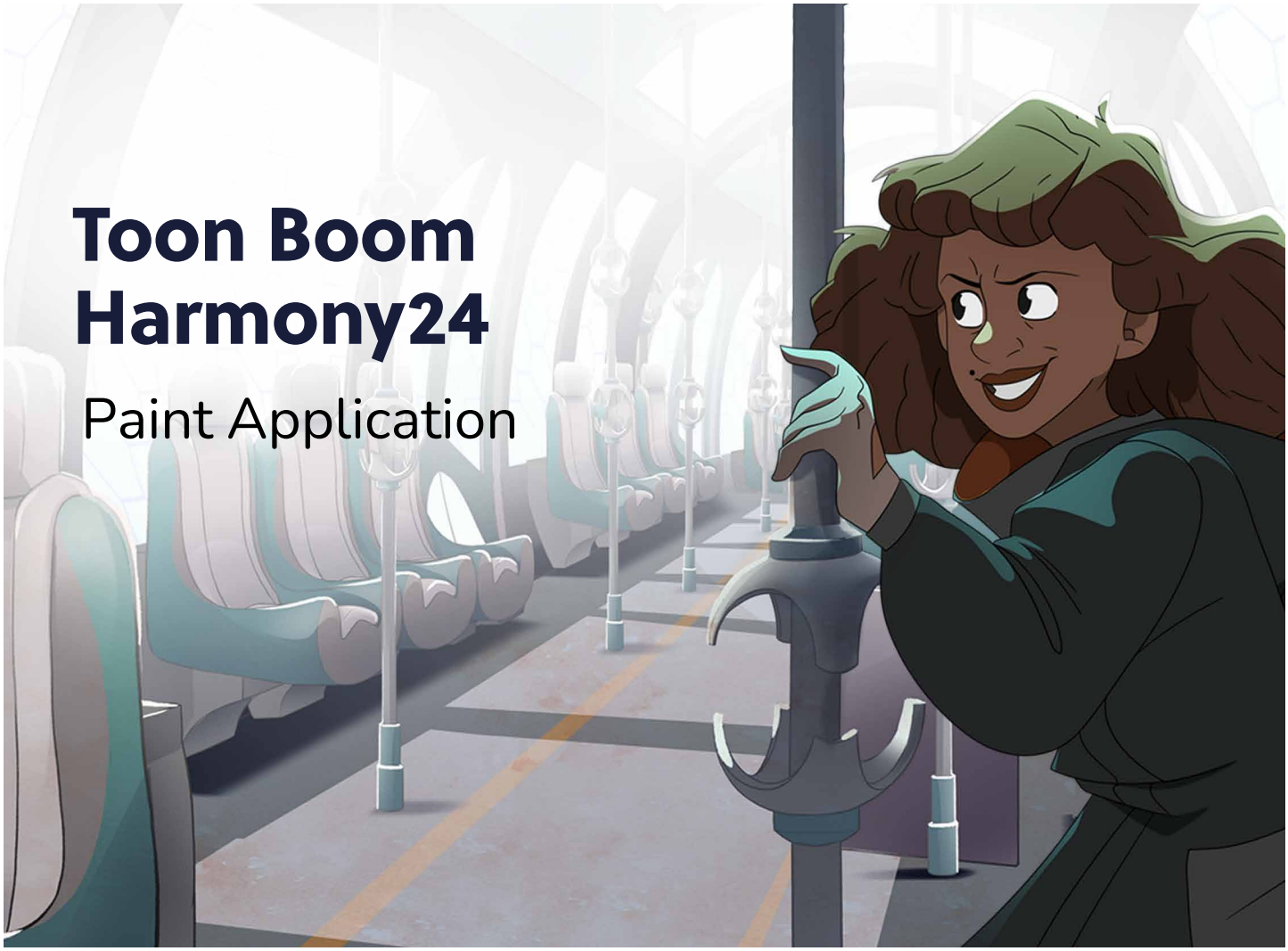
Harmony 24



Toon Boom Harmony24

Paint Application

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Introduction

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 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

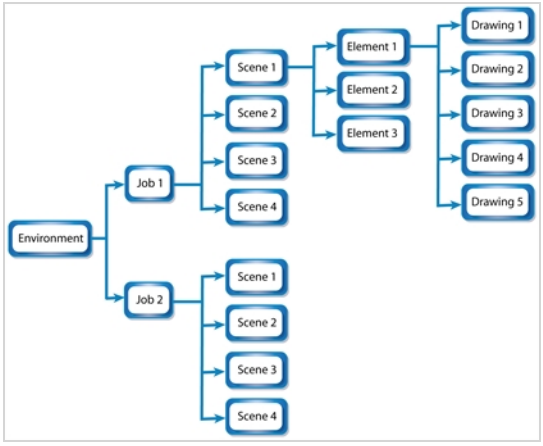
About the Database Structure in Harmony Server

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 *Environment Structure* on page 14
- **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 Paint

When working in 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 Paint

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You can run Harmony [Edition] 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. Depending on your operating system, do one of the following:

   - **Windows**: Open the Start menu and, in the list of programs, select **Harmony 24 [Edition] > PaintGame Studio [Edition]**.
   - **macOS**: Do the following:

     a. In Finder, proceed to **Applications > Toon Boom Harmony 24 [Edition]** and double-click **Harmony [Edition]**.

     The main Harmony application launches.

     b. In the top menu, select **Harmony [Edition] > Tools > Paint**.

   - **GNU/Linux**: In the GNOME top menu, select **Applications > Harmony 24 [Edition] > Paint**.

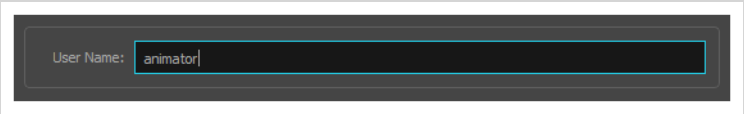
   The Paint application launches and displays a splash screen. After the splash screen, the log-in dialog box appears—see *Connecting to the Database* on page 18.

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 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 Paint

Loading Drawings and Elements in Paint

Once you launch 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.

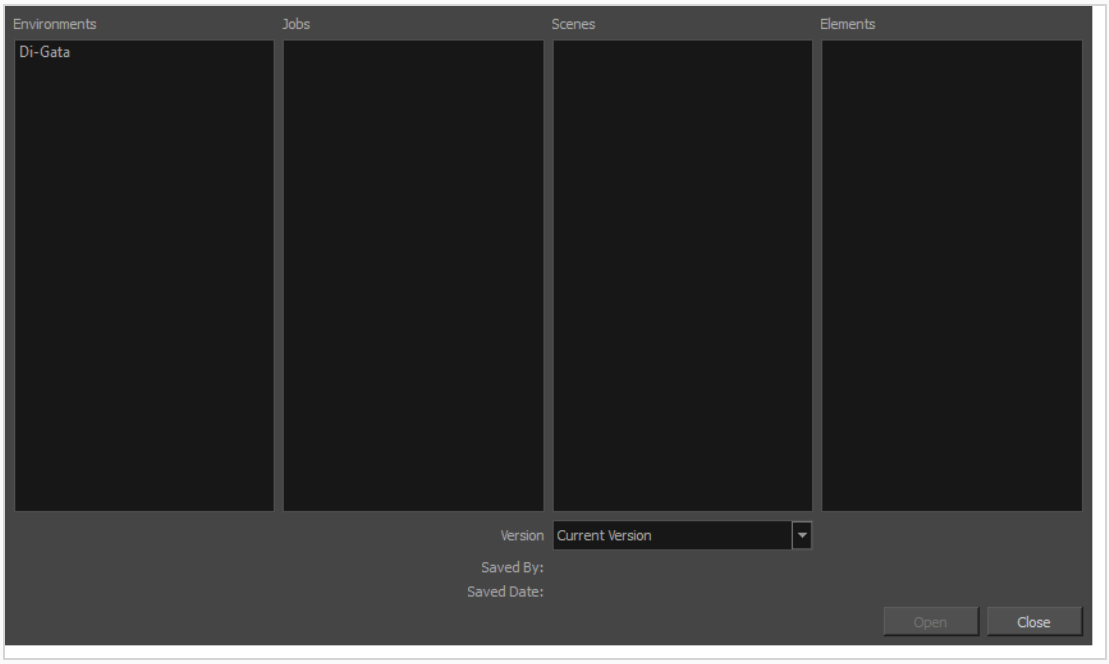
Opening Drawings in Paint

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

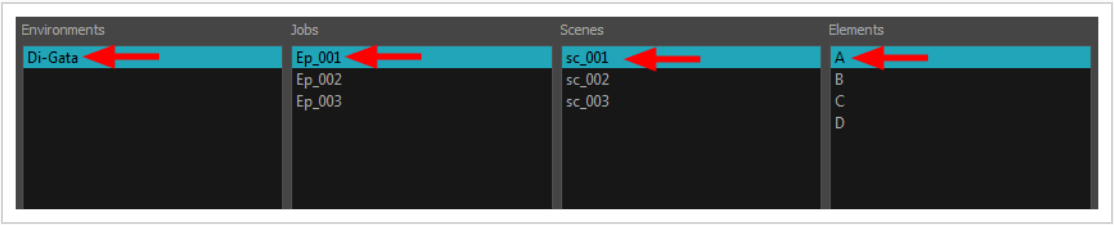
How to open drawings in Paint

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

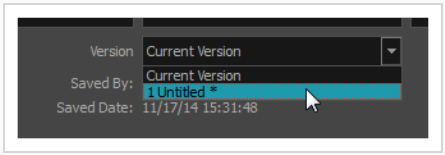
   The Database Selector opens, displaying the Environments available from the Harmony database.



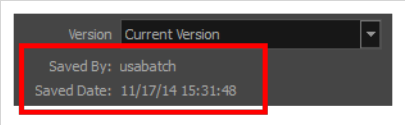
2. Select the Environment, Job, Scene and Element where the drawings you need to paint are located.



3. Choose the version you want to open from the Version drop-down menu.

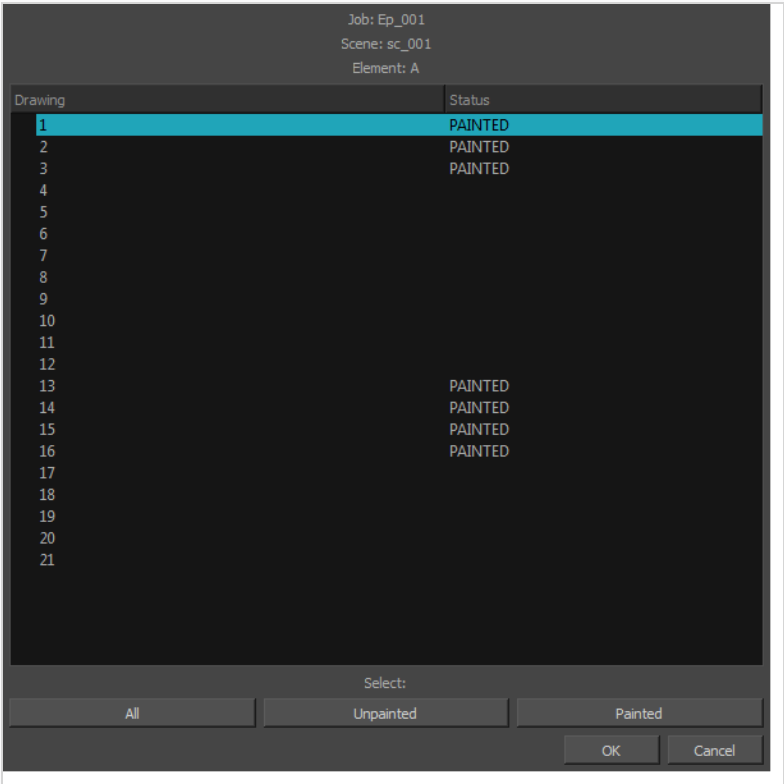


- The Saved By and Saved Date fields display the user who was the last to save the selected scene and the date of the last save.



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!

