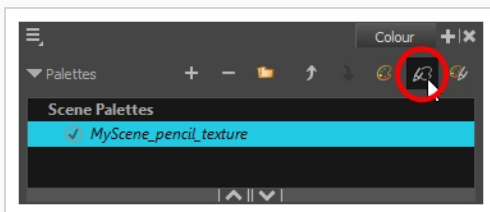
4. In the palette list, select the pencil texture palette containing the desired pencil texture.
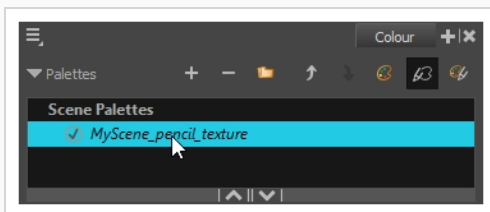
5. In the swatch list, select the pencil texture you want to apply to your pencil line.
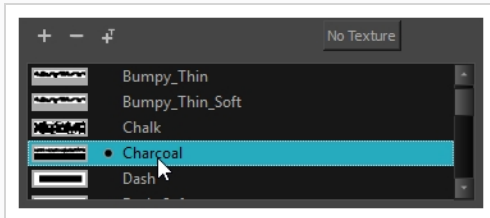
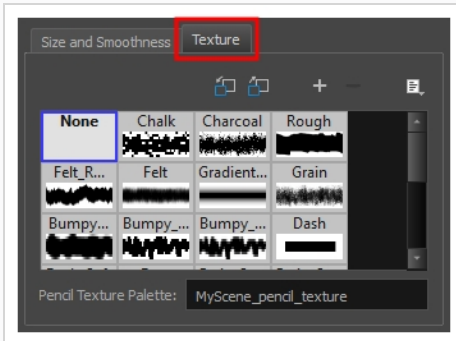6. The selected pencil line now uses the selected pencil line texture.
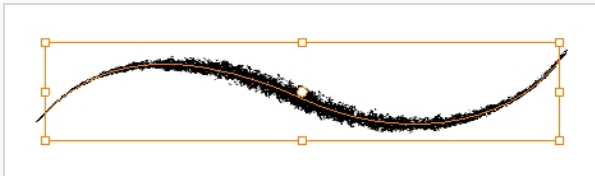
How to apply a pencil line texture to an existing pencil line using the Tool Properties view

1. In the Tools toolbar, select the Select ⬏ tool or press Alt + S.

2. In the Drawing view, select a pencil line.
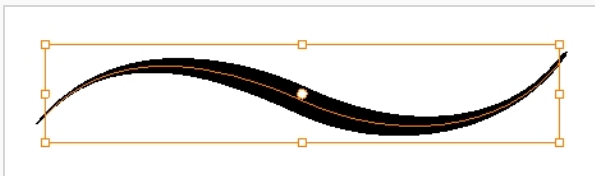
3. In the Tool Properties view, scroll down to the pencil texture library panel.
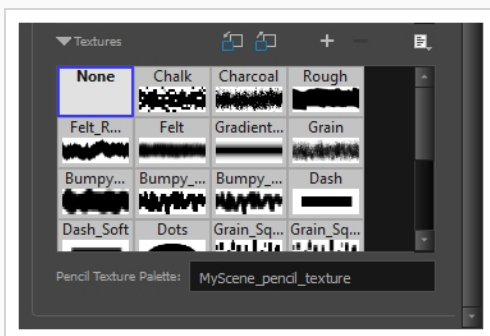
> 📝 **NOTE**
>
> The texture library in the Tool Properties view lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

4. Select the pencil texture you wish to apply.
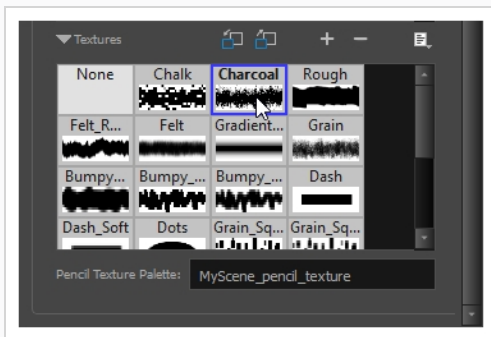
5. The selected pencil line now uses the selected pencil line texture.
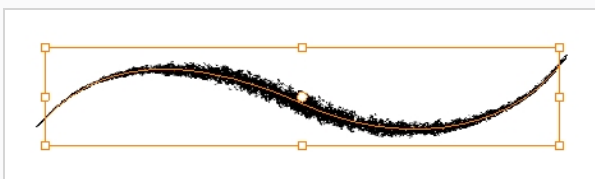
Editing a Pencil Line's Texture

There are two kinds of modification you can make to a pencil line's texture. Using the Edit Gradient/Texture tool, you can scale the texture by its length and thickness, as well as offset its starting position. Using the Pencil Editor tool, you can change the texture's symmetry relative to the line's center.

How to scale the length or thickness of a pencil line texture.

1. In the Tools toolbar, select the Edit Gradient/Texture ☐ tool or press Shift + F3.

2. Click on the pencil line you want to edit.
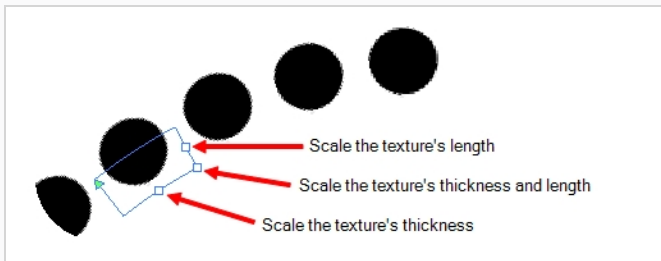
3. Drag one of the square-shaped handles to scale the texture's length, thickness, or both simultaneously.
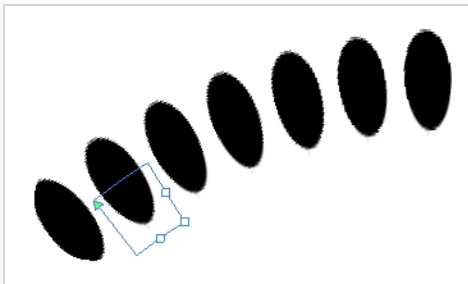
How to offset a pencil line's texture.

1. In the Tools toolbar, select the Edit Gradient/Texture ☐ tool or press Shift + F3.

2. Click on the pencil line you want to edit.
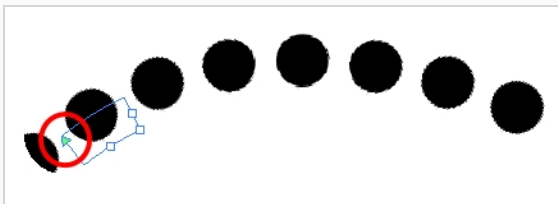
3. Drag the triangle-shaped handle to offset the texture.
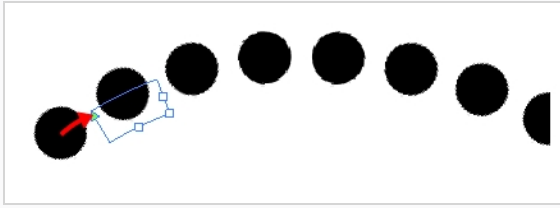
How to change a pencil line's symmetry

1. In the Tools toolbar, select the Pencil Editor 🖊 tool or press 8.

2. Click on the pencil line you want to edit.
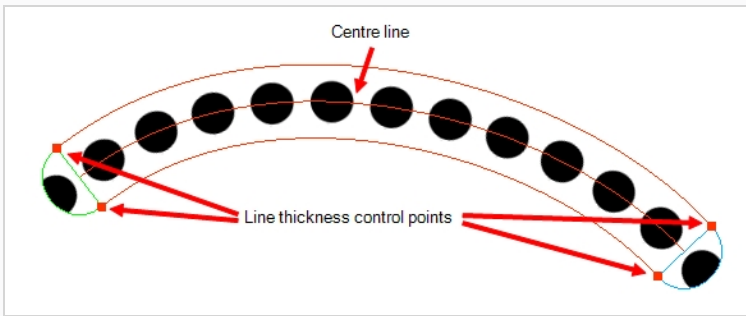
3. Drag one of the line's control points closer or further away from the center line to change the size of its half of the texture.
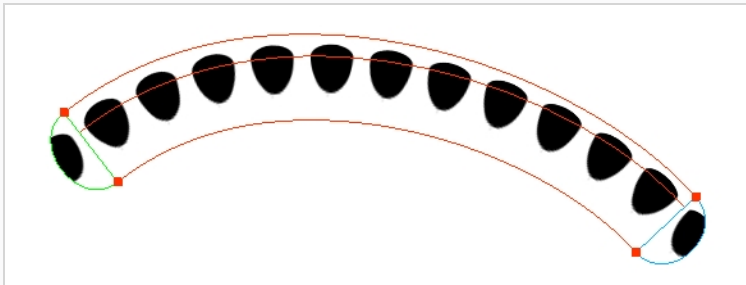
Disabling Pencil Line Textures

After you selected a pencil line texture, if you wish to resume drawing solid pencil lines again, you can do so using either the Colour view or the Pencil Properties dialog.

## How to resume drawing with a solid pencil line using the Colour view

1. Click on the Show Pencil Texture Palettes 𝄞 button to display your pencil texture palettes.
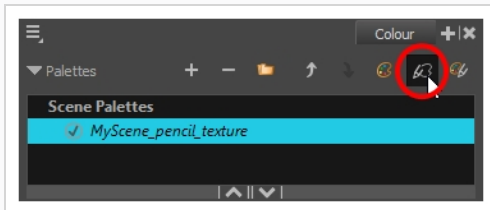
2. Over the swatch list, click on the **No Texture** button.
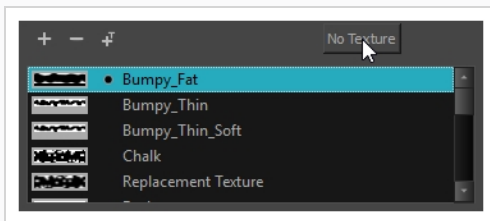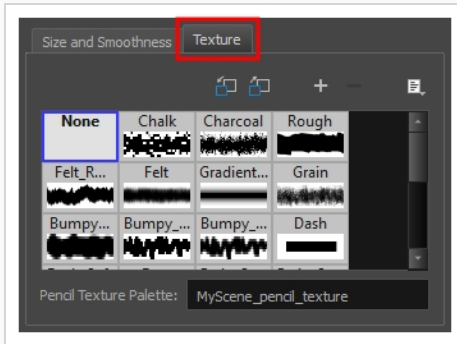
   From now on, the pencil lines you draw will not have a texture.

How to resume drawing with a solid pencil line Pencil Properties dialog

1. In the Colour view, select the colour with which you wish to draw.

2. In the Tools toolbar, select the Pencil 🖉 tool or press Alt + /.

3. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
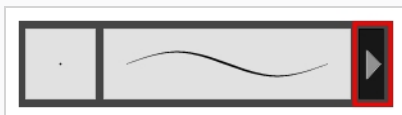
4. In the Pencil Properties dialog, click on the **Texture** tab.

5. In the pencil textures library, select **None**.

From now on, the pencil lines you draw will not have a texture.

Pencil Texture Palettes

Just like colours used by your drawings, pencil textures are stored in pencil texture swatches, which are stored in pencil texture palettes. Because pencil lines drawn with pencil textures are linked to the pencil texture in their pencil texture palette, pencil textures can be shared and updated just as easily as colours in your Harmony project.

For example, you can create the texture palette for your character in your character model's scene, then make scenes that include this character link to that character's pencil texture palette, as you can with their colour palette, to make sure both their colour and line textures are the same throughout your project. For more information, see *About Advanced Palette Management* on page 288.

Just as with colour palettes, you can update a swatch in a pencil texture palette with a different texture, and the pencil lines that are drawn with this texture will update with the new texture. This means your pencil textures can always be subjected to revisions.

When you create a new scene, your palette list will be preloaded with a default colour palette and a default texture palette, the latter which is contains some sample pencil textures. If you wish, you can use these textures for your project, you can build on this palette and add new textures as needed, or you can create your own texture palette, loaded with only your custom textures, to use across your project. You can configure Harmony to create new scenes with your own custom pencil texture palette.

> **NOTE**
>
> The following topics will introduce you to the basics of creating and using pencil texture palettes. For more information on creating and managing swatches and palettes, see *About Colour Swatches* on page 265 and *About Palettes* on page 286.

Creating a Pencil Texture Palette

Creating a pencil texture palette allows you to manage your own pencil textures as you wish. You can create separate pencil texture palettes for different characters, props and backgrounds as needed, and share them among the people collaborating on your project like you would with colour palettes.

Creating a pencil texture palette is as simple as creating a colour palette. When creating a palette, you have the option to create it as a colour or a pencil texture palette.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

How to create a pencil texture palette (Basic palette list mode)

1. In the Colour view, click on the Show Pencil Texture Palettes ✍ button to display your pencil texture palettes.

2. 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**

    The Create Palette dialog box opens.

3. In the Create Palette dialog, enter the new palette's name. Make sure your palette name contains information to be easy to identify, such as the name of the character and information about the type of setting for this palette, if any.
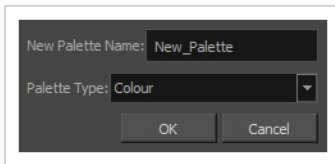
4. In the **Palette Type** drop-down, select **Pencil Texture**.

5. Click **OK**.

    The palette appears in the drawing element's palette list.

How to create a pencil texture palette (Advanced palette list mode)

1. In the Colour view, click on the Show Pencil Texture Palettes ✍ button to display your pencil texture palettes.

2. If you want to add the palette to an element's palette list, select a drawing from the element for which you want to create a palette in the Timeline, Xsheet or Camera view.

3. 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**

    The Palette Browser dialog box opens.

Harmony Server   Harmony Stand Alone
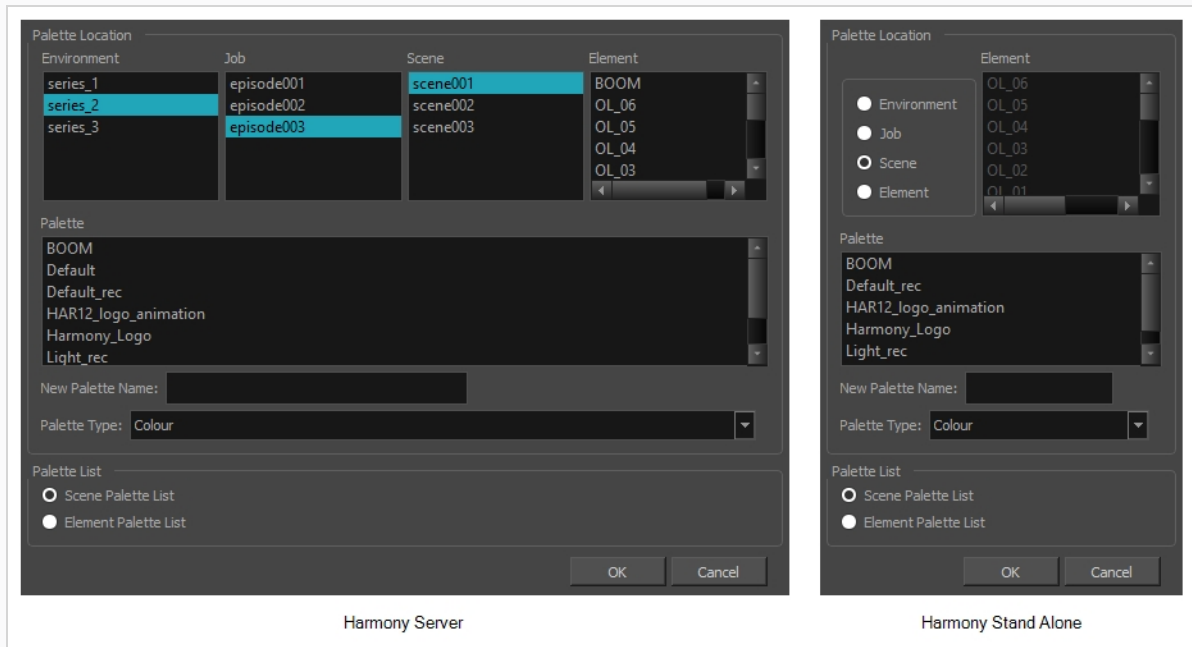
4. In the **Palette Location** panel, select the location where you want to store the palette file. If you are using Harmony Server, you can store the palette in any environment, job, scene or element on your database. In Harmony Stand Alone, you can store the palette in the scene, inside one of its element, or inside its provisional job or environment. For more information, see *About Palette Storage Locations* on page 291.

5. In the **New Palette Name** field, enter the name for the new palette. The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.

6. In the **Palette Type** drop-down, select **Pencil Texture**.

7. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see *About Scene and Element Palette Lists* on page 290.
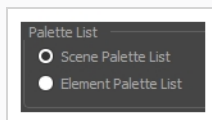
8. Click **OK**.

    The new palette appears in the palette list.

Adding a Pencil Line Texture

You can create your own pencil textures by first creating an image file containing the texture, either in Harmony or in a third party software, then importing it to your pencil texture palette.

A pencil texture must be created with transparency, as Harmony will only use the image's transparency channel to determine how to apply the texture to your pencil lines. Hence, pencil textures can be in image format that are supported by Harmony and which supports transparency: `.png`, `.tga`, `.tif`, `.psd`, `.psb` and `.sgi`.

A pencil texture can be of any size, but the bigger the image resolution, the thicker the lines you can draw with it without seeing pixels. The pencil texture will follow your pencil lines on their horizontal axis, like so:
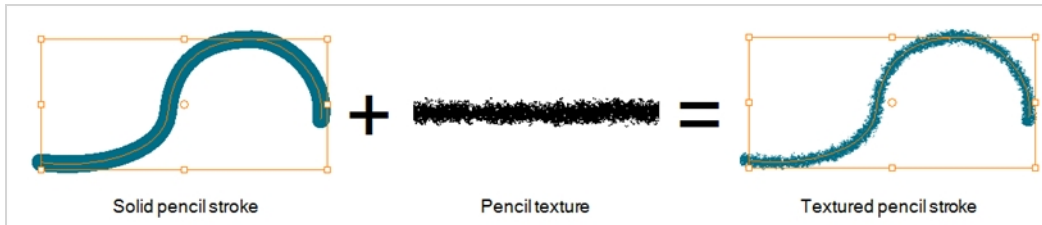
Solid pencil stroke   Pencil texture   Textured pencil stroke

---

NOTE

If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:

- In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to add a pencil line texture using the Colour view

1. In the Colour view, click on the Show Pencil Texture Palettes 🖋 button to display your pencil texture palettes.
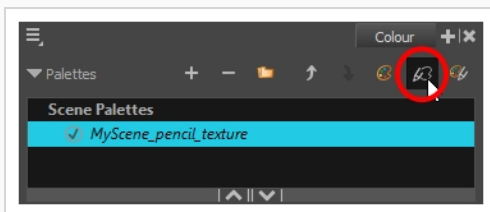
2. In the palette list, select the pencil texture palette containing the desired pencil texture.
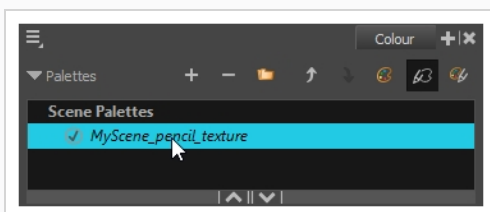
3. Do one of the following:

   - Click on the Add Texture ➕ button.

   - Right-click on the swatch list and select **New Texture**.

   - Open the Colour view menu ☰ and select **Colours > New Texture**.

4. In the file browser dialog, navigate to the location of your texture image file and select it.

5. Click **Open**.

   The texture is added to your pencil texture palette.
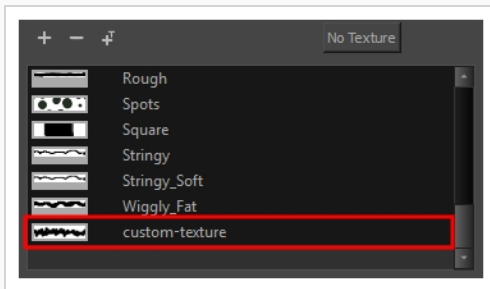
   You can start drawing with your new pencil texture.

How to add a pencil line texture using the Pencil Properties dialog

1. In the Tools toolbar, select the Pencil 🖊 tool or press Alt + /.

2. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
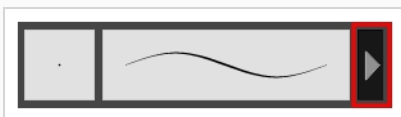
3. In the Pencil Properties dialog, click on the **Texture** tab.
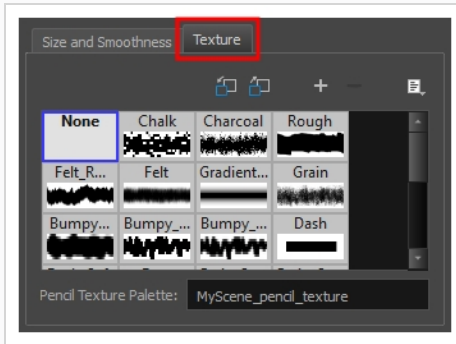
> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

4. Do one of the following:

   - Click on the New Texture ✚ button over the pencil textures list.

   - Open the Brush menu ☰ and select **New Texture**.

5. In the file browser dialog, navigate to the location of your texture image file and select it.

6. Click **Open**.

   The texture is added to your pencil texture palette.

7. In the pencil texture library, select the new pencil texture.

You can start drawing with your new pencil texture.

Renaming Pencil Line Textures

You can rename pencil textures from the Colour view or from the Pencil Properties dialog box.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to rename a pencil line texture using the Colour view

1. In the Colour view, click on the Show Pencil Texture Palettes ✍ button to display your pencil texture palettes.

2. In the palette list, select the pencil texture palette containing the desired pencil texture.

3. In the swatch list, double-click on the name of the texture you wish to rename.
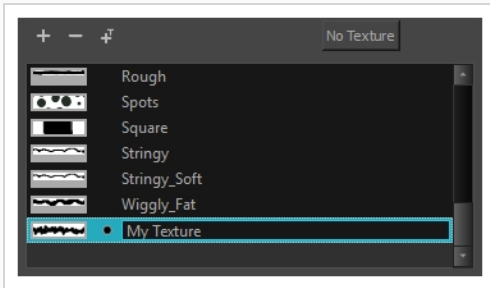
4. Enter the texture's name, then click outside of the text input field to confirm the new name.

How to rename a pencil line texture using the Pencil Properties dialog

1. In the Tools toolbar, select the Pencil ✏ tool or press Alt + /.

2. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.

3. In the Pencil Properties dialog, click on the **Texture** tab.
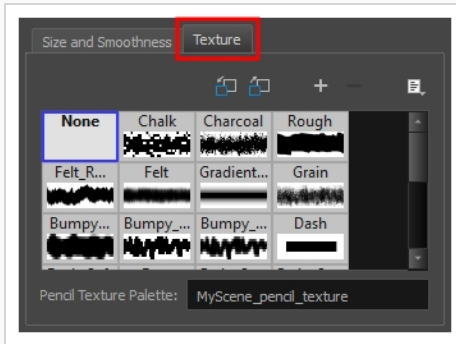
> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

4. In the pencil texture library, select the texture you wish to rename.
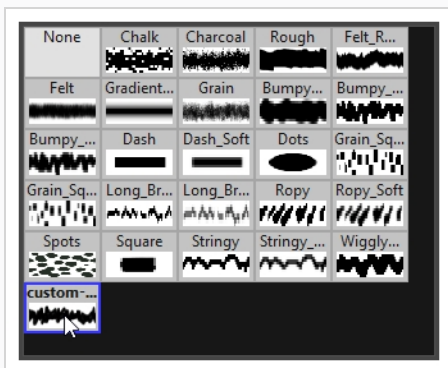
5. Open the Brush menu ▤ and select **Rename Texture**.

   The Rename Texture dialog box opens.
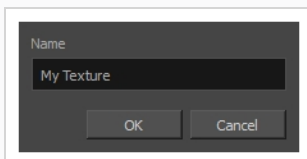
6. In the **Name** field, type in the desired name for your texture

7. Click **OK**.

   You can start drawing with your new pencil texture.

Deleting Pencil Line Textures

You can delete pencil texture palettes that you do not need.

> **NOTE**
>
> You should not delete any pencil texture that is used in your project, as pencil lines using a deleted pencil texture will become solid pencil lines.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode ⬛ toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to rename a pencil line texture using the Colour view

1. In the Colour view, click on the Show Pencil Texture Palettes 🖋 button to display your pencil texture palettes.

2. In the palette list, select the pencil texture palette containing the desired pencil texture.

1. In the swatch list, select the pencil texture you wish to delete.
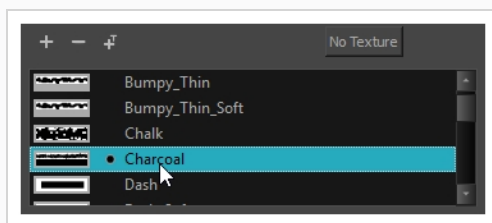
2. Do one of the following:

    - Click on the Remove Colour button.

    - Right-click on the pencil texture and select **Delete**.

    - Open the Colour view menu and select **Colours > Delete**.

    - Press Del (Windows/Linux) or Backspace (macOS).

    The selected pencil texture is removed from the pencil texture palette.

How to rename a pencil line texture using the Pencil Properties dialog

1. In the Tools toolbar, select the Pencil ✐ tool or press Alt + /.

2. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
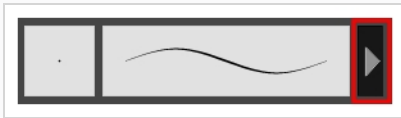
3. In the Pencil Properties dialog, click on the **Texture** tab.
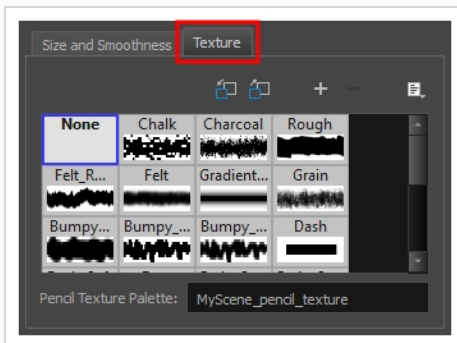
    > 🗒 **NOTE**
    >
    > The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

4. In the pencil texture library, select the texture you wish to delete.

5. Do one of the following:

- Click on the Delete Texture — button.

- Open the Brush menu ▤ and select **Delete Texture**.

The selected pencil texture is removed from the pencil texture palette.

Replacing a Pencil Texture

Just like you can edit a colour swatch and simultaneously update all the drawings using the colour swatch with this new colour, you can replace an existing pencil texture with a different texture, and update all pencil lines that use this texture with the new texture.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
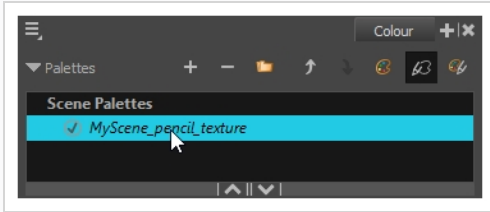>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
>
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
>
> - From the Colour view menu ▤, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

## How to replace an existing pencil line texture

1. In the Colour view, click on the Show Pencil Texture Palettes ✍ button to display your pencil texture palettes.
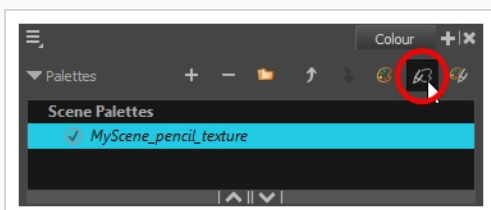
2. In the palette list, select the pencil texture palette containing the desired pencil texture.
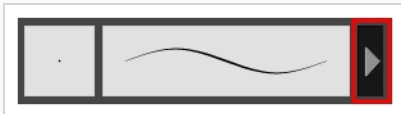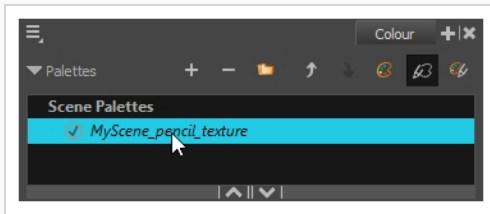

3. In the swatch list, select the pencil texture that you want to replace.
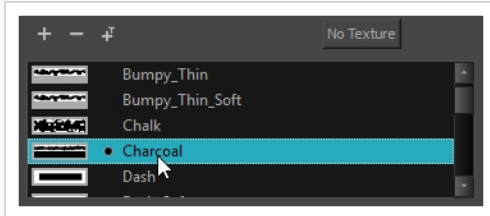
4. Do one of the following:

   - Right-click on the pencil texture and select **Edit Texture**.

   - Open the Colour view menu and select **Colours > Edit Texture**.

5. In the file browser dialog, navigate to the location of your new texture image file and select it.

6. Click **Open**.

   The selected texture is replaced with the new texture file. It is also renamed based on the new texture's file name.
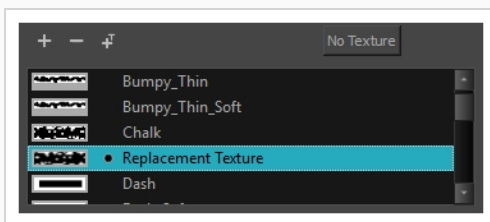
   Any pencil line that was drawn with the older pencil texture will now be drawn with the new pencil texture.

Setting the Default Pencil Texture Palette

You can make a pencil texture palette into the default texture palette which is added to every new scene you create. This will be saved in your user preferences.

How to add a texture to your preferences

1. In the Colour view, click on the Show Pencil Texture Palettes ✍ button to display your pencil
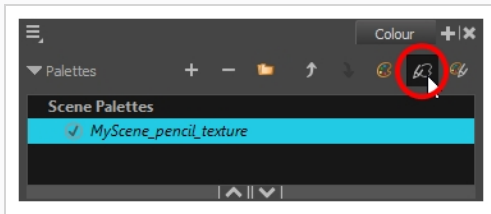
texture palettes.

2. In the palette list, select the pencil texture palette containing the desired pencil texture.
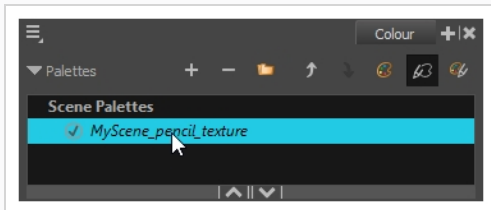
3. In the Tools toolbar, select the Pencil ✏ tool or press Alt + /.

4. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
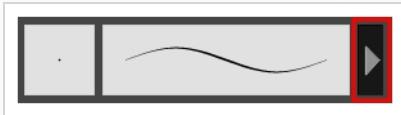

5. In the Pencil Properties dialog, click on the **Texture** tab.
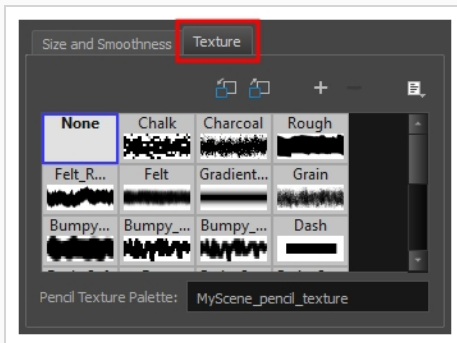
> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

6. Do one of the following:

- Click on the Use as Default Texture Palette

button.

- Open the Brush menu ▤ and select **Use as Default Texture Palette**.

From now on, new scenes created in Harmony will have the selected pencil texture palette as their default pencil texture palette.

Recovering the Default Pencil Texture Palette

If you have made modifications on the default pencil texture palette in your scene that you wish to undo, you can easily re-import the default pencil texture palette back into your scene as a new pencil texture palette.

## How to recover the default pencil texture palette into your scene

1. Click on the Show Pencil Texture Palettes ✍ button to display your pencil texture palettes.

2. In the Tools toolbar, select the Pencil ✏ tool or press Alt + /.

3. In the Tool Properties view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
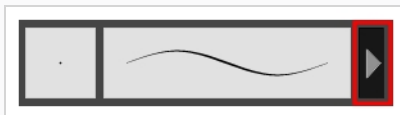
4. In the Pencil Properties dialog, click on the **Texture** tab.

> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

5. Click on the Reload Default Texture Palette 📋 button.

   A copy of the default pencil texture palette is added to the scene's pencil texture palette list.

Converting a Colour Palette to a Pencil Texture Palette

As of Harmony 15, each palette is set to either be a colour palette, or a texture palette, and both palette types are kept in separate lists. However, in Harmony 14 and prior versions, pencil texture palettes were just regular palettes, which you had to temporarily set at your pencil texture palette in order to use it for pencil line textures.

Because of this, if you open a scene created in Harmony 14 or prior, and which contains pencil texture palettes, Harmony 15 will not be able to tell which palettes are colour palettes and which ones are pencil texture palettes. Hence, you must manually move your pencil texture palettes to the pencil texture palette list before you can use them for pencil line textures.

The only exception to this is if a scene created in a prior version of Harmony has a pencil texture palette named `penstyle_opacity`. Because this was the default name for pencil texture palettes in older versions of Harmony, Harmony 15 will automatically convert those palettes to pencil texture palettes.

> **NOTE**
>
> Converting a colour palette to a pencil texture palette is permanent. You cannot convert a pencil texture palette to a colour palette. However, you will be prompted to confirm before making the conversion, and the conversion can be undone with the Undo command.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode ⬜ toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to convert a colour palette to a pencil texture palette

1. In the palette list of the Colour view, select the palette you want to convert to a pencil texture palette.

2. Do one of the following:

   - Right-click on the palette and select **Change to Pencil Texture**.

   - Open the Colour view menu ☰ and select **Palettes > Change to Pencil Texture**.

   The palette will be moved from the colour palette list to the pencil texture palette list. To see it, click on the Show Pencil Texture Palettes ✍ button or the Show All Palettes 🎨 button.

About Pencil Presets

Setting up your pencil to perfectly reproduce the desired art style can require a lot of tweaking as well as trial and error. Once you have found the correct settings for your pencil, you will want to reuse it throughout your project for consistency. You can do that by creating and using pencil presets.
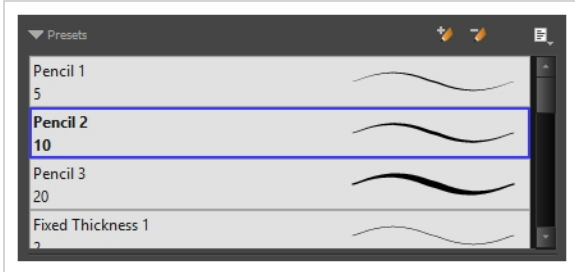
Harmony comes preloaded with a few pencil presets which you can select from the Tool Properties view. It is also possible to create your own pencil presets by configuring your pencil, then saving it as a preset.

Pencil presets are saved in your preferences. You can also export your brush presets into an `.xml` file, and import them on a different workstation, allowing you to share your brush presets between the different people collaborating on your project.

Creating Pencil Presets

T-LAY-002-002

You can create your own custom pencil presets.

Regular pencil presets allow you to set the size and smoothing of the line or shape. As you draw, the thickness of the line varies according the amount of pressure you apply with a pen and tablet.

> **NOTE**
>
> To learn more about the Pencil tool options, see the Reference guide .

How to create a pencil preset

1. In the Tools toolbar, select the Pencil ✐ , Line ╱ , Ellipse ◯ , or Rectangle ☐ tool.

2. In the **Tool Properties** view, click on the arrow button next to the stroke preview area to open the Pencil Properties dialog.
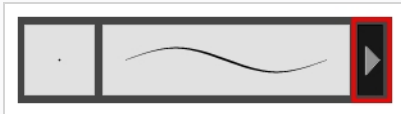
3. Configure your brush to be exactly how you wish to use it in the future—see *Creating a Pencil* on page 122.

4. In the Tool Properties view, click the New Brush 🖌 button.

   The New Preset dialog box opens.
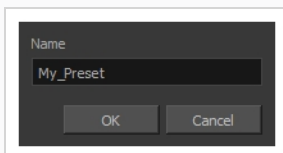
5. Type in a name for your new pencil thickness stencil and click **OK**.

6. Start drawing in the Drawing view.

Creating Pencil Thickness Presets

T-LAY-002-003

Thickness stencils that are indicated with this [icon] icon are also set with specific properties, but disregards the pressure of your pen and tablet. The line thickness varies. You can access thickness stencils from the list of presets on the Tool Properties view or create your own.