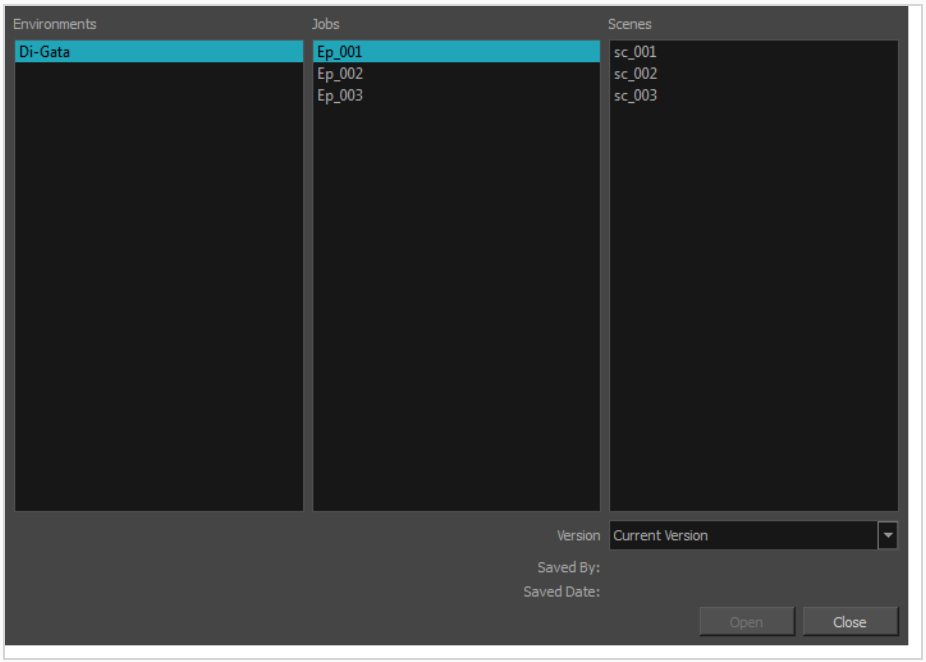
Opening Elements in Paint

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.

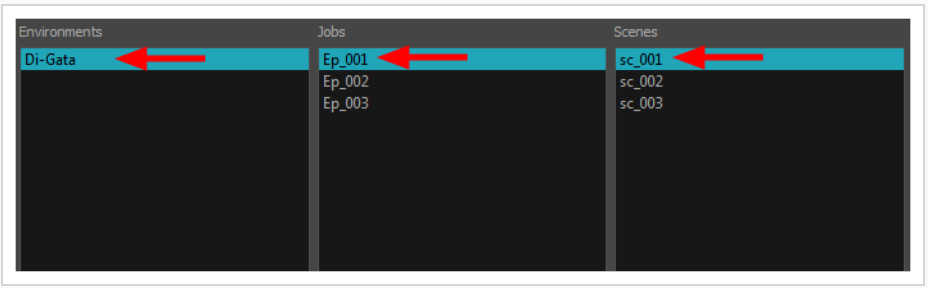
How to open elements in Paint

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

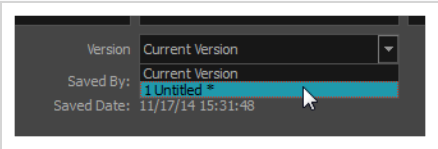
   The Database Selector opens, displaying the Environments available from the Harmony database.



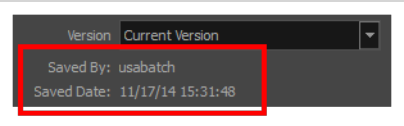
2. Select the Environment, Job and Scene where the elements containing the drawings you need to paint are located.



3. Choose the version you want to open from the Version drop-down menu.

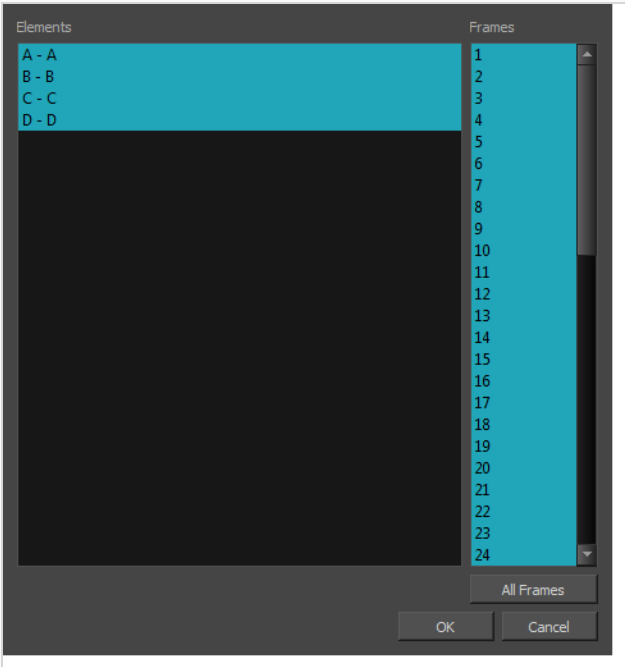


- The Saved By and Saved Date fields display the user who was the last to save the selected scene and the date of the last save.



4. Click on the **Open** button.

   The Open Elements dialog box opens.



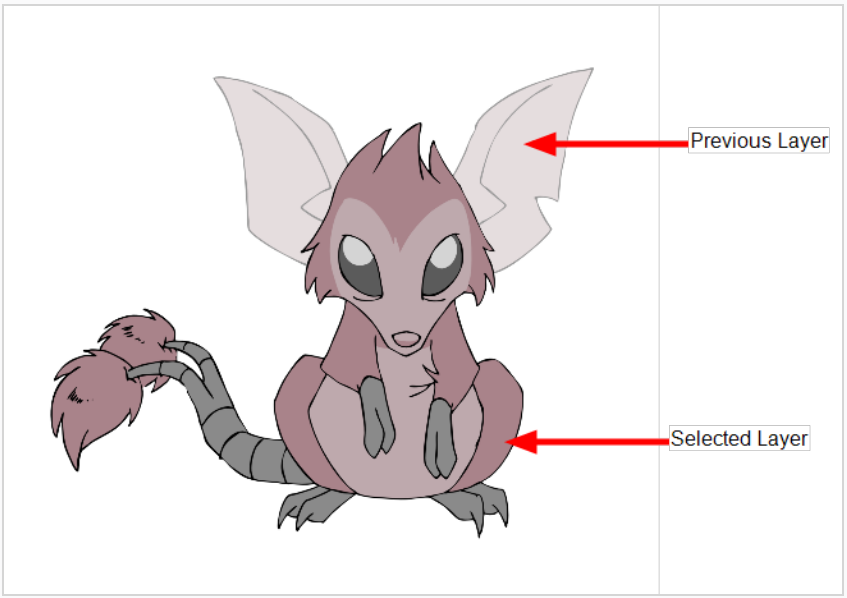
5. Select the elements you need to paint from the Elements list:
   - You can create a continuous multiple selection by holding the Shift key.
   - You can create a multiple selection by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.
6. Select the frames you wish to load from the Frames list:
   - 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 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 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 Paint, you can only make changes to drawings in a scene, not to the scene's structure or set-up. When you save in 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 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.

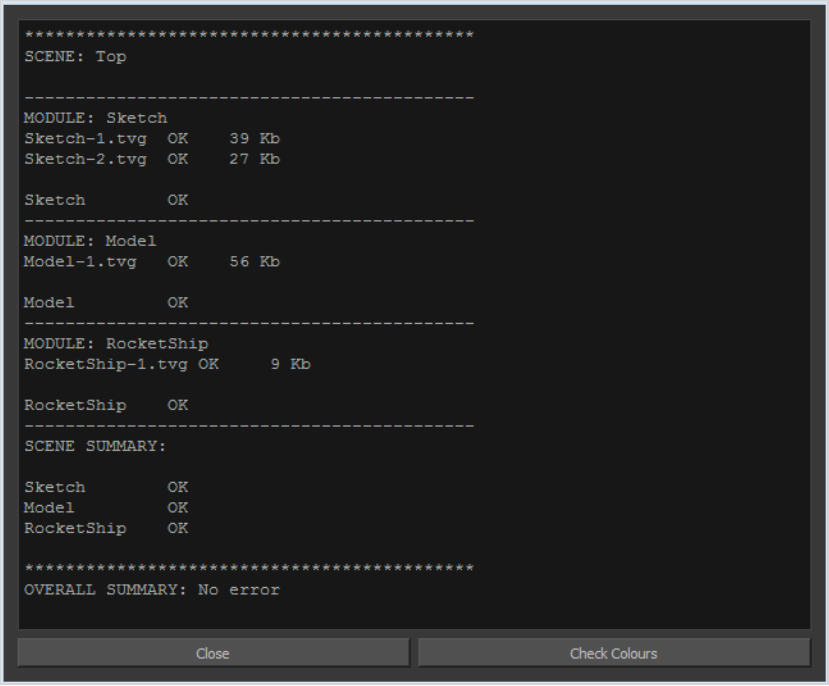
   For information on the parameters in the Advanced Save Dialog Box, refer to the *Advanced Save Dialog Box* topic of the Reference guide.

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.

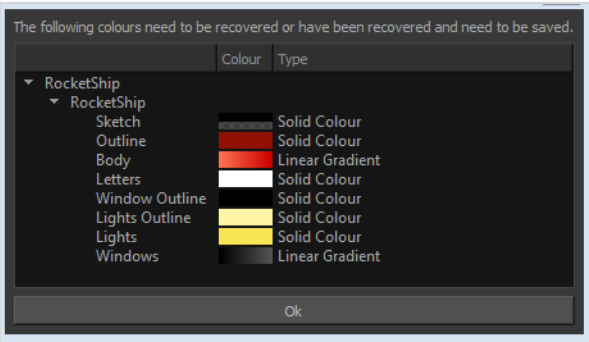
How to open the Check Files dialog box

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: User Interface

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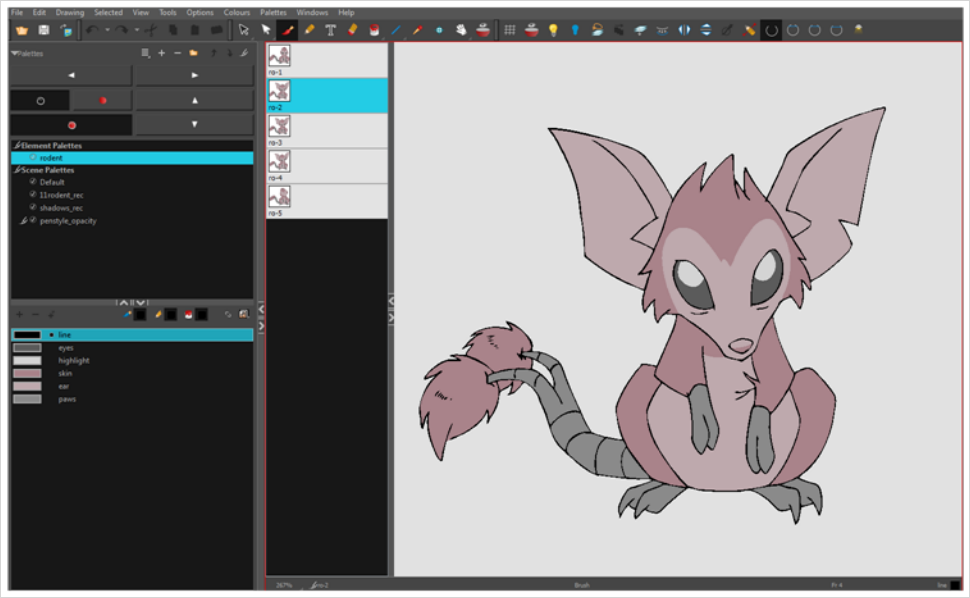
Knowing how to manage the Toon Boom Harmony interface helps you to work efficiently and organize your workspace conveniently. There are a series of views and toolbars you can use as you perform different operations. Usually, each person has a specific way of working in the interface and prefer particular 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. In the top menu, select **Edit > Preferences** (Windows/Linux) or **Harmony [Edition] > Preferences** (macOS) .

   The Preferences dialog box opens.

2. In the **General** tab, in the **Options** section, uncheck the **Use Dark StyleSheet (Requires Relaunch)** check box.
3. Click **OK**.
4. Close and relaunch Harmony.

Changing the User Interface Language

Harmony is available in English, Spanish, Japanese, and Chinese.

By default, Harmony will automatically launch in your operating system language if it is one of the supported languages. Otherwise, it will launch in English.

There are two ways of controlling the language in which Harmony launches:

- By changing the Language preference in the Preferences dialog.
- By launching Harmony from a command line, with the **`-lang`** parameter followed by a two-letters language code.

How to change the user interface language for Harmony

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

   The Preferences dialog box opens.

1. In the **General** tab, in the **Language** section, open the **Language (Requires Relaunch)** drop-down and select the desired user interface language.
2. Click **OK**.
3. Close and relaunch Harmony.

How to start Harmony in a specific user interface language from the command line

1. Open a Command Prompt or Terminal window.
2. Type in the following command, including the quotation marks, but don't press Enter/Return yet.

   - **Windows:** **`"C:\Program Files (x86)\Toon Boom Animation\Toon Boom Harmony 24 [Edition]\win64\bin\Harmony[Edition].exe"`**
   - **macOS:** **`"/Applications/Toon Boom Harmony 24 [Edition]/Harmony [Edition].app/Contents/MacOS/Harmony [Edition] "`**
   - **GNU/Linux:** **`/usr/local/ToonBoomAnimation/harmony[Edition]_24/lnx86_64/bin/Harmony[Edition]`**

3. Type a space, then type the following parameter depending on which language you want to launch Harmony in:

   - **English:** **`-lang en`**
   - **Chinese:** **`-lang zh`**

- **Japanese: `-lang ja`**
- **Spanish: `-lang es`**

4. Press Enter/Return.

   Harmony will launch in the specified language.

About Menus

T-HFND-003-002

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

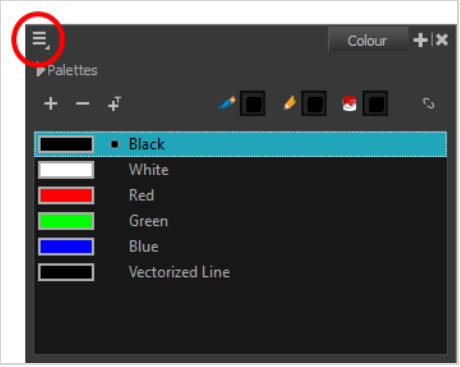
On macOS, there is also a Harmony [Edition] category that contains the following commands:

- 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.



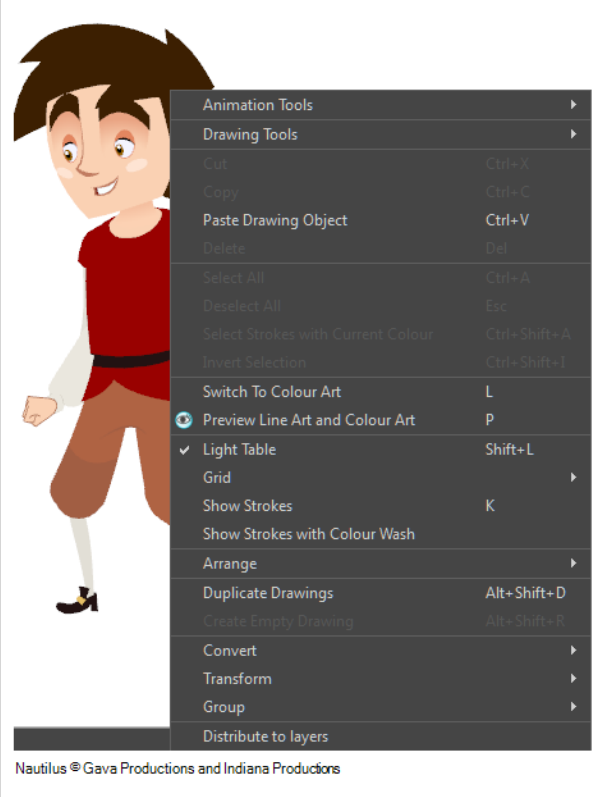
A view menu is available in the following views:

- 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.



About Toolbars

T-HFND-003-003

The Harmony user interface contains various toolbars, such as the Tools toolbar and the Edit toolbar, to give you quick access to various menu commands.

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.

Toolbars are separated in two main categories:

- Workspace toolbars are toolbars that have a general purpose. For example, the File, Edit, Workspace, Advanced Animation and Deformation toolbars at the top, as well as the Tools toolbar on the left, are workspace toolbars. Those toolbars can be placed at the top, bottom, left or right edge of the application window. They can also be placed at the edge of specific views if preferred.
- View toolbars are toolbars that are useful for a specific view. For example, the Camera view has a Camera toolbar at its top. View toolbars can only be displayed inside their respective view. They can be placed at the top, bottom, left or right edge of their view.

You can display or hide toolbars using the **Windows > Toolbars** menu. This menu contains all the workspace toolbars, as well as the view toolbar for all the views that are currently displayed in your workspace.

For example, in the default workspace, you have the Camera and the Drawing views in the same area, and you can switch between either view by clicking on the Camera or Drawing tab. If the Camera view is the one being displayed, then the Camera toolbar will be in the list. If the Drawing view is displayed, then the Drawing toolbar will be in the list instead.

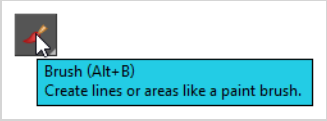
Workspace toolbars can be added to either the general workspace or the inside of a view. For example, you can add the Edit toolbar to the top of the area occupied by the Camera view instead of the top of the application window, where it is by default. In the default workspace, the Tool Presets and Art Layer toolbars are placed in the area where the Camera and Drawing views are, even though they're actually workspace toolbars.

When a workspace toolbar is added to a view, and several views are placed where this view is, then all those views will have this toolbar inside of them. For example, if you add the Edit toolbar to the Camera view, it will also be available in the Drawing view, as both these views share the same space. However, the Camera toolbar will not be available in the Drawing view as it is specific to the Camera view.

Some toolbars have buttons that are hidden by default to avoid cluttering. You can customize which buttons are displayed in these toolbars, and in which order they're displayed—see Customizing Toolbars.

TIP

Many toolbar buttons have a keyboard shortcut associated to them. You can check which keyboard shortcut is associated to a button by leaving your mouse cursor over the button for a second. If the button has a keyboard shortcut, it will be indicated in the tooltip that appears.



Adding and Removing Toolbars

T-HFND-003-004

You can add toolbars to certain areas of your workspace. The way it works is as follows:

- A workspace toolbar can be added to any edge of the application window, or to the edge of a view in your workspace.
- A view-specific toolbar can be added to the edge of its respective view only.

> **NOTE**
>
> When a workspace toolbar is added inside a view, and this view shares its area with other views—like the Camera and Drawing views do by default—the toolbar will remain visible even if you switch to a different view in this area. For example, if you added the Alignment Guides toolbar to the Camera view, this toolbar would also be visible in the Drawing view.

How to add or remove a workspace toolbar to the general workspace

1. Do one of the following:
    - In the top menu, select **Windows > Toolbars** and in the sub-menu, select the toolbar you want to add.
    - Right-click on any toolbar that is at the top or side of the workspace, or in the empty space next to these toolbars, and select the toolbar you want to add in the contextual menu.

    > **NOTE**
    >
    > In the list of toolbars in the top menu and in the contextual menu of the workspace, the toolbars listed above the separator are workspace toolbars, and the ones below the separator are view toolbars.

How to add a view toolbar to a view

1. Do one of the following:
    - Click on the tab of the view for which you want to add a toolbar to set the focus on it. Then, in the top menu, select **Windows > Toolbars** and select the toolbar you want to add.
    - In the top area of the view to which you want to add a toolbar, to the left of its tab, right-click and select the toolbar you want to add in the contextual menu.

How to add or remove a workspace toolbar to a view

1. In the top area of the view to which you want to add a toolbar, left of its tab, right-click and select the toolbar you want to add in the contextual menu. You can also-right-click on a toolbar inside this view, if there is any.

NOTES

- If the workspace toolbar was present somewhere else in your workspace, it will be removed from its previous position and moved to the view where you just added it.
- In the list of toolbars in the contextual menu of a view, the toolbars listed above the separator are workspace toolbars, and the ones below the separator are view toolbars.

Moving Toolbars

T-HFND-003-005, T-HFND-003-006

You can move toolbars around using drag & drop. This can be used to:

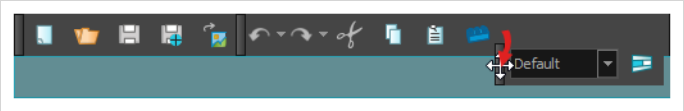
- Reorder toolbars within the same toolbar area.
- Move a toolbar from one edge of the application window or view in which it is located to another edge.
- Hide part of a toolbar with another toolbar.

The action you do depends on the gesture with which you drag the toolbar:

- If you drag the toolbar horizontally you are “sliding” the toolbar. This allows you to move the toolbar over another toolbar in the same row. When two toolbars share the same space, the toolbar on the right appears over the toolbar on the left, and the left toolbar’s rightmost buttons are hidden in a pop-up menu.

  Likewise, you can do this with a vertical toolbar by sliding it vertically, in which case the toolbar at the bottom appears over the toolbar at the top.

- If you drag the toolbar vertically, you “pop” it out of its row. When a toolbar is popped out, you can reorder toolbars and move the toolbar to another row or to a different edge of the user interface.

  Likewise, you can do this with a vertical toolbar, such as the Tools toolbar at the left of the workspace, by moving it horizontally.

NOTE

You cannot move a toolbar from the edge of the application window to the inside of a view, or vice versa. If you want to do that, you must add the toolbar where you want it to be located, and it will automatically be removed from the area where it is currently located. For example, if you want to move the Edit toolbar from the top of the workspace to the Camera view, all you have to do is add it to the Camera view—see Adding and Removing Toolbars.

How to move a toolbar around

1. Click and hold the handle at the left of the toolbar you want to move.

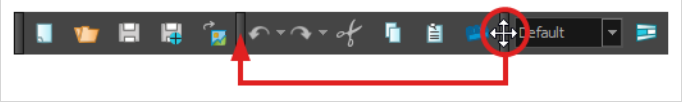
2. Do one of the following:

   - If the toolbar is horizontal, move it up or down to make it pop out of its row.

   - If the toolbar is vertical, move it left or right to make it pop out of its column.

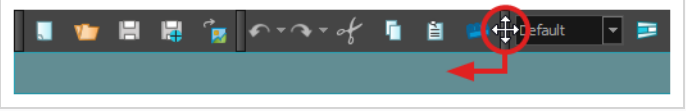
3. Do one of the following:

   - To reorder toolbars, drag the toolbar where you want it to be located and drop it.



     The toolbar will move to its new position. Toolbars to the right (or to the bottom, if the toolbar is vertical) will be offset to make space for it.

   - To move the toolbar to a new row or to a new column, simply move the toolbar where the new row or column should be created. For example, to create a new row of toolbars at the top of the user interface, move it just below the existing toolbars at the top of the user interface. A new row or column will appear, highlighted in cyan.



     When you drop the toolbar, the new row will be created and the toolbar will be placed at the left end of the row.

Likewise, to create a new column at the left of the user interface, move the toolbar just right of the existing toolbars at the left of the user interface.

- To move the toolbar to another edge of the user interface, drag it all the way to that edge of the user interface.

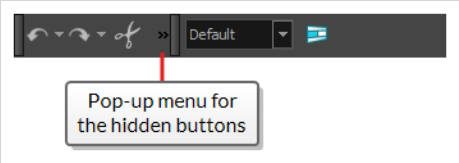
How to move a toolbar over another toolbar

1. Make sure both toolbars are in the same row or column. If they are not, move both toolbars to the same row or column using the method previously described.

    - If the toolbars are horizontal, click and hold the handle at the left of the rightmost toolbar. Then, without going outside of the toolbar's row, slide the toolbar towards the left.

    - If the toolbars are vertical, click and hold the handle at the top of the bottom toolbar. Then, without going outside of the toolbar's column, slide the toolbar up.

    As you slide the toolbar over the other toolbar, the other toolbar's buttons become hidden and a pop-up menu button appear.

2. To separate the toolbars again, simply slide the same toolbar in the opposite direction.
3. To expand a toolbar that is overlapped by another toolbar, click on the expand button at the right of the overlapped toolbar.

Customizing Toolbars

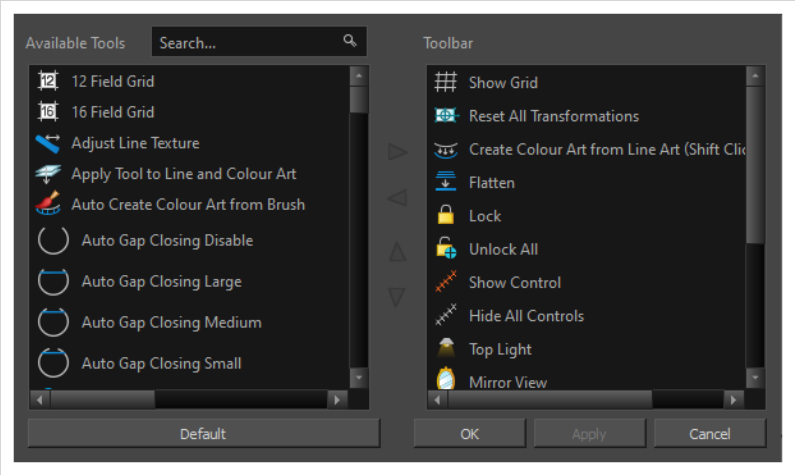
T-HFND-003-007

Some toolbars have buttons that are hidden by default to prevent clutter. You can customize which buttons are displayed in these toolbars, as well as the order in which the buttons are displayed.