How to create a pencil thickness stencil

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

2. In the Camera view, select the pencil line or shape from which you want to take the style.
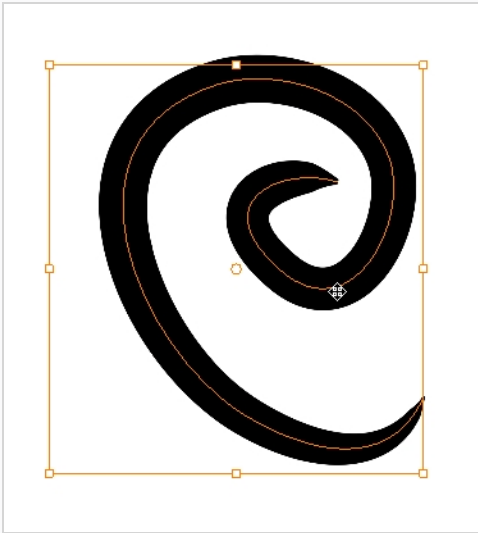
3. In the Tool Properties view, click the New Thickness Stencil ✦ button.

   A new thickness stencil is added to the end of the list in the Presets menu.

4. In the Presets menu, select a new thickness stencil and click on a line or shape in the Drawing view to apply the thickness stencil you created.

Selecting a Pencil Preset

A pencil preset is a pencil with specific properties. You can work with regular pencil presets and thickness stencils.

How to select a pencil preset

1. In the Tools toolbar, select the Pencil ✏, Line ╱ , Ellipse ◯ , or Rectangle ▢ tool.

2. In the Tool Properties view, use the Presets menu to select a pencil preset.
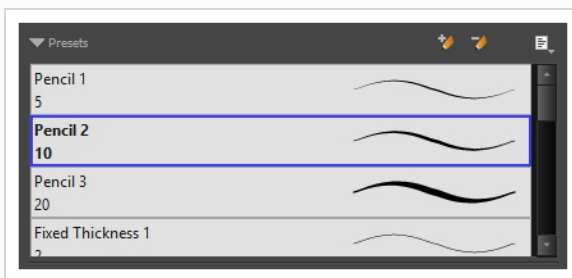
3. In the Drawing view, draw your pencil line or shape.
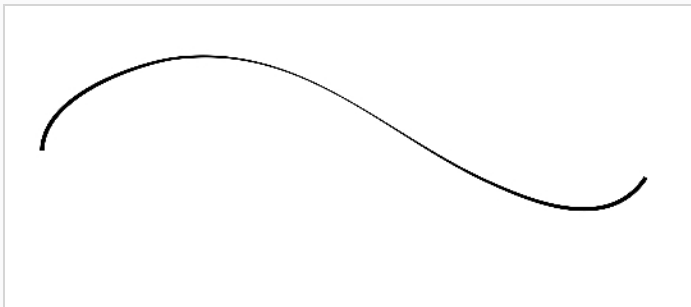
Applying a Pencil Preset

You can apply a pencil preset on already drawn pencil lines using the Select tool.

How to apply a thickness stencil to a pencil line or shape

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

2. In the Drawing view, select the pencil line or shape on which you want to apply a style.
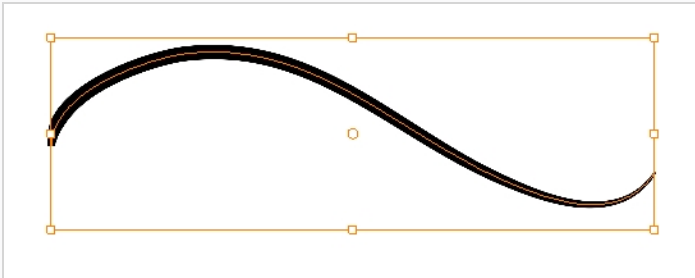
3. In the Tool Properties view, select the style you want to apply from the Presets list.

The style you selected is applied to your selection.
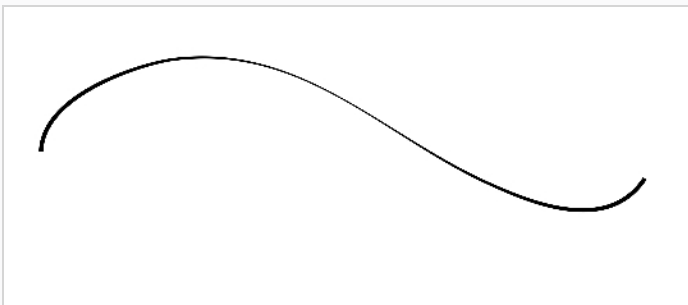
Renaming Pencil Presets

You can rename your pencil presets to keep your list organized.

How to rename a pencil preset

1. In the Tools toolbar, select the Pencil ✏️ , Line ╱ , Ellipse ◯ , or Rectangle ▭ tool.

2. In the Presets menu, select the thickness stencil or preset you want to rename.

3. From the Brush menu ▤ , select **Rename Brush**.

   The Rename Preset dialog box opens.
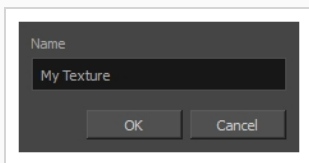
4. In the Name field, type in the new name.

5. Click **OK**.

Deleting Pencil Presets

You can delete unnecessary presets from your list.

How to delete a thickness stencil or pencil preset

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

2. In the Presets menu, select the thickness stencil or preset to delete.

3. Click the Delete Preset ✏️ button.

Exporting Pencil Presets

T-ANIMPA-010-005

You can export your pencil presets to either backup, share or install on a different computer.

How to export pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush , Pencil or Eraser tool.

2. Open the Brush Preset menu and select **Export Brushes**.

   The Export Tips and Textures dialog opens. This dialog allows you to export brush presets for the Brush, Pencil and Eraser tools.

   Select Brushes from the list:

☑	Pencil 1 5 P	
☑	Pencil 2 10 P	
☑	Pencil 3 20 P	
☑	MyPencil 2 P	
☑	Fixed Thickness 2 10 P	
☑	Charcoal 25 P	
	Tapered Thickness ...	

   ☑ Select/ Deselect All
   ☑ Pencil
   ☑ Vector Brush ☑ Vector Eraser
   ☑ Bitmap Brush ☑ Bitmap Eraser

   Export...   Cancel

3. By default, the presets for all your tools will be selected for export. If you only wish to export presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets.

4. Click **Export**.

5. In the Export Presets dialog that appears, browse to the location where you want to save the `.xml` file and enter its file name.
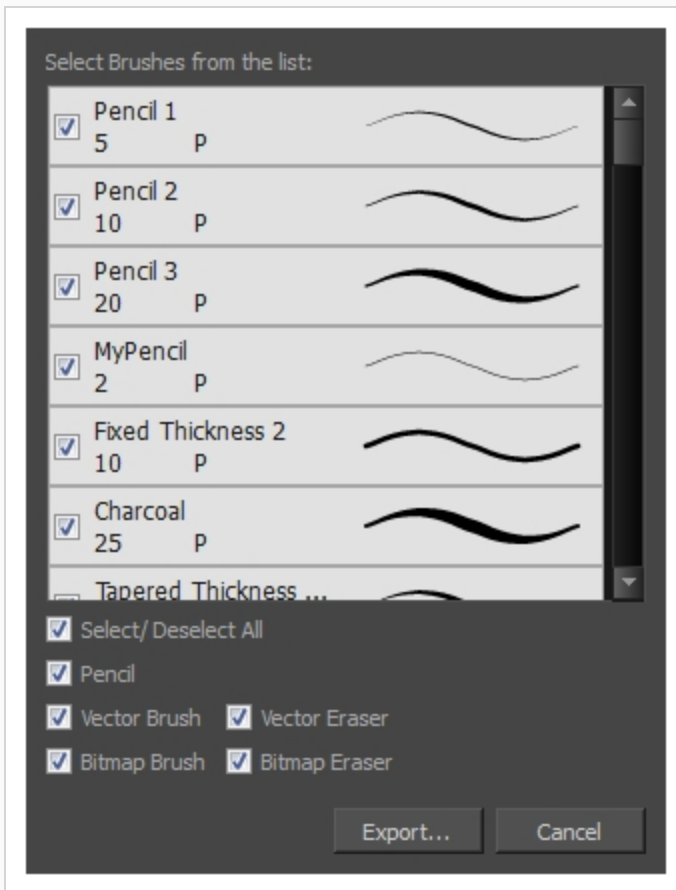
6. Click **Save**.

Importing Pencil Presets

You can import Harmony pencil presets that you previously exported.

How to import pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush 🖌, Pencil 🖍 or Eraser 🖌 tool.

2. Open the Brush Preset menu 📄 and select **Import Brushes**.

3. In the browser window that appears, navigate to and select the `.xml` file in which you exported your brush presets.

4. Click **Open.**

   The Import Brushes dialog box opens.
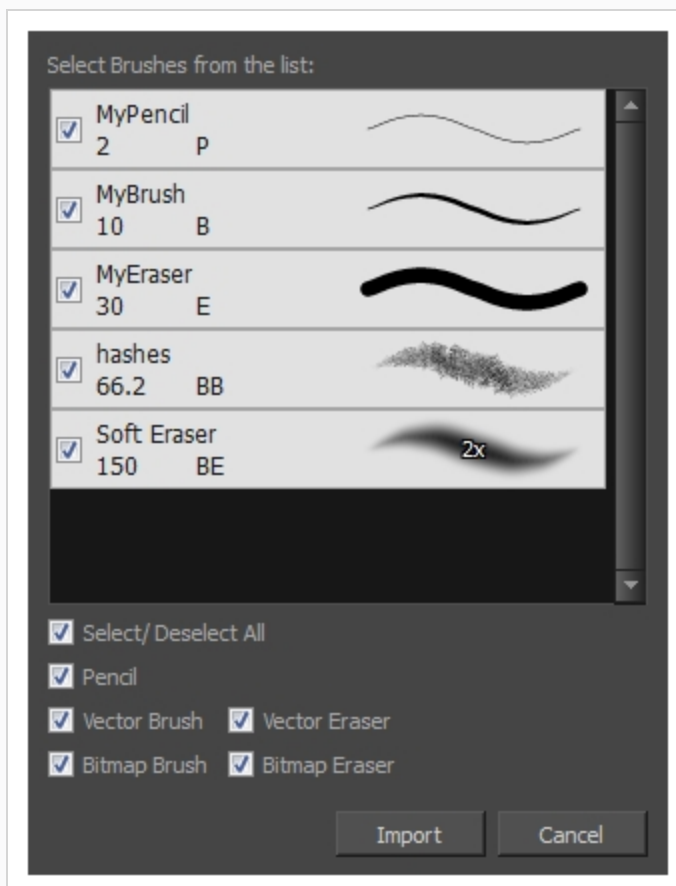
5. By default, the presets for any tools included in the file will be selected for import. If you only wish to import presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets

6. Click **Import**.

   The imported brush, eraser and pencil styles will appear in the Presets list.

Changing the Pencil Preset Display

You can display your preset list as thumbnails or a list.

> ## How to change the Brush Presets display
>
> 1. In the Tool Properties view, click on the Brush Presets menu button ▤ .
>
> 2. Select one of the following options:
>   - **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.

About Shape Tools

In Harmony, you can use the shape tools to draw circles, lines and rectangles. You can also easily reshape a square or circle into a much more complex drawing—see *About the Contour Editor Tool* on page 202 and *About the Pencil Editor Tool* on page 213.

The available shape tools are:

- Line tool

- Rectangle tool

- Ellipse tool

- Polyline tool

The shape tools use the same pencil presets as the Pencil tool. To learn how to create, delete, rename, import and export presets, see *About the Pencil Tool* on page 118.

To learn more about the shape tool parameters, see the Reference guide .

Creating Rectangles, Circles and Lines with the Shape Drawing Tools

You can use the Line, Rectangle, or Ellipse tool to draw shape without having to trace them. You can also draw perfect circles and squares.

> **NOTE**
>
> To learn more about the shape tool parameters, see the Reference guide .

How to draw with a shape tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Rectangle □ , Ellipse ○ , or Line ╱ tool.

3. To automatically fill the shape, in the Tool Properties view, select the Auto Fill ● option.

4. In the DrawingCamera view, click and drag to draw the shape.
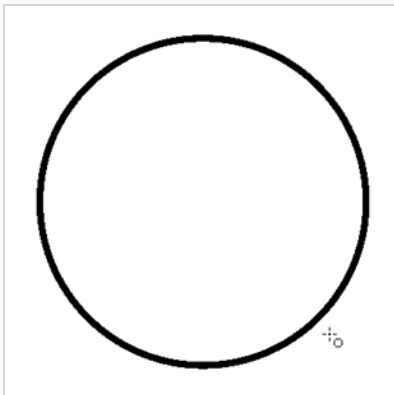
   - Hold down Shift to lock the rectangle or the ellipse ratio to 1:1.

   - Hold down Alt to draw the rectangle or ellipse from its centre.

   - Hold down Shift to snap the line every 15 degrees.

   - Hold down Alt to snap the start or end of the line to a nearby stroke.

5. Use the Contour Editor ▷ tool to deform the shape and create your drawing.
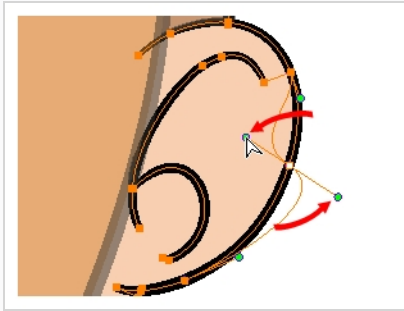
Creating Vector Shapes with the Polyline Tool

You can use the Polyline tool to draw long and curvy lines.

> **NOTE**
>
> To learn more about the Polyline tool options, see the Reference guide .

How to draw with the Polyline tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Polyline ⌇ tool or press Alt + _.

3. In the Drawing view, click and drag to create a point and a Bezier handle to shape your line.

4. Click a new area and drag to create a second point and Bezier handle.

   - Press Alt to pull only one handle, instead of two.

   - Press Shift to snap the handles to 45, 90, or 180 degrees.
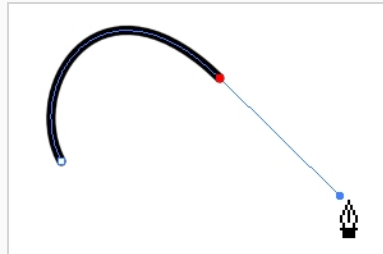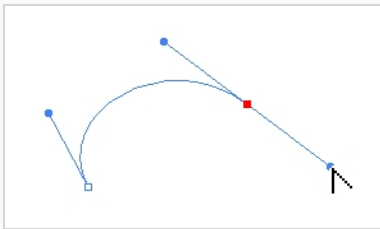
5. Repeat the previous step until your shape is completed.

6. Press Ctrl (Windows/Linux) or ⌘ (macOS) and click to release the Polyline tool from the current path or shape that it is creating. Continue to use the tool to make multiple, independent paths or shapes.

7. If necessary, reshape the lines using the Contour Editor ⌖ tool—see *Reshaping a Shape, Pencil Line or Stroke with the Contour Editor Tool* on page 203.

About the Stroke Tool

T-HFND-004-013

There are two different ways to draw invisible lines, using the Pencil tool or Stroke tool.

Using the Pencil tool, you can draw as strokes only, meaning that the line will be invisible. This can be useful for drawing tones and highlights directly on the character.
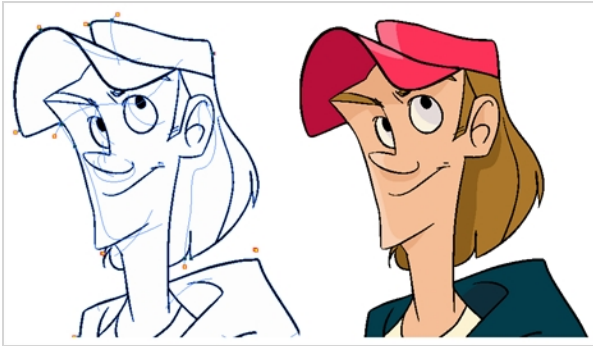
The Stroke tool draws invisible lines only. You cannot add thickness to the line. Unlike the Close Gap tool that creates a short, straight line between two points, the stroke line will stay exactly where you draw it. This tool can be useful for closing a zone in a particular way or creating some hard shadows or highlight areas.

Sometimes, it may be difficult to see strokes, especially if your colours are similar to the blue stroke colour. In Harmony, you can display the strokes in washed-out colours so the invisible lines stand out.

> 📝 **NOTE**
>
> To learn more about the Stroke tool parameters, see the Reference guide

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Creating Invisible Lines with the Stroke Tool

You can draw invisible lines with the Stroke tool as well as with the Pencil tool.

> **NOTE**
>
> To learn more about the Stroke tool parameters, see the Reference guide

How to draw invisible lines with the Stroke tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar from the Paint drop-down menu, select the Stroke 💬 tool or press Alt + V.

3. From the top menu, select **View > Show Strokes** ✐ or press K.

4. In the Tool Properties view, you can adjust the smoothness.

5. In the Drawing view, start drawing.

   If you forgot to enable the Show Strokes option before drawing, as soon as you draw a first stroke, a Message dialog box opens.
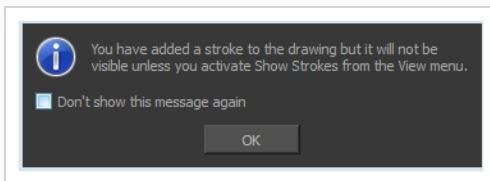
   Select the **Don't Show This Message Again** option if you do not want the dialog box to notify you about the Show Strokes option.

6. Click **OK**.

7. You can modify the stroke shape with the Contour Editor ▷ tool.

How to draw invisible lines with the Pencil tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Pencil ✐ tool or press Alt + /.

3. From the top menu, select **View > Show Strokes** ✐ or press K.

4. In the Tool Properties view, set the Pen Style size to **0**. You can also adjust the smoothness.

5. In the Drawing view, start drawing.

If you forgot to enable the Show Strokes option before drawing, as soon as you draw a first stroke, a Message dialog box opens.
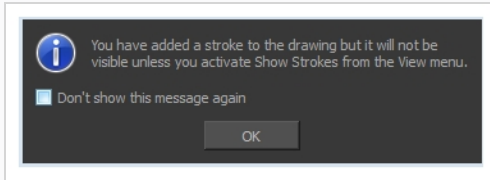
Select the **Don't Show This Message Again** option if you do not want the dialog box to notify you about the Show Strokes option.

6. Click **OK**.

7. You can modify the stroke shape with the Contour Editor ⟍ tool.

How to show the strokes with washed-out colours

1. From the top menu, select **View > Show Stroke With Colour Wash**.

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About the Eraser Tool

T-HFND-004-010

Using the Eraser tool, you can remove parts of your drawing.

It is a good idea to create and save erasers with precise sizes and parameters in order to save time when drawing and designing. Harmony provides you with a variety of default eraser styles and allows you to create and save your own eraser presets.

The Eraser tool has as many options as the Brush tool. You can configure an Eraser to have a vector or textured tip, automatic smoothing, transparency, a dual tip and a paper texture.

Erasing

You can erase portion of your artwork using the Eraser tool.

How to erase with the Eraser tool

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Eraser 🖊 tool or press Alt + E.

3. In the Tool Properties view, set the Maximum Size to the desired Eraser size.

   > **NOTE**
   >
   > If you are drawing with a mouse, your strokes will always be at their maximum size. If you are using a pressure-sensitive tablet, your strokes will vary in size depending on the pressure of your pen, ranging between 25% to 100% of the maximum size.

4. In the Drawing view, start erasing.

Creating a Solid Eraser

When using the Eraser tool on a vector layer, you can use either solid vector erasers or textured vector erasers. By default, your eraser will be a solid vector eraser. A solid vector eraser cuts out the shape of its stroke from your vector artwork.

A solid vector eraser's tip can be shaped like a circle, a diamond or a square, and can be configured to have a specific size, aspect ratio and angle. Also, solid vector erasers can be automatically smoothed by Harmony as you draw.

If you are erasing on a bitmap layer, you can only use textured erasers, although you can configured a textured eraser to appear solid.

How to create a solid vector eraser

1. In the Tools toolbar, select the Eraser ✏ tool or press Alt + B.

2. In the Tool Properties view, click the arrow button to open the Eraser Properties view.

   The Eraser Properties dialog opens.
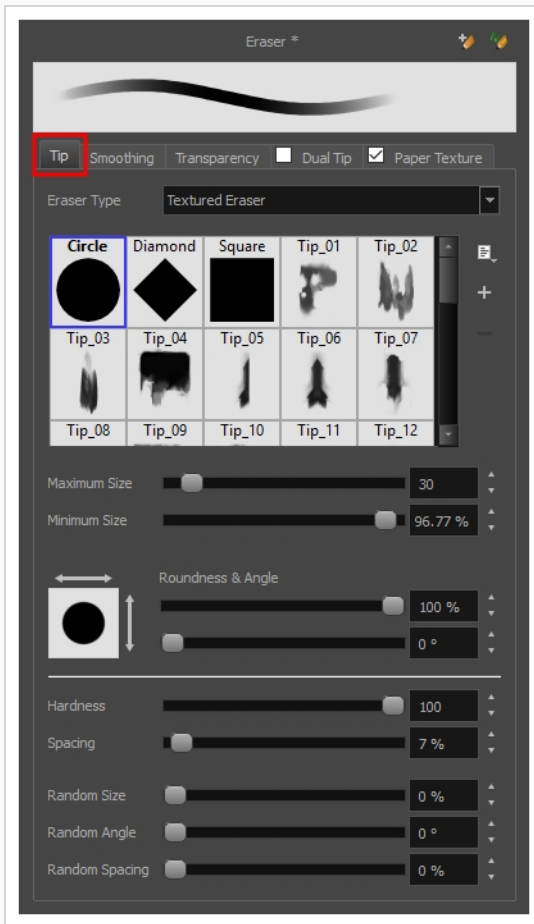
3. In the **Eraser Type** dropdown list, select **Solid Vector**.

4. In the brush tip list, select either **Circle**, **Diamond** or **Square**.

5. Use the **Maximum Size** slider to set the maximum size of your eraser tip, in pixels.

> **NOTE**
>
> When drawing with a mouse, your eraser is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your eraser's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

6. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the percentage of your eraser tip's maximum size your eraser should be when you use your pen with very little pressure. If you don't want the pressure on your pen to affect the eraser size, set this parameter to 100%.

7. If you want your eraser tip to have uneven dimensions, use the **Roundness** slider to shrink the eraser tip vertically all the while preserving its horizontal size.

8. If you want your eraser tip to be at an angle, use the **Angle** slider to rotate your brush tip.

9. Click on the **Smoothing** tab.
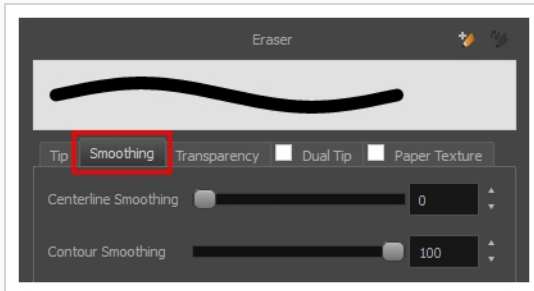
10. Use the **Centerline Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's direction, curves and corners. A higher setting will prevent your line from being shaky, but is liable to reduce your drawing precision and to round sharp corners into curves.

11. Use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's contour. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.

12. Either close or set aside the Eraser Properties dialog.

13. In the Drawing view, start erasing to test your eraser settings.

Creating a Textured Eraser

A textured eraser can have the same settings as a textured brush: It can have a bitmap tip of any shape, can be hard or soft, semi-transparent, combine two tips and be applied with a paper texture effect.

When working on a bitmap layer, the eraser tool is always textured, whereas when working on vector layers, erasers are solid vector by default. A solid vector eraser merely cuts out the shape of the eraser stroke from the vector artwork, whereas a textured vector eraser makes the artwork's bitmap texture more opaque or fully invisible, depending on its intensity, then cuts out some of the vector artwork that the eraser made fully invisible.

A textured eraser works like a reverse textured brush: It makes the pixels in a brush stroke's texture more—or completely—transparent, depending on the eraser's intensity. This effect can only be obtained by using a textured eraser on a textured brush stroke. If you use a textured eraser on solid vector shapes or on pencil lines, the eraser will act like a solid vector eraser, that is, it will merely cut out the shape of the stroke from the artwork. This is because solid vector shapes and pencil lines don't have a bitmap texture, and therefore the textured eraser cannot work on the opacity of their individual pixels. Hence, when working on vector layers, it is better to use a textured eraser only if all your artwork is composed of textured brush strokes, or it might wield strange-looking results.
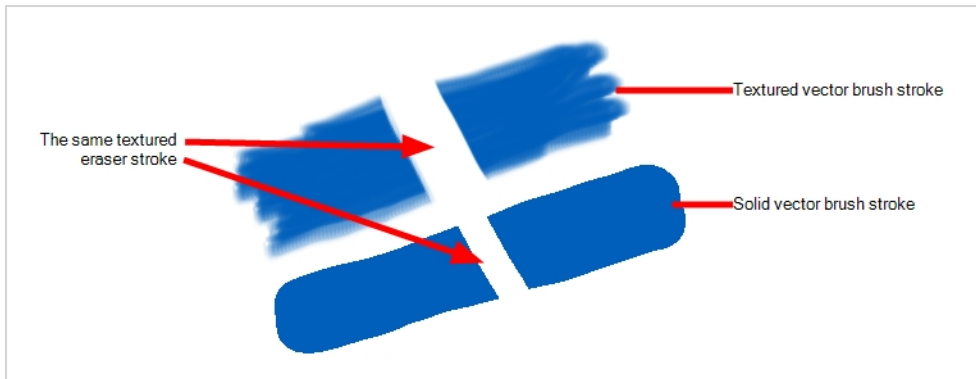
This outlines one of the advantages of working with bitmap layers. On bitmap layers, your brushes and erasers always work as textured brushes and erasers.

Another issue you might encounter when erasing textured vector artwork is that textured vector brush strokes are not flattened together, whereas on bitmap layers, your artwork is always flattened. This implies that if you use a semi-transparent eraser on textured vector artwork, and the artwork has overlapping strokes, all the strokes you erase will become semi-transparent, the resulting image will be a composite of the overlapping strokes. On a bitmap layer, this would simply result in a single layer of semi-transparent artwork.

Vector layer   Bitmap layer

There are two different types of textured vector erasers: **Textured** and **Textured, Preserve Vector**. A simple textured eraser will do two things: First, it will make textured brush strokes more or completely transparent where you erased, and second, it will cut out from the brush stroke's vector shape where it made its texture completely transparent. In contrast, a Textured, Preserve Vector-type eraser will only make the texture brush strokes more or fully transparent, but will leave its vector shape intact.

Textured   Textured, Preserve Vector
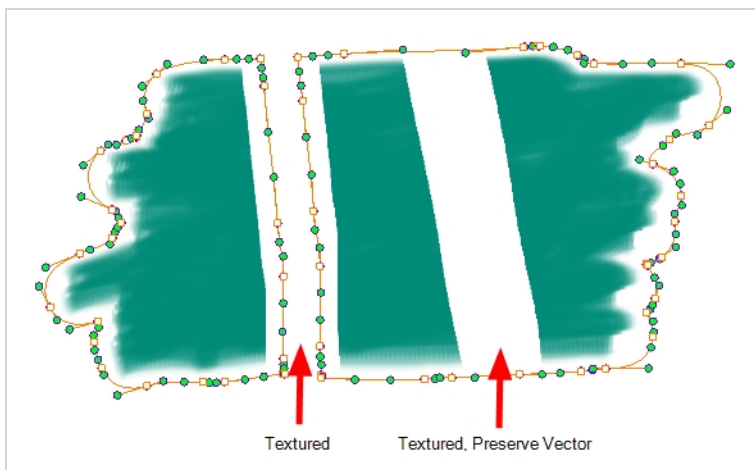
Creating a textured eraser works exactly like creating a textured brush. Therefore, you can follow the steps in the Creating a Textured Brush section to learn how to create a textured eraser.

About Eraser Presets

Once you have found the correct settings for your eraser, you might want to reuse it throughout your project for consistency. You can do that by creating and using eraser presets.

Harmony comes preloaded with a few eraser presets which you can select from the Tool Properties view. It is also possible to create your own eraser presets by configuring your eraser then saving it as a preset.

Like eraser tips and paper textures, eraser presets are saved in your preferences. You can also export your eraser presets into an `.xml` file, and import them on a different workstation, allowing you to share your eraser presets between the different people collaborating on your project.

> **NOTE**
>
> Eraser presets are not to be confused with eraser tips and paper textures. Eraser tips and paper textures are one of the many properties of an eraser, whereas an eraser preset contains all the properties of a brush.

> **NOTE**
>
> Eraser presets for vector layers and for bitmap layers are separate. An eraser preset created while working on a vector layer cannot be used when working on a bitmap layer, and vice versa.

Creating an Eraser Preset

You can create your own custom eraser preset by configuring your eraser, then adding it as a preset.

How to create an eraserpreset

1. Make sure the current drawing layer is vector if you wish to create a vector eraser preset, or bitmap if you wish to create a bitmap eraser preset—see About Vector and Bitmap Layers

2. In the Tools toolbar, select the Eraser 🩹 tool or press Alt + E.

3. Click on the Arrow button to open the Eraser Properties dialog.

4. Configure your brush to be exactly how you wish to use it in the future—see Creating a Solid Eraser and Creating a Textured Eraser.

5. Do one of the following:

   - From the Eraser Properties dialog, click on the New Brush Preset 🖌 button in the top-right corner.

   - In the Tool Properties view, click the New Brush Preset 🖌 button.

   - In the Tool Properties view, open the Brush Presets menu 🗒 and select **New Brush Preset**.

6. In the New Preset window, type a name for your new eraser preset.

   Your new eraser preset is added to the end of the list of eraser presets.

Selecting an Eraser Preset

Harmony provides you with default eraser presets available in the Tool Properties view.

How to select a brush preset

1. In the Tools toolbar, select the Eraser 🖌 tool or press Alt + E.

2. In the Tool Properties view, select an eraser preset from the Presets list.

Updating a Brush Preset

If you want to modify the settings of an existing custom preset, you can do so by adjusting the parameters in the Tool Properties view, then updating your preset with your brush current's parameters.

How to update a brush preset

1. In the Tools toolbar, select the Brush ![brush icon] tool or press Alt + B.

1. In the Tool Properties view, select the Brush Preset you wish to update.

2. Click on the Arrow button to open the Brush Properties view.

3. Configure your brush to be exactly how you wish to use it in the future—see Creating a Solid Brush or Creating a Textured Brush.

4. Click on the Update Brush Preset ![update icon] button in the upper-right corner of the Brush Properties dialog.

Renaming an Eraser Preset

To keep your list comprehensive and organized, you can name your custom brush presets.

How to rename a brush preset

1. In the Tools toolbar, select the Eraser ✏️ tool or press Alt + E.

2. In the Tool Properties view, select an eraser preset to rename.

3. Open the Brush Preset menu ☰ and select **Rename Brush**.
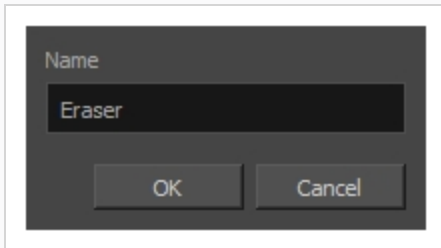
4. Type in a new name for the brush and click **OK**.

Deleting a Brush Preset

You can keep your preset list clean by deleting unwanted custom presets.

How to delete a brush preset

1. In the Tools toolbar, select the Eraser ✏ tool or press Alt + E.

2. In the Tool Properties view, select the eraser preset you want to delete.

3. Do one of the following:

   - Click the Delete Brush ✏ button.

   - Open the Brush Preset menu ▤ and select **Delete Brush**.

Exporting Eraser Presets

You can export eraser presets into an `.xml` file which will contain all of your eraser's settings. This can be useful if you wish to back up or share your eraser presets.

How to export pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush ✏, Pencil ✏ or Eraser ✏ tool.

2. Open the Brush Preset menu ▤ and select **Export Brushes**.

   The Export Tips and Textures dialog opens. This dialog allows you to export brush presets for the Brush, Pencil and Eraser tools.

   Select Brushes from the list:

☑	Pencil 1 5 P	
☑	Pencil 2 10 P	
☑	Pencil 3 20 P	
☑	MyPencil 2 P	
☑	Fixed Thickness 2 10 P	
☑	Charcoal 25 P	
	Tapered Thickness ...	

   ☑ Select/Deselect All

   ☑ Pencil

   ☑ Vector Brush   ☑ Vector Eraser

   ☑ Bitmap Brush   ☑ Bitmap Eraser

   [Export...]   [Cancel]

3. By default, the presets for all your tools will be selected for export. If you only wish to export presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets.

4. Click **Export**.

5. In the Export Presets dialog that appears, browse to the location where you want to save the `.xml` file and enter its file name.
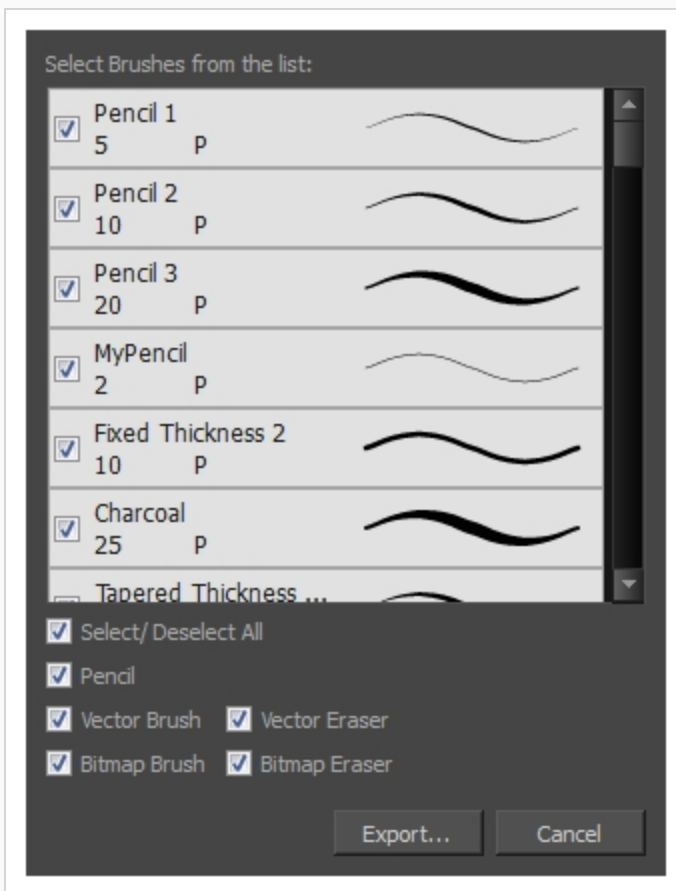
6. Click **Save**.

Importing Eraser Presets

You can import eraser presets that you previously exported from Harmony.

How to import pencils, brushes and erasers

1. In the Tools toolbar, select either the Brush ✐ , Pencil ✐ or Eraser ✐ tool.

2. Open the Brush Preset menu ☰ and select **Import Brushes**.

3. In the browser window that appears, navigate to and select the `.xml` file in which you exported your brush presets.

4. Click **Open.**

   The Import Brushes dialog box opens.

5. By default, the presets for any tools included in the file will be selected for import. If you only wish to import presets for specific tools, uncheck **Select/Deselect All** and select the tools for which you want to export the presets

6. Click **Import**.

The imported brush, eraser and pencil styles will appear in the Presets list.

Changing the Brush Preset Display

You can display your preset list as thumbnails or a list.

How to change the Brush Presets display

1. In the Tool Properties view, click on the Brush Presets menu button .

2. Select one of the following options:

   - **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.

About the Select Tool

The Select tool allows you to select drawing strokes and drawing objects. When selected, you can use the Select tool to scale, translate, rotate, resize, flip and delete them.

> **NOTE**
>
> To learn more about the Select tool options, see the Reference guide .

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Selecting

Using the Select tool, you can select drawing strokes and groups.

> **NOTE**
>
> To learn more about the Select tool options, see the Reference guide .

How to select objects

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select the Select ⬉ tool or press Alt + S.

3. In the Camera or Drawing view, select strokes or drawing object you want to edit by doing one of the following:

   - Click on a stroke or drawing object to select it.

   - Shift + Click on a stroke or drawing object to add it to a multiple selection.

   - Draw a lasso around drawing strokes or objects to select them simultaneously.

   - From the top menu, select **Edit > Select All** or press Ctrl + A (Windows/Linux) or ⌘ + A (macOS) to select all the strokes and drawing objects in the drawing.