How to customize a toolbar

1. Right-click on the toolbar that you want to customize.
2. In the context menu, select **Customize**.

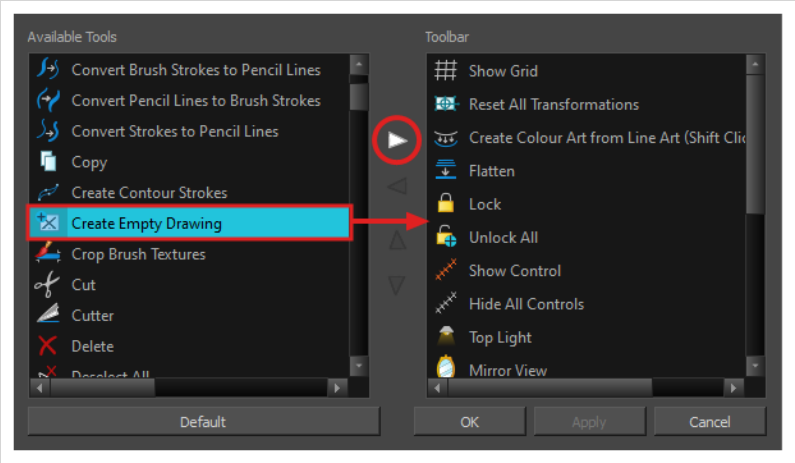
   The Toolbar Manager dialog appears.



> **NOTES**
>
> - If the **Customize** option is greyed out, this toolbar cannot be customized.
> - The **Customize** option is only available if the toolbar is in the space above the Camera View.
> - The Tools toolbar can only be customized in Flat Tools Toolbar mode.

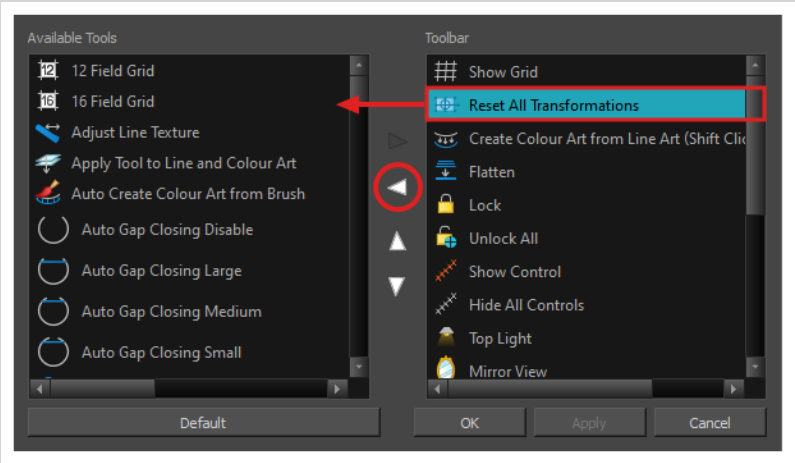
3. To add a new toolbar button, select the button you want to add from the **Available Tools** list, then click on the ▷ Add the selected tool into the toolbar button.

   The button will be removed from the **Available Tools** list and added to the **Toolbar list**.

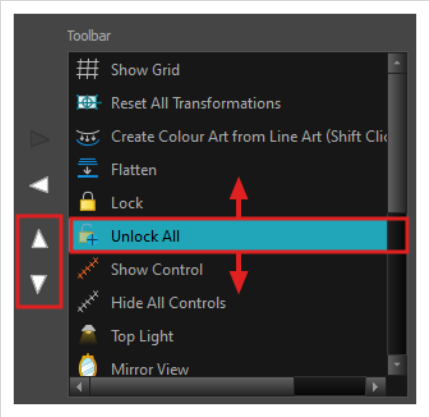


4. To remove a button from the toolbar, select it in the Toolbar list, then click on the Remove the selected tool from the toolbar button.

   The button will be removed from the Toolbar list and added to the Available Tools list.



5. To reorder the buttons in the toolbar, select a button in the Toolbar list, then use the Move the tool up and Move the tool down buttons to change the button's order. The order of the tools in the toolbar from left to right is the same as the order of the buttons in the Toolbar list from top to bottom.



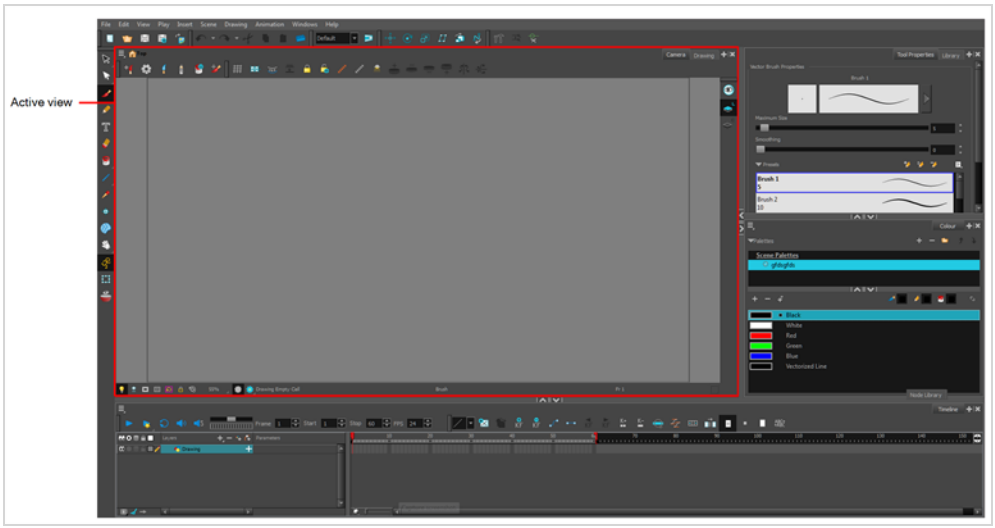
6. Click **OK** when you are done customizing the toolbar.

About Views

T-HFND-003-008

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

T-HFND-003-012

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.

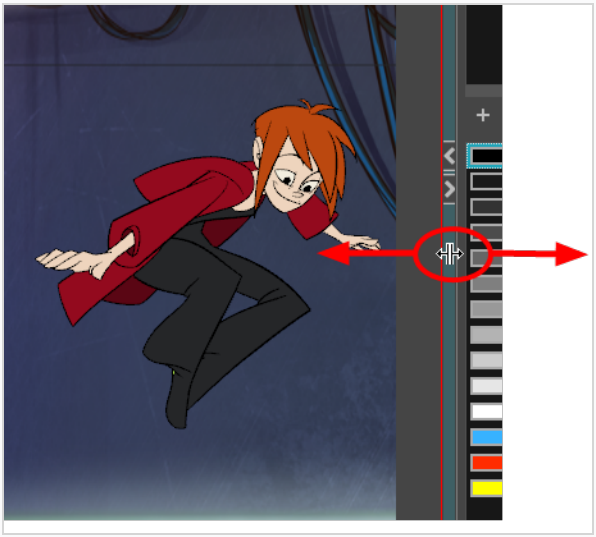
Resizing Views

T-HFND-003-013

You can resize a view by sliding its edges.

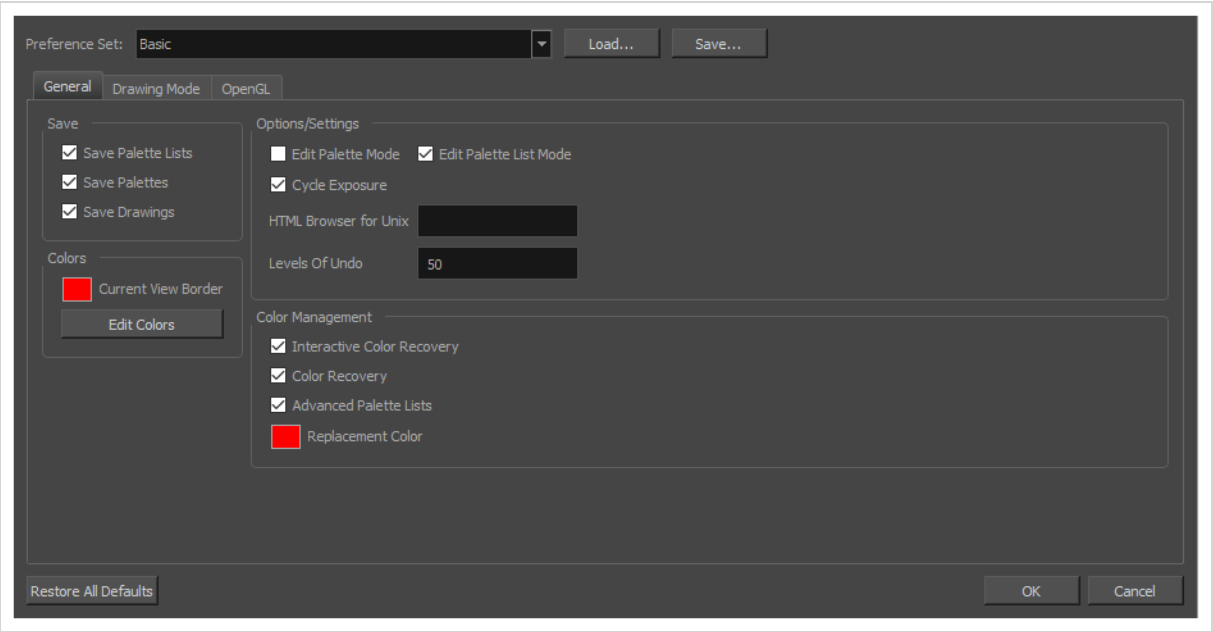
How to resize a view

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 the behaviour of various user interface elements, as well as drawing and animation tools, and enable or disable advanced features.



NOTE

For a list of all the preferences as well as their functionality, refer to the Preferences guide.

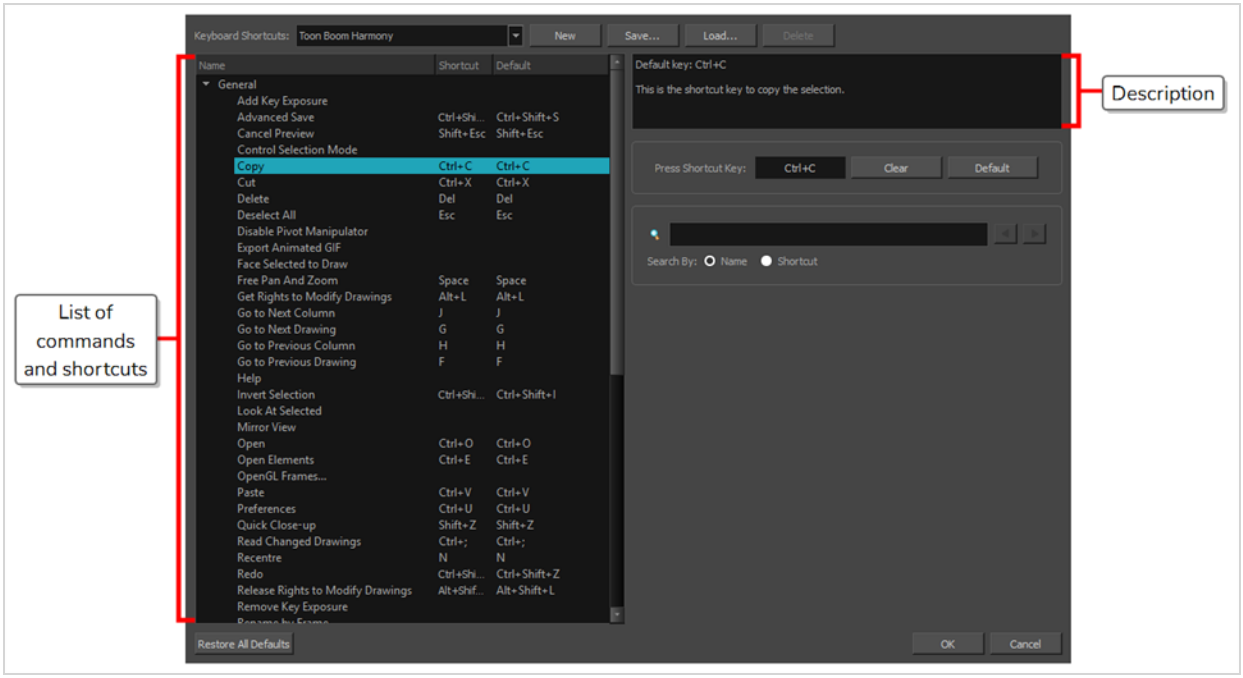
How to open the Preferences dialog box

1. Do one of the following:
    - **Windows or GNU/Linux:**
        - In the top menu, select **Edit > Preferences**.
        - Press Ctrl + U.
    - **macOS:**
        - In the top menu, select **Harmony [Edition] > Preferences**.
        - Press ⌘ + U.

About Keyboard Shortcuts

Harmony uses keyboard shortcuts to allow you to quickly use commands you are familiar with without having to browse through menus and toolbars. Learning the keyboard shortcuts for the commands you use the most often can be a great way to increase your productivity with Harmony.

Using the Keyboard Shortcuts dialog, you can: check which keyboard shortcuts are assigned to which commands, you can customize existing keyboard shortcuts, and you can assign keyboard shortcuts to commands that don't have any.



NOTE

For more information on how to configure keyboard shortcuts as well as a list of commands and their default keyboard shortcuts, refer to the Keyboard Shortcuts guide.