4. Do one of the following to edit your selection:

   - To reposition, click the selected drawing object and drag the selection to a new area.
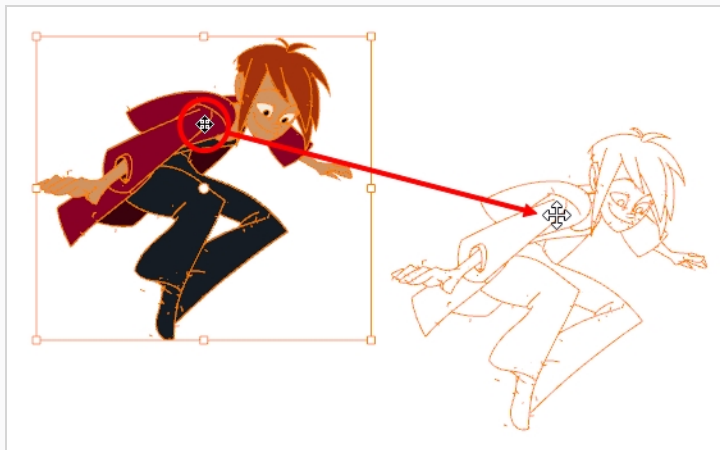
> 📝 **NOTE**
>
> You can also nudge your selection using the arrow keys, and fast-nudge your selection by holding Shift and pressing the arrow keys.

- To rotate, grab the selection box handle and rotate it.
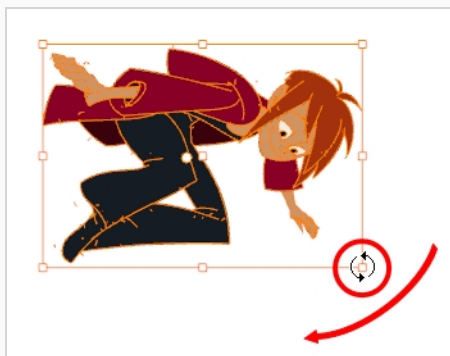
- To scale, pull or push on the top, side, bottom or corner control point. Hold down Shift to lock the selection's ratio.
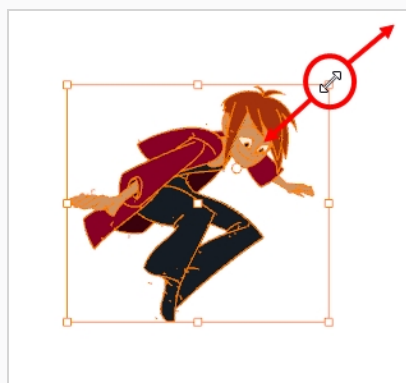
- To skew, drag sideways or up and down the sides or top and bottom segments, between the control points.
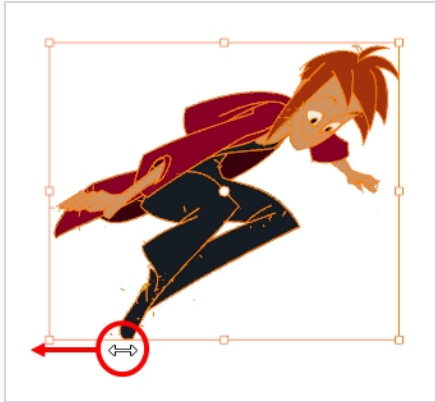
- To delete, press Del (Windows/Linux) or Backspace (macOS).

Inverting a Selection

You can invert your selection to select everything else in your drawing that was not previously selected.

How to invert a selection

1. From the top menu, select **Edit > Invert Selection** or press Ctrl + Shift + I (Windows/Linux) or Shift + ⌘ + I (macOS).

Repositioning the Selection Pivot

You can temporarily reposition the selection's pivot position to rotate, scale, or skew from a different point.

How to temporarily reposition the pivot point

1. In the Drawing view, select the drawing object you want to transform.

    The pivot point appears in the middle of your selection.

2. Click the pivot point and drag it to a new position.

    This becomes the new position of the pivot point for the current transformation and will remain there until you make a new selection.
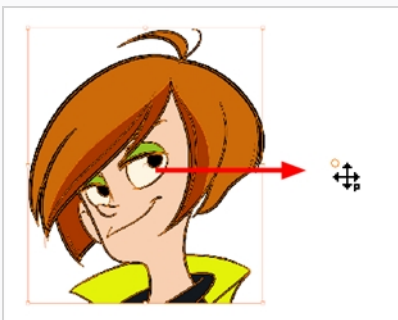
Arranging and Reordering Drawing Strokes

The different Arrange options let you reorder drawing objects and strokes inside a single layer in the Drawing view.

How to arrange drawing strokes

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

2. In the Camera or Drawing view, select the strokes to be reordered.

3. Do one of the following:

   - From the top menu, select **Selected > Arrange > Bring to Front**—Moves the selected art to the front (on top). Press Ctrl + Shift + PgUp (Windows/Linux) or ⌘ + Shift + PgUp (macOS).

   - From the top menu, select **Selected > Arrange > Bring Forward**—Moves the selected art one level forward (closer to the front). Press Ctrl + PgUp (Windows/Linux) or ⌘ + PgUp (macOS).

   - From the top menu, select **Selected > Arrange > Send Backward**—Moves the selected art one level lower (behind). Press Ctrl + PgDown (Windows/Linux) or ⌘ + PgDown (macOS).

   - From the top menu, select **Selected > Arrange > Send to Back—**Moves the selected art behind everything (bottom / back). Press Ctrl + Shift + PgDown (Windows/Linux) or ⌘ + Shift + PgDown (macOS).

   - Bring to Front ⊨ button

   - Bring Forward ⊨ button

   - Send Backward ⊨ button

   - Send to Back ⊨ button

Grouping Drawing Strokes

Use the grouping options to group and ungroup selected drawing objects and strokes. This can help in the selection, repositioning, re-scaling and other transformations to be applied to multiple objects of a drawing. Grouping does not flatten your objects. You can ungroup your selection at any time. You can also group groups.

How to group strokes

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

2. In the Camera or Drawing view, select the strokes to be grouped.

3. Do one of the following:

    - From the top menu, select **Selected> Group > Group**.

    - Press Ctrl + G (Windows/Linux) or ⌘ + G (macOS).

How to ungroup strokes

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

2. In the Camera or Drawing view, select the groups to be ungrouped.

3. Do one of the following:

    - From the top menu, select **Selected > Group > Ungroup**.

    - Press Ctrl + Shift + G (Windows/Linux) or ⌘ + Shift + G (macOS).

About the Repositioning All Drawings Tool

T-ANIMPA-010-008

The Reposition All Drawings tool is used to reposition, scale, rotate or skew all drawing strokes on every drawing included in a layer.
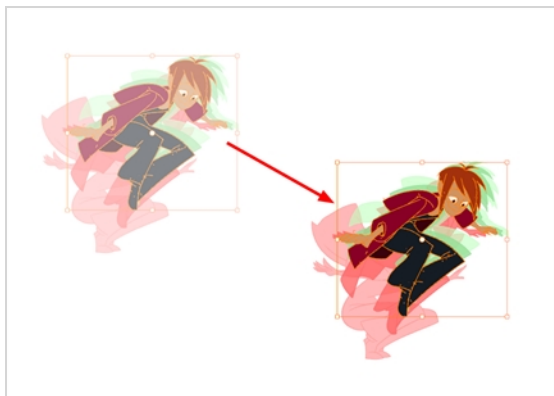
If your hand-drawn animation requires to be repositionned in the grid, as soon as your select the Reposition All Drawings tool, all the strokes in all the drawings exposed on the current layer are selected. You can use the controls the same was as the Select tool—see *About the Select Tool* on page 189.

> 📝 **NOTE**
>
> To learn more about the Reposition All Drawings tool options, see the Reference guide .

Repositioning All Drawings in a Layer

T-ANIMPA-010-009

Use the Reposition All Drawings tool to reposition all the drawing strokes on all drawings exposed in the current layer.

> **NOTE**
>
> To learn more about the Reposition All Drawings tool options, see the Reference guide .

How to reposition all drawings

1. From the Tools toolbar, select the Reposition All Drawings ⬚ tool. This also automatically selects every stroke in your drawing in the Drawing and Camera view.

2. Do any of the following:

   - To reposition, click and drag your selection to a new area.
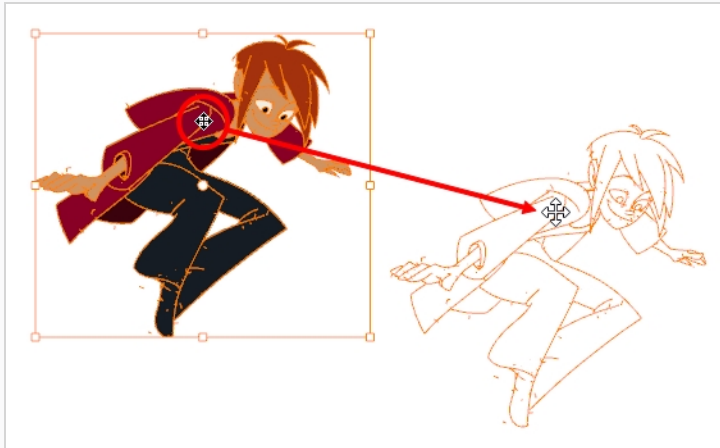
   - To rotate, rotate the selection box handle.
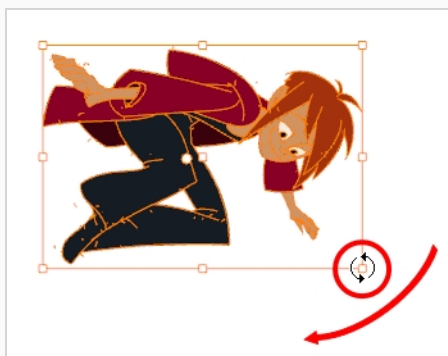
- To scale, pull or push on the top, side, bottom or corner control points. Hold down Shift to maintain the selection's ratio.
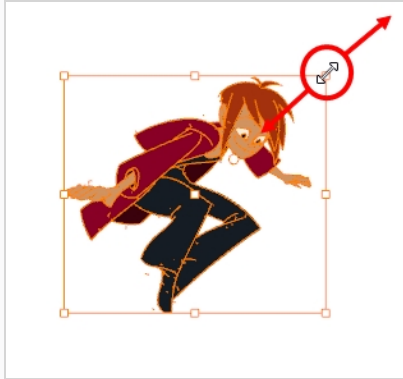
- To skew, drag the sides or top and bottom segments, between the control points.
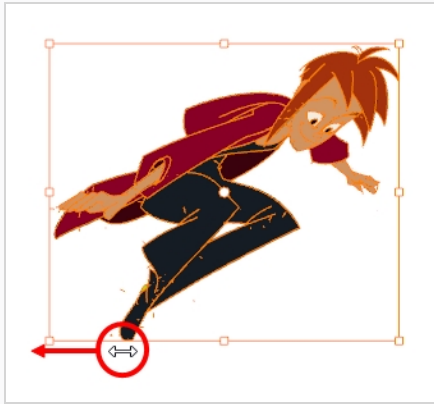
3. When you release your cursor, every drawing in the drawing layer you repositioned, scaled, rotated or skewed will follow the same transformation.

4. You can also adjust the position by modifying the settings and using the operation buttons in the Tool Properties view.

About the Cutter Tool

The Cutter tool lets you cut a drawing to move, copy, or delete it. You can use it to scale or reposition the portion of a flattened or bitmap drawing. You can also use it to trim strokes using a single gesture.

> **NOTE**
>
> To learn more about the Cutter tool options, see the Reference guide .

Authors

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Cutting Artwork

Use the Cutter tool to trim and cut your artwork.

> **NOTE**
>
> To learn more about the Cutter tool options, see the Reference guide .

How to cut drawings

1. In the Tools toolbar, select the Cutter ✎ tool or press Alt + T.

2. In the Drawing view, select an area to cut away.

   - To delete the selected area, press Del.

   - To move the selection, drag it to a new area.

   - Use the bounding box controls to scale, skew, or rotate the cut piece.
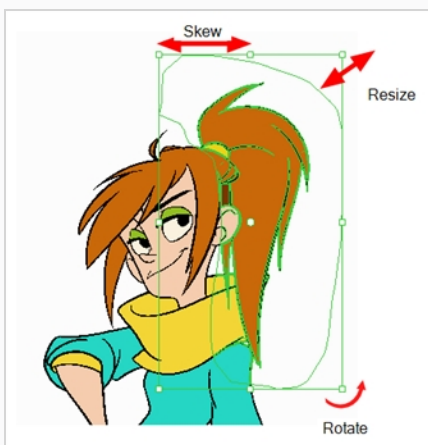
About the Contour Editor Tool

T-HFND-004-008

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

Artwork in Harmony is made of vector shapes. Vector shapes are defined by points, the lines joining the points together (contours) and the curve vectors, represented by Bezier handles, which make the curve of said lines.
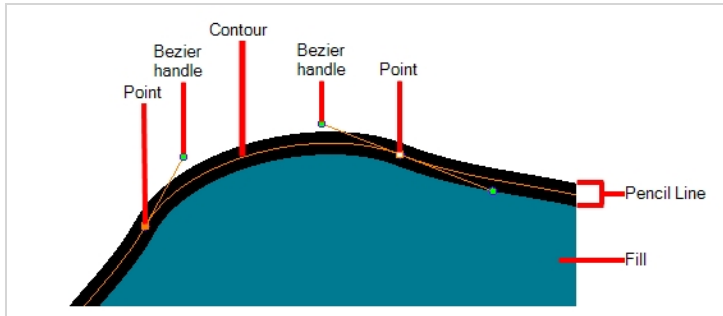
The Contour Editor tool allows you to select a contour or point, and change the position of points, add and remove points from the shape, rotate, lengthen and shorten curve handles to influence the curve of contours between those points, or drag contours between points to change their curve directly.

Since pencil lines are defined by a single line with a line width, you can use the Contour Editor to easily modify the shape of pencil lines. In contrast, brush strokes are full vector shapes, so the Contour Editor can be used to modify their shape.
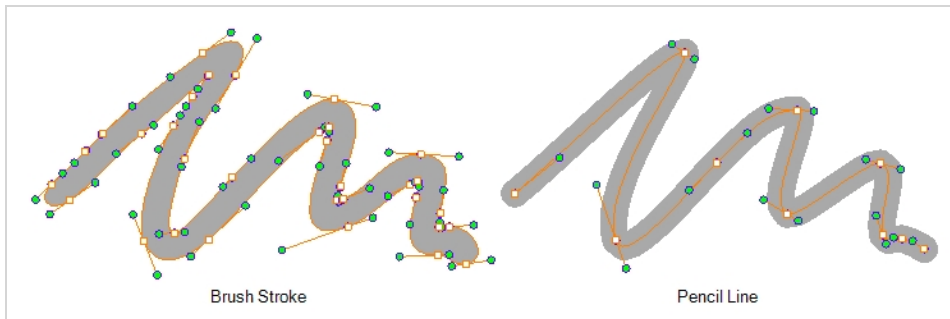
The Contour Editor can be used to tweak vector artwork in all sorts of ways. It can be used to perfect a pencil line, correct shapes, or create complex shapes out of a basic ellipse or rectangle.

> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

Reshaping a Shape, Pencil Line or Stroke with the Contour Editor Tool

T-HFND-004-008A

You can use the Contour Editor tool to tweak the contours of vector shapes and brush strokes in your drawings, as well as reshape pencil lines and strokes.

> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

How to reshape drawings

1. In the Tools toolbar, select the Contour Editor ⬚ tool or press Alt + Q.

2. In the Drawing view, click the shape, contour or pencil line you want to edit near the area you wish to change.

   The shape or line's control points appear.
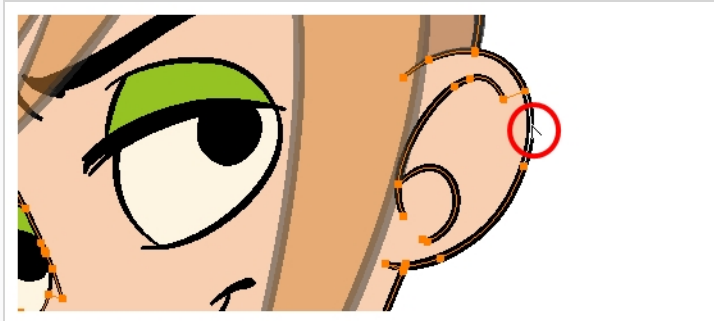
3. Click on one of the points to select it.

   The point's Bezier handles appears, as well as Bezier handles for the surrounding points.
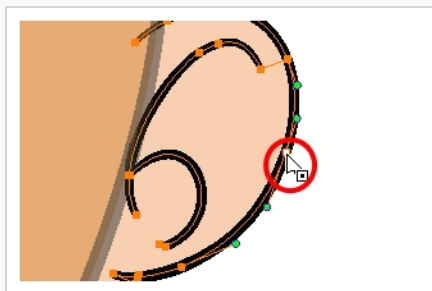
> 💡 **TIP**
>
> You can select several points by drawing a lasso around the points, or by holding Shift while clicking on points to add them to your selection. You can use the Contour Editor to scale and rotate a selection of multiple points by enabling the Show Contour Editor Control ⬚ option in the Tool Properties view.

4. Do one of the following:

- To move a point or a selection of multiple points, click and drag it.

- To change the curve on both sides of a point, drag one of its Bezier handles.

- To change the curve on only one side of a point, press and hold the Alt key, then drag one of its Bezier handles.

- To deform the contour, drag a part of the contour between two points.

- To deform the curve between two points, hold the Shift key and drag the contour between two points.

- To remove a point's Bezier handles and make the lines it is connected to straight, press and hold the Alt key and click on the point.

- Straight lines have no Bezier handles at their points by default. To create Bezier handles for these points and make their lines curved, pres and hold the Alt key, then click and hold the point and drag the mouse cursor away from it. A new Bezier handle will follow your mouse cursor until you release the mouse button.

- To add a control point, press Ctrl (Windows/Linux) or ⌘ (macOS) and click on the contour where you want the new point to be created.

- To remove a control point, select the control point and press Del (Windows/Linux) or Backspace (macOS).
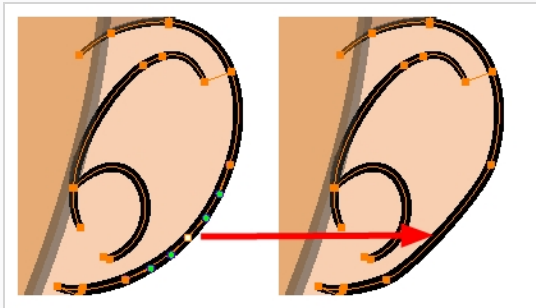
About the Centerline Editor

T-HFND-004-009B

The Centerline Editor allows you to tweak and reshape brush strokes by manipulating their center line rather than their contour. This gives you a flexibility that is similar to the one you have when using the Contour Editor tool to manipulate pencil lines.

In Harmony, pencil lines are vector information calculated by their center line and the width of the line. This makes it easy to edit pencil lines with the Contour Editor. Brush strokes, however, are stored as shapes. Therefore, using the Contour Editor on a brush stroke does not allow you to edit the center line of the stroke, but rather, its contour.

The Centerline Editor tool creates a center line for a brush stroke, and gives you access to control points and Bezier handles for this center line, allowing you to deform the brush stroke the same way you can deform a pencil line using the Contour Editor.

.

Centerline Editor on brush stroke

Contour Editor on brush stroke   Contour Editor on pencil line
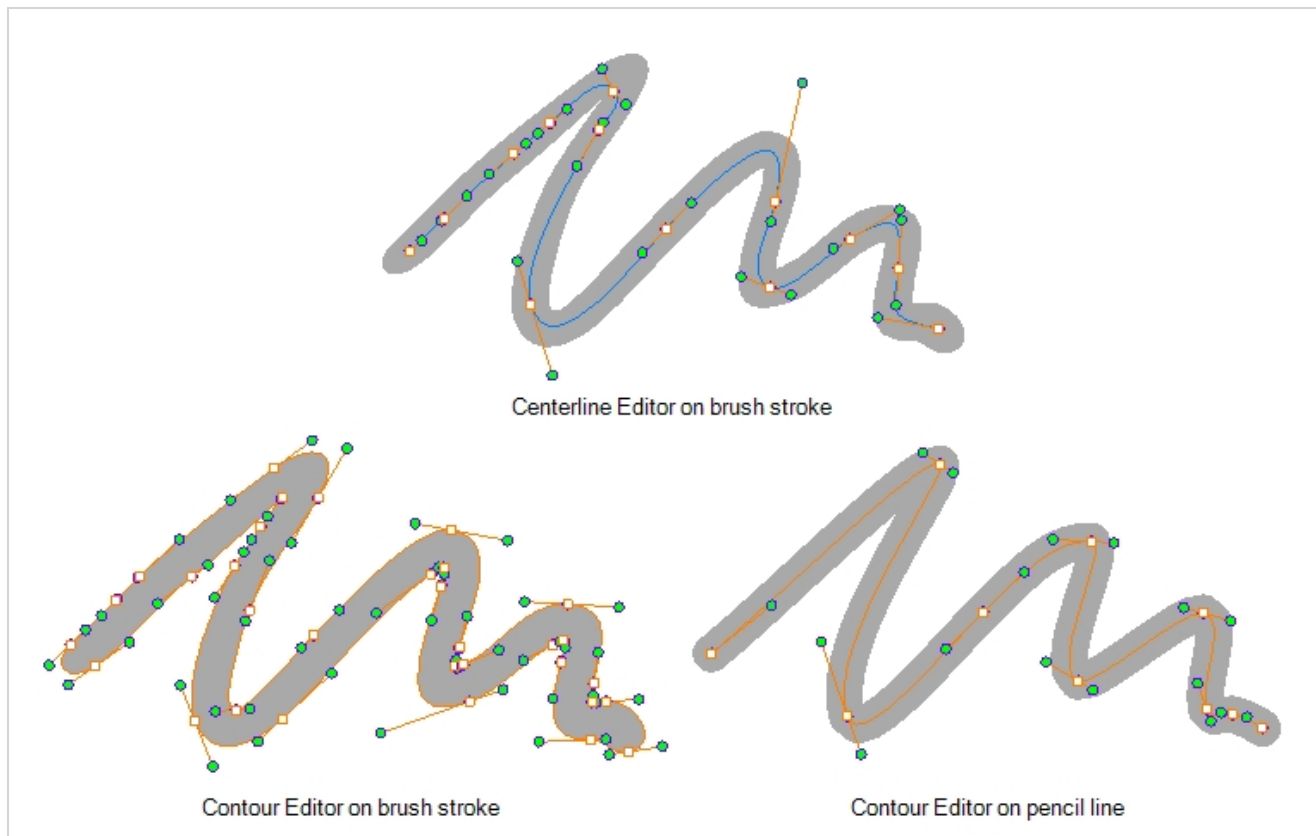
Keep in mind that brush strokes are vector shapes with a fill. As such, the Centerline Editor must do guess work to figure out the center line of your brush strokes, and apply deformations on its shape as you tweak its control points. The Centerline Editor will not be able to make a clear center line out of brush strokes that merge together, that look scrambled or that do not have a clear direction.
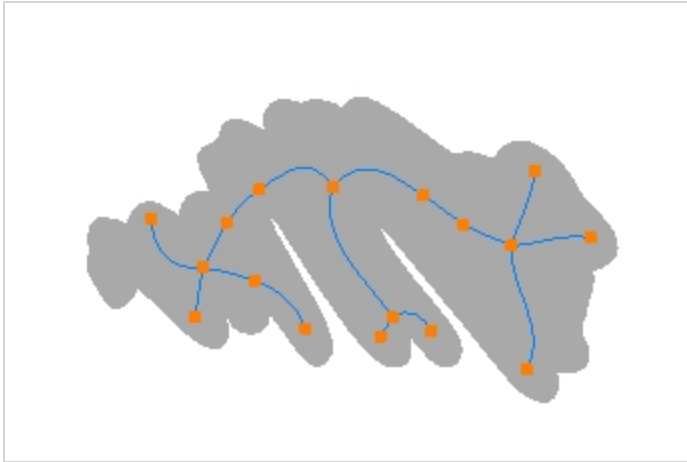
> **NOTE**
>
> The Centerline Editor is also able to tweak textured brush strokes with their texture. Note that this will resample its texture, which may make it lose quality.

> **NOTE**
>
> If you use the Centerline Editor to deform a closed brush stroke with a fill inside it, the fill will not be reshaped to fit the new shape of the brush stroke.

Reshaping Brush Strokes Using the Centerline Editor

You can use the Centerline Editor tool to reshape brush strokes from their center line rather than their contour, like you would reshape pencil lines using the Contour Editor.

> **NOTE**
>
> The Centerline Editor is also able to tweak textured brush strokes with their texture. Note that this will resample its texture, which may make it lose quality.

> **NOTE**
>
> If you use the Centerline Editor to deform a closed brush stroke with a fill inside it, the fill will not be reshaped to fit the new shape of the brush stroke.

How to reshape brush strokes

1. In the Tools toolbar, double-click on the Contour Editor ⮰ button and select the Centerline Editor ⚡ tool, or press Alt + W.

2. In the Drawing view, click the contour or pencil line you want to edit near the area you wish to change.

   The Centerline Editor creates a center line manipulator based on the outline's shape, with control points.

3. Click on one of the points to select it.

   The point's Bezier handles appears, as well as Bezier handles for the surrounding points.
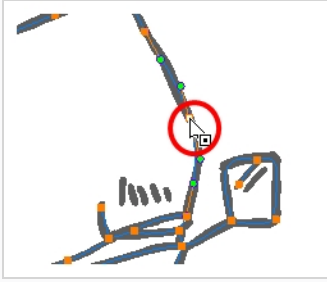
> 💡 **TIP**
>
> You can select several points by drawing a lasso around the points, or by holding Shift while clicking on points to add them to your selection. You can use the Contour Editor to scale and rotate a selection of multiple points by enabling the Show Centerline Editor Control ⬚ option in the Tool Properties view.

4. Do one of the following:

- To move a point or a selection of multiple points, click and drag it.

- To change the curve on both sides of a point, drag one of its Bezier handles.

- To change the curve on only one side of a point, press and hold the Alt key, then drag one of its Bezier handles.

- To deform the contour, drag a part of the contour between two points.

- To deform the curve between two points, hold the Shift key and drag the contour between two points.

- To remove a point's Bezier handles and make the lines it is connected to straight, press and hold the Alt key and click on the point.

- Straight lines have no Bezier handles at their points by default. To create Bezier handles for these points and make their lines curved, press and hold the Alt key, then click and hold the point and drag the mouse cursor away from it. A new Bezier handle will follow your mouse cursor until you release the mouse button.
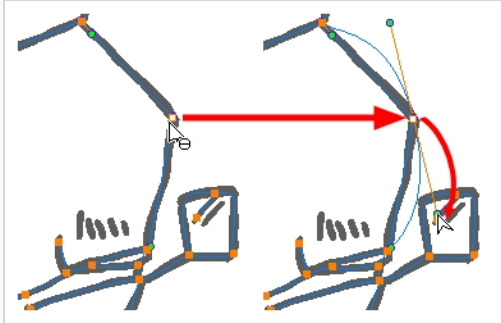
- To add a control point, press Ctrl (Windows/Linux) or ⌘ (macOS) and click on the contour where you want the new point to be created.
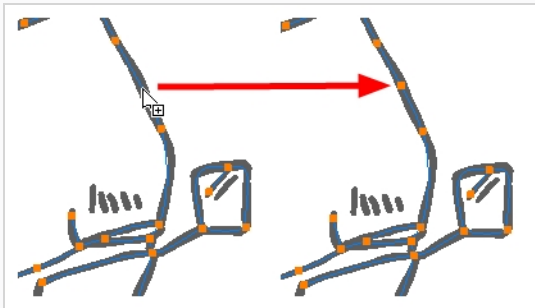
About the Pencil Editor Tool

T-HFND-004-009

A pencil line is a central vector shape. Control points are located along the central spine allowing you to adjust the stroke curve and position. Using the Pencil Editor tool, you can adjust the thick and thin areas of pencil lines. Using the Contour Editor tool, you can reposition the spine of the stroke.

> **NOTE**
>
> To learn more about the Pencil Editor tool options, see the Reference guide .

Tweaking the Thickness of Pencil Lines with the Pencil Editor Tool

T-HFND-004-009A

You can use the Pencil Editor tool to reshape the pencil line thickness.

> **NOTE**
>
> To learn more about the Pencil Editor tool options, see the Reference guide .

How to reshape pencil lines

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

2. In the Drawing view, select a pencil line and click to reshape it.

Pencil Editor
Contour control points

Contour Editor
Central spine control points
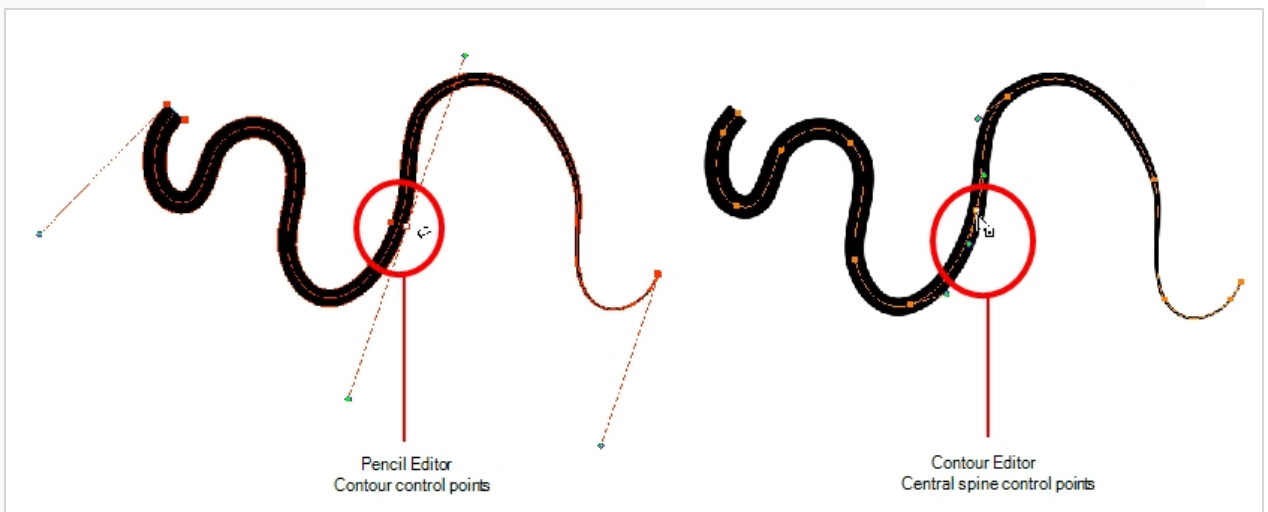
3. Select one or several points by clicking them or circling around.
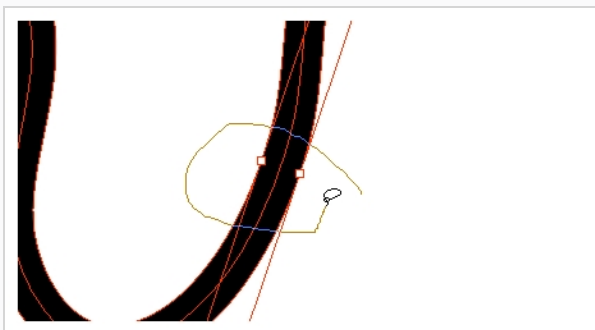
4. Press Del to delete a selected point.

5. Press Ctrl (Windows/Linux) or ⌘ (macOS) and click the central spine to add a set of points to adjust the contour.

6. To modify the shape, you can:

- Move the selected points to a new area. If you select matching points on each side of the line, holding the Shift key will move them both. This way you can thicken or thin a line from both sides at the same time.
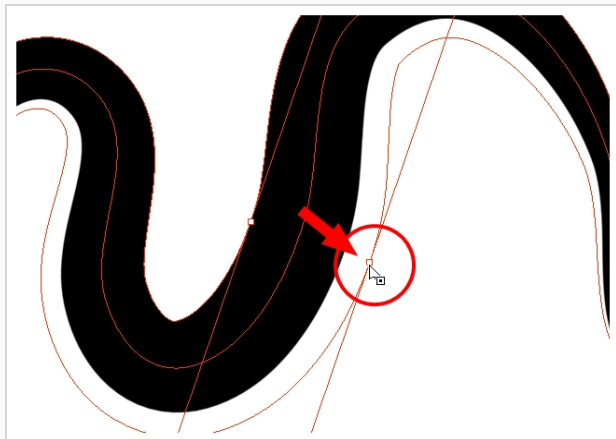
- Pull on the Bezier handle to move both points' handles as one.
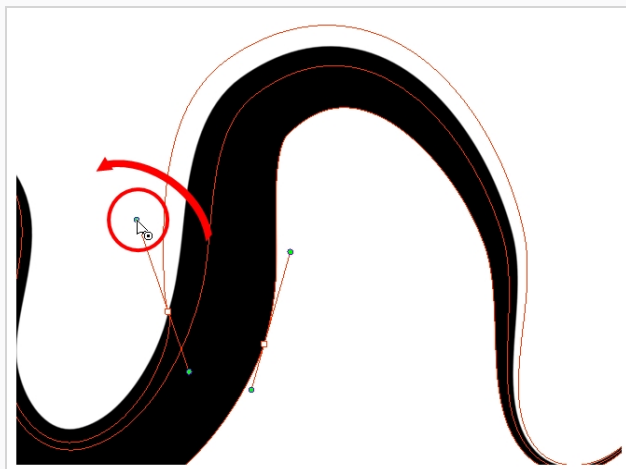
- Hold down Alt and pull on one of the Bezier handles. It moves the handle independently from the other one.

215
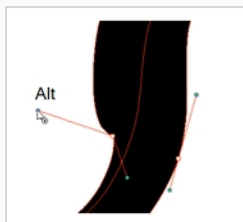
- Pull directly on the line between two points. No selection is necessary. Holding down the Shift key will limit the contour modification to the curve between the two first points.
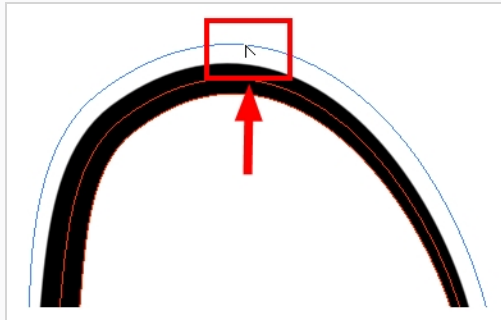
- If an anchor point has no visible Bezier handle, hold down Alt to display them.

Editing a Pencil Line Texture with the Pencil Editor Tool

When working with textured pencil lines, the Pencil Editor will deform the textures starting from the centre lines.

How to use Pencil Editor tool to edit the texture or gradient on a pencil line

1. Do one of the following:

    - In the Tools toolbar, select the Pencil Editor ✎ tool.

2. Click on the pencil line to be modified to bring up its contour envelope.
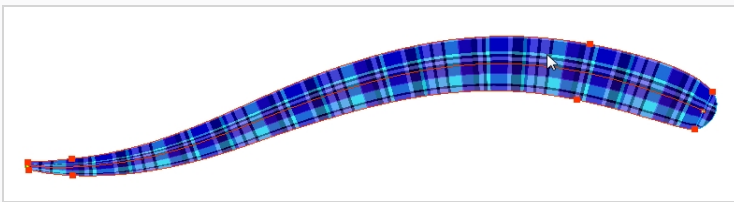
3. Select one of the contour points around the envelope and move its position to change the size of the tiled texture or gradient. You can also pull directly on the lines of the contour envelope or play with the Bezier handles of any given point in order to continue to modify the envelope form.
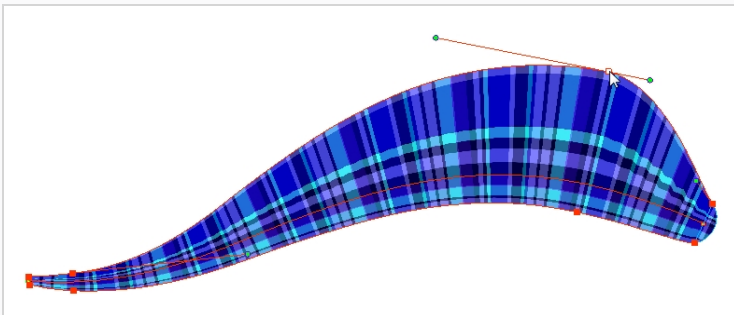
   Expanding the width of the envelope parallel to the pencil line's central vector will cause the tiled texture to be stretched. Conversely, reducing the envelope's width will cause the tiled texture to look squashed.

   Reducing the contour's width perpendicular to the pencil line's central vector will reduce the number of tiles, while expanding it will increase the number of tiled images.
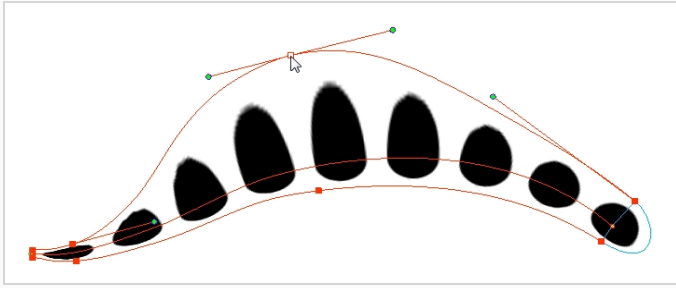
About the Smooth Editor Tool

T-ANIMPA-010-010

When drawing in a digital application, it is not like drawing on a sheet of paper. Sometimes the lines you draw may look as if they were drawn with an unsteady hand. When this occurs, you may need to correct the look of your lines.
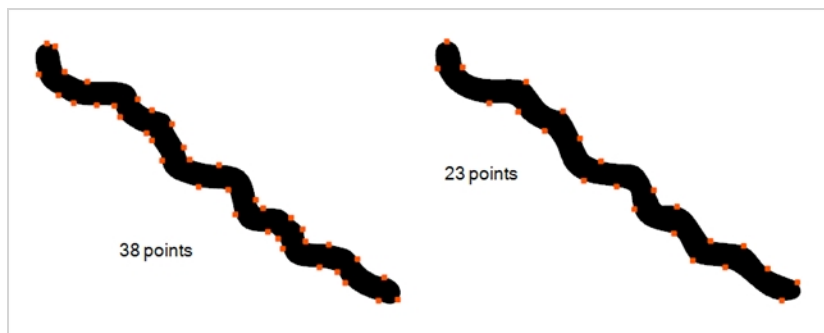
Harmony has a very powerful tool you can use to optimize contours and reduce the number of points on the lines, the Smooth Editor tool.

> **NOTE**
>
> To learn more about the Smooth Editor tool options, see the Reference guide .

Smoothing Artwork Using the Smooth Editor

You can use the Smooth Editor to smooth out specific areas of your drawing strokes.

How to optimize lines with the Smooth Editor tool

1. In the Tools toolbar, select the Smooth Editor ✎ tool or select **Tools > Smooth Editor**.

2. In the Drawing view, place your pointer over the lines to smooth. You may need to pass over the same line several times to remove more points and make the line smoother. Note that by default, the Smooth Editor tool colour is yellow, it was changed to orange for screen grab clarity—see the Reference guide to learn about the various settings available.
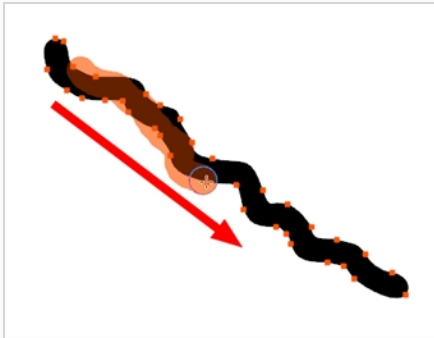
About the Perspective Tool

The Perspective tool lets you deform a drawing selection and alter its perspective. You can use the corner and edge anchor points to warp the shape.
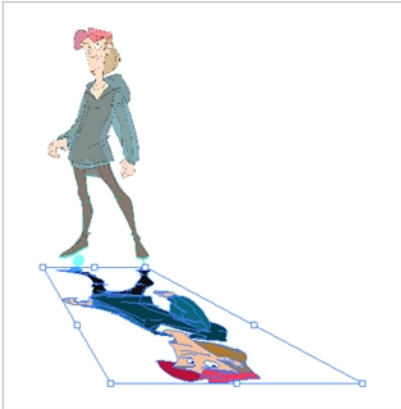
> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

> **NOTE**
>
> To learn more about the Perspective tool options, see the Reference guide .

Deforming a Drawing with the Perspective Tool

Use the Perspective tool to distort a drawing's bounding box and simulate a perspective effect.

> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

> **NOTE**
>
> To learn more about the Perspective tool options, see the Reference guide .

How to deform a drawing with the Perspective tool

1. In the Tools toolbar, select the Perspective △ tool from the Contour Editor drop-down menu or press Alt + 0.

2. In the Drawing view, select a drawing to deform.

3. Click and drag the different anchor points to deform the shape.

About the Envelope Tool

The Envelope tool lets you deform and warp part of a drawing using a grid envelope and Bezier handles. You can warp images to make them look like they are reflected in water or in a deformable mirror.

> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

> **NOTE**
>
> To learn more about the Envelope tool options, see the Reference guide .

Warping a Drawing with the Envelope Tool

You can warp your drawings using the Envelope tool.

> **NOTE**
>
> If you use the Contour Editor, Perspective or Envelope tool on a textured brush stroke, it will deform its texture to fit the new shape of the brush stroke. Note that this will resample the texture, which is liable to make it lose quality.

> **NOTE**
>
> To learn more about the Envelope tool options, see the Reference guide .

How to warp a drawing with the Envelope tool

1. In the Tools toolbar, select the Envelope ⊞ tool from the Contour Editor drop-down menu.

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Drawing view, select the region you want to deform
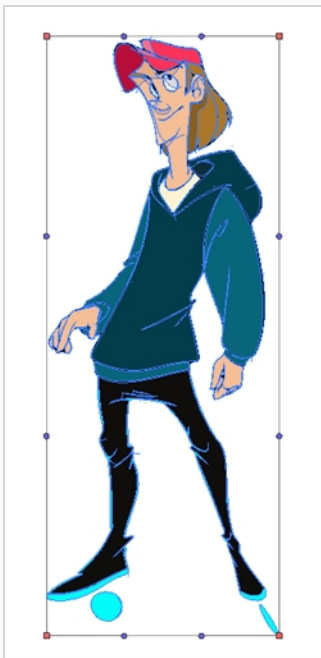
3. Click and drag the different anchor points and handles to deform the image.
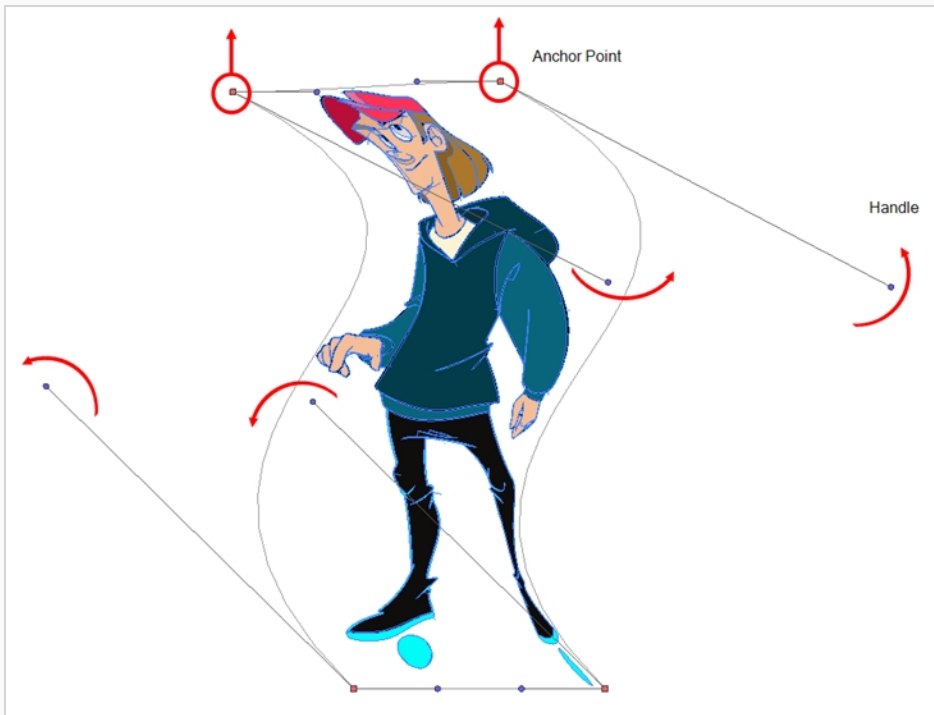
4. To display more controls, in the Tool Properties view, click the Show Advanced Controls ⠿ button.
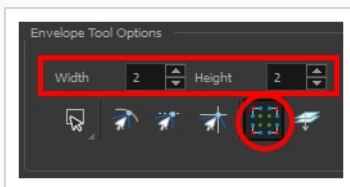
5. Increase the height and width of the grid to get more control points to deform your image.
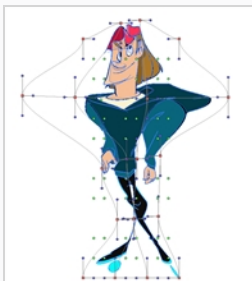
About the Text Tool

With the Text tool, you can add text in your project using various fonts and texts attributes.

Text objects are drawing objects in the same was as brush strokes and drawing groups are, so they can be manipulated with the select tool. After you have written and formatted your text, you can break the string apart to convert the letters into drawing objects that can than be individually modified with tools such as Select, Perspective, Contour Editor, Smooth Editor.

> **NOTE**
>
> To learn more about the Text tool options, see the Reference guide .

Adding Text to Drawings

You can use the Text tool to add text to your drawings.

> **NOTE**
>
> To learn more about the Text tool options, see the Reference guide .

How to add text to drawings

1. Do one of the following:

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

    - From the top menu, select **Tools > Text**.

    - Press Alt + 9.

2. In the Timeline view, select the cell containing the drawing on which you want to add text.

3. In the Drawing view, click on the location you want the text to begin.

4. You can use the Tool Properties view to select the font, font size and format of the text you will type—see the Reference guide .

5. Type in the desired text.

6. Click outside the text box to exit the typing mode.

    If you want to create another text object, click outside the currently active text box. You can always return to edit the text by selecting the Text ⊤ tool and clicking in the text.

7. You can resize the text box by selecting your text box with the Text ⊤ tool and moving the anchor point right or left. Using the Select tool will distort and scale your text itself rather than changing the width and height of your text box.

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.
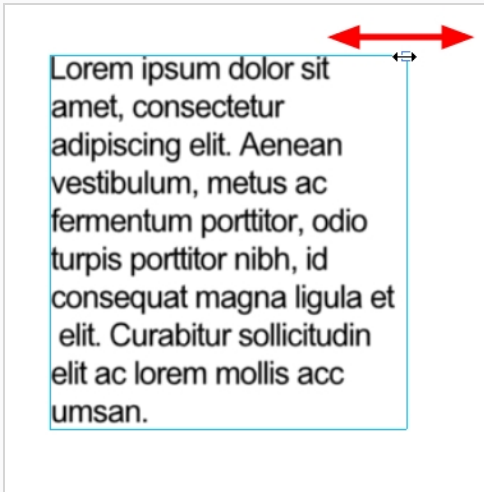
Breaking Text Into Letters or Vector Shapes

Text contained in a text field is treated as a single drawing object. You can easily separate the text so each character becomes an individual drawing object that you can select and modify independently.

How to break a text object

1. In the Tools toolbar, click the Select ➚ tool or press Alt + S.

2. In the Drawing view, select the text object you want to break.

3. From the top menu, select **Drawing > Convert > Break ApartText Layers**.

   Each character is surrounded by a bounding box that you can modify; they remain text objects that you can edit.

4. If you want to convert your independent letter to a complete vector object that you can deform, use the Select tool to select the letters to convert.

5. From the top menu, select **Selected > Convert > Break Apart Text Layers** to break the selection into a regular drawing object, with no more text attributes.

About the Tool Colour Swatches

T-ANIMPA-010-018

While drawing and painting, you can let Harmony retain the last colour you selected for each one of the following tool types:

- Brush

- Paint

- Pencil, Ellipse, Line, Rectangle, Polyline

The Colour view has three swatches where you can set a colour for the Brush , Paint, and Pencil tools.
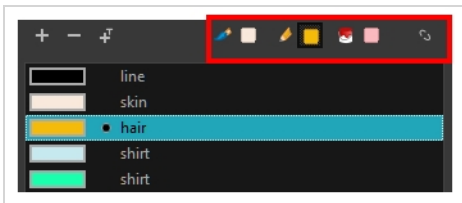
You can also link or unlink the colour swatch used between vector and bitmap layers.

Unlinking the Tool Colour Swatches

T-ANIMPA-010-019

You can unlink the tool colour swatches and use separated colours for the Brush, Paint, and pencil line tools.

If you prefer to have Harmony use the same colour swatches regardless of the selected tool, you can link the three swatches together.

How to unlink the tool colour swatches

1. In the Colour view, if the storage swatches are linked, click the Link ✎ button to unlink them.
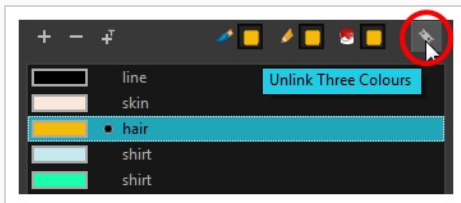
2. Click on the Brush 🖌 storage swatch.
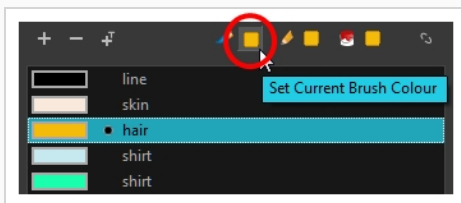
3. In the Colour list, select the desired colour.

4. Click the Pencil ✏ storage swatch.
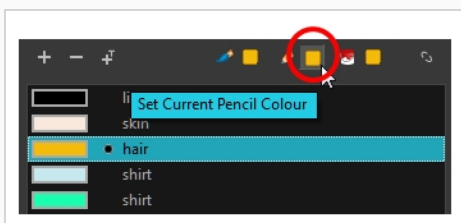
5. In the Colour list, select a colour.

6. Click the Paint 🪣 storage swatch.
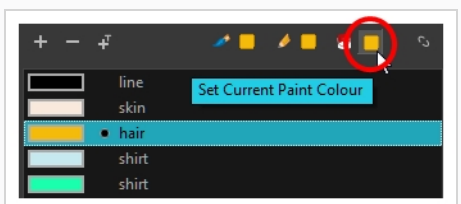
7. In the Colour list, select a colour.
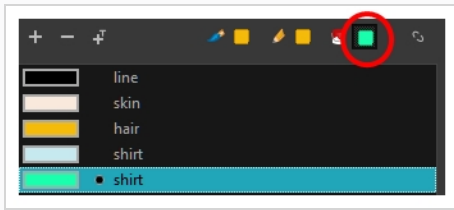
Linking the Tool Colour Swatches

You can link the tool colour swatches so all the tools use the same colour swatch.

How to link the storage swatches

1. In the Tools toolbar, select one of the following tools:
    - 🖌 Brush
    - 🪣 Paint
    - ✏ Pencil
    - ⌇ Polyline
    - ╱ Line
    - ◯ Ellipse
    - ☐ Rectangle

2. In the Colour view, if the storage swatches are unlinked, click the Link ✎ button to link them.
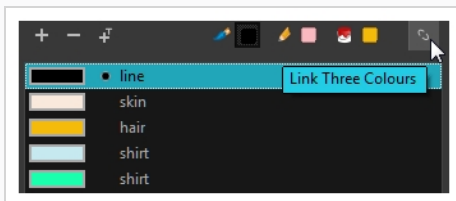
Each time you select a new colour for your current tool, all the storage swatches are updated.

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Using Independent Bitmap Colour Swatches

When working in the Colour view, by default the current colour is active for both vector and bitmap layers. You can however, use different reference colours for each layer.

Although you can use colours from your colour palette to paint on a bitmap layer, colours used in a bitmap drawing layer are not linked to their colour swatch in the palette. This means that, contrary to vector drawing, updating the colours in your colour palette will not update your bitmap drawings with the new colours.

How to use independent colours

- From the Colour view menu, select **Colours > Independent Bitmap Colour**.

  Whichever colour you choose as the reference color is retained for that layer type.

About Drawing Space Management

When you are drawing in the Camera or Drawing view, you can zoom, pan and rotate the view to make it easier to determine where to place objects, determine the scale of objects, and when zooming out, get an overall view of the panel and its contents. You can also use the grid to help you determine the size and placement of objects as you draw.

If you like drawing in the Camera view, but don't want overlays to cover the drawing you're working on, you can enable the Current Drawing on Top option.

About the Zoom Tool

The Zoom tool in the Tools toolbar lets you zoom in and zoom out of the Drawing view.

> **NOTE**
>
> To learn more about the Zoom tool options, see the Reference guide .

How to use the Zoom tool

1. In the Tools toolbar, select the Zoom 🔍 tool available in the Hand tool drop-down menu.

2. Click in the Drawing view.

3. In the Tools Properties view, do the following:

   - Enable the Zoom In 🔍 mode to zoom in mode when you click in the Drawing view. When you're in Zoom In mode, hold as you click to zoom out.

   - Enable the Zoom Out 🔍 mode to zoom out when you click in the Drawing view.

   - Click on the Zoom In 🔍 button to immediately zoom in. You can also press 2.

   - Click on the Zoom Out 🔍 button to immediately zoom out. You can also press 1.

About the Hand Tool

You can use the Hand tool to pan through the Drawing view. When you are zoomed in your workspace, you may need to pan to a different area of your image. You can do so with the Hand tool or the Spacebar keyboard shortcut.

The Hand tool has no options in the Tool Properties view.

How to use the Hand tool

1. Do one of the following:

   - In the Tools toolbar, select the Hand ⬚ tool, click in the Drawing view and drag.

   - You can also Hold down the Spacebar, click in the Drawing view and move your mouse in the direction you want to pan the view.

About the Rotate View Tool

T-LAY-001-005

The Rotate View tool lets you rotate the Drawing view, the same way as you would do with a real animation disc for increased flexibility. This tool can also be used in the Perspective view.

When using the Rotate View tool, you are only rotating your workspace. You can not changing the actual rotation angle of your drawings. Exporting your project will completely ignore the Rotate View angle.

The Rotate View tool has no options in the Tool Properties view.

Rotating the Workspace

T-LAY-001-006

You can use the Rotate View tool to rotate your drawing workspace.

How to use the Rotate View tool

1. Do one of the following:

   - From the top menu, select **Tools > Rotate View**.

   - In the Tools toolbar, select the Rotate View tool in the Hand tool menu.

   - In the Drawing view, right-click and select **Drawing Tools > Rotate View**.

   - Hold down Ctrl + Alt (Windows/Linux) or ⌘ + Alt (macOS).

   The rotary table appears.

2. In the Drawing view, click and drag to rotate the space.

3. Release the keyboard shortcut or switch to a new drawing tool.

4. Reset the view rotation using **View > Reset Rotation** or press Shift + X to reset the rotation.

About the Grid

Harmony is equipped with a traditional animation grid. You can use it as a reference while drawing to fit a given layout field chart, align elements, or simply see the center of your drawing. You can draw beyond the grid boundaries as it is only a visual reference.
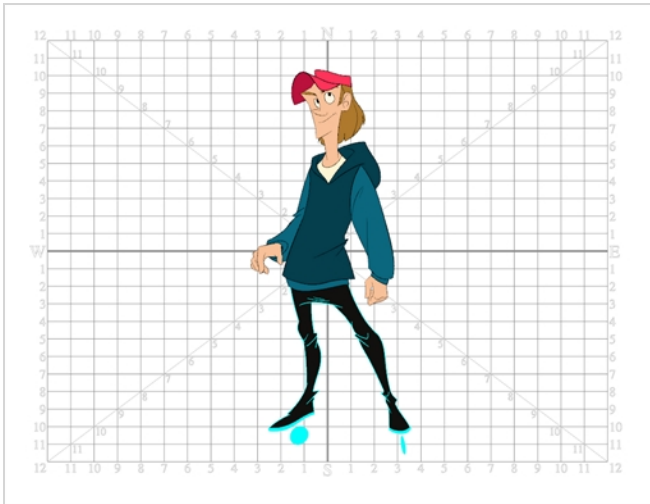
Displaying the Grid

You can display the grid and it will be visible in the Drawing view.

Use the Show Grid option to display a grid in the Drawing view.

How to display the grid

1. Do one of the following:

   - In the Drawing View toolbar, press the Show Grid ⊞ button.

   - In the Camera View toolbar, press the Show Grid ⊞ button.

   - Select **View > Grid > Show Grid**.

   - Press Ctrl + ' (Windows/Linux) or ⌘ + ' (macOS).

Modifying the Grid

You can modify the look of the grid to be either square, 12-field, 16-field, outline, and so on.

How to modify the grid display

1. Select **View > Grid > Show Grid** to display the grid.

2. To modify the grid, select one of the following:

   - **View > Grid > Grid Outline Only**—Displays the outline of the grid only.

   - **View > Grid > Square**—Displays a standard square grid.

   - **View > Grid > 12 Field Grid**—Displays a 12-field size grid.

   - **View > Grid > 16 Field Grid**—Displays a 16-field size grid.

   - **View > Grid > Underlay**—Displays the grid under the drawing elements.

   - **View > Grid > Overlay**—Displays the grid over the drawing elements.

About OpenGL Antialiasing

T-ANIMPA-010-016

Everything you draw in Harmony is vector-based, unless you purposely elected to draw as bitmap. When you draw in the Drawing view, notice that your lines may appear jagged. This is caused by the fast real-time display called *OpenGL*. If you prefer to see smooth lines as you draw, you can enable the antialiasing preference.

Full scene antialiasing is generated by your computer's graphics card. This antialiasing will not only antialias your drawings, but all your different views in the interface. Full scene antialiasing is an option you can turn on or off; by default, it is disabled.

There is no need to modify your graphic card settings.

> **NOTE**
>
> Full Scene Antialiasing parameters are only valid while you work in your scene. The scene will be rendered to 100% of its resolution regardless of your preference settings or graphic card panel.

Setting the Full Scene Antialiasing Preference

You can enable the Full Scene Antialiasing preference to smooth out the OpenGL artwork.

> **NOTE**
>
> You must restart Harmony after you change the parameters.

How to customize the full scene antialiasing parameters

1. Do one of the following:

   - Select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS).

   - Press Ctrl + U (Windows/Linux) or ⌘ + U (macOS).

   The Preferences dialog box opens.

2. In the OpenGL tab, select the **Enable** option in the Full Scene Antialiasing section.
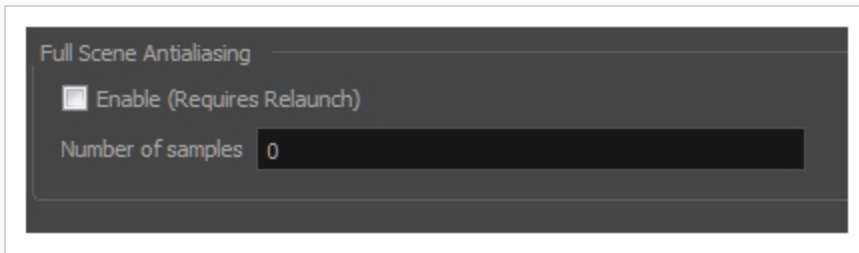
3. **Number or samples**: Enter the number of samples you want to be used for the antialiasing process. The number of samples is basically equivalent to the amount of times a pixel will be enlarged to calculate the antialiasing. This technique is called *supersampling*. The higher the number of samples, the better the antialiasing quality will be, but the longer it will take to calculate.

4. Restart Harmony.

About Drawing Optimization

As you work, you drawing can get complex and contain multiple strokes. You may want to optimize those drawings to reduce the number of brush strokes, pencil lines, and invisible strokes. You may also want to flatten your artwork or optimize your brush stroke textures.

The Optimize command 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.

For example, if you have selected a number of partially transparent objects, which you layered to create an additive colour effect, the selected transparent drawing objects will not be merged. This is because merging the transparent drawing objects will cause them to lose the effect of the layered transparent colours.
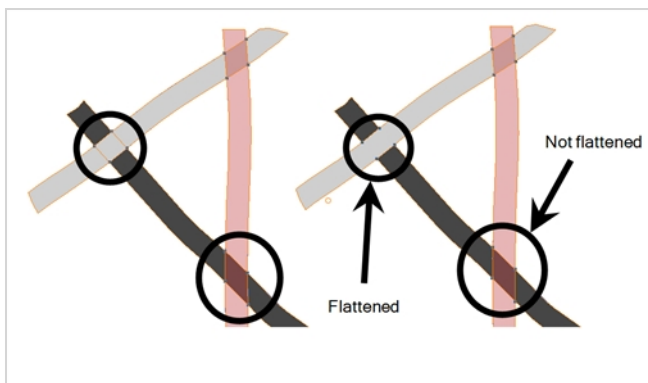
You could also want to add invisible contour strokes so that if you unpaint lines, the vector container remains to be repainted later.
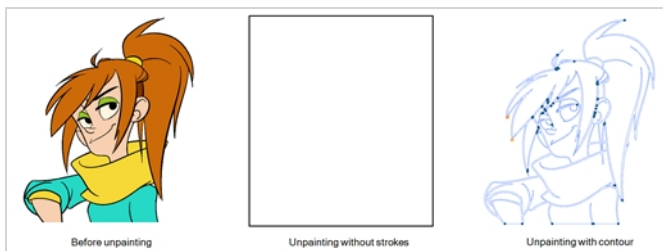
Flattening Drawings

The Flatten operation is used to merge 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.

How to flatten drawings

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

2. In the Drawing view, select the drawing strokes you want to flatten.

3. Select **Drawing > Optimize > Flatten** or press Alt + Shift + F. You can also press the Flatten ⬇ button in the Tool Properties view.
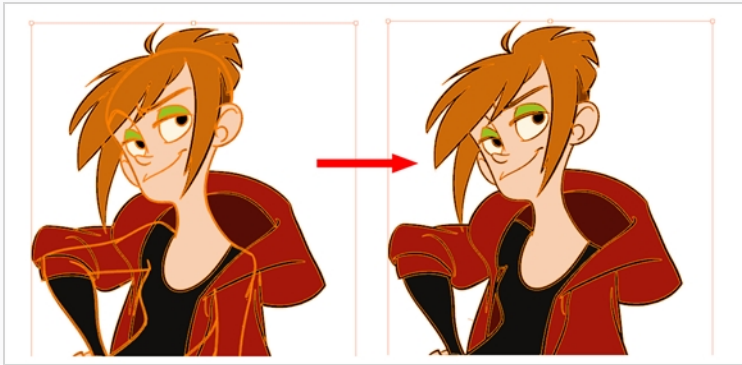
Smoothing Drawings

The Smooth operation is used to reduce the number of contour points on a brush stroke and center points on a pencil line. It also smooths out the shape.

The Smooth Fast option allows out to smooth out a drawing stroke at a faster rate than the regular smooth option.

How to smooth drawings

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

2. In the Drawing view, select the drawing strokes you want to smooth out.

3. Select **Drawing > Optimize > Smooth** or press Alt + Shift + S. You can also press the Smooth ✏ button in the Tool Properties view.
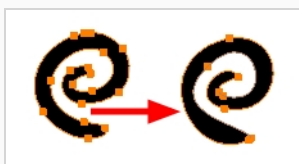
Creating Contour Strokes

The Create Contour Stroke option is used to add a permanent invisible line around a shape that was drawn directly in Harmony. This allows you to unpaint your lines with the Paint tool but maintain the shape of the lines, should you need to repaint later.
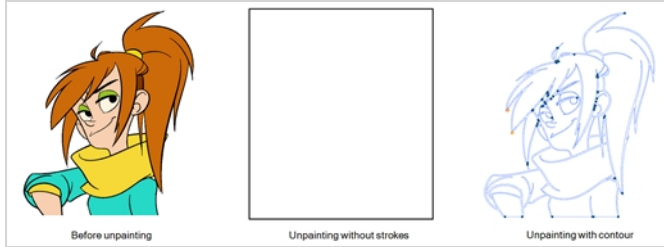
This command is useful when inking and painting and using the Apply to All Drawings in Layer option.

How to create contour strokes

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

2. In the Drawing view, use the Select tool to select the drawing objects you want to create contour strokes for.

3. From the top menu, select **Selected > Create Contour Strokes.**

Removing Contour Strokes

The Remove Contour Stroke option is used to remove any permanently invisible lines that were created while scanning and vectorizing drawings or manually adding contour strokes. This is useful if you want to remove the intersection triangles created during vectorization.

How to remove contour strokes

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

2. In the Drawing view, use the Select tool to select the drawing objects you want to remove contour strokes for.

3. From the top menu, select **Selected > Remove Contour Strokes.**

Flattening and Removing Extra Strokes

The Flatten and Remove Extra Strokes command allows you to flatten the selected artwork together and instantly remove invisible lines that are adjacent to it.

> **NOTE**
>
> This will only remove invisible lines that are adjacent to visible artwork. Invisible lines that are not connected to any visible shape or line will not be removed.

How to flatten artwork and remove extra strokes

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

2. In the Drawing view, use the Select tool to select the artwork that you want to flatten and clean up.

3. In the top menu, select **Selected > Flatten and Remove Extra Strokes**.

Optimizing Drawings

You can use the Optimize feature to flatten your drawing strokes without changing the aspect of your drawings. This mainly means that transparencies will not be flattened.

How to optimize a drawing

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

2. In the Drawing view, select the drawing strokes you want to optimize.

   - From the top menu, select **Selected > Optimize**.

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Reducing the Drawing Texture Resolution

How to reduce the drawing texture resolution

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

2. In the Drawing view, use the Select tool to select the drawing objects whose texture resolution you wan to reduce.

3. From the top menu, select **Drawing > Optimize > Reduce Drawing Texture Resolution.**
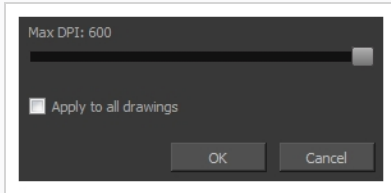
4. In the dialog box, drag the slider toward the left to reduce the texture resolution.

5. Enable the **Apply to All Drawings** option if you want the modification to be applied to all the drawings in your layer.

6. Click **OK**.

About Strokes Conversion

You may have drawing stroke using the Pencil tool when you wanted to use the Brush tool. You may also have drawing your image using the Polyline tool and now you want to convert your strokes to brush strokes. For many reasons, you may want to switch your stroke types to another type to use the various advantage set they offer.

There are three types of strokes:

- Brush strokes (contour vector)

- Pencil strokes (central vector)

- Invisible strokes (central vector with a thickness value of 0)

Harmony lets you convert pencil lines to brush strokes, brush strokes to pencil lines, and invisible strokes (strokes) to pencil lines.

You can also break text objects apart—see *Breaking Text Into Letters or Vector Shapes* on page 229.

Converting Brush Strokes to Pencil Lines

The Brushes Strokes to Pencil Lines operation converts selected contour strokes into centreline pencil strokes. The brush stroke thickness will be lost.

How to convert brush strokes to pencil lines

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

2. In the Drawing view, select the strokes you want to convert.

3. Do one of the following:

   - From the top menu, select **Selected > Convert > Brush Strokes to Pencil Lines** or press ^.

   - Right-click on the selection, select **Convert >Brush Strokes to Pencil Lines** or press ^

Converting Pencil Lines to Brush Strokes

The Pencil Lines to Brush Strokes operation converts the selected centreline pencil strokes into contour strokes brush lines.

How to convert pencil lines to brush strokes

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

2. In the Drawing view, select the strokes you want to convert.

3. Do one of the following:

   - From the top menu, select **Selected > Convert > Pencil Lines to Brush Strokes** or press &.

   - Right-click on the selection, select **Convert > Pencil Lines to Brush Strokes** or press &.

   - In the Tool Properties view, press the Pencil Lines to Brush Strokes button.

Converting Strokes to Pencil Lines

The Strokes to Pencil Lines operation converts the selected invisible line to a pencil line.

How to convert strokes to pencil lines

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

2. In the Drawing view, select the strokes you want to convert.

3. Do one of the following:

   - Select **Selected > Convert > Strokes to Pencil Lines** or press Shift + F12 (Windows/Linux only).

   - Right-click on the selection, select **Convert > Strokes to Pencil Lines** or press Shift + F12 (Windows/Linux only)

About Vector and Bitmap Layers

T-LAY-001-002

With Harmony, you have the choice to use vector or bitmap drawing tools. Vector drawing tools allow you to make drawings that can be scaled without losing quality, to easily tweak and fine tune your drawings and to use the whole suite of drawing tools available in Harmony, whereas bitmap drawing tools allow you to lay on brush strokes to make more traditional-looking artwork, and to tweak your drawing by the pixel rather than by their strokes and contours.
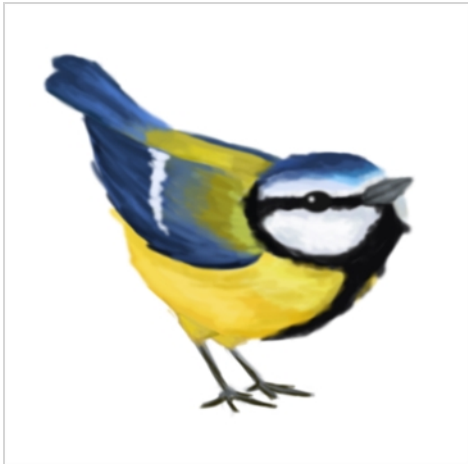
When drawing, whether you can use vector or bitmap drawing tools is determined by whether the art layer you are drawing on is a vector or a bitmap layer. By default, each drawing layer has two art layers: Line Art and Colour Art, and each of these art layers can be a vector or a bitmap layer. This can be useful if, for example, you wish your line art to be done using bitmap drawing tools, and then to paint your drawings using vector drawing tools, or vice versa.

Using bitmap layers may be preferable if you find that vector drawings are too limiting for the desired art style, or if your vector drawings are so complex that they affect software performance. However, bitmap layers have the following limitations which you should carefully consider before using them:

- In vector drawings, each stroke is a separate drawing object by default, and each of these drawing objects, as well as each of their points, curves and outlines, can be manipulated independently. It is not possible to do that with bitmap layers, as they are always a single drawing object. They can be drawn, filled or erased over, and manipulated as a whole, but its individual elements cannot be manipulated independently.

- By default, bitmap layers are created at the same pixel density as your scene's camera when it is in its default position. This means that your artwork will lose picture quality if you zoom in on it or scale it up. If you need bitmap drawings to be scaled up or zoomed on, you must set your bitmap artwork's pixel density higher before you start drawing.

- Bitmap drawings may require more storage space than vector drawings. Note that this depends a lot on the amount of space in your drawing that is covered by artwork. Harmony does not store bitmap data for empty areas of your drawings.

The yellow tiles are the spaces containing artwork. The white tiles are empty spaces, which do not use storage space.
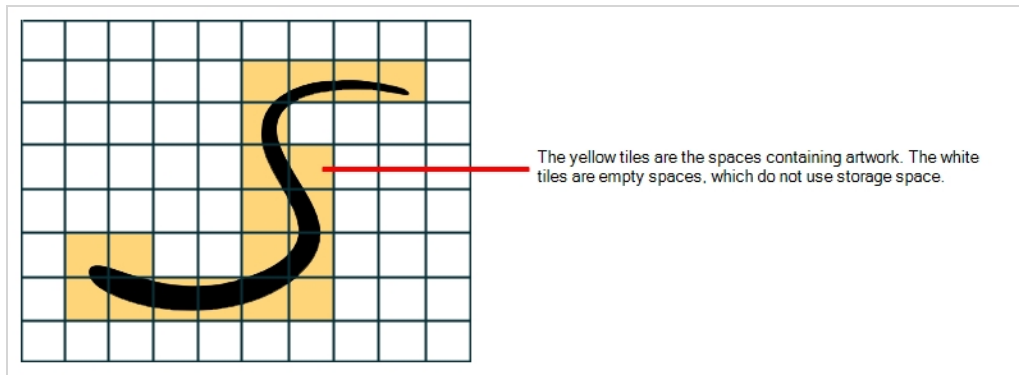
When drawing on a bitmap layer, the following tools are unavailable, as they exploit the vector drawing capabilities of Harmony:

- Pencil

- Contour Editor

- Pencil Editor

- Smooth Editor

- Perspective

- Envelope

- Ink

- Stroke

- Close Gap

- Polyline

Setting the Bitmap Resolution

When drawing in bitmap, it is important to understand that, contrary to vector artwork, bitmap artwork is stored in pixels. This implies that, where vector artwork can be scaled and zoomed in without issue, bitmap artwork is resolution dependent, and is liable to drop in picture quality and appear pixelated if it is enlarged or zoomed in.

By default, bitmap layers created in Harmony have a pixel density of 100%. At this density, when your scene is not zoomed in and your artwork is not scaled up, each pixel in your artwork corresponds to one pixel in the rendered image. Scaling it up or zooming in will require Harmony to render several pixels using the same bitmap pixel, making the artwork lose quality.

Hence, before you start drawing on your bitmap layer, it is important to consider if you will need to zoom onto or scale up your artwork, and set the pixel density accordingly. For example, if you intend to scale your bitmap artwork up to 300%, or if you intend to zoom in from 12 fields to 4 fields, you should make sure your bitmap artwork's pixel density is of at least 300% before you start drawing.