How to open the Keyboard Shortcuts dialog box

1. Do one of the following:
    - **Windows or GNU/Linux:** In the top menu, select **Edit > Keyboard Shortcuts**.
    - **macOS:** In the top menu, select **Harmony [Edition] > Keyboard Shortcuts**.

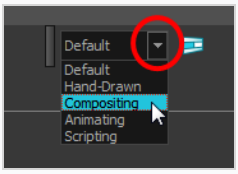
Loading Workspaces

T-HFND-003-015

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.



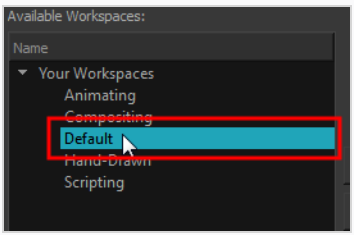
Creating Workspaces

T-HFND-003-016

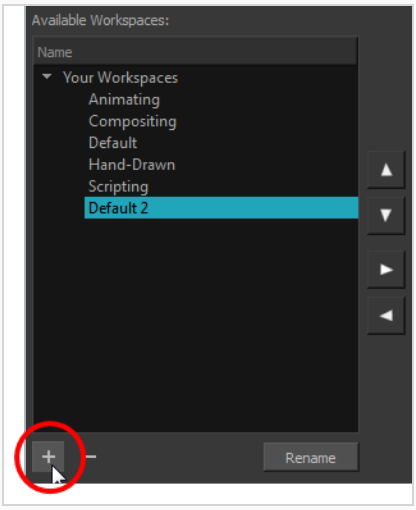
You can create new workspaces through the Workspace Manager dialog box.

How to create a new workspace

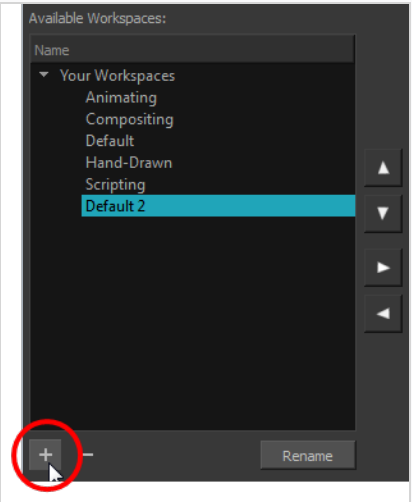
1. Do one of the following:
    - In the Workspace toolbar, click the button.
    - From the top menu, select **Windows > Workspace > Workspace Manager**.
2. In the Available Workspaces list, select an existing workspace.



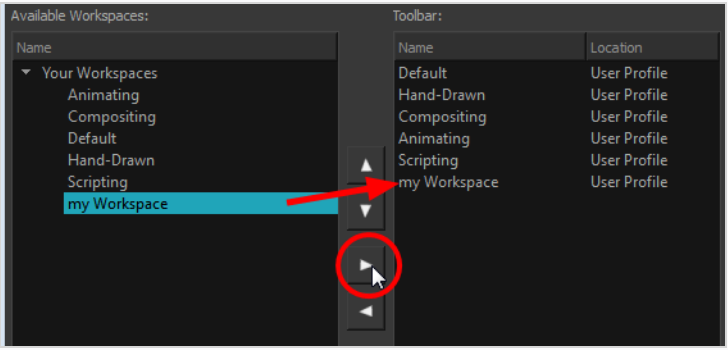
3. At the bottom of the Available Workspaces list, click the Add button to add a workspace.



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.



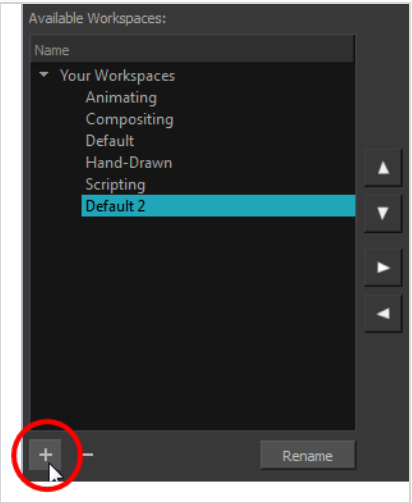
6. Click **OK**.

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

T-HFND-003-017

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

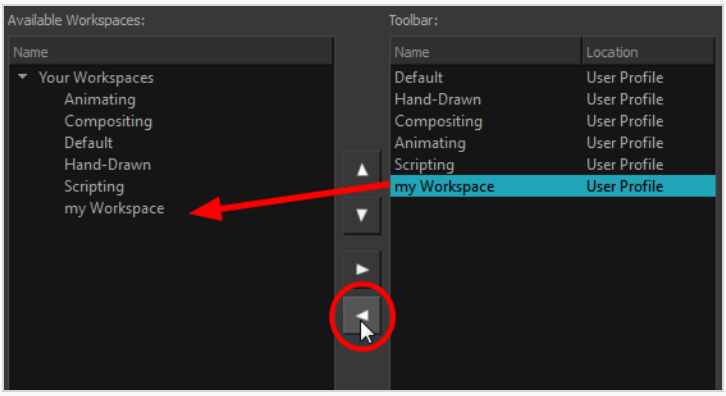
1. Do one of the following:
   - In the Workspace toolbar, click the Save Workspace button.
   - You can also select **Windows > Workspace > Save Workspace**.

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

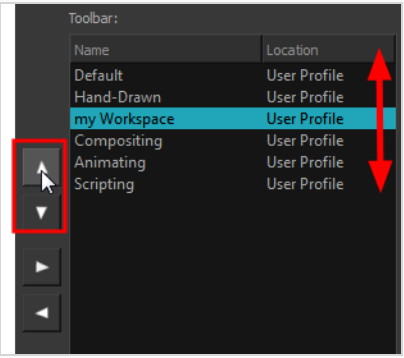
1. Do one of the following:
    - In the Workspace toolbar, click the button.
    - From the top menu, select **Windows > Workspace > Workspace Manager**.
2. In the Workspace Manager, select the workspace to be hidden and click the Left Arrow button to move it to the Available Workspaces list.
3. Click **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

T-HFND-003-018

You can restore modified workspaces to their original layout.

How to restore the default workspaces

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

About Interface Navigation

With the help of menu commands and keyboard shortcuts, some views let you navigate their content by zooming in, zooming out, panning and rotating them. You can also reset the zoom level, pan and rotation angle of these views as needed.

TIP

Keyboard shortcuts can be customized. You can view, search for and change keyboard shortcuts for Harmony in the Keyboard Shortcuts dialog. To access the Keyboard shortcuts dialog:

- **Windows or GNU/Linux:** In the top menu, select **Edit > Keyboard Shortcuts**.
- **macOS:** In the top menu, select **Harmony [Edition] > Keyboard Shortcuts**.

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 The Reset View button at the bottom of the Camera view.

Command	Action	Access Methods
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 left or right.	While holding Ctrl + Alt (Windows/Linux) or Ctrl + ⌘ (macOS), click and drag the rotating disc to rotate it clockwise or counterclockwise.
3D Rotate View	Rotates the view in any direction. This is only available in the Perspective view.	While holding Ctrl + Shift (Windows/Linux) or ⌘ + Shift (macOS), click and drag the stage to rotate it in any direction.
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**
Mirror View	Temporarily flips the Camera or Drawing view horizontally, allowing you to view and edit your artwork as if it was being mirrored.	**View > Mirror View** In the Camera or Drawing toolbar, click on the Mirror View button.
Toggle Quick Close-up	Instantly multiplies the	Shift + Z

Command	Action	Access Methods
	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%.	

Accessing the Documentation

T-HFND-001-004

The Harmony documentation can be accessed from the Help menu.

How to access the Harmony 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	✓	✓

Icon	Tool Name	Vector Layer	Bitmap Layer
	Pencil	✓	
	Eraser	✓	✓
	Text	✓	✓
	Line	✓	✓
	Rectangle	✓	✓
	Ellipse	✓	✓
	Polyline	✓	
	Paint	✓	✓
	Ink	✓	
	Paint Unpainted	✓	✓
	Repaint	✓	
	Unpaint	✓	✓
	Stroke	✓	

Icon	Tool Name	Vector Layer	Bitmap Layer
	Close Gap	✓	
	Colour Eyedropper	✓	✓
	Pencil Texture Eyedropper	✓	

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.

NOTE

To learn more about the options of the Brush tool, see the Reference Guide.

Drawing with the Brush Tool

T-HFND-004-003A

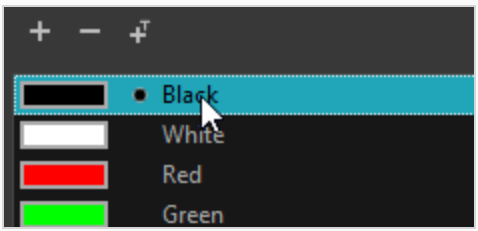
In the Drawing view, you can draw on any drawing layer type with the Brush tool.

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.



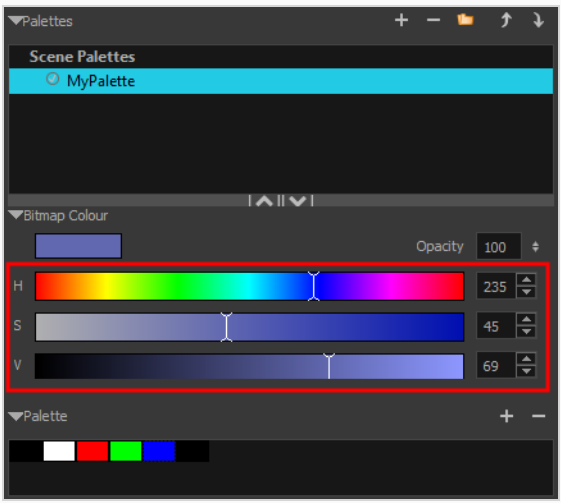
5. In the Drawing or Camera view, start drawing.

TIPS

- You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
- If you press and hold the Shift key before or while drawing, you will draw a straight line.
- If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.
- If you press and hold the Shift and Alt keys before or while drawing, you will draw a straight horizontal or vertical line.
- If you press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing, your drawing stroke will turn into a closed shape.
- If you press and hold Alt before drawing a stroke, and start drawing near existing artwork, the start of your drawing stroke will connect to that artwork.
- If you press and hold Alt while drawing a stroke, and end your drawing stroke near existing artwork, the end of that drawing stroke will connect to that artwork.

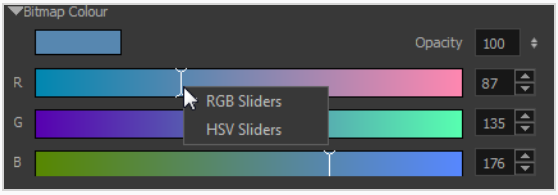
How to draw with the Brush tool on a bitmap layer

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.

TIPS

- You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
- If you press and hold the Shift key before or while drawing, you will draw a straight line.
- If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.
- If you press and hold the Shift and Alt keys before or while drawing, you will draw a straight horizontal or vertical line.
- If you press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing, your drawing stroke will turn into a closed shape.

Creating a Solid Brush

T-ANIMPA-002-001A

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.

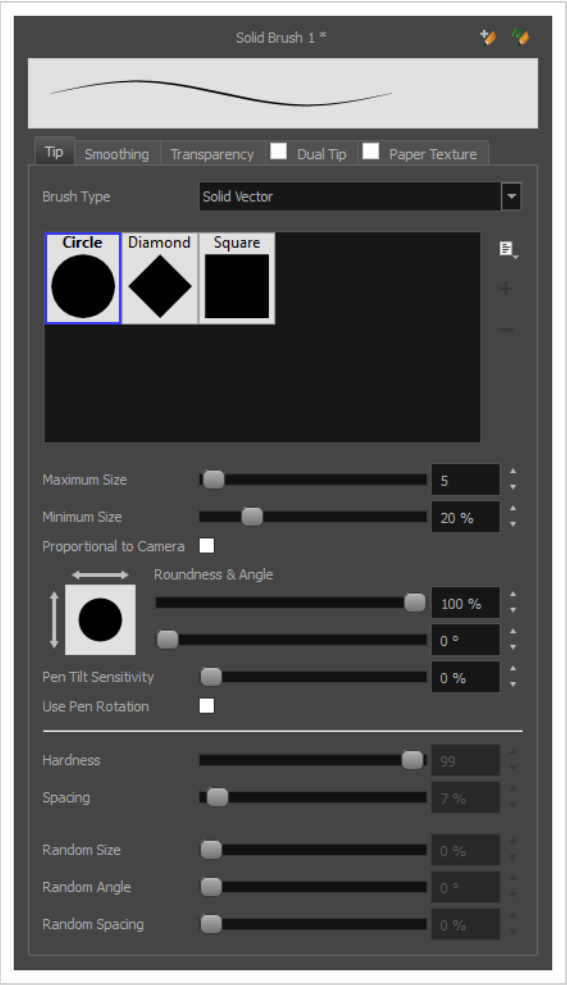
If you are drawing on a bitmap layer, you can only use textured brushes. You can create a textured brush that makes solid looking strokes, but they can not be automatically smoothed by Harmony, nor can they tweaked with vector tools such as the Contour Editor.

You can now control the Size properties with input options such as Pressure, Tilt and Speed. You can use a combination of multiple inputs to control a single property. Also, you can control the Angle Function by selecting any one option from the drop down list.

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.

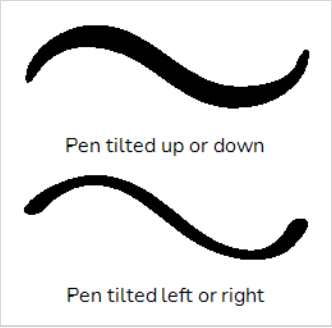
4. You can control the size properties by clicking on the arrow button on right and the Size Properties

dialog box will appear.

5. 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%.
6. If you want your brush to keep the same size relative to the camera frame when the camera zooms in on or zooms out of the scene, check the **Proportional to Camera** option.

> **NOTE**
>
> The "Size Proportional to Camera" option has been moved to the new Size Properties window.

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. If you want your brush tip to stretch when you tilt your pen, use the **Pen Tilt Sensitivity** slider to set how much the tip should stretch. The tip will stretch by the percentage you set, in the direction in which you tilt the pen.

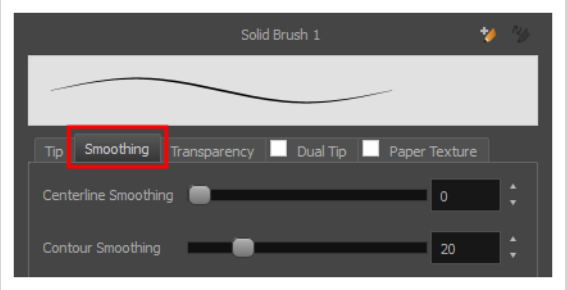


> **NOTE**
>
> This option only works if your tablet and your pen support tilt sensitivity.

10. If you want your brush tip to rotate with the angle of your pen tip use the **Angle Function**. You can select one of the following options:

- **Constant:** The static orientation of the brush tip expressed in degrees.
- **Heading:** The orientation of the brush tip is determined by the direction in which the stroke is drawn. It changes dynamically as the stroke is drawn.
- **Azimuth:** When the pen is tilted, it uses the direction in which the pen eraser is facing.
- **Twist (if supported by pen):** It uses the twist angle of the stylus and is only available with Wacom Art Pen.

11. Click on the **Smoothing** tab.



12. 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.
13. 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.
14. Either close or set aside the Brush Properties dialog.
15. 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.

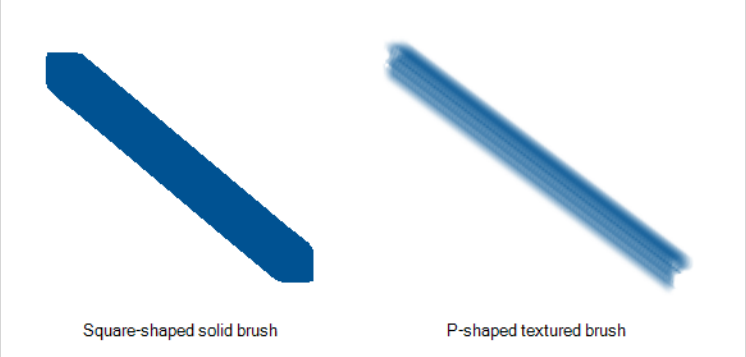
When drawing on a vector layer, brushes are solid vector brushes by default. You can however create a textured vector brush which combines both Harmony's vector and bitmap drawing capabilities. You can tweak textured vector brush strokes using various vector editing tools such as the Contour Editor,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

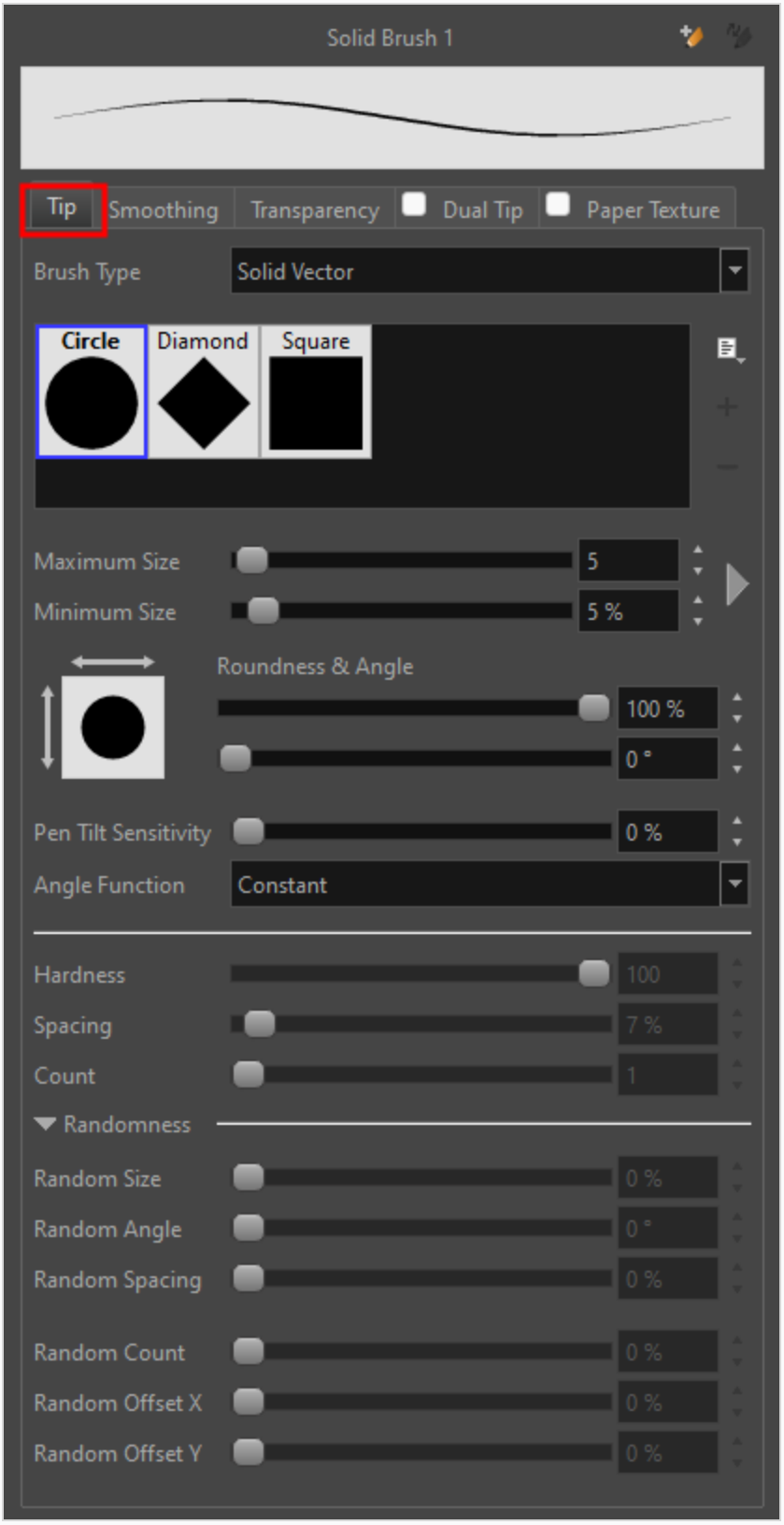


Solid brush tips are not customizable. The selection is limited to either a circle, diamond or square-shaped brush tip, the proportions and angle of which can be adjusted. While Harmony also comes bundled with preset textured brush tips, it is also possible to create and use your own textured brush tips.

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.


Solid Brush 1
Tip
Smoothing
Transparency
Dual Tip
Paper Texture
Brush Type
Solid Vector
Circle
Diamond
Square
Maximum Size
5
Minimum Size
5 %
Roundness & Angle
100 %
0 °
Pen Tilt Sensitivity
0 %
Angle Function
Constant
Hardness
100
Spacing
7 %
Count
1
Randomness
Random Size
0 %
Random Angle
0 °
Random Spacing
0 %
Random Count
0 %
Random Offset X
0 %
Random Offset Y
0 %

4. In the **Brush Tip** list, select the desired brush tip. If you want to create your own brush tip, see *Adding a Brush Tip* on page 84.
5. Use the **Maximum Size** slider to set the maximum size of your brush tip.

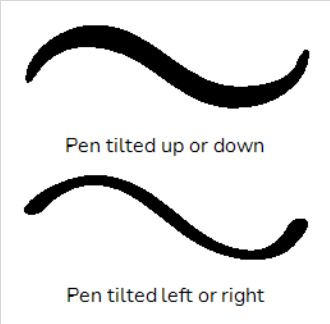
> **NOTE**
>
> When drawing with a mouse, your brush is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your brush's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

6. You can control the size properties by clicking on the arrow button on right and the Size Properties dialog box will appear.

7. 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%.
8. If you want your brush to keep the same size relative to the camera frame when the camera zooms in on or zooms out of the scene, check the **Proportional to Camera** option.

> **NOTE**
>
> The "Size Proportional to Camera" option has been moved to the new Size Properties window.

9. 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.
10. If you want your brush tip to be at an angle, use the **Angle** slider to rotate your brush tip.
11. If you want your brush tip to stretch when you tilt your pen, use the **Pen Tilt Sensitivity** slider to set how much the tip should stretch. The tip will stretch by the percentage you set, in the direction in which you tilt the pen.



NOTE

This option only works if your tablet and your pen support tilt sensitivity.

12. If you want your brush tip to rotate with the angle of your pen tip use the **Angle Function**. You can select one of the following options:

    - **Constant:** The static orientation of the brush tip expressed in degrees.
    - **Heading:** The orientation of the brush tip is determined by the direction in which the stroke is drawn. It changes dynamically as the stroke is drawn.
    - **Azimuth:** When the pen is tilted, it uses the direction in which the pen eraser is facing.
    - **Twist (if supported by pen):** It uses the twist angle of the stylus and is only available with Wacom Art Pen.

13. 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.
14. 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.
15. 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 %.
16. 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 °.
17. 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 %.

18. 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 %.
19. In the Drawing view, start drawing to test your brush settings.

NOTE

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 136.

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.

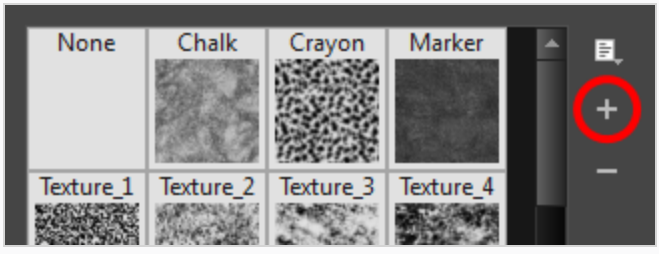
You can import brush tips in any image format supported by Harmony. It is recommended to create brush tips in a resolution ranging from 100 x 100 pixels to 400 x 400 pixels.

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

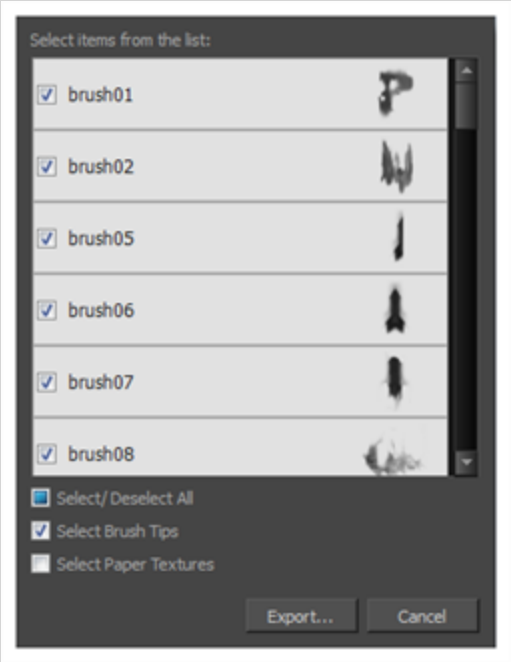
You can export brush tips to share, backup or install on a new computer.