The pixel density of a bitmap layer affects the amount of pixels it contains, but not its apparent size in the scene. For example, if your scene resolution is set to 1920 x 1080 and your bitmap artwork's pixel density is 300%, its resolution will be 5760 x 3240. However, it will be scaled down to 1920 x 1080, and the extra pixels will be used to preserve the image quality if the artwork is zoomed on or scaled up.
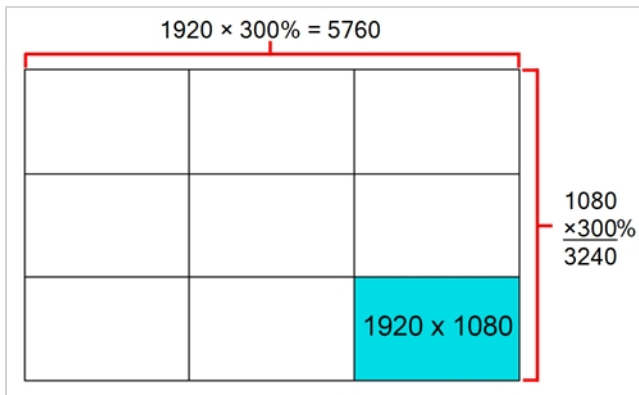
Bitmap layers are also limited by a canvas. By default, this canvas is set to be 200% of the scene's width and height. This means that your artwork can bleed outside any edge of the camera frame by 50% of its size. If you need your bitmap artwork to have a larger canvas, it is possible to change its canvas size. This can be useful for example if you want to create a panning background in a bitmap layer. If you want a background to pan horizontally over three times the width of the camera frame, you would need to set its canvas width to at least 300%, but it is recommended to make your canvas bigger than what you plan to use so as to avoid accidentally including the edges of your artwork in the picture.
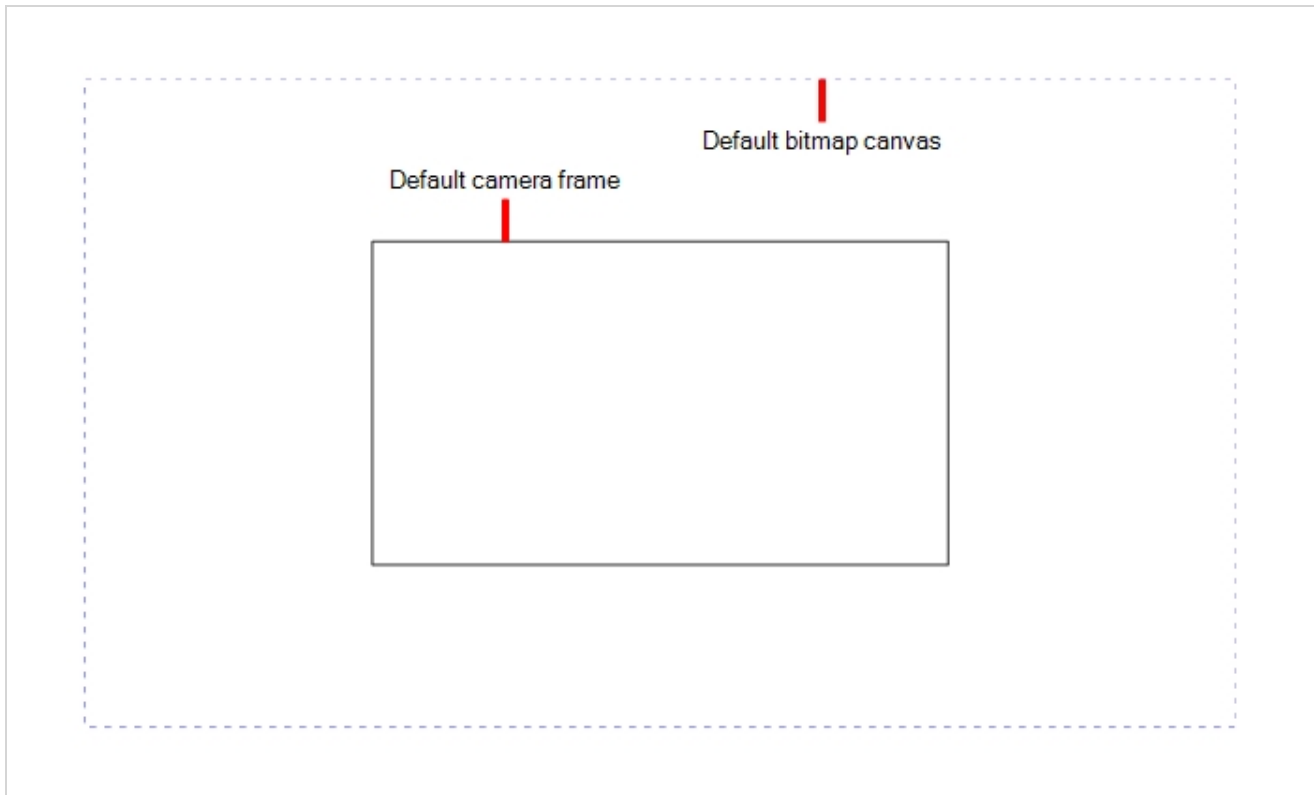
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You can specify the pixel density and canvas size at the scene level or at the drawing level:

- Setting the pixel density and canvas size at the scene level will make it newly created bitmap drawings have the specified settings, but it will not change the pixel density and canvas size of existing bitmap drawings.

- Setting the pixel density and canvas size at the drawing level will allow you to change the pixel density and canvas size of existing drawings in a bitmap layer, but will not affect the pixel density and canvas size of drawings created afterward.

> **NOTE**
>
> In Harmony Paint, you cannot set the canvas size and pixel density for the whole scene, since Harmony Paint is only able to modify individual drawings. You can only change the canvas size and pixel density of existing drawings. If you need to make this change for the whole scene, open the scene in Harmony and refer to the Harmony documentation.

> **NOTE**
>
> If you are using textured brushes on a vector drawing layer, you must set the pixel density for vector drawing brush textures instead—see *Setting the Textured Brush Resolution* on page 100.

How to change the canvas size and pixel density of existing bitmap drawings

1. In the Drawing Thumbnails panel, select the bitmap drawing for which you want to change the canvas size or pixel density.

2. From the top menu, select **Drawing > Change Bitmap Drawing Resolution**.

   The Change Bitmap Drawing Resolution dialog opens.
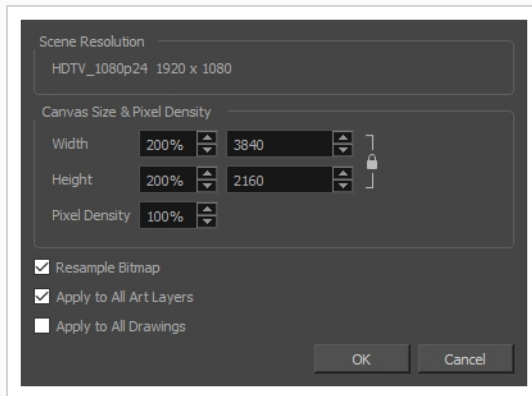
3. In the **Width** and **Height** fields, enter the percentage of your scene's resolution that you want the canvas of your bitmap layer to occupy. By default, both values will be set to 200%, which means the width and height of your bitmap canvas will be twice the width and height of your scene's resolution. When the camera is in its default position, this leaves extra space around the camera frame to draw on your bitmap layer.

4. In the **Pixel Density** field, enter the desired percentage of pixel density. If you intend to scale or zoom in on your artwork, make sure your pixel density is set to be at least the factor by which your artwork will scaled or zoomed on. For example, if you intend to scale your artwork by 300%, you need to set the pixel density to at least 300%. If you intend to zoom in on your artwork from 12 fields to 6 fields, you need to set the pixel density to at least 200%. If you intend to do both, you need to set the pixel density to at least 600%, as the camera zoom and scaling factor will have a multiplying effect on the apparent scaling of your artwork.

5. Enable the **Resample Bitmap** option if you want your drawings to preserve their apparent size in the scene.

6. If you want the specified settings to be applied to all of the drawing's art layers (ie: Line Art, Colour Art and, if enabled, Overlay Art and Underlay Art), check the **Apply to All Art Layers** option. Otherwise, only the currently active art layer will be affected.

7. If you want the specified settings to be applied to all drawings in the active layer, check the **Apply to All Drawings** option. Otherwise, only the current drawing will be affected.

8. Click **OK**.

   The selected drawing's canvas size and pixel density is set to the specified settings.

> **NOTE**
>
> This does not change the default canvas size and pixel density for the scene. New drawings will still be created with the scene's default canvas size and pixel density.

Chapter 4: Colours

Toon Boom Harmony has some very powerful painting features to add colour to your drawings. Whereas some other software only allow users to work with one colour swatch at a time, painting in Harmony is done by using palettes containing multiple colour swatches that can be saved and reused as needed.
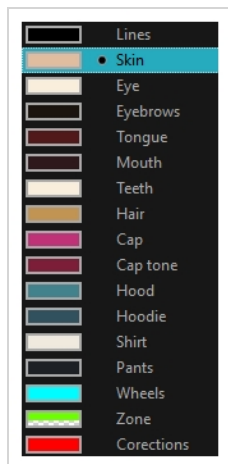
In the Colour view, you choose a different colour swatch for each colour you want to paint in your drawing. You can add as many swatches as you want. You can also rename them and modify existing ones.

When you modify the colour of an existing swatch, it automatically updates all the zones painted with this swatch throughout the entire scene. The colour swatch has a unique ID number that associates it with the painted zones. This way, you can change the look of your character at any time without having to repaint it!

Another advantage of this system is that you can create complete palettes for different lighting situations. For instance, in addition to the regular palette for a character, you could have one for that character in the rain using colours that are duller and less vibrant than the dry daytime colours, or yet another for using in a night scene. Using palettes linked to your character in this way allows you to instantly change its colouring to suit the mood and atmosphere of the scene without having to repaint each element.

It is also possible to use colour swatches from palettes in bitmap drawings, although changing the colours in the palettes will not automatically update colours used in bitmap layers.

About Colour Swatches

You can use several different types of colour swatches, including solid colour, gradient colour and bitmap texture swatches.
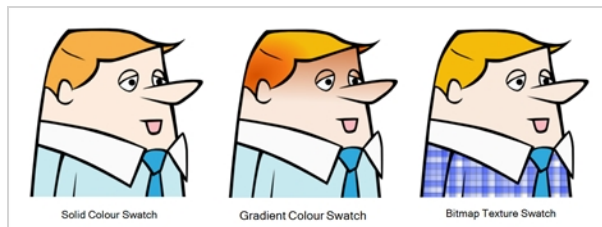
A colour palette is an actual file on the hard drive.

In Harmony Server, these palette files can be stored in a different location on the server. They can be stored in the Environment, Job, Scene, or Element folder and linked to any palette list. This means that if the original palette file is modified, it will update in every drawing element the palette is linked to.

In Harmony Server, to avoid accidentally modifying the palette, the palette files can be locked. If a palette must be modified, you must get the rights to modify them before doing so.

Locking and Unlocking the Colour List

In Harmony Server, you can lock and unlock the colour list to avoid modifying or modify the colour swatches.

How to lock and unlock the colour list

1. In the Colour view, click the Edit Palette Mode ⬛ button.

   A grey pencil icon appears in the top-right corner of the Palette list.
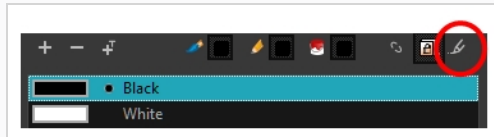
Adding a Colour Swatch

T-HFND-006-017A

You can add as many colour swatches as you want in your palette.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to add a solid colour swatch

1. In the Colour view, click the Add Colour ➕ button.

2. Do one of the following to edit the colour swatch:

   - From the Colour view menu, select **Colours > Edit.**

   - Double-click on the colour swatch.

   The Colour Picker window opens.
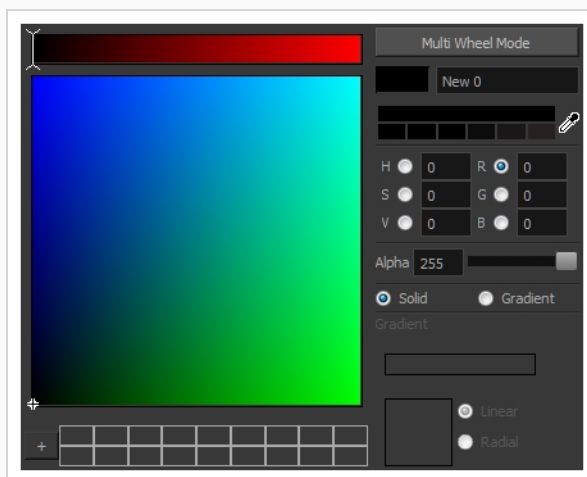
3. To set your colour, do one of the following:

   - Select either **R**ed, **G**reen, **B**lue, **H**ue, **S**aturarion of **V**alue to change the colour wheel's spectrum, then click on the desired colour in the colour wheel.

- Enter the hue, saturation, value, red, green and blue values manually into their corresponding fields. All values range from 0 to 255.
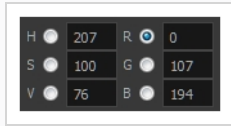
- Click the Dropper button to select any colour on your screen. It can be from the Harmony interface, your operating system or any other open application.
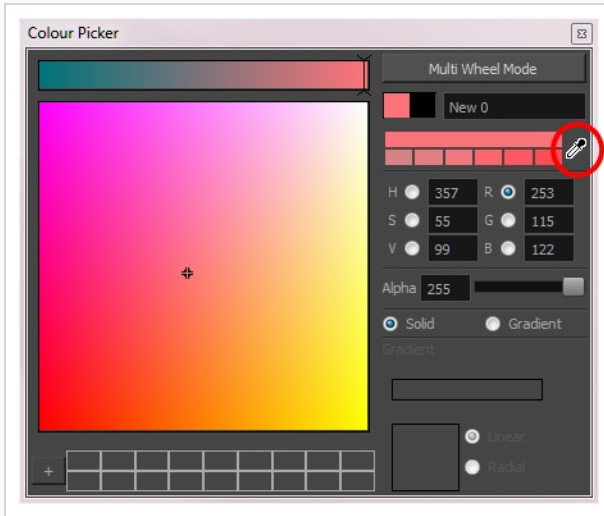
You can also click **Multi Wheel Mode** to open the Multiwheel Colour window. This displays all the picking area styles together and also contains a picking undo list. To return to the regular Colour Picker window, click **Single Wheel Mode**.
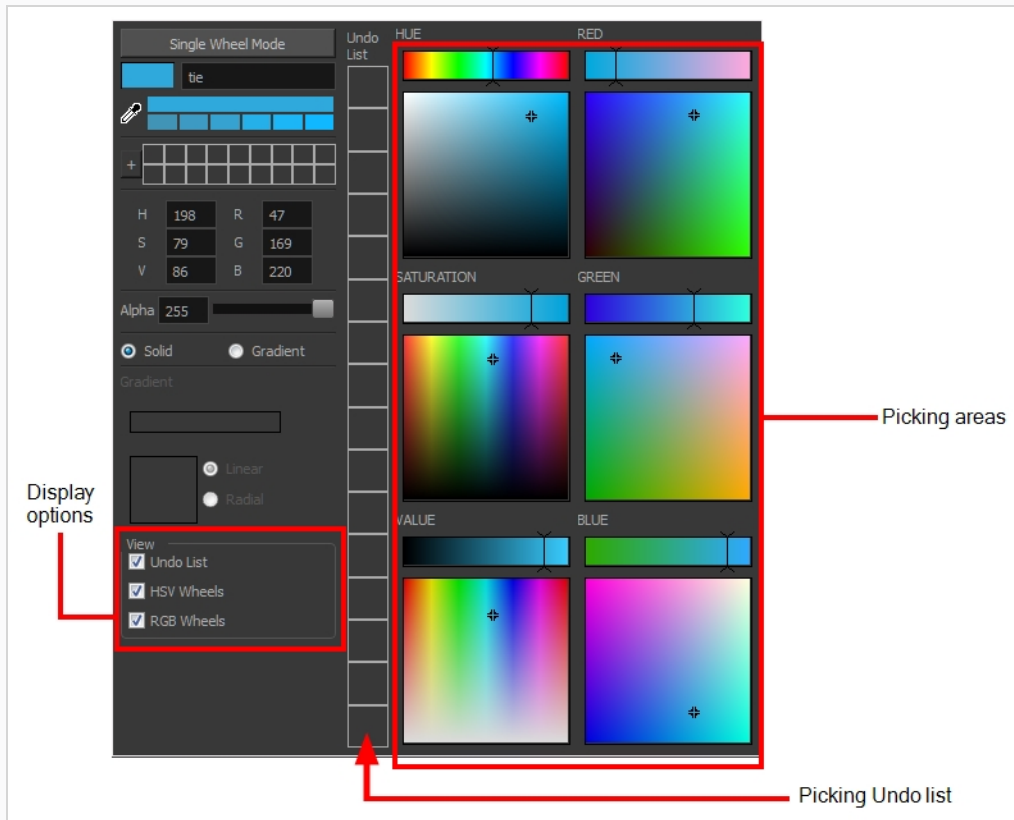
4. Click on the Shade Scale swatches to modify the shade of the selected colour.
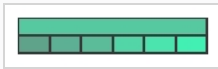
5. Adjust the transparency with the Alpha slider or type the value directly in the Alpha field.
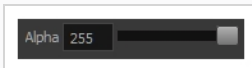
6. Click the **Add** button to add the current selected colour to the Colour Storage Library, so you can quickly access it later.

7. Rename the colour swatch in the Colour Picker window or directly in the colour list by double-clicking on its name.
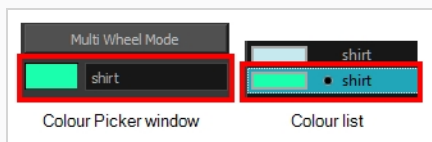
By default, when you create a new colour swatch, its colour will be the same as the currently selected colour swatch, or black if no colour swatch is selected. You can make Harmony create new colour swatches with a specific default colour instead.

Adding a Gradient Colour Swatch

T-HFND-006-017B

You can transform any colour swatch into a linear or radial gradient.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to create a gradient colour swatch

1. In the Colour view, select a colour to modify .

2. Do one of the following:

   - Click the new colour and from the Colour View menu, select **Colours > New**.

   - Double-click on the colour swatch.

   The Colour Picker window opens.
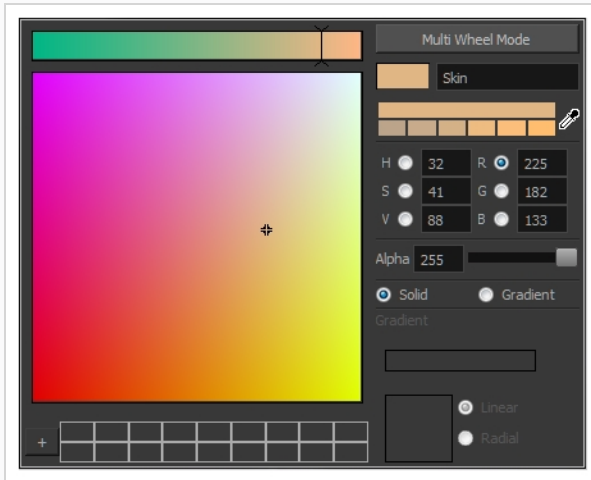
3. Select the **Gradient** option.

4. Select the **Linear** or **Radial** option.

5. In the Gradient slider, create your gradient:

   - To change one of the colours of your gradient, select a key colour from the gradient slider, then pick its colour in the colour picker.
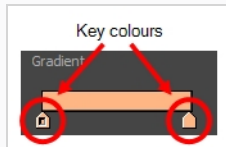
   - To add a key colours to your gradient, click anywhere on the colour slider, between the existing key colour.
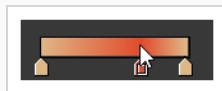
   - To delete a key colour, use the mouse to pull down on it.

   - To move a key colour's position in the gradient, use the mouse to drag it left or right.

> **NOTE**
>
> To learn how to reposition the gradient zones in your drawings, see *About the Edit Gradient and Texture Tool* on page 360.

Adding a Texture Colour Swatch

You can add bitmap texture colour swatches to your palette. This allows you to fill zones in your artwork with custom patterns and textures.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode ⬚ toggle button is pressed in.
>
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
>
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to create a texture colour

1. From the Colour menu, select **Colours > New Texture** or click the New Texture ⬚ button.

   The Browser window opens.

2. Browse for a PSD or TGA bitmap file created with a third party software and click **Open**.

   The texture is added to the colour list.

   You can also replace a texture once it is painted. If you decide to make the character's shirt wool instead of plaid, just update the texture file in the swatch and the entire project updates. Any transformation previously applied to the texture's position in your drawings will be kept.
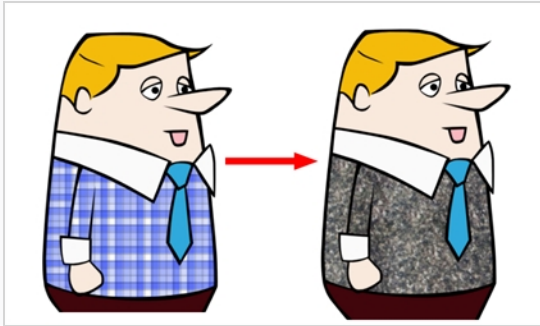
> **NOTE**
>
> To learn how to reposition the textured zones in your drawings, see *About the Edit Gradient and Texture Tool* on page 360.

Copying and Pasting Colours

When you're creating palettes, you may want to copy colour swatches or their values and paste them in other palettes to save time. You can also quickly copy a colour value from a palette in your scene to a selected colour swatch in a different palette.

You can copy a selected colour swatch and paste it as a clone. Since it produces a clone colour swatch, it is impossible to use the Paste as Clone command in the same palette as you copied the original colour swatch from.

If you would like to keep a reference file of some colour IDs or use them with custom plug-ins, you can copy the colour swatch IDs. Here is an example of colour ID: **075cf5b552401130**.

```
ToonBoomAnimationInc PaletteFile 2
Solid    Black              0x075cf5b15fe006a1   0    0    0 255
Solid    White              0x075cf5b15fe006a3 255  255  255 255
Solid    Red                0x075cf5b15fe006a5 255    0    0 255
Solid    Green              0x075cf5b15fe006a7   0  255    0 255
Solid    Blue               0x075cf5b15fe006a9   0    0  255 255
Solid    Custom             0x075cf5b15fe006a8   0    0  150 255
Solid    "Vectorized Line"  0x0000000000000003   0    0    0 255
```

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu , select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to copy and paste colours

1. In the Colour view, select one or more colours to copy.

- In the Colour view, click the Edit Palette Mode button to edit the colour list.
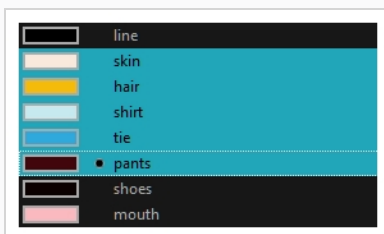
2. In the Colour View menu, select **Colours > Copy** or press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).

3. In the Palette list, select the palette in which you want to paste the colours.
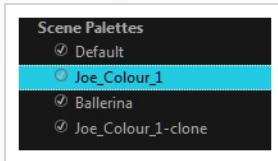
4. From the Colour View menu, select **Colours** > **Paste as New Colours** or press Ctrl + V (Windows/Linux) or ⌘ + V (macOS).

   - To paste the colour values of the copied swatch over an existing colour swatch, select **Colours** > **Paste Colour Values**.

How to clone a colour swatch

1. In the Colour view, select the colour swatch you want to clone.

   - In the Colour view, click the Edit Palette Mode 🔒 button to edit the colour list.

2. From the Colour View menu, select **Colours > Copy** or press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).

3. In the Colour view, select the colour palette you want to paste the clone into or create a new palette.

4. From the Colour View menu, select **Colours > Paste as Clone**.

   The cloned colour swatch appears in the palette.

How to copy a colour ID

1. In the Colour view, select the colour swatch you want toget the ID from.

   - In the Colour view, click the Edit Palette Mode 🔒 button to edit the colour list.

2. From the Colour View menu, select **Colours > Copy Colour ID** or press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).

3. Paste the copied value as plain text in the desired document.

Deleting a Colour Swatch

You can delete unnecessary colour swatches from your palette. If painted zones are using this colour, they will be displayed in red and the system will try to recover them the next time you load the scene.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to delete a colour swatch

1. In the Colour view, select the colour swatches to delete.
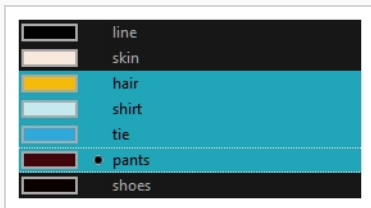
2. Do one of the following:

   - From the Colour View menu, select **Colours > Delete**.
   - Click the Delete Colour — button.
   - Right-click and select **Delete**.
   - Press Del.

   If the colour swatch is used in a drawing, the Delete Colour dialog box opens.
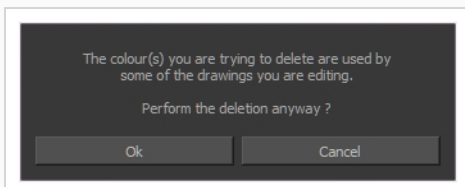
3. Click **OK** to delete the colours or click **Cancel** to abort the operation.

If you delete colour swatches already in use, the zones painted with them turn red so you can easily identify them.

Modifying a Texture Colour Swatch

You can replace a texture colour swatch and all zones already painted with it will update.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
>
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
>
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
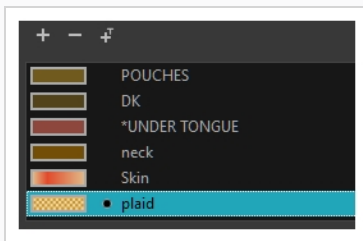
How to replace a texture swatch

1. In the Colour view, select the texture swatch that contains the bitmap texture you want to replace.
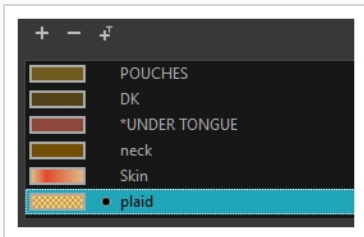
2. From the Colour View menu, select **Colours > Edit Texture** or double-click on the swatch.

   The Browser window opens.

3. Browse for the new PSD or TGA bitmap file created in a third party software.

4. Click **Open** to update the colour swatch.
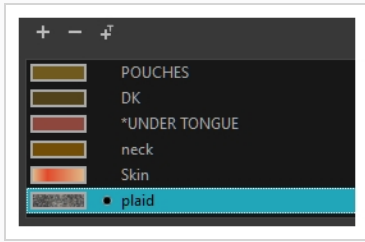
Replacing Colours and Textures in Drawings

Although it is always possible to change colours and textures in existing drawings by updating the swatch in the palette, there may be situations where you want to replace a colour or texture in your drawings with a different colour or texture swatch, without updating the existing swatch. For example, you may want to only replace a colour with a different colour in specific drawings, but not in all the drawings that use the original colour, or you may want to replace a colour with a colour from a different palette without changing your palettes.

Using the Recolour Drawing dialog, you can replace all instances of a colour or texture used in your drawings with a different colour or texture swatch. This will actually change the colours or textures from within the drawings, without making any changes to your palette. You can perform this operation on the currently selected drawing, on all drawings in the current layer or in all drawings in your scene.

How to recolour drawings

1. First, make sure one of the palettes in your scene already has a swatch containing the colour or texture you want to replace the original colour with—see _About Colour Swatches_ on page 265, _About the Edit Gradient and Texture Tool_, _Adding a Texture Colour Swatch_ on page 274 and _Adding a Pencil Line Texture_ on page 137.

2. In the Timeline or Xsheet view, select the drawing or drawing layers you wish to recolour.

   > **NOTE**
   >
   > You can select multiple layers if needed.

   > **NOTE**
   >
   > You can skip this step if you intend to recolour all the drawings in your scene.

3. In the Colour view, click on Show Colour Palettes 🎨 if you want to replace a colour, gradient or texture, or on Show Pencil Texture Palettes 🖌 if you want to replace a pencil texture. You can also click on Show All Palettes 🖌.

4. 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.

5. 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**.

The Recolour Drawings dialog appears.
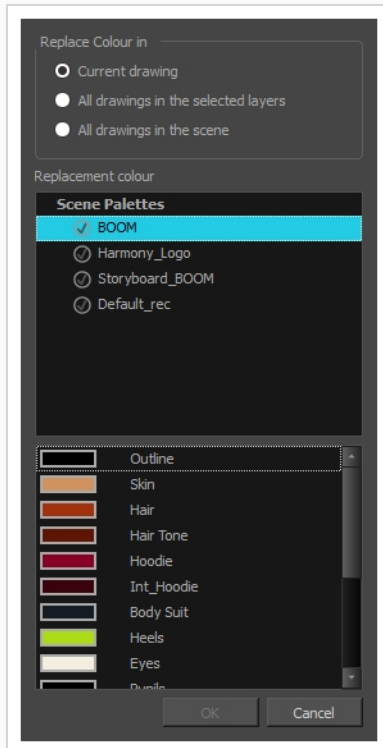
6. In the Replace Colour In panel, select whether you want to replace the selected colour in the **Current Drawing**, in **All drawings in the selected layers** or in **All drawings in the scene**.

7. In the palette list in the Replacement Colour panel, select the palette that contains the colour or texture swatch you want to replace the original colour or texture with.

8. In the swatches list, select the colour or texture swatch you want to replace the original colour or texture with.

9. Click OK.

A dialog displays showing the progress of the recolour operation. When finished, the original colour or texture is replaced with the replacement colour or texture in your drawing.

Protecting Colours

When you are finished inking one colour, you can lock it so if you ever paint over it accidentally, the work already done will not be affected. You can also use the Protect Colour feature to block the filling colours if you painted all of the animation in Line Art and you plan to repaint the lines.

When painting, the Respect Protected Colour option is enabled by default. In the Colour view, you can protect 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.

How to protect colours

1. In the Colour view, select the colour to be protected.
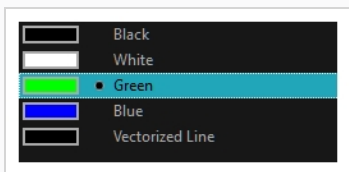
2. Do one of the following:

   - From the Colour view menu, select **Colours > Protect Colour**.

   - From the top menu, select **Colours > Protect Colour**.

   A red bar appears beside the colour to indicate that it is locked.
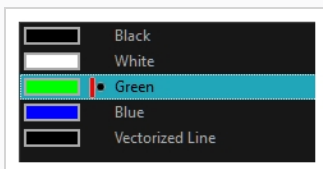
How to enable the Respect Protected Colours option

1. Do one of the following:

   - In the Paint tool properties, click the Respect Protected Colour 🔒 button.

   - From the top menu, select **Options > Colour Protection > Respect Colour Protection**.

   - Press Shift + S.

Changing the Colour Display Mode

The Colour view has two display modes:

- List

- Swatch

You can also display the RGB values and names of your solid colour swatches instead of only the name. This option is not available when displaying the colours in Swatch mode.

How to switch between the display modes

1. From the Colour View menu, and do one of the following:

    - Select **Colours > Swatch Mode** to display the swatches.

    - Deselect **Colours > Swatch Mode** to display the colour list.
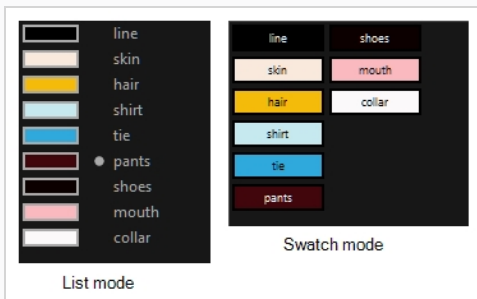
How to display the swatch colour values

- From the Colour View menu, select **Palettes > Display Colour Values**.

    The solid colour swatches' RGB values are displayed between the colour swatch and its name. The gradient colour swatches will be identified as (gradient).

About Palettes

In animation, specific colours are used to paint each part of each character. In order to maintain absolute consistency, a base colour palette should be created for each character, prop and effect in the production. This is referred to as a *master palette*.

Master palettes contain a colour swatch for each area to colour. Each swatch stores a colour in precise levels of red, green, blue and opacity (the latter which is referred to as *alpha*).

Using a master colour palette has many benefits, including:

- Each character consistently retains their dedicated colours.

- You cannot accidentally use a colour which is not in the master palette.

- Standardization and colour consistency throughout the production.

- Multiple artists can use the same colour palette and produce the same results.

Harmony uses palettes to hold all the colours needed to paint your elements, allowing complete control and consistency in the painting process.

A palette is created by assigning a set of colours to each character, prop or effect. You will create a new palette and add a new colour, known as a *colour swatch*, for each zone of the character, such as the skin, hair, tongue, shirt, pants, and so on.

When you modify the colour of an existing swatch, it automatically updates all the zones painted with this swatch throughout the entire scene. The colour swatch has a unique ID number that associates it with the painted zones. This way, you can change the look of your character at any time without having to repaint it!

Another advantage of this system is that you can create complete palettes for different lighting situations. For instance, in addition to the regular palette for a character, you could have one for that character in the rain using colours that are duller and less vibrant than the dry daytime colours, or yet another for using in a night scene. Using palettes linked to your character in this way allows you to instantly change its colouring to suit the mood and atmosphere of the scene without having to repaint each element.

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

About Advanced Palette Management

In Harmony, palettes are individual `*.plt` files that can be copied, transferred and stored. When a palette is created in Harmony,it is stored in your scene's `palette-library` subfolder by default, and linked to your scene's palette list. However, Harmony has advanced palette management features that allow you to store and manage your palettes in manners that may better serve your production's needs. This is called Advanced Palette Lists mode. To enable these features, you must enable the Advanced Palette Lists preference.

The Advanced Palette Lists mode unlocks two features that can be very useful, especially for a big production:

- **Palette location:** While palette files are stored in a scene's palette library directory by default, you can choose to store palettes in different locations, allowing you to easily share palettes between different scenes in a Harmony Server database.

- **Palette list type:** Whereas palettes are usually added to a scene's palette list, making them available to all the elements in your scene, you can also choose to add palettes to the palette list of individual elements (layers) in your scene.

When the Advanced Palette Lists mode is enabled, Harmony open a dialog called the Palette Browser whenever you want to create, import, clone, duplicate or link to a palette, which allows you to decide your palette's location and palette list type.
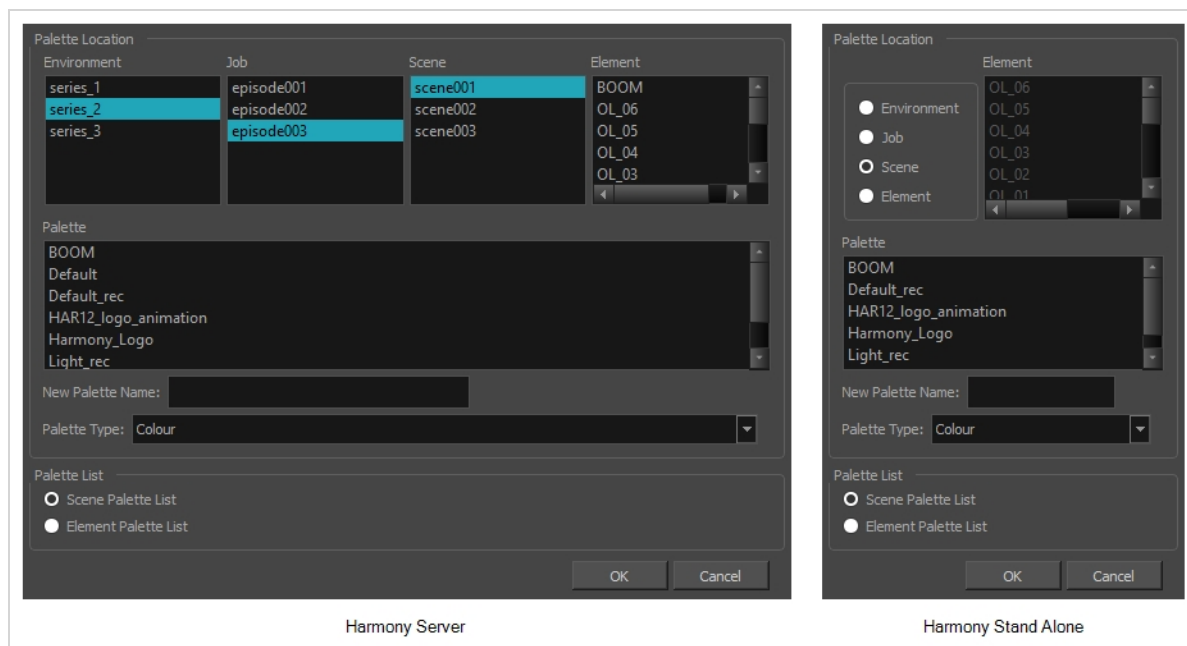
To use advanced palette lists, it is important to understand the difference between a palette's location and a palette list's level. For example, it is possible to add a palette file stored in a scene's palette library folder to an element's palette list. This can be useful if you wish to have the same palette file used by several specific elements in your scene, without copying it in the palette library folder of each element that uses it. The reverse is possible: You can add a palette file stored in an element's palette library folder to a scene's palette list, making the palette usable for all the elements in the scene, even if it is stored inside a single element's folder.