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

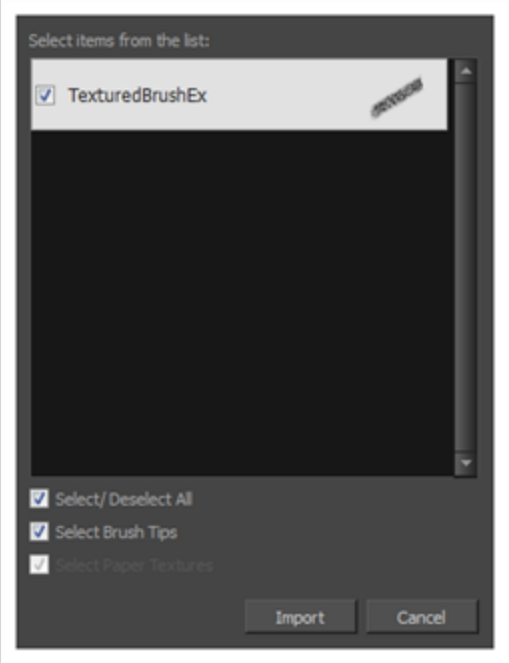
You can import Harmony brush tips you previously exported.

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.

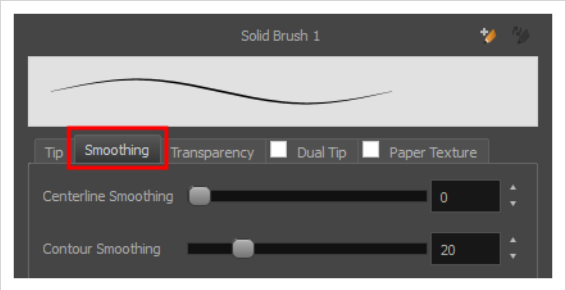
Configuring Smoothing for a Textured Brush

T-ANIMPA-002-003

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.

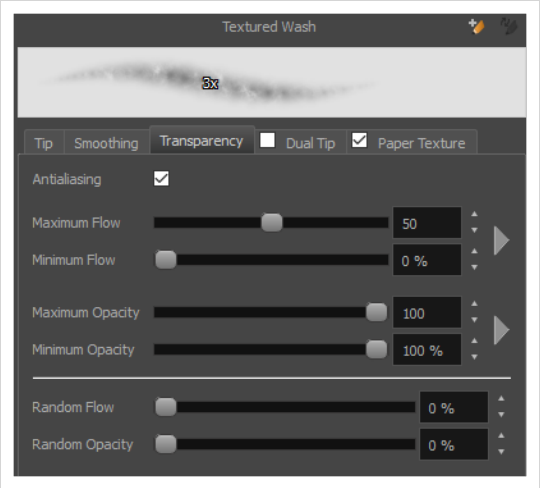
You can now control the Flow/Opacity properties with input options such as Pressure, Tilt and Speed. You can use a combination of multiple inputs to control a single property.

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.

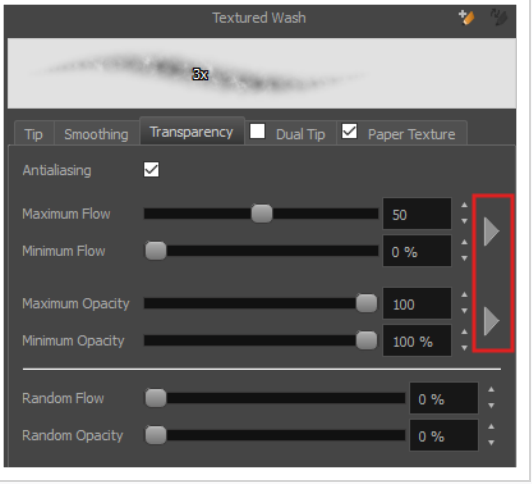
   NOTE

   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%.

> **NOTE**
>
> You can control the Flow/Opacity properties by clicking on the arrow button on the right and Flow/Opacity Properties Dialog box will appear.



> **NOTE**
>
> Please see Brush Properties Dialog and to learn more about Brush Tool option

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

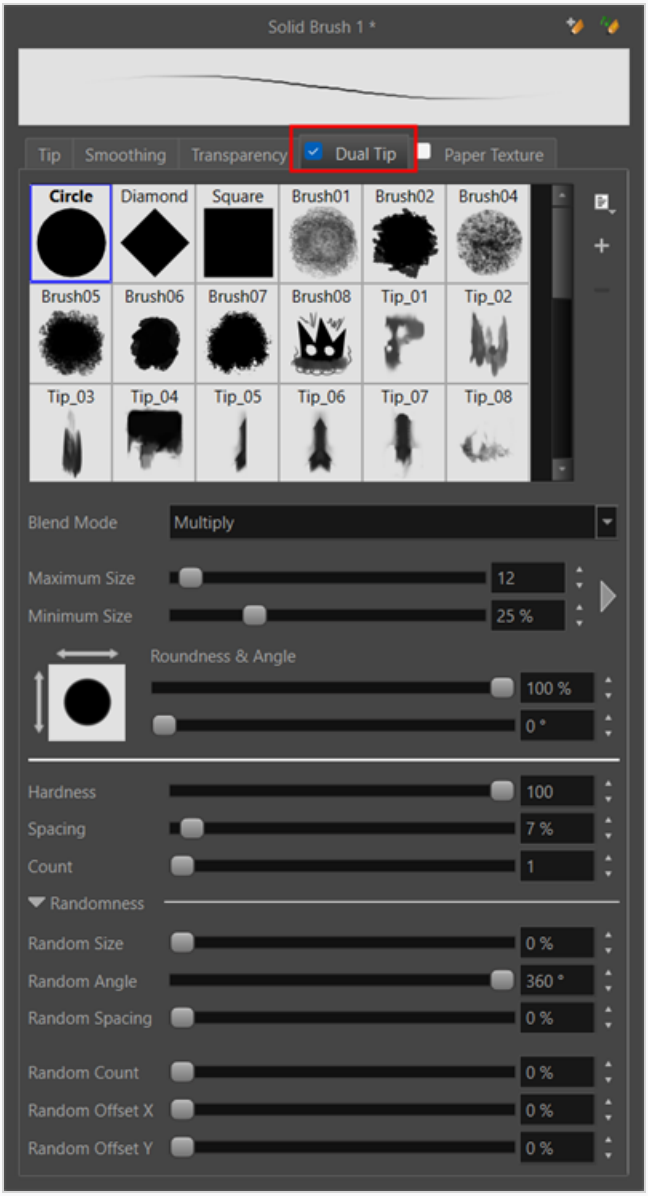
Textured brushes can also have a dual tip. A dual tip is a secondary tip that can be blended into your primary tip in various blend modes, with its own full set of tip settings.

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 *Adding a Brush Tip* on page 84.
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.

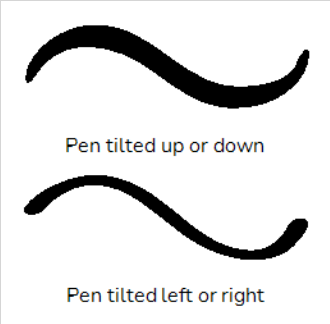
> **NOTE**
>
> When drawing with a mouse, your brush is always at its maximum size. When drawing with a pressure-sensitive pen tablet, your brush's size will range between its minimum and maximum size, depending on the amount of pressure you put on the pen when drawing.

6. You can control the size properties by clicking on the arrow button on right and the Size Properties dialog box will appear.

7. 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%.
8. If you want your brush to keep the same size relative to the camera frame when the camera zooms in on or zooms out of the scene, check the **Proportional to Camera** option.

> **NOTE**
>
> The "Size Proportional to Camera" option has been moved to the new Size Properties window.

9. 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.
10. If you want your brush tip to be at an angle, use the **Angle** slider to rotate your brush tip.
11. If you want your brush tip to stretch when you tilt your pen, use the **Pen Tilt Sensitivity** slider to set how much the tip should stretch. The tip will stretch by the percentage you set, in the direction in which you tilt the pen.



NOTE

This option only works if your tablet and your pen support tilt sensitivity.

12. If you want your brush tip to rotate with the angle of your pen tip use the **Angle Function**. You can select one of the following options:

    - **Constant:** The static orientation of the brush tip expressed in degrees.
    - **Heading:** The orientation of the brush tip is determined by the direction in which the stroke is drawn. It changes dynamically as the stroke is drawn.
    - **Azimuth:** When the pen is tilted, it uses the direction in which the pen eraser is facing.
    - **Twist (if supported by pen):** It uses the twist angle of the stylus and is only available with Wacom Art Pen.

13. 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.
14. 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.
15. 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 %.
16. 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 °.
17. 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 %.

18. 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 %.
19. In the Drawing view, start drawing to test your brush settings.

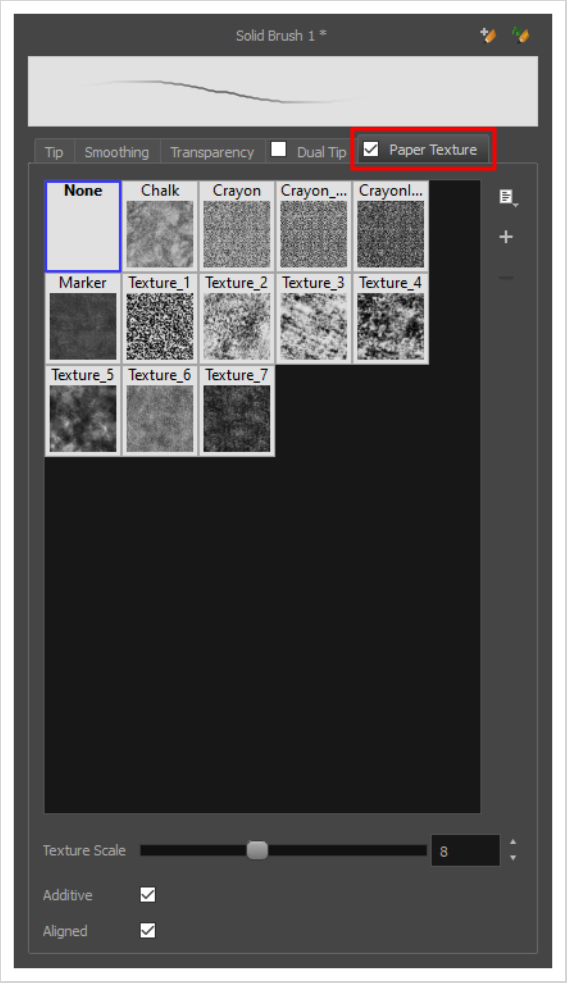
Configuring a Brush with a Paper Texture

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 104.
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.

NOTE

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 136.

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.

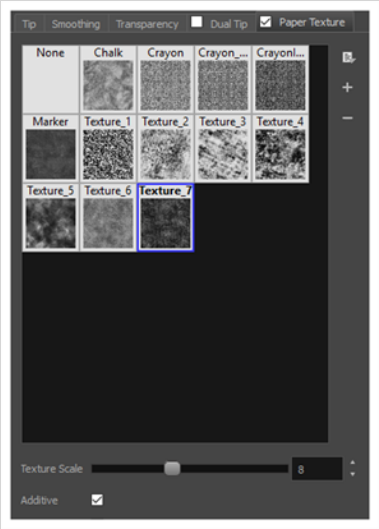
You can import brush tips in any image format supported by Harmony. It is recommended to create paper textures in a resolution ranging from 100 x 100 pixels to 400 x 400 pixels.

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

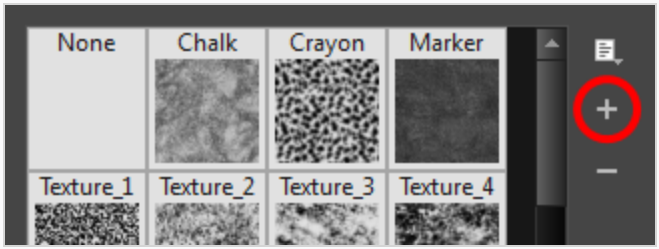
1. In the Tools toolbar, select the Brush tool or press Alt + B.
2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

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.
4. Click on the **Paper Texture** tab.
5. 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.

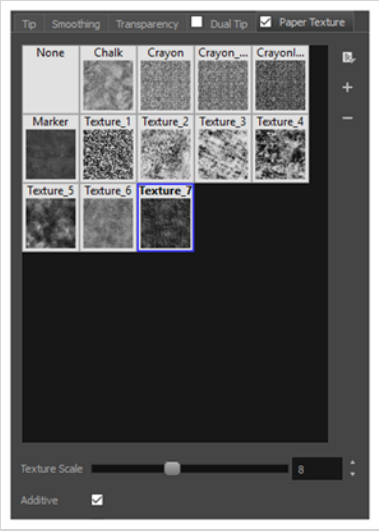
Renaming a Paper Texture

You can rename your paper textures to keep your list organized.

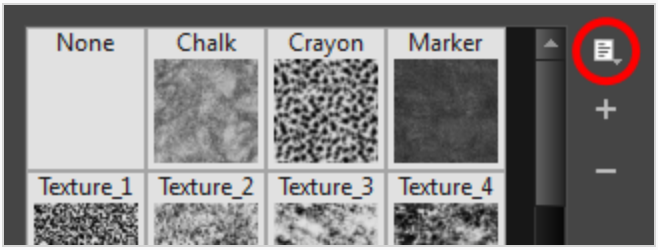
How to rename a paper texture

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.