Enabling the Advanced Palette Lists Mode

Advanced Palette Lists mode is disabled by default to avoid cluttering a basic workflow with too many options, but it enables palette management capabilities that are very useful for big productions. Mainly, this preference allows you to:

- Create palettes inside a scene's environment, job or element palette-library directory, instead of the scene's palette-library directory. Storing a palette at the environment or job level can be especially useful if you want to use the same palette in several scenes without creating dependencies between animation scenes and colour model scenes.

- Create palettes for specific elements instead of the entire scene. You can do this by adding, importing or linking to a palette in an element's palette list. A palette in an element's palette list can only be used by that element.

You can set up the Advanced Palette Lists option in the Preferences panel.

How to set the Advanced Palette Lists mode

1. Do one of the following:

   - From the top menu, select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS).

   - Press Ctrl + U (Windows/Linux) or ⌘ + U (macOS).

2. Select the **General** tab.

3. In the Advanced OptionsColor Management section, select the **Advanced Palette Lists** option.

4. Click **OK**.

About Scene and Element Palette Lists

By default, you can only add palettes to a scene's palette list. With the Advanced Palette Lists preference enabled, you can choose to store add palettes to the palette list of individual elements if you choose. Here is an explanation of the two different levels of palette lists:

- **Scene palette list:** This palette list and its palettes are available for and can be used in all of the scene's elements. Hence, it is the most simple and least restrictive approach, and is the type of palette used by Harmony when Advanced Palette Lists mode is disabled. It is most recommended to add your palettes to your scene's palette list if you are doing digital animation, where character models can be made of many different elements that must use the same palette.

- **Element palette list:** A palette list associated with a single element in your scene. An element is the container for the drawings used by a drawing layer. Hence, when an element has a palette list with its own palettes, only the drawings in that element can use the colours in these palettes, and the palettes in this element's palette list will only be shown in the Colour view when a drawing from this element is selected.

Using element palette lists as certain advantages, depending on your type of production:

- In paperless and traditional animation projects, characters are usually drawn on single elements. Hence, you can use this to associate characters in a scene to their colour palette.

- If a scene requires a lot of palettes, linking those palettes only to elements that need them rather than to the whole scene can help declutter your palette list.

- When a palette and its clone are in the scene's palette list, Harmony will only use whichever palette is highest in the list. If you want one element to use the original palette and another element to use the cloned palette, you can do so by adding the right palette to each element's palette list.

About Palette Storage Locations

Palettes can also be stored in four different locations. The best location to store palettes depends on the type of production, the purpose of the palette, your pipeline and your backup plan. Here is an introduction to each type of palette location and their purpose:

- **Element:** The palette-library folder inside an element's folder in the scene. This is the recommended location if you are adding palettes to the palette lists of individual elements.

- **Scene:** The palette-library folder inside the scene's folder. This is the default location when creating a palette in the scene's palette list, and is the location chosen by Harmony when creating a palette with the Advanced palette Lists preference disabled. This is a suitable location to store the palettes of characters, props and backgrounds used in a single scene, a small project, or any production that uses Harmony Stand Alone.

- **Job:** For Harmony Server, this is the palette-library folder inside the job's folder on the database server. This is the recommended location if you want to share the same palette between several scenes in the same job, like for characters, props and backgrounds that are used in across entire episodes or smaller-scale projects.

- **Environment:** For Harmony Server, this is the palette-library folder inside the environment's folder on the database server. This is the recommended location if you want to share the same palette between several scenes in the same environment, like for characters, props and backgrounds that are used across an entire series or movie.

It is actually possible, but not recommended, to use palettes that are from a different job or environment. For example, if you wish to store a colour model's palette in the colour model's scene, you can make animation scenes that user this character link to the palette in the colour model's scene. However, this means your scene will depend on the colour model's scene and its palette being available at this location to render its colours. If the colour model's scene is moved or deleted, or if you export the animation scene and import it in another database, it will not be able to retrieve the palette. Hence, you would have to export the colour model along with the animated scene, and import it into the other database. If you were to store the colour model's palette in its element folder, this would have the same restriction, with the added risk of breaking links to the original palette if the character model's element is renamed. However, if you are sure that the structure of your Harmony database will remain static and available at all time and at all steps of your production, then you can store your palettes in whichever job or environment you see fit.

Another reason why it is better to store shared palettes in a scene's job or environment is because, when you export a Harmony scene, you can choose to export the palettes in the scene's job or environment palette libraries along with it. These palettes are then stored with the exported scene and, when importing the scene back into the database, you can choose to import the job and environment palettes that were exported with it back into the scene's job and environment.

Even in Harmony Stand Alone, you can store palettes at the job or environment level, even though Harmony Stand Alone scenes do not have a job or an environment. When you do this, palettes are stored inside a provisional jobs or environments directory inside the scene directory. If you import your scene to a Harmony Server database, you can choose to import the files located in that scene's provisional job and environment into

the scene's job and environment. Hence, when using Harmony Stand Alone, you should only store palettes at the job or environment level if you intend to import your scene in a database later.

> **NOTE**
>
> In Harmony Server, even if you store palettes in a job or environment, they will not become immediately accessible to the scenes inside that job or environment. You must still add them to the scene's palette list, or to the palette list of one of its elements, before you can use the palette.

About Exporting Palettes

It is important to understand what is happening to a palette file when the scene is exported.

Because of the Harmony client-server configuration, all of the data can be shared through all of the scenes in the database. This also includes the palette files, even if they are stored at the Element, Scene, Job, Drawing or Environment level. The palette files can be accessed from any scene of any project.

When you export scenes from Harmony to either archive or send them to other users or studios, you can choose to export it with palettes stored in the scene's own job or environment, but if your scene uses palettes stored in other jobs, environments, or in any other location, **those palettes will not be exported**. Hence, if you wish to use the same palette for several scenes, it is recommended to store that palette at the environment or job level to avoid ever facing a situation where a scene no longer has access to its palette.

For example, in the following chart, if you export Scene 2 from Job 1, the package will carry the palettes from Scene 2, Job 1 and Environment. It **WILL NOT** carry the palettes from Element 3 in Scene 1, Scene 1 and Job 2. If Scene 2 was linked to any of these, the system will create a recovery palette the next time Scene 2 is opened in another Harmony system.
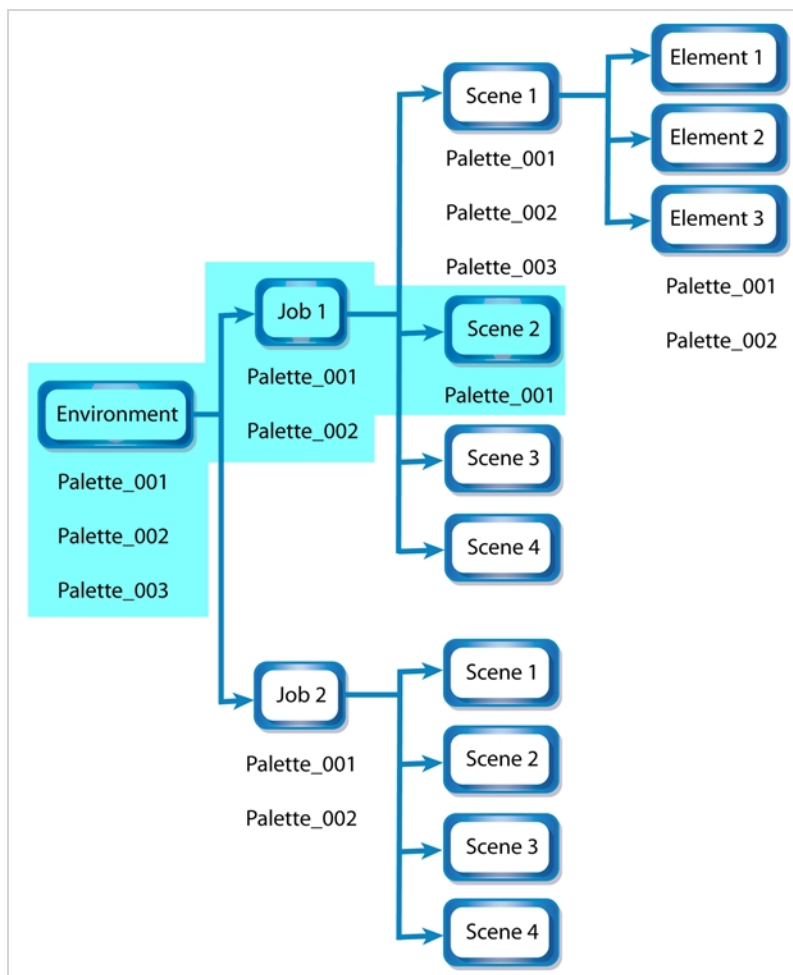
About Backing Up and Recovering Palettes

Although Harmony Server opens palettes in read-only mode by default, there is always the possibility of palettes that are shared between scenes getting modified or their swatches getting deleted by accident. That is why it is a good idea to copy and back up your palette libraries, your master palette directories and your colour models.

If you open a scene and a palette file happens to be missing, it will still appear in the palette list for that scene or element, with a strike through across its name.

When Harmony attempts to load a drawing that uses colours from a missing palette, or colours that were removed from their palette, it will display the zones painted with the missing colours in red. Then, it will prompt you to recover the missing colours into a recovery palette. A recovery palette is based on the colour information which Harmony stores in each drawing as a backup mechanism. This palette is stored at the scene level, and is not shared or sourced externally.
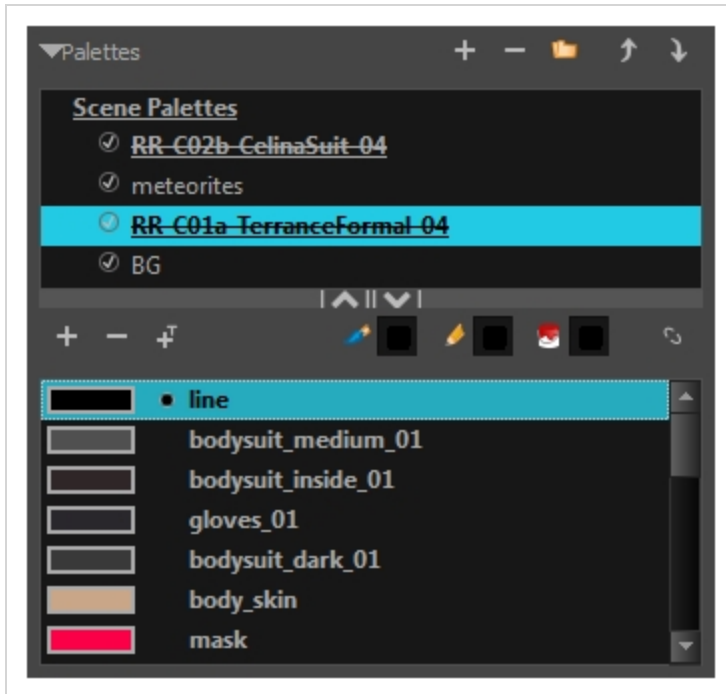
Whether you choose to perform colour recovery or not, your artwork will preserve the colour IDs which Harmony uses to associate brush strokes, pencil lines and filled zones with the colour swatches in your palettes. Hence, if you recover your original palette, you can just import or link it back to your scene—and remove the recovery palette, if you have one—and Harmony will automatically associate your artwork with the original palette again. You will not have to repaint your drawings.

You can backup your palettes by copying them manually using your operating system's shell, or by cloning them using the Palette Operations dialog. In both cases, the palette preserves the colour IDs, making it easy to replace a missing palette with its backup. For more information on the Palette Operations, see *Palette Operations* on page 323.

About the Palette List

A palette list is a file containing all of the links to the palette files. Each scene created has its own palette list. However, it is also possible to assign palette lists to individual layers in a scene. To be able to do that, you must first enable Advanced Palette Lists mode—see *Enabling the Advanced Palette Lists Mode* on page 289.

- **Scene Palette List**

    The scene palette list is simple to understand and convenient. Every element in your scene can use colours from a palette in your scene's palette list. This is especially useful for digital animation, as a cut-out character model will often be divided into dozens of different layers which will all use the same palette.
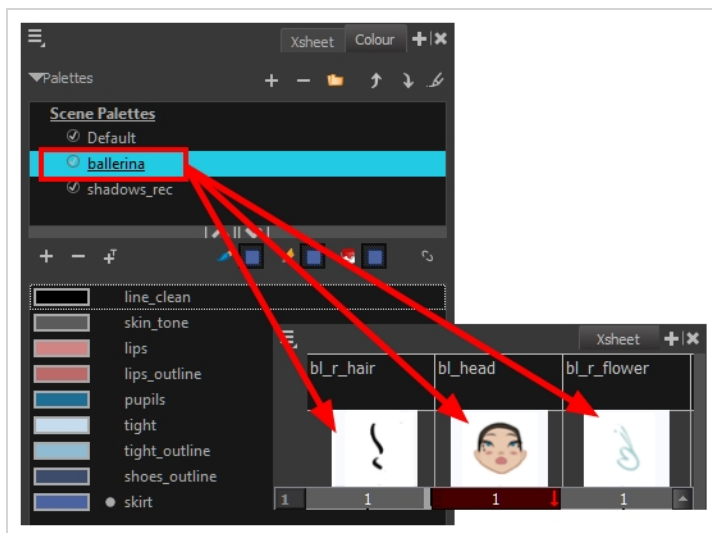
    The scene palette list is stored inside the scene's directory in a file named **PALETTE_LIST**, and its palettes are usually located in the scene's **palette-library** subfolder.

- **Element Palette List**

An element palette list is a list of palettes that is associated to an individual layer (element) in your scene. Only the drawings inside that element are able to use the colours in the palettes of its element palette list. The palettes in an element palette list will only be visible in the colour view when a drawing from that element is selected. This can be useful if you are doing traditional animation in which characters are usually drawn on a single layer, so you can assign each character to their individual palette.
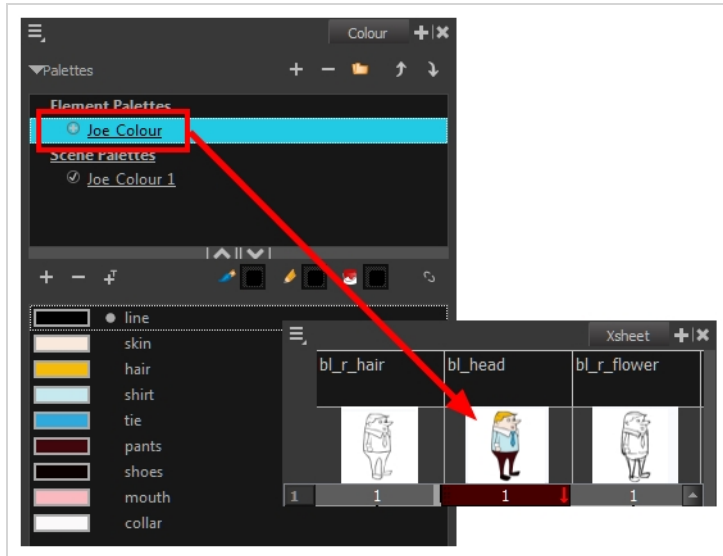
An element's palette list is stored in a file named **PALETTE_LIST**, inside the element's directory in the scene's **elements** subdirectory. An element's palettes can be stored in **palette-library** subdirectory of the element's directory.

If you have the Advanced Palette List preference enabled, then you can build a palette list by creating palettes in different locations, or linking to palettes from different locations. You might notice that the icon left of each palette in the list looks different depending on where the palette is sourced from. The following is a table explaining the meaning of each icon in the list.

Icon	Description
✓	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.

Showing and Hiding the Palette List

By default, the palette list is enabled. If you want to only use one palette for all of your scenes, you can disable the palette list simply by collapsing it, which will give more vertical space to your colour swatch list:

How to show or hide the palette list

1. In the Colour view, right over the palettes list, click on the expand/collapse arrow to expand or collapse the palettes list.
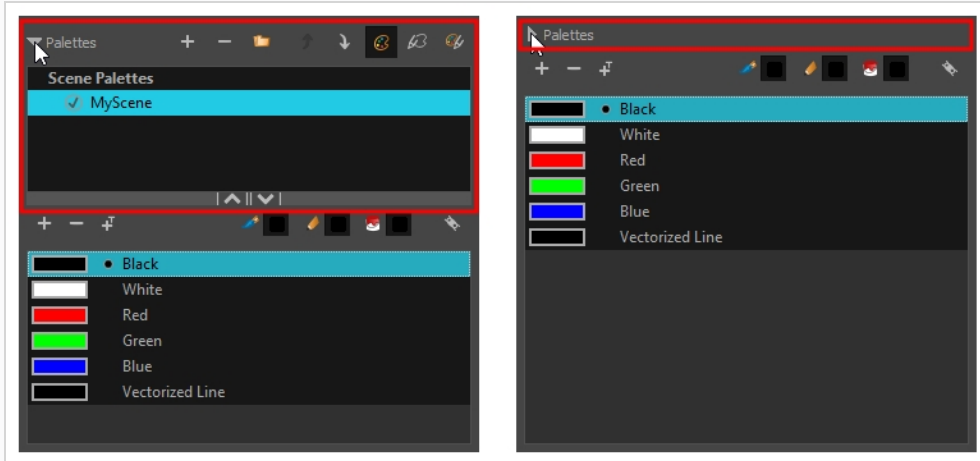
Locking and Unlocking the Palette List

In Harmony Server, palette lists are open in read only mode when loading a scene. This is to prevent users from accidently removing palettes. To create, link to, reorder or remove palettes, you must first unlock your scene's palette list.

How to lock and unlock to the palette list

1. Do one of the following:

   - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked

   - Right-click on the palette list and select **Get Rights to Modify Palette List**.

   - From the Colour view menu ≡, select **Palettes > Get Rights to Modify Palette List**

   A grey pencil appears on the top-right corner of the Palette list to indicate that it can be modified.
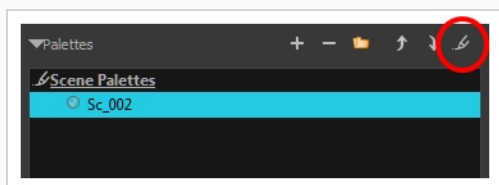
Displaying Colour and Pencil Texture Palettes

Besides regular colour palettes, Harmony also supports pencil texture palettes. A pencil texture can be combined with a colour to create pencil lines of various styles, ranging from styles reproducing traditional drawing tools such as chalk or felt to simple patterns like dots and circles. For more information, see *About Pencil Line Textures* on page 124.

By default, the Colour view only lists colour palettes in its palette list. You can make the Colour view list only pencil texture palettes, or all types of palettes.

How to change the palette list's filter to show colour palettes, pencil texture palettes, or both

1. In the Colour view, do one of the following:

   - If you only want to only see colour palettes, press the Show Colour Palettes 🎨 button.

   - If you only want to see texture palettes, press the Show Texture Palettes 🖌 button.

   - If you want to see both types of palettes, press the Show All Palettes 🎨 button.

> **NOTE**
>
> If you open the Link Palette dialog, it will only list either colour palettes or pencil texture palettes, depending on which filter is currently applied to the palette list. If the palette list is set to display all palettes, the dialog will list the type of palettes of the last palette list filter that was used.

Creating a Palette

You can create a palette in either Basic or Advanced mode.

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.To enable Advanced Palette Lists, see *Enabling the Advanced Palette Lists Mode on page 289*.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

How to create a new palette (Basic palette list mode)

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**

   The Create Palette dialog box opens.

2. In the Create Palette dialog, enter the new palette's name. Make sure your palette name contains information to be easy to identify, such as the name of the character and information about the type of setting for this palette, if any.
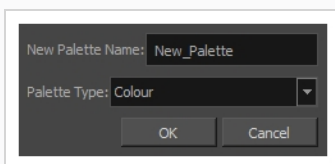
3. Set the **Palette Type** to **Colour** if you want to create a colour palette, or to **Pencil Texture** if you want to create a pencil texture palette—see About Pencil Line Textures.

4. Click **OK**.

   The palette appears in the drawing element's palette list.

How to create a palette (Advanced palette list mode)

1. If you want to add the palette to an element's palette list, select a drawing from the element for which you want to create a palette in the Timeline, Xsheet or Camera view.

2. Do one of the following:

   - In the Colour View, click the New Palette ➕ button over the palette list.
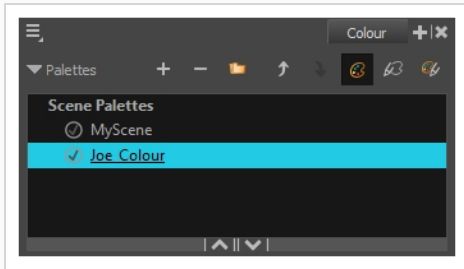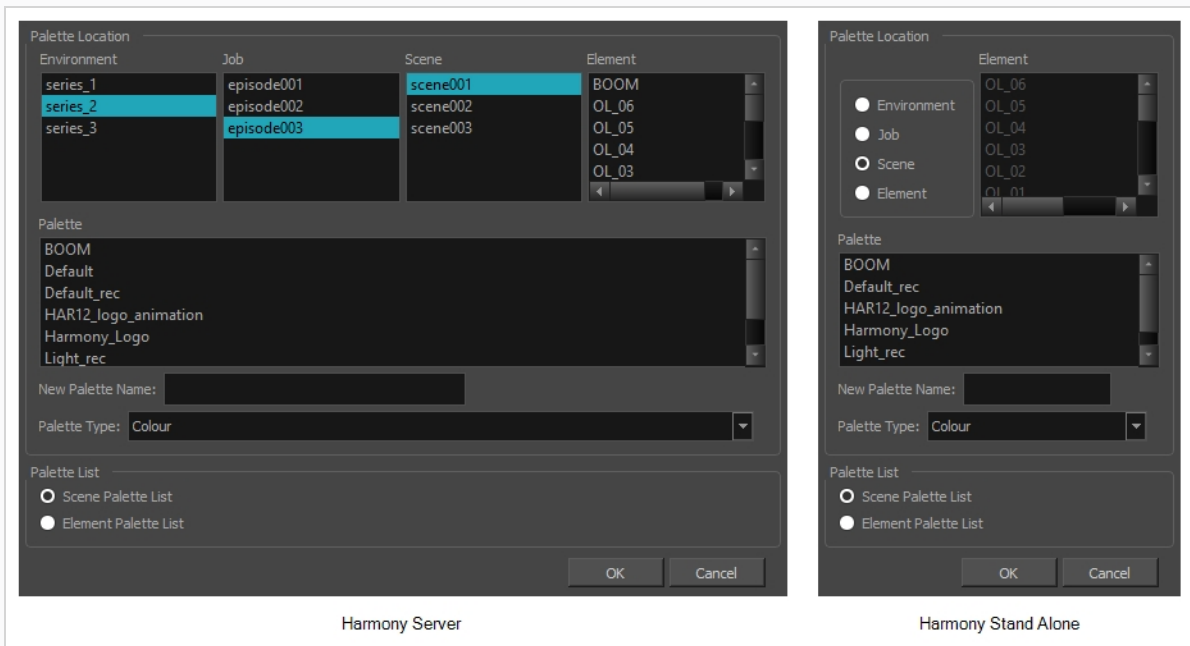
   - From the Colour view menu, select **Palettes > New**

   The Palette Browser dialog box opens.

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3. In the **Palette Location** panel, select the location where you want to store the palette file. If you are using Harmony Server, you can store the palette in any environment, job, scene or element on your database. In Harmony Stand Alone, you can store the palette in the scene, inside one of its element, or inside its provisional job or environment. For more information, see *About Palette Storage Locations* on page 291.

4. In the **New Palette Name** field, enter the name for the new palette. The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.

5. Set the **Palette Type** to **Colour** if you want to create a colour palette, or to **Pencil Texture** if you want to create a pencil texture palette—see About Pencil Line Textures.

6. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see *About Scene and Element Palette Lists* on page 290.
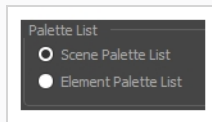
7. Click **OK**.

   The new palette appears in the palette list.

Linking a Colour Palette

Linking a palette means adding a palette to your scene's palette list, or to an element's palette list, without making a local copy of that palette in your scene's palette library. This means your scene will depend in this palette remaining in its location in order to render its colours, but it allows you to reuse the same palette files for several scenes, making sure that recurring characters and objects keep their original colours across a production and that any late change done to their colour scheme can be quickly reflected across all your scenes.

In Harmony Server, environments, jobs, scenes and elements can all have their own palette library, and you can link to a palette from the palette library of any environment, job, scene or element in your database. However, to make it easier to ensure scenes do not lose access to their palettes, it is recommended to only link to palettes from within the scene's own environment, job, scene or elements. The most important reason for this is that if you export a scene that uses palettes from other jobs, environments, scenes or elements, these palettes will not be exported. Hence, they will be missing if you import them in a different database. However, you can export a scene with all of its assets along with the assets contained in its own job and environment.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

How to link a colour palette

1. If you want to add the palette to an element's palette list, select a drawing from the element for which you want to create a palette in the Timeline, Xsheet or Camera view.

2. Do one of the following:

   - From the Colour View menu, select **Palettes > Link**.

   - Right-click and select **Link**.

   - Click the Link Palette 📁 button.

   The Palette Browser: Link Palette dialog box opens.

Harmony Server　　　　　　　　　　　　　　　Harmony Standalone
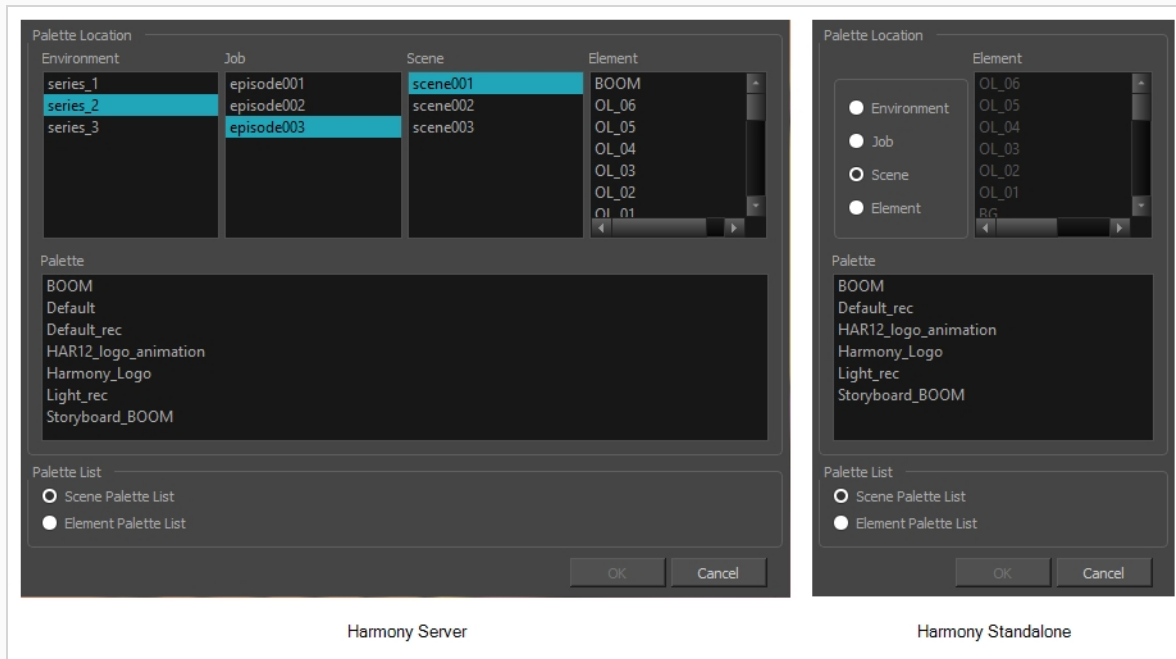
3. In the **Palette Location** panel, browse to the location of the palette you want to link to.

4. In the **Palette** list, select the palette you want to link to.

5. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see _About Scene and Element Palette Lists_ on page 290.

    The palette appears in the Colour view.

Importing a Colour Palette

You can import an existing palette from your file system or network into your scene. This will create a copy of the palette file and add it to your palette list.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**
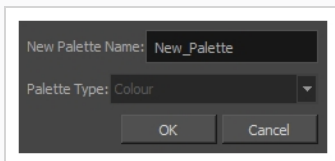
How to import a palette into your project (Basic palette list mode)

1. Do one of the following:

   - From the Colour menu ☰, select **Palettes > Import**.

   - Right-click on the palette list and select **Import**.

   The Browser window opens.

2. Browse for a palette file located (`*.plt`) on your hard drive. You can usually find a scene's palettes by browsing to the **palette-library** sub-folder of the scene's folder.

3. Click **Open**.

   The Import Palette dialog box appears.

4. In the **New Palette Name** field, enter the name for the imported palette.

   The palette is copied to your project and added to your scene's palette list.

How to import a palette into your project (Advanced palette list mode)

1. If you want to add the palette to an element's palette list, select a drawing from the element for

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which you want to create a palette in the Timeline, Xsheet or Camera view.

2. Do one of the following:

    - From the Colour menu ☰, select **Palettes > Import**.

    - Right-click on the palette list and select **Import**.

    The Browser window opens.

3. Browse for a palette file located (`*.plt`) on your hard drive. You can usually find a scene's palettes by browsing to the **palette-library** sub-folder of the scene's folder.

4. Click **Open**.

    The Palette Browser dialog box appears.

Harmony Stand Alone   Harmony Server
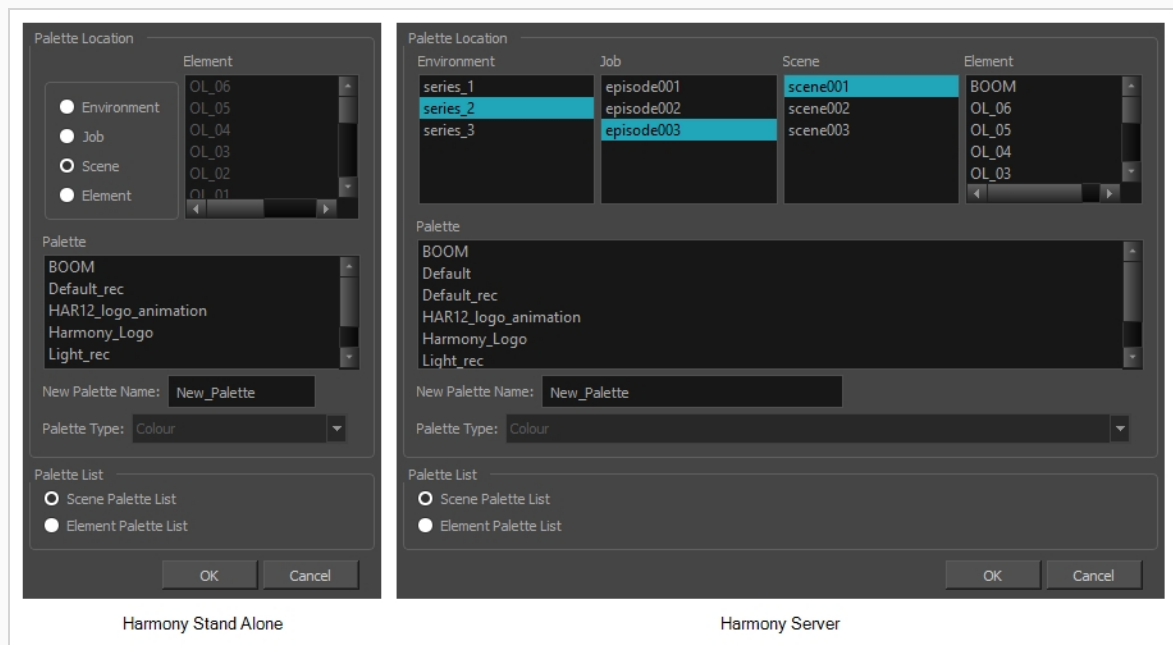
5. In the **Palette Location** panel, select the location where you want to store the palette file. If you are using Harmony Server, you can store the palette in any environment, job, scene or element on your database. In Harmony Stand Alone, you can store the palette in the scene, inside one of its element, or inside its provisional job or environment. For more information, see *About Palette Storage Locations* on page 291.

6. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see *About Scene and Element Palette Lists* on page 290.

7. In the **New Palette Name** field, name the imported palette.

    The palette is copied to your project and added to your scene's palette list.

Renaming a Palette

You can rename a colour palette to keep your list organized.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
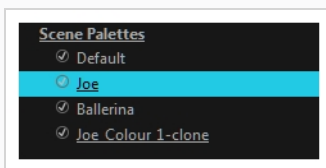> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode 🔒 toggle button is pressed in.
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to rename a palette

1. In the Colour view, select the palette to rename.

2. Do one of the following:

   - Right-click and select **Rename**.

   - From the Colour View menu, select **Palettes** > **Rename**.

3. In the Rename dialog box, give the palette a new name and click **OK**.
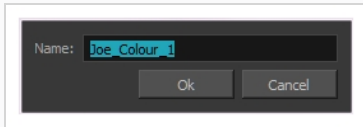
Removing a Palette

You can remove palettes from your Palette list if they're not needed in your scene. The actual palette file will not be deleted, so you can add it back to your palette list later if you need it.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

How to remove a palette

1. In the Colour view, select the palette to remove.
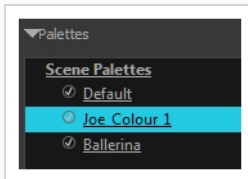
2. Do one of the following:

   - From the Colour View menu, select **Palettes** > **Remove**.

   - Right-click on the selected palette and select **Remove**.

   - Click the Remove Palette — button located above the Palette list.

   If the palette was used in your scene, the zones painted with its colours turn red.

NOTE

If you wish to delete the palette file, you can select the **Remove and Delete From Disk** option from the same menu. You will be prompt to confirm the deletion. Note that the palette will be deleted from your file system, and there will be no way to recover it.

Duplicating a Palette

A duplicated palette is a simple copy of the original palette. When you duplicate a palette, the duplicated palette will have the same colour names and values, but will have different colour IDs so that Harmony does not mix it up with its original palette. This is useful when you want to create different palettes for similar models, but want to avoid having to create the palette and its colours all over again. You can just start with your duplicate palette, tweak the colours and add and remove colours as needed.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**
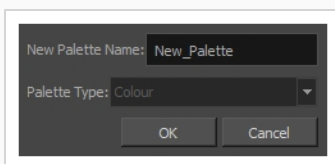
How to duplicate a palette (Basic palette list mode)
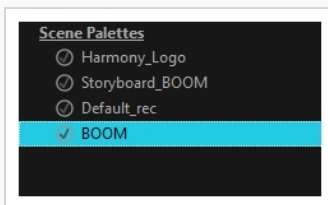
1. In the Colour view, select a palette to duplicate.

2. Do one of the following: From the Colour menu, select **Palettes > Duplicate** or right-click and select **Duplicate**.

    - Right-click on the palette and select **Duplicate**.

    - Open the Colour menu ☰, then select select **Palettes > Duplicate**.

   The Duplicate palette dialog box opens

3. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-copy". The palette list above this field lists the

palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.
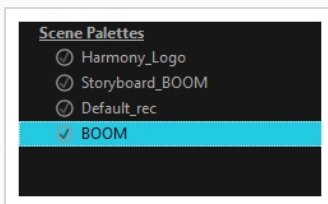
4. Click **OK**.

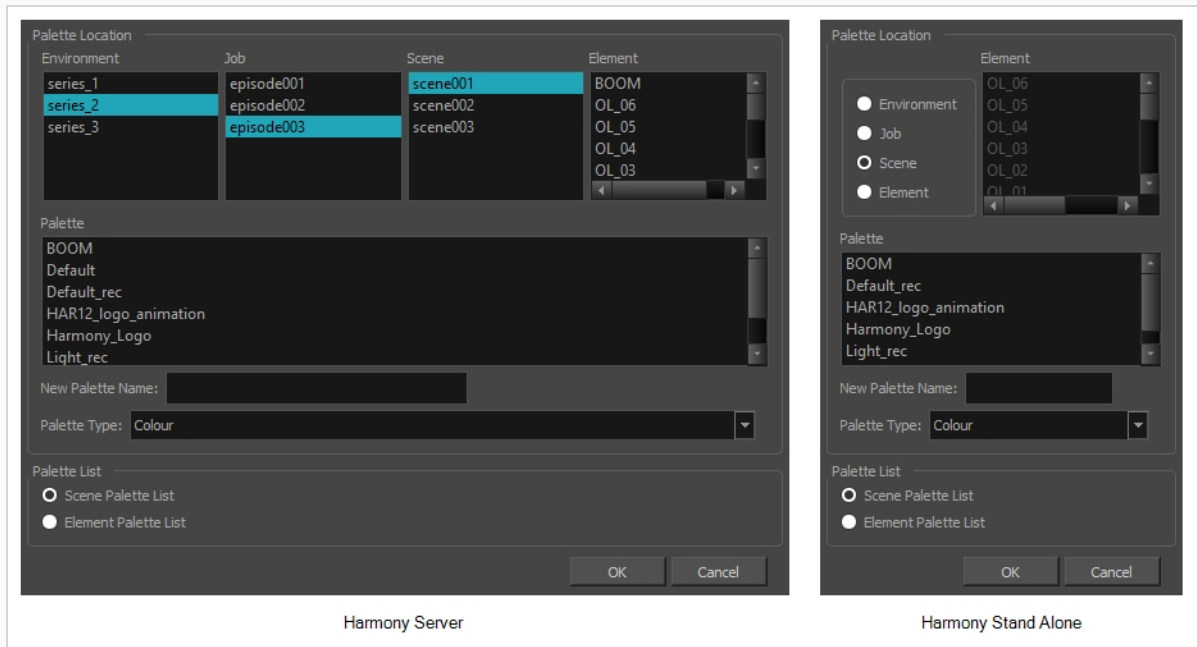   The duplicated palette appears in the palette list.
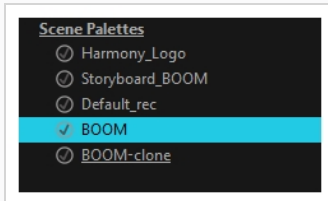
How to duplicate a palette (Advanced palette list mode)

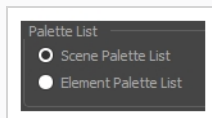1. In the Colour view, select a palette to duplicate.

2. Do one of the following: From the Colour menu, select **Palettes > Duplicate** or right-click and select **Duplicate**.

   - Right-click on the palette and select **Duplicate**.

   - Open the Colour menu ☰, then select select **Palettes > Duplicate**.

   The Palette Browser dialog box opens.

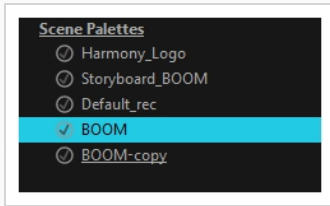Harmony Server   Harmony Stand Alone

3. In the **Palette Location** panel, select the location where you want to store the palette file. If you are using Harmony Server, you can store the palette in any environment, job, scene or element on your database. In Harmony Stand Alone, you can store the palette in the scene, inside one of its element, or inside its provisional job or environment. For more information, see *About Palette Storage Locations* on page 291.

4. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-copy". The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.

5. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see *About Scene and Element Palette Lists* on page 290.


6. Click **OK**.

    The duplicated palette appears in the palette list.

Cloning a Palette

Cloning a palette creates an exact copy of the palette, where each colour swatch has the same colour ID as in the original palette, but which you can modify independently afterward. Since painted zones in drawings are associated to their colour by their colour ID, this means that any drawing colored with the original palette can have its colours replaced with the cloned palette's colours just by switching the palette in the scene with the cloned palette.

A good example of how this can be useful is when you want to make variants of a character's palette. A character usually has only one master palette, although there are times when the characters are placed in different lighting conditions and require a different colour shading. The night palette is a popular choice when a scene or sequence changes from day to night. Instead of creating a different palette for the character and repainting all of its zones with the night palette, you can just clone the character's master palette, tweak its colours, and the character will have its original colours or its night colours depending on which one of the palettes is in the palette list, without having to repaint your drawings.
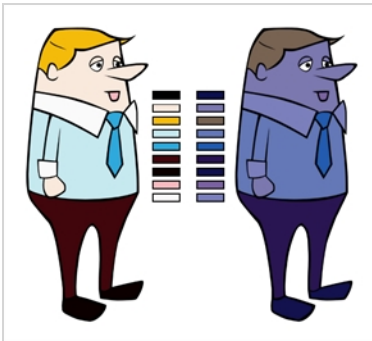
When a palette and its clone are present in the same scene, Harmony uses the palette that is highest in the list. If one palette clone is present in the scene's palette list and another clone is present in the element's palette list, the element will use the palette in its own palette list.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**
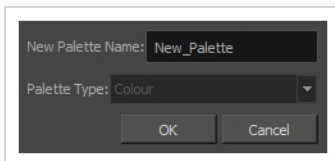
How to clone a palette (Basic palette list mode)
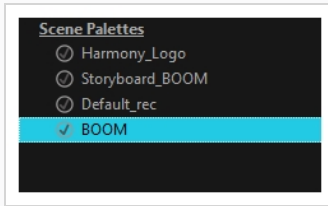
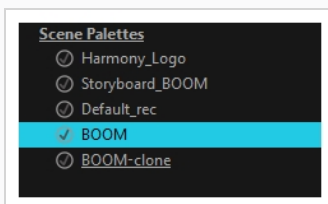1. In the Colour view, select a palette to clone.

2. Do one of the following: From the Colour menu, select **Palettes > Clone** or right-click and select **Clone**.

   - Right-click on the palette and select **Clone**.

   - Open the Colour menu ☰, then select select **Palettes > Clone**.
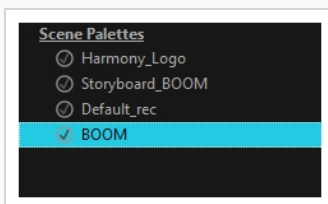
   The Clone palette dialog box opens

3. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-clone". The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.

4. Click **OK**.

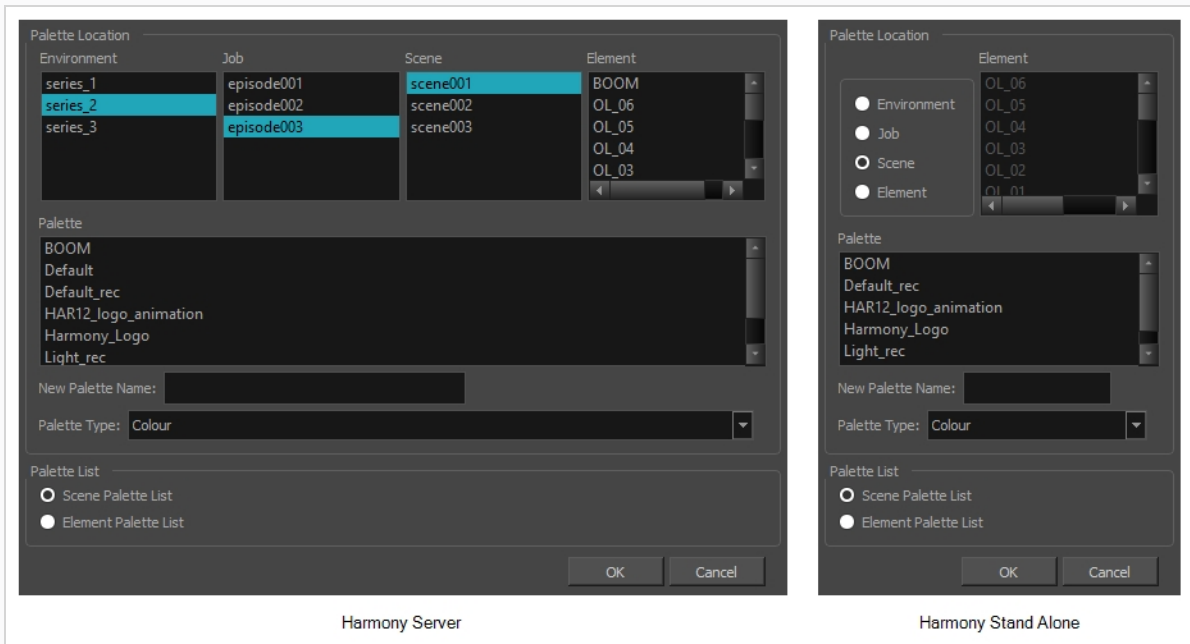   The cloned palette appears in the palette list.

How to clone a palette (Advanced palette list mode)

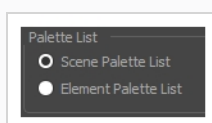1. In the Colour view, select a palette to clone.

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2. Do one of the following: From the Colour menu, select **Palettes > Clone** or right-click and select **Clone**.

    - Right-click on the palette and select **Clone**.

    - Open the Colour menu ≡, then select select **Palettes > Clone**.

   The Palette Browser dialog box opens.

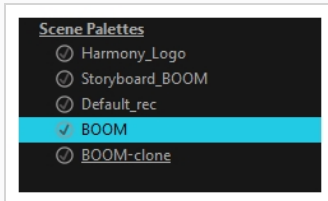Harmony Server   Harmony Stand Alone

3. In the **Palette Location** panel, select the location where you want to store the palette file. If you are using Harmony Server, you can store the palette in any environment, job, scene or element on your database. In Harmony Stand Alone, you can store the palette in the scene, inside one of its element, or inside its provisional job or environment. For more information, see *About Palette Storage Locations* on page 291.

4. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-clone". The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not already used by another palette.

5. In the **Palette List** panel, select whether you want the palette to be added to the **Scene Palette List**, or to the **Element Palette List** of the currently selected element. Note that in the latter case, the palette will only be usable by the element. For more information, see *About Scene and Element Palette Lists* on page 290.

6. Click **OK**.

The cloned palette appears in the palette list.

> **NOTE**
>
> You can modify your cloned palette by changing its colour swatches individually, or you can use the Tint Panel to change all of the palette's colour swatches simultaneously—see *Tinting a Palette's Colour Swatches* on page 320.

Tinting a Palette's Colour Swatches

You can use the Tint Panel dialog to offset, blend or mix all the different colour swatches in a palette simultaneously. This can be useful if you want to give a cloned palette a different tint, for example to make a night-themed version of a character's master palette.
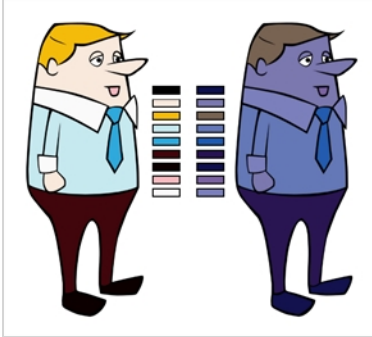

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:
>
> - In the Colour view, make sure the Edit Palette Mode ⬜ toggle button is pressed in.
>
> - In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
>
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.

How to tint a palette

1. In the Palette list, select the palette you want to tint.

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

   The Blend/Offset Tint panel opens.
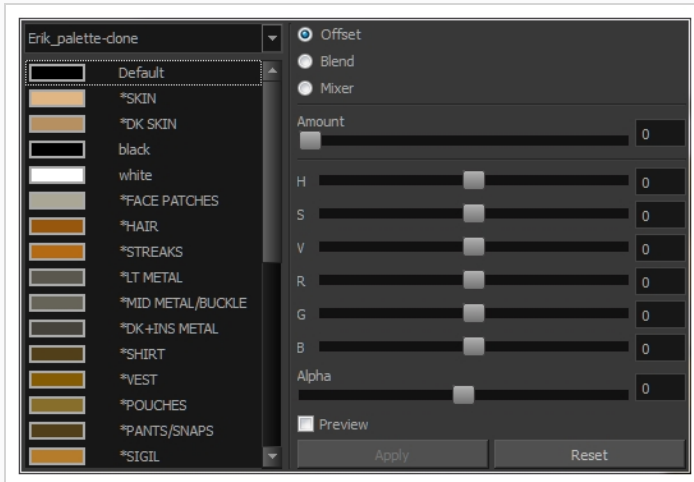
3. Select one or more colours to modify. You can select all your colours by pressing Ctrl + A (Windows/Linux) or ⌘ + A (macOS).

4. Offset, blend, or mix the colours using the sliders and increasing the Amount value.
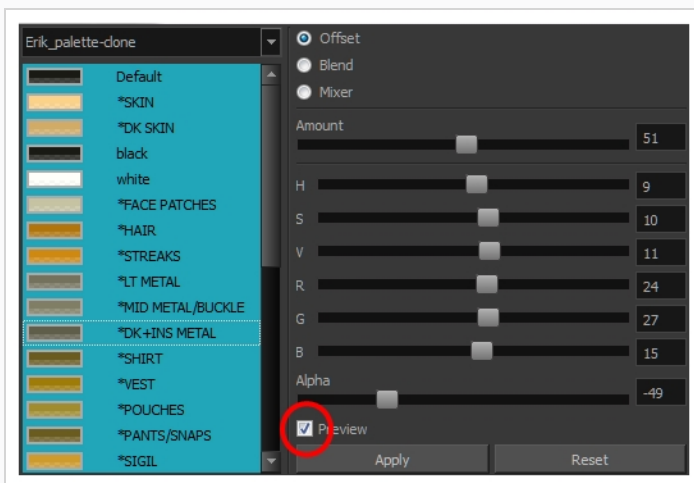
5. Select the **Preview** option to see a preview of the colours while you adjust them.

Reordering Palettes in the Palette List

You may want your palettes to be listed in a specific order. In a lot of cases, this is strictly a matter of convenience. However, if your palette list contains palettes that have been cloned off each other, Harmony will use the palette that is located the highest in the list to determine the colours to use in the drawings. Hence, if you are using cloned palettes, you must mind the order of your palettes in the palette list. For more information, see *Cloning a Palette* on page 316.

> **NOTE**
>
> If a palette in the scene's palette list has been cloned into an element's palette list, Harmony will use the palette in the element's palette list for this element.

> **NOTE**
>
> If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:
>
> - From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
> - Right-click on the palette list and select **Get Rights to Modify Palette List**.
> - From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

How to reorder palettes in the palette list

1. Select the palette you wish to reorder.

2. Do one of the following:

   - In the Palette list toolbar, click the Up ⬆ or Down ⬇ buttos.

   - From the Colour View menu, select **Palettes > Move Up** or **Move Down**.
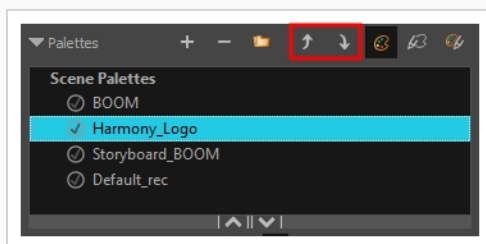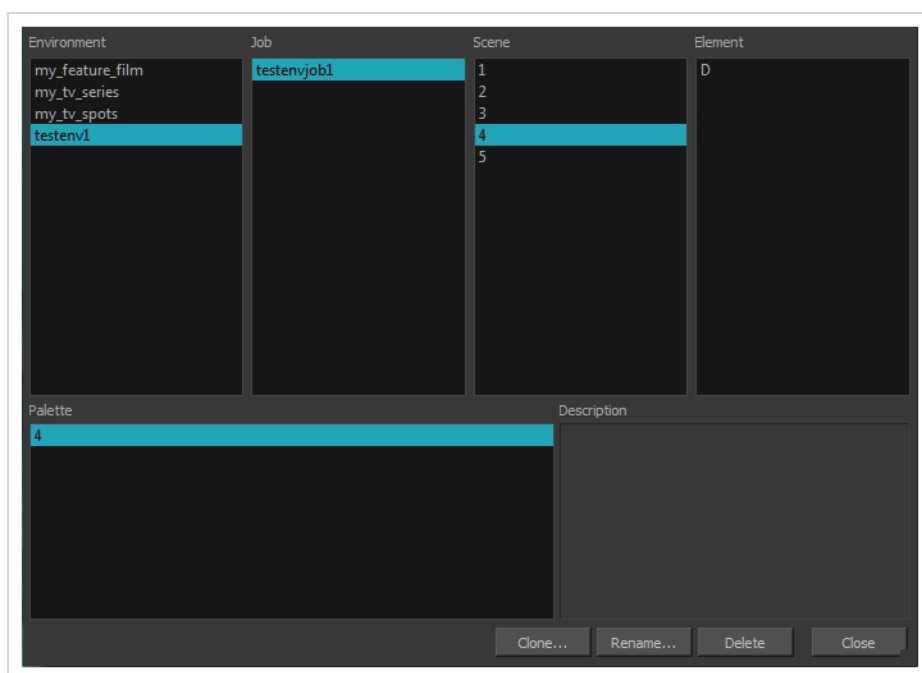
Palette Operations

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.

> **NOTE**
>
> The Palette Operations dialog box never makes any change to any palette list in your database. All it allows you to do is manipulate palettes files. You should be careful not to rename or delete palettes that are required by some of your existing scenes, or Harmony will be unable to locate those palettes when you open one of those scenes.
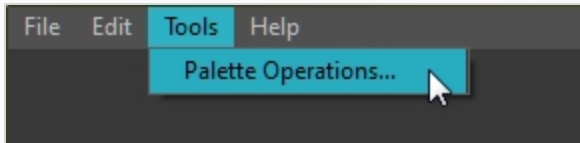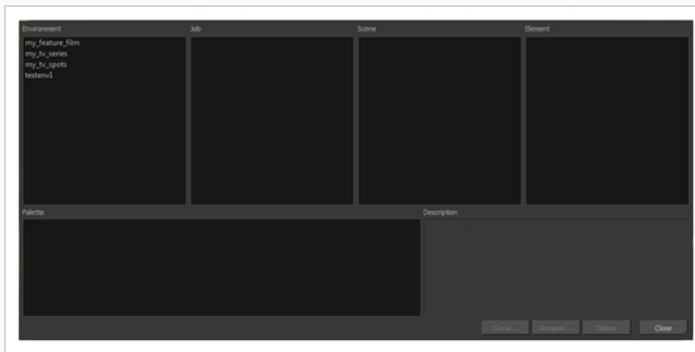
Opening the Palette Operations Dialog Box

You can open the Palette Operations dialog box in Harmony Server.

How to open the Palette Operations dialog box

1. Start Harmony Paint and log in.

2. Close the Database Selector dialog box.

3. From the top menu, select **Tools > Palette Operations**.
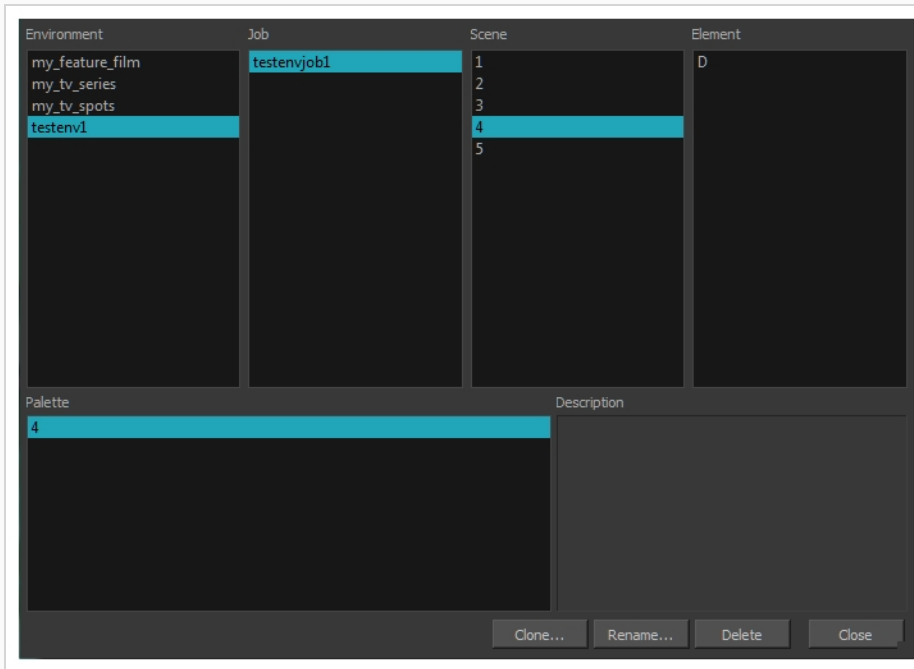

The Palette Operations dialog box opens.

Cloning a Palette in the Palette Operations Dialog Box

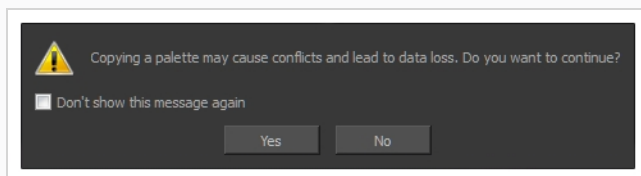From the Palette Operations window, you can clone palettes in Harmony Server.

How to clone a palette in the Palette Operations dialog box

1. Select the palette you want to clone at the location and level in which it was stored.
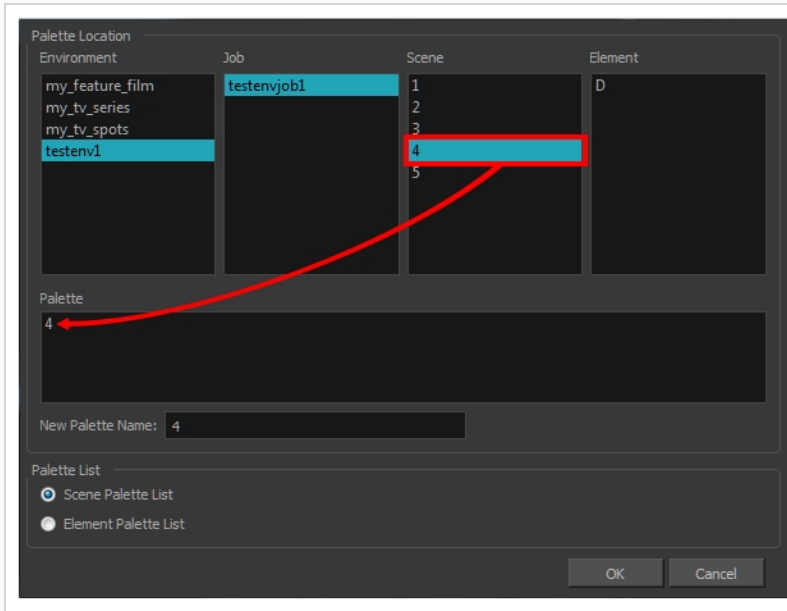

2. Click **Clone**.

   A Warning dialog box opens.

3. Select the **Don't show this message again** option if you do not want to see this message every time you perform this operation.

4. Click **Yes**.

   The Palette Browser dialog box opens.

5. Select the level to store the palette file.

6. In the New Palette Name field, enter the name of your palette.

7. Click **OK**.

Renaming a Palette in the Palette Operations Dialog Box

You can rename palettes in the Palette Operations dialog box in Harmony Server.
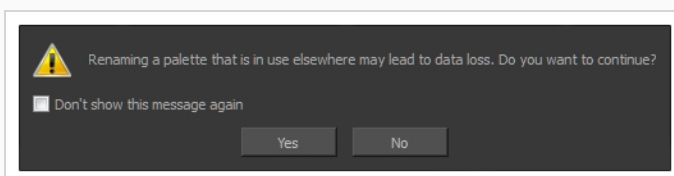
How to rename a palette in the Palette Operation dialog box

1. Select the palette you want to rename at the location and level in which it was stored.
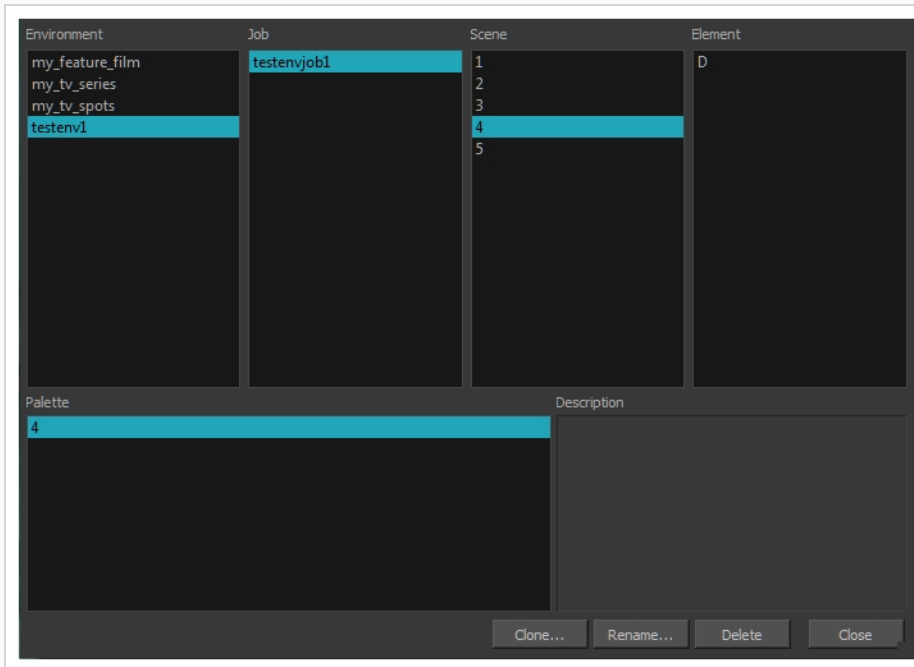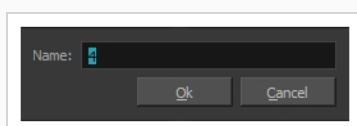

2. Click **Rename**.

   A Warning dialog box opens.

3. Select the **Don't show this message again** option if you do not want to see this message every time you perform this operation.

4. Click **Yes**.

   The Rename Palette dialog box opens.

5. Type in a name for the palette.

6. Click **OK**.

Deleting a Palette in the Palette Operations Dialog Box

You can delete palette files from the Palette Operations dialog box in Harmony Server.
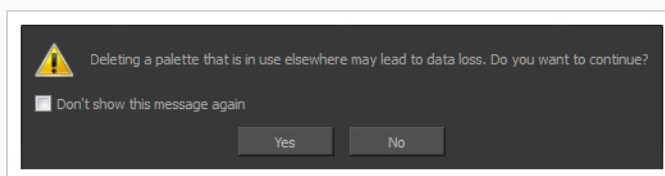
How to delete a palette in the Palette Operation dialog box

1. Select the palette you want to delete at the location and level in which it was stored.
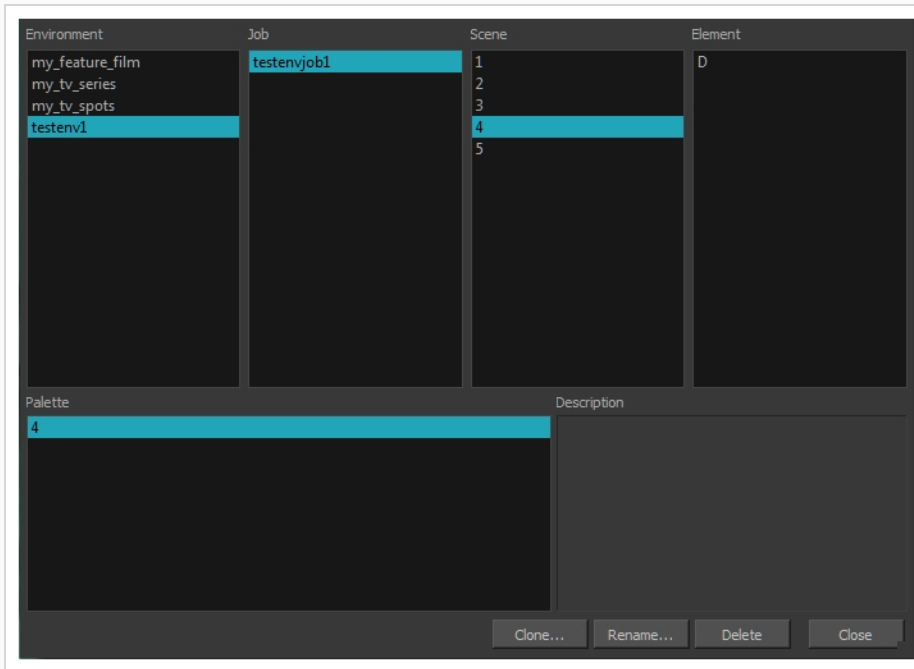
2. Click **Delete**.

   A Warning dialog box opens.

3. Select the **Don't show this message again** option if you do not want to see this message every time you perform this operation.

   > **NOTE**
   >
   > It is not recommended to disable the warning message as deleting a palette cannot be undone.

4. Click **Yes**.

About Painting

Harmony is optimized to ink and paint drawings efficiently. Since most of the drawings are vector-based, the colour zones are completely filled and there are no scattered spots left blank. Also, there are some actions that can be applied on an entire animation sequence at once, like dirt removal, some colour filling, line repainting, and so on.

When traditional animation is traced, cleaned up, scanned in and properly exposed, it's time for the ink and paint process. This consists of cleaning all dirt and hair (for example, dust that was in the scanner, dots that do not belong in the drawing, extra floating artwork around the drawing that must be removed), painting the lines and filling the colours in the empty zones on an entire animation sequence.

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For paperless animation, the drawings are cleaned up directly in Harmony, so there is generally no dirt to clean, only painting and inking.

Harmony uses palettes to hold all the colours you need to paint your elements. A palette is created by assigning a set of colours to each character, prop or effect. The colour styling artist will create a new palette and add a new colour for each zone of the character, such as the skin, hair, tongue, shirt, pants, and so on. Each colour is known as a *colour swatch*—see *About Palettes* on page 286.

Di-Gata Defenders © Nelvana Limited, Corus® Entertainment
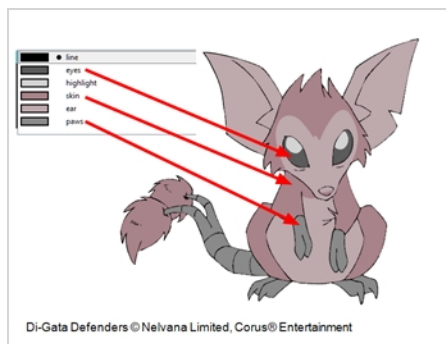
About Colour Models

Once you have a fully painted drawing, you can use it as a colour model and load it in the Model view. That drawing can be used and loaded in any of your Harmony scenes—see *Painting Drawings* on page 342.
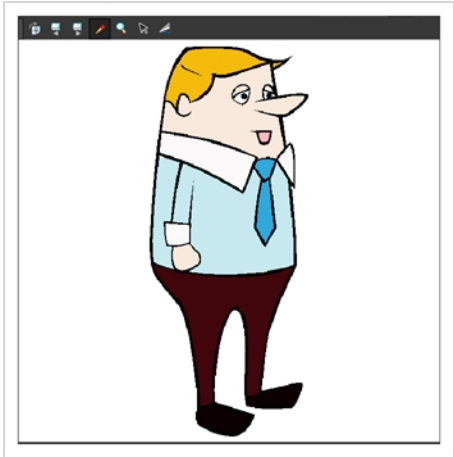
Once a drawing is loaded in the Model view, you can use the Model view Dropper to select a colour from the model and use it to paint in your Drawing view without having to pick the colour from the colour palette.

You can do more than just copy colours from a colour model. Harmony gives you the ability to copy parts of the character directly from its colour model and paste these elements into the Drawing view.

Loading Colour Models

T-ANIMPA-004-005

You can load any TVG drawings in your Model view. To avoid browsing for models every single time you work on your scene, you can store default models in your scene and load those.

How to browse for a colour model drawing on your hard drive

1. Do one of the following:

   - Right-click in the Model View and select **Import Model**.

2. In the Browser window, browse for any *.tvg drawing file on your hard drive or in the database for Harmony Server.

3. Click **Open**.

   The model appears in the Model view.

How to load the default models

1. In your scene's folder, create a new folder and name it `models`.

2. On your hard drive, copy the *.tvg drawing file you want to use as colour models in your scene.

3. Paste the copied models in the `models` folder you created.

4. Do one of the following:

   - Right-click in the Model View and select **Load Default Models**.

Clearing Colour Models

You can remove colour models from the Model view.

How to clear a colour model

- Right-click in the Model view, select **Clear Model** or press Del.

Flipping Between Models

Once your models are loaded in the Model view, you can flip through them using a keyboard shortcut or toolbar buttons.

How to flip between models

1. Do one of the following:

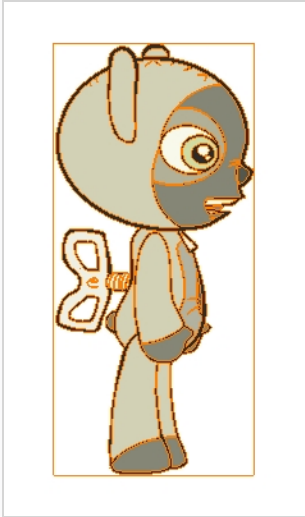   - Right-click in the Model View and select **Next Model** or **Previous Model**.

    The previous or next model appears in the Model view.

Copying Colour Models

You can copy pieces or the entire colour model to paste in your scene,

How to copy the entire model from the Model view

1. Right-click and select the Select ↖ tool.

2. In the Model view, select your model.

3. Press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).

4. Select the Drawing view, then go to the top menu and select **Edit > Paste Drawing Object**or press Ctrl + V (Windows/Linux) or ⌘ + V (macOS).

   The model appears in the selected view.

How to copy part of the model from the Model view

1. Right-click in the Model view and select Cutter Selection or press Alt + T.

2. In the Model view, use the Cutter tool to create a selection around the part of your model that you want to copy.
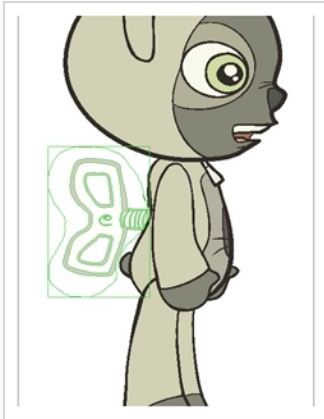
3. PressCtrl + C (Windows/Linux) or ⌘ + C (macOS).

4. In the Timeline view, make sure you have the correct layer and frame selected.

5. Do one of the following:

   - Select the Drawing view and select **Edit > Paste Drawing Object**.

   The model appears in the selected view.

About Dirt Cleanup

T-INK-002-001

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.

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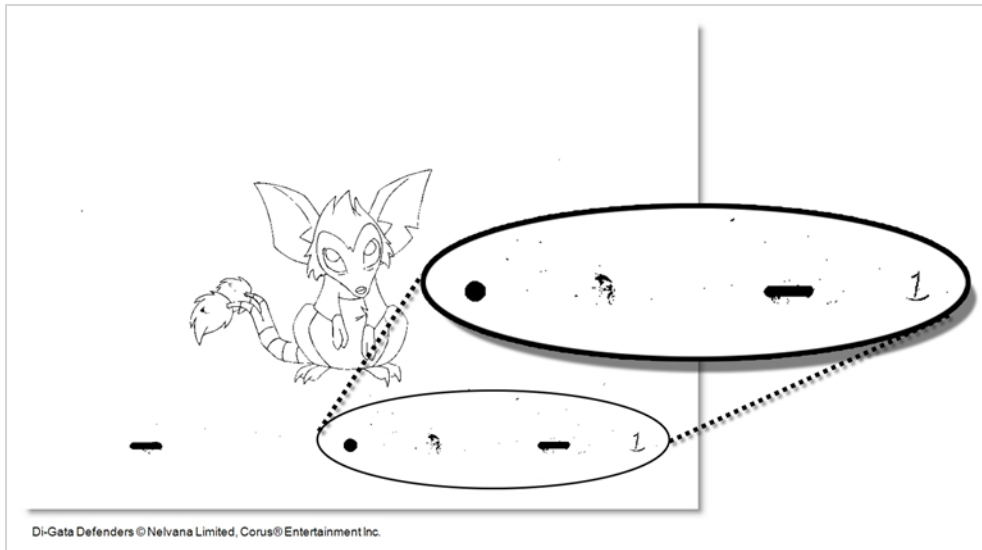
If there are some marks that cannot be removed with the automated tools, you can erase them with the Eraser tool or select them with the Select tool and then delete them. It's always safer to select and delete them than to erase them, so you do not overlook anything.

Removing Dirt

The Remove Dirt tool selects small dots and hairs on the drawing.

Raising the Remove Dirt level will select bigger dots. When selecting larger dots, be careful not to lose small details like pupils and nostrils. Once you have chosen the level, you can apply it to the current drawing or the entire animation sequence. This is a quick way to get rid of most dirt and dust.

During this process, the dirt that will be removed is highlighted in red.

How to use the Remove Dirt tool

1. Do one of the following:

   - From the top menu, select **Drawing > Remove Dirt.**

   - Press Shift + D.
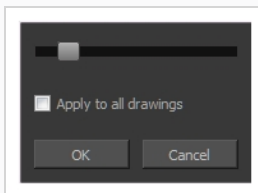
2. Increase the Remove Dirt value by moving the slider to the right.

3. Select the **Apply to All Drawings** option if you want to apply the operation to all drawings in the layer.

   Di-Gata Defenders © Nelvana Limited, Corus® Entertainment Inc.
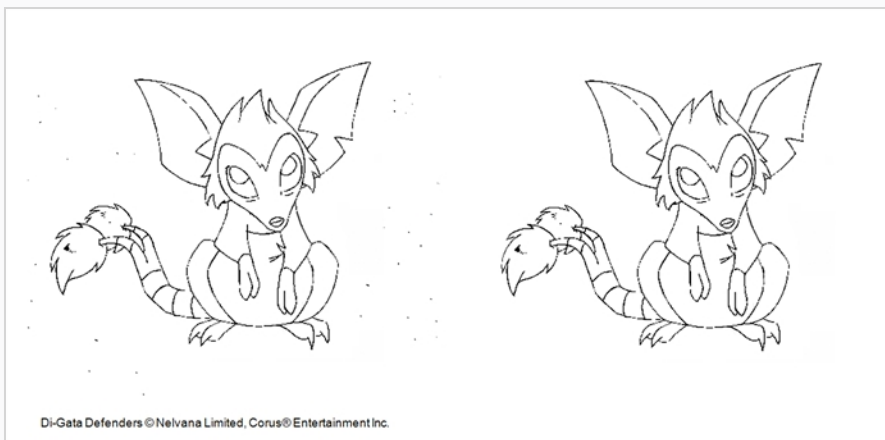
Removing Dirt Outside the Selection

T-INK-002-003

The Remove Art Outside Selection option lets you remove any art existing outside a selection. It is recommended that you clean your Colour Art level as well. If you have a stroke accumulation in your Colour Art, it can result in large output files, especially if you work in high-definition resolutions.

How to clean dirt with Remove Art Outside Selection

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

2. From the top menu, select **Options > Permanent Selection**.

3. Draw a selection around the animation making sure to include the entire animation sequence.

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

4. From the top menu, select **Selected** one of the following options:

   - **Remove Art Outside Selection** to delete artwork outside your selection on a single drawing.

   - **Remove Art Outside Selection on All Drawings** to delete artwork outside your selection on all the drawings.

   The art outside the selection is removed.

Removing the Art Inside the Selection

You can delete any art inside a selection with the Remove Art Inside Selection option. We recommend that you clean your Colour Art level as well. If you have a stroke accumulation in your Colour Art, it can result in large output files, especially if you work in high definition resolutions.

You can simultaneously apply this operation to all your drawings in the layer by using the Remove Art Inside Selection on All Drawings command.

How to clean dirt with Remove Art Inside Selection

1. In the Tools toolbar, click the Select ⬉ tool or press Alt + S.

2. To apply the action to your entire animation, select **Options > Permanent Selection**.

3. In the Drawing view, draw a selection around the animation. Make sure the area is large enough to include all the zones to be cleaned up on all drawings.

4. From the top menu, select **Selected > Remove Art Inside Selection** to delete artwork inside your selection on one single drawing. You can also press Delete.

5. To apply the action on all your drawings in the layer, select **Selected > Remove Art Inside Selection on All Drawings** to delete artwork inside your selection on all the drawings.

Removing Hair

The Remove Hair command 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.

How to use the Remove Hair tool

1. Select the drawing containing the drawing to clean.

2. From the top menu, select **View > Show Strokes** to display the invisible lines or press K.

3. In the top menu, select **Drawing > Remove Hair**.

   The Remove Hair dialog box opens.
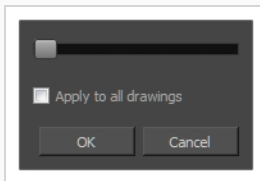
4. Move the slider to the right to increase the number and length of hairs to be selected.

5. Select the **Apply to All Drawings** option if you want to apply the operation to all the drawings in the layer.
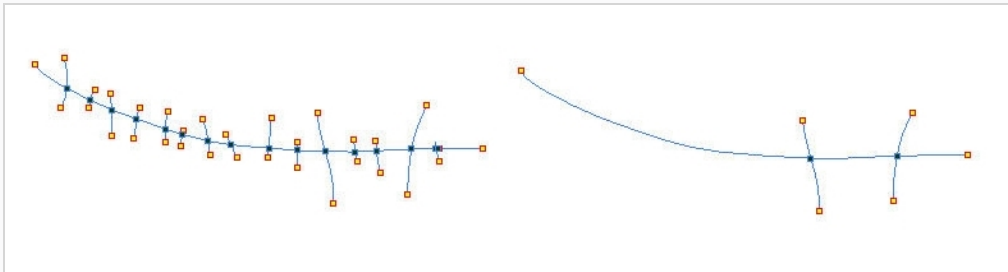
6. Click **OK**.

Painting Drawings

The main tool you will use to paint your drawings with is the Paint tool. The Paint tool can be used in several different modes, which can be customized in the Tool Properties view.

The Paint tool paints closed zones, including brush strokes and pencil lines. If there are gaps in the lines defining a zone, you must close them using the Brush, Pencil, or Close Gap tools or the Automatic Close Gap option.

> **NOTE**
>
> To learn more about the Paint tool options, see the Reference guide .

How to paint drawings

1. Select the drawing on which you want to paint.

2. Do one of the following:

   - In the Tools toolbar, click the Paint tool.

   - From the top menu, select **Tools > Paint** or press Alt + I..

   - Press Alt + I.

   In the Tool Properties view or Tools toolbar, you can select additional painting modes.
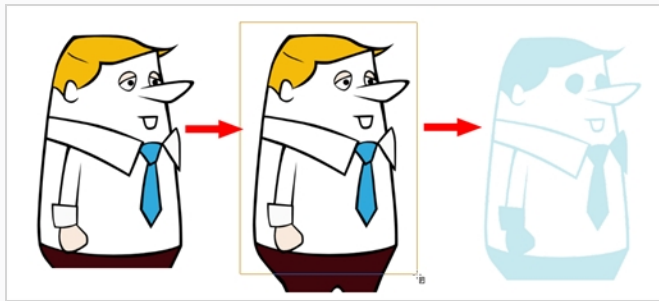
   - The Paint mode paints everything it touches, including empty and filled zones.
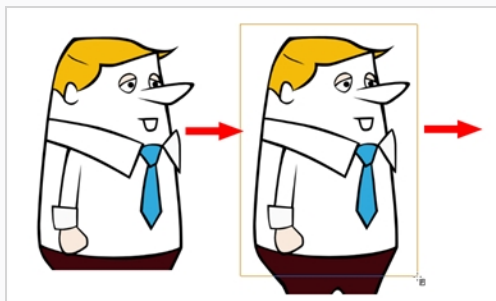

   - The Paint Unpainted mode paints only empty zones. Any line or filled zone will remain unchanged.
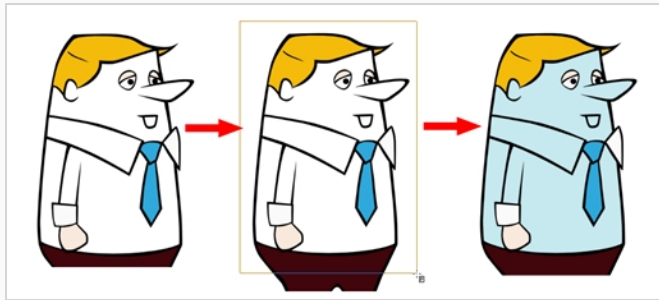
- The Repaint mode paints everything it touches except empty zones. Any zone that is not painted will remain intact.

- The Unpaint mode unpaints everything it touches, including empty and filled zones.

3. In the Colour view, select a colour.

4. In the Drawing view, start painting. Click on a zone or pencil line to paint it, or trace a lasso or marquee selection to paint several zones or pencil lines at the same time.
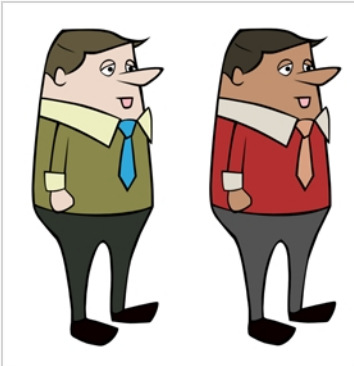
> **NOTE**
>
> The last colour you select while using the Paint tool will be used the next time you

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> select the Paint tool if you're using the unlocked painting tools in the Colour view.

Authors

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Repainting

You can use the Paint tool to click on the zones to repaint. If you click in an empty zone, it will fill the area.

You can repaint lines, zones, and brush strokes using the Repaint tool. The repaint pencil lines more efficiently, see *Inking Lines* on page 357. The Repaint tool does not fill empty zones, even if they are closed.
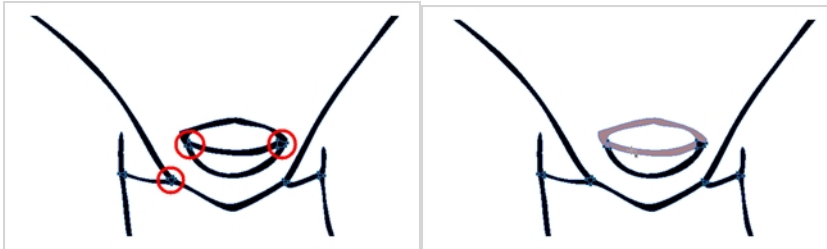
The Brush tool can be used to repaint specific segments. The Brush tool's Repaint Brush mode is used to paint a section by manually painting over the lines. This is useful when the vectorization triangles are not placed as you would like or you simply need to repaint a section of a segment. It is also useful for paperless animation, where there are no triangles. So, the Repaint Brush is used to paint a certain area. It acts like the Brush tool, but will only show on painted areas that are already painted.

Unlike the Brush tool's regular mode, the Repaint Brush mode flattens automatically. The brush strokes are not added one on top of each other.

> **NOTE**
>
> To avoid repainting specific colours, see Protecting Colours

How to access the Repaint Tool

1. In the Tools toolbar, select the Repaint 🍭 tool. You can also find the option in the Tool Properties view when the Paint tool is selected.

2. In the Drawing view, click on the zones to repaint. You can also make a lasso or marquee selection around several zones.

How to enable the Repaint Brush mode

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

2. In the Tool Properties view, click the Repaint Brush 🖌 button.

3. In the Drawing view, draw on the zones to repaint.

Repainting a Selection

The Repaint Selection command is used to repaint any art inside a selection. You must first draw a selection using the Select tool in order for this command to be available. You can also click on the colour swatch in the colour palette to automatically repaint your selection.
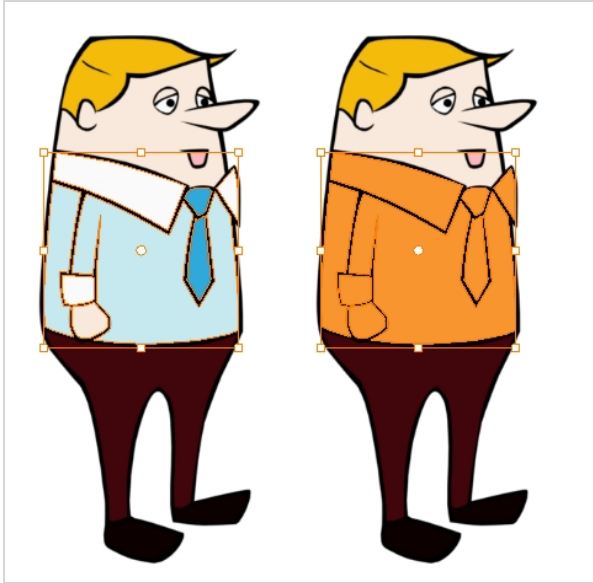
The Repaint Selection On All Drawings command is used to repaint any art inside a selection on all the drawings contained within the same layer. You must enable the Permanent Selection option in the Select tool Tool Properties view and then select an area of your drawing using the Select tool in order for this command to be available. The Permanent Selection option lets you maintain the same selection throughout the drawings of a same layer.
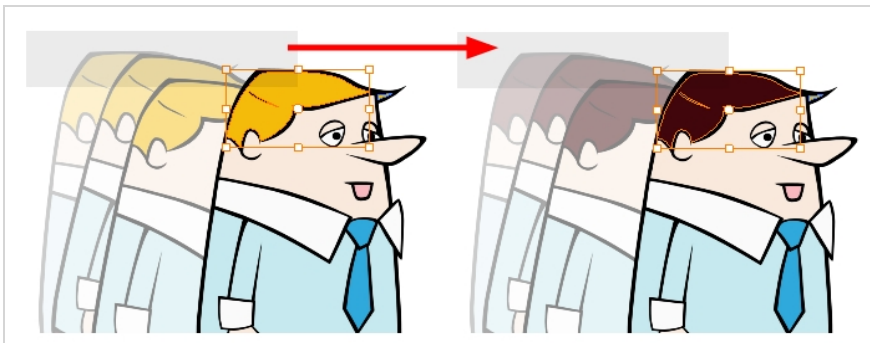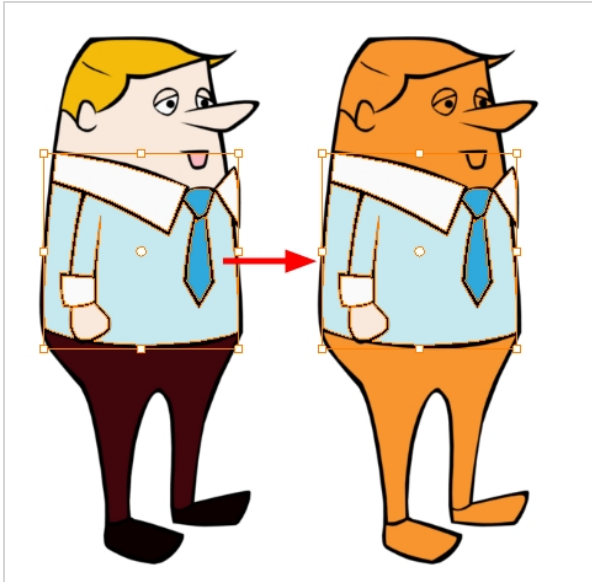

> 📝 **NOTE**
>
> To avoid repainting specific colours, see Protecting Colours
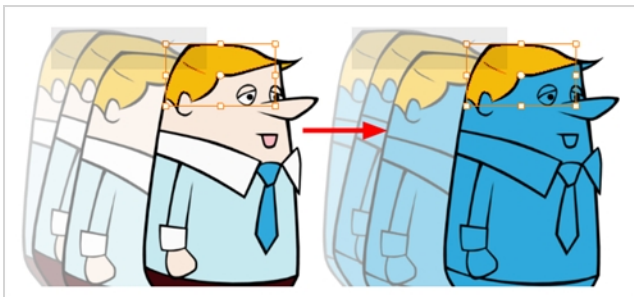
How to repaint a selection

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

2. In the Drawing view, select the zones to repaint.

3. To repaint the selection on all drawings, enable the Permanent Selection 🗇 option in the Select tool Tool Properties view.

4. Do one of the following:

   - From the top menu, Camera or Drawing view menu, select **Drawing > Paint > Repaint Selection** or **Repaint Selection on All Drawings**.

   - From the top menu, select **Selected > Paint > Repaint Selection** or **Repaint Selection on All Drawings**.

Repainting Outside a Selection

The Repaint Outside Selection command is used to repaint any art outside a selection. If no selection has been drawn using the Select tool, the entire drawing will be repainted.

The Repaint Outside Selection On All Drawings command is used to repaint any art outside a selection on all the drawings contained within the same layer. You must enable the Permanent Selection option in the Select tool Tool Properties view and then select an area of your drawing using the Select tool in order for this command to be available. The Permanent Selection option lets you maintain the same selection throughout the drawings of a same layer.

> **NOTE**
>
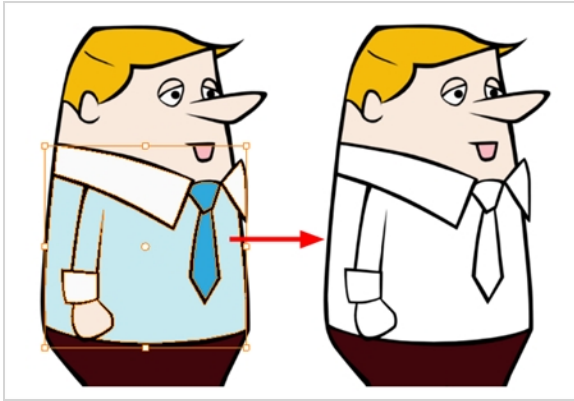> To avoid repainting specific colours, see Protecting Colours

How to repaint outside a selection

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

2. In the Drawing view, select the zones you do not want to repaint.

3. To repaint outside the selection on all drawings, enable the Permanent Selection ⬙ option in the Select tool Tool Properties view.

4. Do one of the following:

   - From the top menu, Camera or Drawing view menu, select **Drawing > Paint > Repaint Outside Selection** or **Repaint Outside Selection on All Drawings**.

   - From the top menu, select **Selected > Paint > Repaint Outside Selection** or **Repaint Outside Selection on All Drawings**.
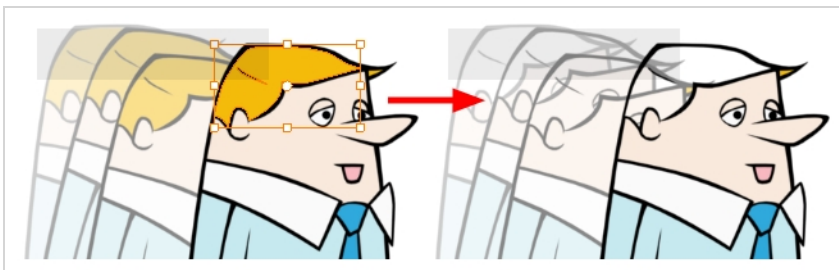
Unpainting a Selection

The Unpaint Selection command is used to unpaint any art existing inside a selection. You must first draw a selection using the Select tool in order for this command to be available.

The Unpaint Selection on All Drawings command is used to unpaint all art contained inside a selection on all the drawings within the same layer.

You must enable the Permanent Selection option in the Select tool Tool Properties view and then select an area of your drawing using the Select tool in order for this command to be available. The Permanent Selection option lets you maintain the same selection throughout the drawings of a same layer.
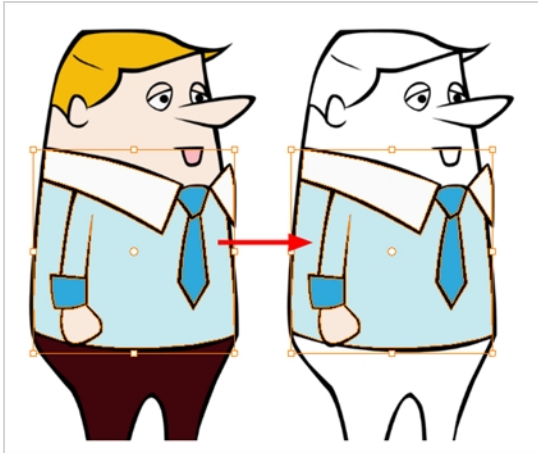

How to unpaint a selection

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

2. In the Drawing view, select the zones to unpaint.

3. To unpaint the selection on all drawings, enable the Permanent Selection ⬙ option in the Select tool Tool Properties view.

4. Do one of the following:

    - From the top menu, Camera or Drawing view menu, select **Drawing > Paint > Unpaint Selection** or **Unpaint Selection on All Drawings**.
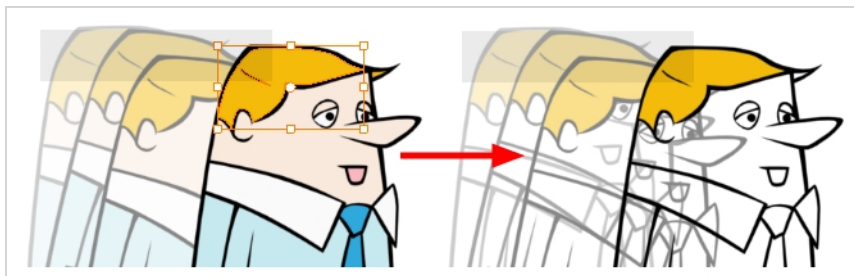
- From the top menu, select **Selected > Paint > Unpaint Selection** or **Unpaint Selection on All Drawings**.

Unpainting Outside a Selection

The Unpaint Outside Selection command is used to unpaint any art existing outside a selection. If no selection have been drawn using the Select tool, the entire drawing will be unpainted.

The Unpaint Outside Selection on All Drawings command is used to unpaint all art outside a selection on all the drawings within the same layer. You must enable the Permanent Selection option in the Select tool Tool Properties view and then select an area of your drawing using the Select tool in order for this command to be available. The Permanent Selection option lets you maintain the same selection throughout the drawings of a same layer.

How to unpaint outside a selection

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

2. In the Drawing view, select the zones you don't want to unpaint.

3. To unpaint the selection on all drawings, enable the Permanent Selection ⤳ option in the Select tool Tool Properties view.

4. Do one of the following:

    - From the top menu, Camera or Drawing view menu, select **Drawing > Paint > Unpaint Selection** or **Unpaint Selection on All Drawings**.

- From the top menu, select **Selected > Paint > Unpaint Selection** or **Unpaint Selection on All Drawings**.

Closing Gaps

When painting, you may notice that some drawing areas are not closed. To close the zone, you can draw the missing line with the Brush or Pencil tool, or close the gap with an invisible line using the Close Gap tool.

The Close Gap tool lets you 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.
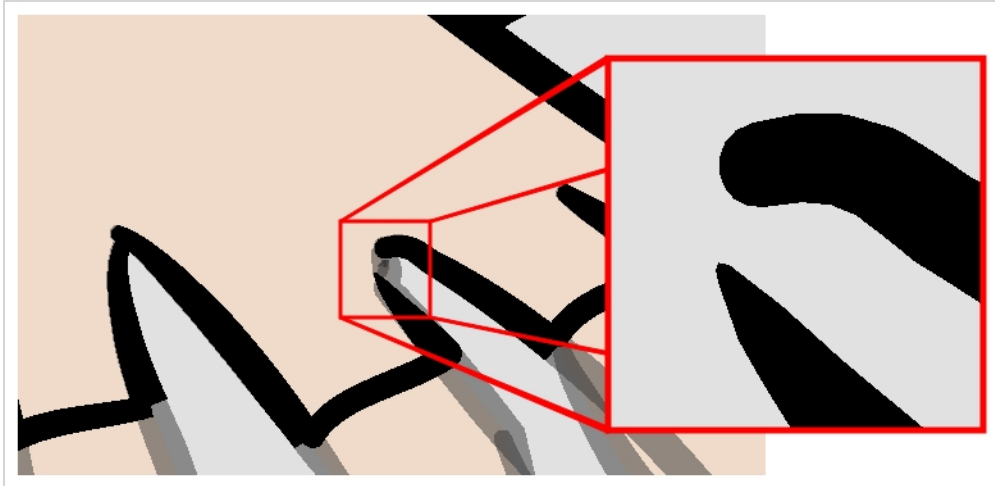
How to close gaps

1. Select **View >Show Strokes** or press K to see a preview of the result.

2. In the Tools toolbar, select the Close Gaps ⬦ tool.

3. In the Drawing view, trace a line near the gap to be closed. Your strokes will be invisible.

4. Enable the Auto-Flatten ⬦ option in the Tool Properties view if you want your strokes to be flattened with your artwork. They will cut overlapping drawing strokes in two pieces.

   The gap automatically closes.
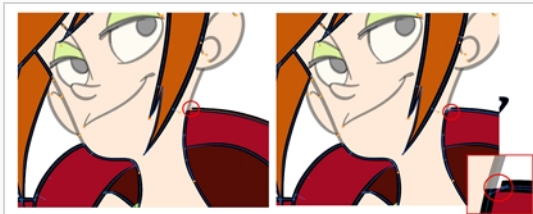
Authors

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Picking a Colour with the Dropper Tool

<div align="right">T-ANIMPA-011-002</div>

While working in the Drawing view, you can use the Dropper tool to pick a colour from your drawing without going to the Colour view.

> **NOTE**
>
> To learn more about the Dropper tool options, see the Reference guide .

How to use the Dropper tool

1. Do one of the following:

   - In the Tools toolbar, select the Dropper 🖋 tool.

   - From the top menu, select **Tools > Dropper**.

   - Press Alt + D.

2. In the Drawing view, click on the desired colour.

   - If you're using another drawing tool such as the Paint tool, you can temporarily hold down the D key and click in your drawing before releasing the key to pick your colour. When you release the key, you will return to your previous tool. You may also want to select the zones painted with the colour currently selected in the Colour view. This can be useful for removing rough lines from a clean drawing.

Inking Lines

T-HFND-004-012

Although pencil lines can be painted in much the same way as closed zones, you can use the Paint, Repaint, Repaint Brush, and Ink tools to make painting segmented lines easier. Normally when you have a drawing, such as the one below, and you use the Paint tool to paint one of the lines, the entire line is painted.
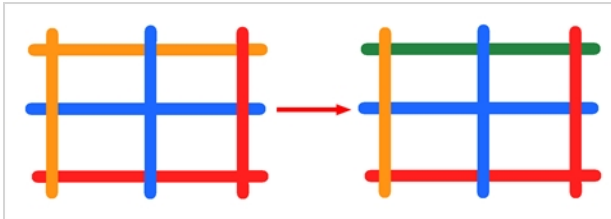
However, if you select the Ink tool instead and click on the same pencil line, only the segment that you clicked on between two intersections will be painted.
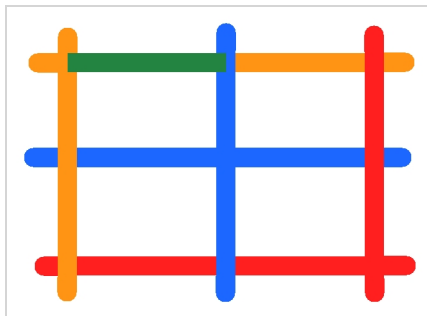
Painting and inking can be used in combination depending on what you need to paint. If you need to ink a character's outline in black, it might be easier to use the Paint tool. If you need to paint the outline of a character's neck with a tan colour and its shirt outline blue and both the neck and shirt belong to the same continuous outline, then the Ink tool might prove more useful.

> **NOTE**
>
> Unless you are repainting all the lines in an entire animation sequence, do not use the Apply Tool to All Drawings option. Since the line positions change a lot over time, you risk painting lines that should not be painted.

> **NOTE**
>
> To avoid repainting specific colours, see Protecting Colours

> **NOTE**
>
> To learn more about the Ink tool options, see the Reference guide .

How to use the Ink tool

1. In the Tools toolbar, select the Ink ✒ tool located in the Paint tool drop-down menu.

2. In the Drawing view, click on the pencil lines to repaint.

   - The newly inked segment is always moved on top of all other pencil strokes, even if it was behind all other pencil strokes before it was inked. To reverse that behaviour, disable the Raise ⇗ option in the Tool Properties view.
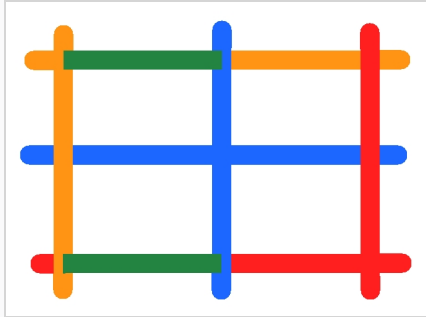
   - Hold down Alt while clicking a segment to do the opposite option from the Raise mode current state. The inked segment will be sent to the back or forward, even if it was in front or behind all other segments to begin with.
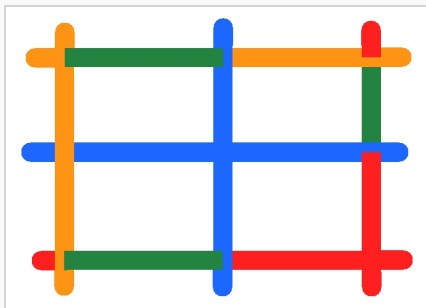
Authors

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Verifying Painted Zones

When the ink and paint process is completed, it's always a good idea to verify that every zone was painted properly.

The 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.

How to use the backlight

> **NOTE**
>
> This feature is only available in the Drawing view.

1. Do one of the following:

    - From the top menu, select **View > Backlight**.

    - From the Tools toolbar, click the Backlight 💡 button.

    - Press Alt + Shift + B.

2. Verify the drawings in the Colour Art to make sure that all the areas are painted. In the Colour view, click the Colour Art 🔴 button.

3. In the Colour view, click the Preview 🔴 button to see the colour zones with lines to ensure that you did not forget any spots between the colour filling and lines.
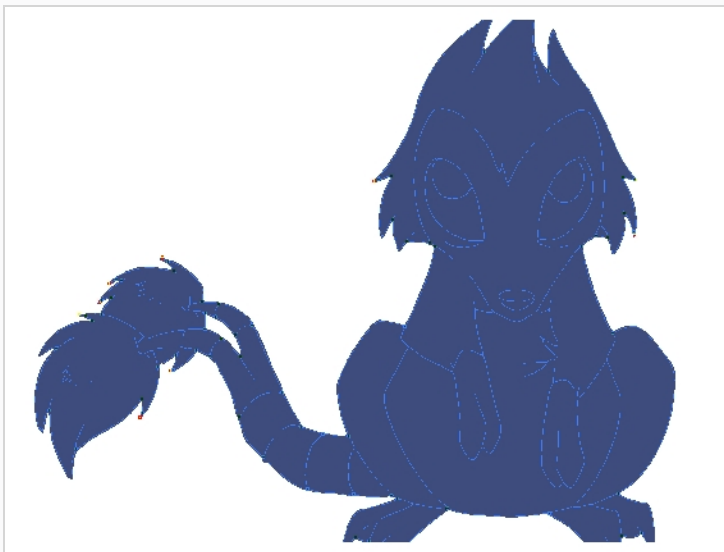
About the Edit Gradient and Texture Tool

If you paint a zone with a gradient or texture colour, you can use the Edit Gradient/Texture tool to modify its position in the zone. You can move, scale, rotate and skew. If you want to match the colour to the animation, set the first texture position and copy the Edit Gradient/Texture position. When moving to the next drawing, you can select the next texture and paste the previous position to continue the modifications.

If you are painting a hand-drawn animation or if you want the Brush and Paint tool to use your gradient's position, angle and scale settings instead of the default ones, you can store your own settings and reuse them afterward.

This way of editing a texture using the Edit Gradient/Texture tool also works with pencil lines drawn with textured "brushes". If you then paint your textured pencil line with a gradient, you can do so and then edit both elements independently at the same time.
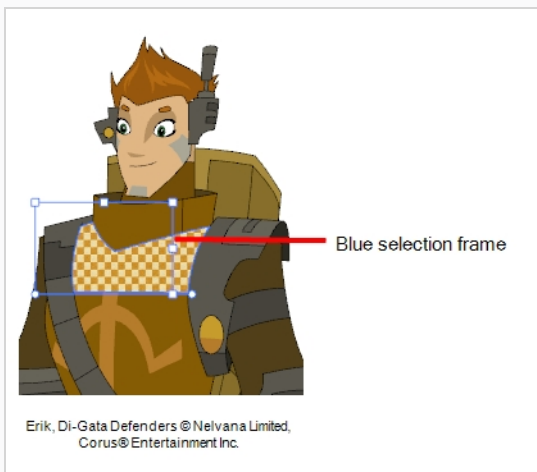
Using the Edit Gradient and Texture Tool

You can use the Edit Gradient/Texture tool to reposition a texture or gradient within a painted zone.

How to use Edit Gradient/Texture tool

1. Do one of the following:

   - In the Tools toolbar, click the Edit Texture ☐ tool.

   - From the top menu, select **Tools > Edit Gradient/Texture**.

   - Press Shift + F3.

2. Click the gradient or texture colour to modify.

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

A blue selection frame surrounds the selected gradient or texture.

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

Texture was scaled down and skewed

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

3. Edit the gradient or texture by adjusting the control handles around the selection frame.

Storing the Gradient and Texture Settings

You can store the position, scale, and angle of a selected gradient or texture to reuse it in other painting zones.

How to store gradient and texture settings

1. In the Tools toolbar, select the Select ⬉ tool or press Alt + S.

2. In the Camera or Drawing view, select the gradient or texture zone to store.

3. In the Tool Properties view, click the Store Colour Gradient ⬇ button.

Pasting a Stored Gradient or Texture

You can apply the gradient and texture settings previously stored to paint zones with the same gradient or texture, in the same position, scale and angle.

How to use the stored gradient and texture settings

1. In the Tools toolbar, select the Brush ✏ or Paint 🪣 tool.

2. In the Tool Properties view, click the Use Stored Colour Gradient ⠿ button.

3. In the Camera or Drawing view, draw and paint.

Editing Pencil Line Textures with the Edit Gradient/Texture Tool

You can use the Edit Gradient/Texture tool to tweak the way a texture or gradient is applied onto a pencil line.
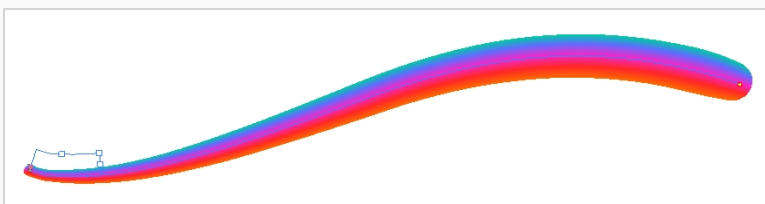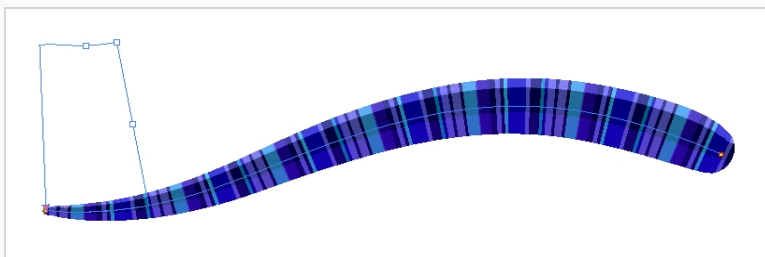
How to use Edit Gradient/Texture tool to edit the texture or gradient on a pencil line
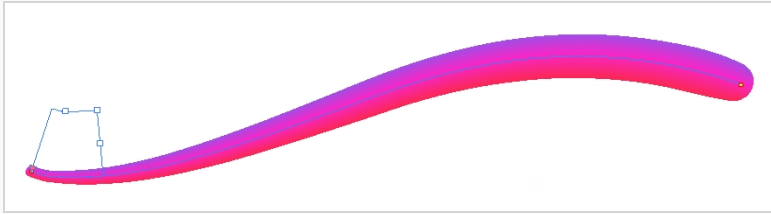
1. Do one of the following:

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

   ‣ From the top menu, select **Tools > Edit Gradient/Texture**.

   ‣ Press Shift + F3.

2. Click on the pencil line to be modified to bring up the editor controls.


3. The editor controls delineate a single tile in the texture. For gradients, this is less applicable. Pull on the top of the editor controls to stretch the tiled texture throughout the length of the stroke.

   As gradients are parallel to the stroke's central vector, this will stretch the way that the gradient is distributed in the pencil line's envelope. The envelope still acts as a boundary for the texture or gradient.

4. Drag the editor control perpendicular to the stroke. You will feel it glide along the strokes central vector line. This is another way to resize the texture tile. Instead of stretching or shrinking it vertically, this motion stretches or shrinks it vertically. As gradients are parallel to the pencil line's central vector, stretching them vertically gives no visual result.
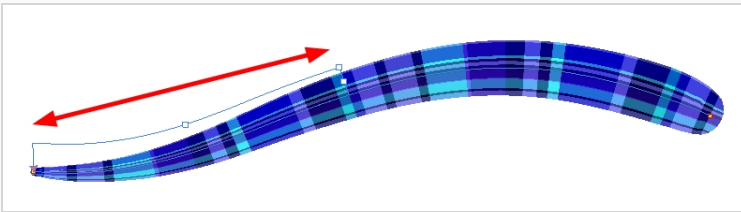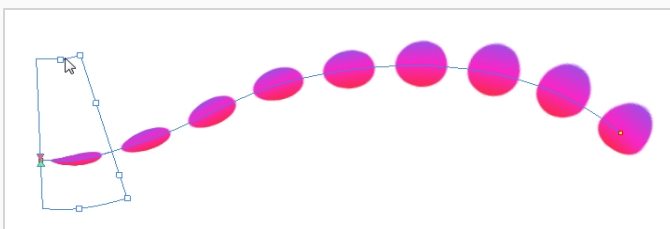
How to use Edit Gradient/Texture tool to edit a pencil line with both a texture and a gradient

1. Do one of the following:

   ‣ In the Tools toolbar, select the Edit Gradient/Texture ☐ tool.
   ‣ From the top menu, select **Tools > Edit Gradient/Texture**.
   ‣ Press Shift + F3.

2. Click on the pencil line to be modified to bring up the editor controls.
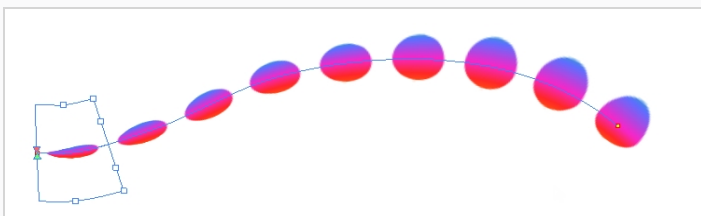
3. Use the top editor controls edit the gradient.

4. Use the bottom controls edit the "brush" texture.