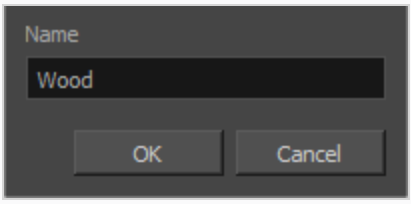
3. If you are drawing on a vector layer, set the **Brush Type** to **Textured Vector** to enable the textured brush options. If you are drawing on a bitmap layer, the textured brush options are always enabled.
4. Click on the **Paper Texture** tab.
5. Check the check box in the **Paper Texture** tab to enable paper textures.



6. Select the texture you want to rename.
7. Click on the Paper Texture menu icon and select **Rename**.



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



9. Click **OK**.

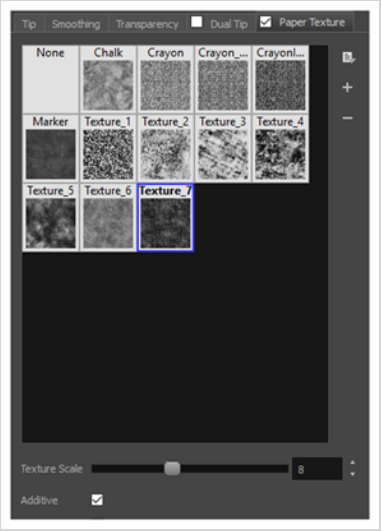
Deleting Paper Textures

You can delete unnecessary paper textures from your preset list.

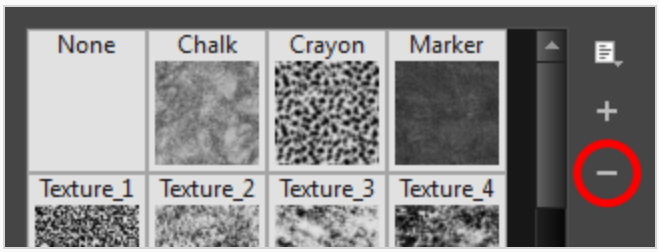
How to delete a paper texture

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.
4. Click on the **Paper Texture** tab.
5. 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.

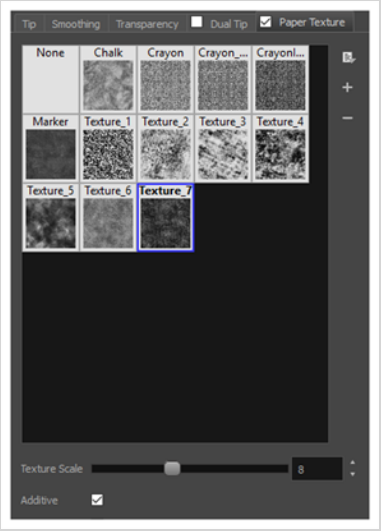
Exporting Paper Textures

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

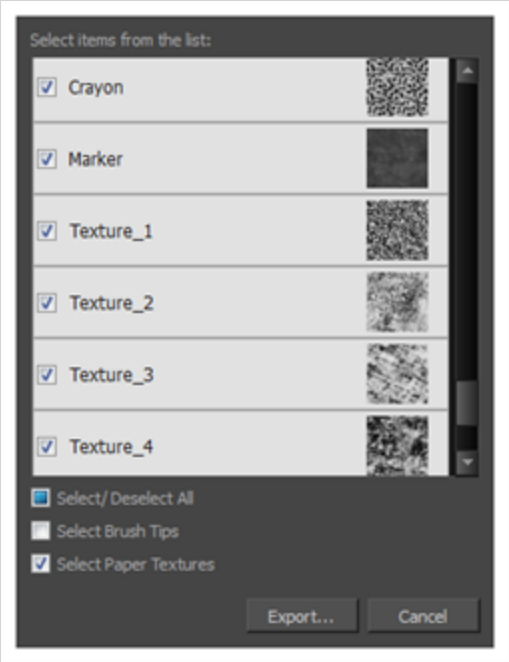
1. In the Tools toolbar, select the Brush tool or press Alt + B.
2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

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**.

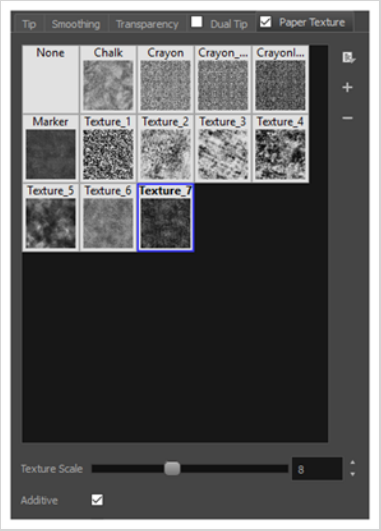
Importing Paper Textures

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

How to import paper textures

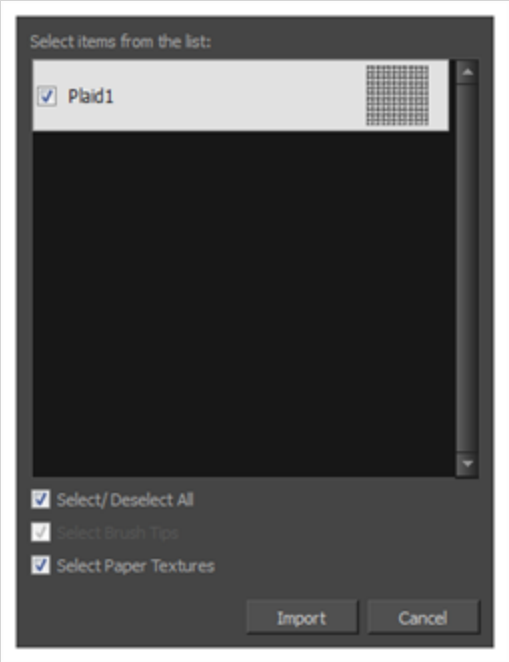
1. In the Tools toolbar, select the Brush tool or press Alt + B.
2. In the Tool Properties view, click the Arrow button to open the Brush Properties view.

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.

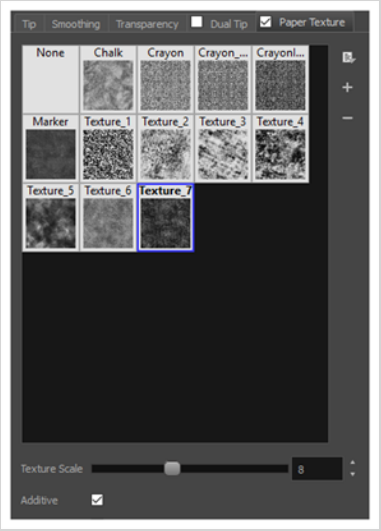
Changing the Paper Texture Display

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 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 Paint, you cannot set the pixel density of textured brush strokes for the whole scene, since 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.

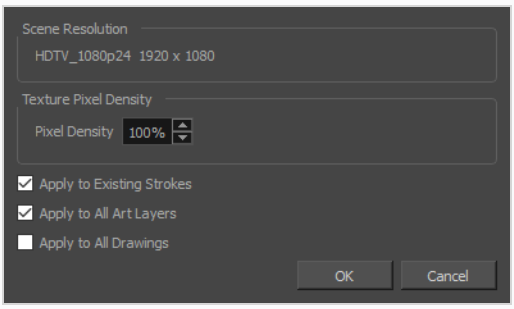
NOTE

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 317.

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.

NOTES

- *Brush presets* are not to be confused with *brush tips* and paper textures. A brush tip is one of the properties of a brush. A brush preset contains all of the properties for a given brush. However, both can be exported, imported and managed similarly.
- 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.
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.
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 Stamp

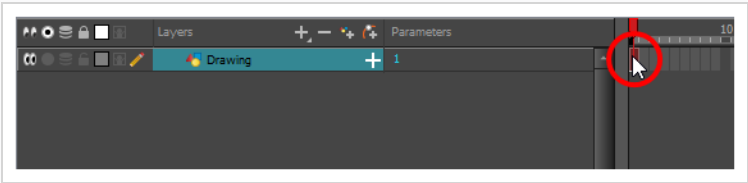
You can create a stamp by drawing the artwork for your stamp, then selecting it and creating a stamp preset.

How to create a stamp

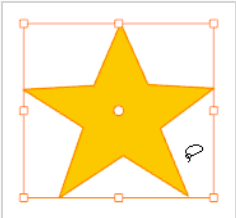
1. In the Drawing view, draw the artwork with which you want to create a stamp.

2. Do one of the following:

   - If you want to create a stamp with all the artwork in the drawing, select this drawing in the Thumbnails list.



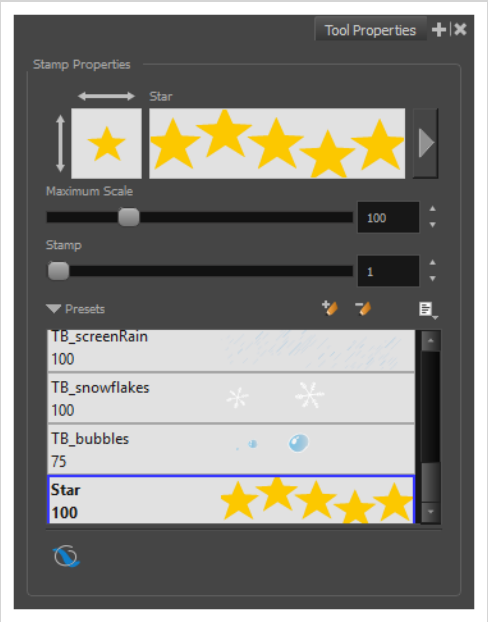
   - If you want to create a stamp with part of the artwork in the drawing, select the Select tool in the Tools toolbar, then select the artwork that you want to use to create a stamp—see—*Selecting, Repositioning and Transforming Artwork* on page 230.



3. In the Tools toolbar, select the Stamp tool.
4. In the Tool Properties view, click on the New Preset button.
5. In the New Preset dialog, type the desired name for your new stamp.
6. Click **OK**.

   A stamp containing the selected artwork is added to the Presets list for the Stamp tool. You can

now draw with the Stamp tool using this stamp.



NOTE

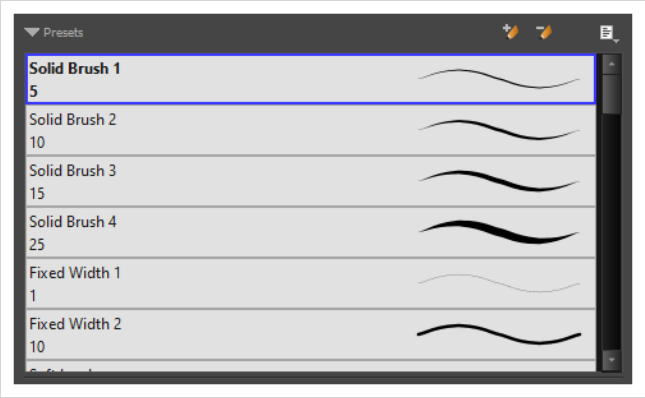
Once your stamp has been created, you can delete the artwork you used to create it from your project. The artwork in your stamps will be saved in your preferences.

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.

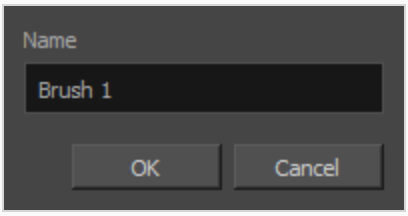
3. Configure your brush to be exactly how you wish to use it in the future—see Creating a Solid Brush or Creating a Textured Brush.
4. Click on the Update Brush Preset button in the upper-right corner of the Brush Properties dialog.

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**.

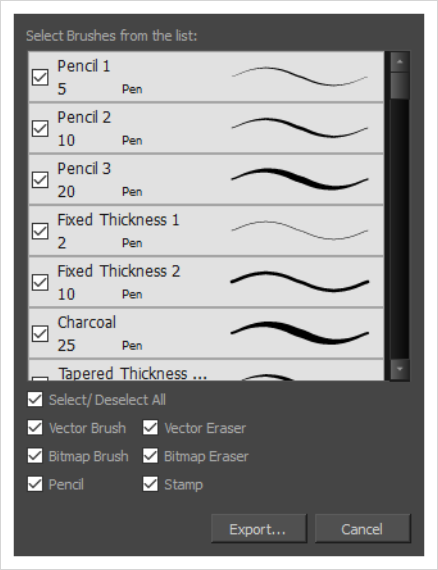
Exporting Brush Presets

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. In the Tool Properties view, open the Brush Preset menu and select **Export Brushes**.

   The Export Brushes 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**.

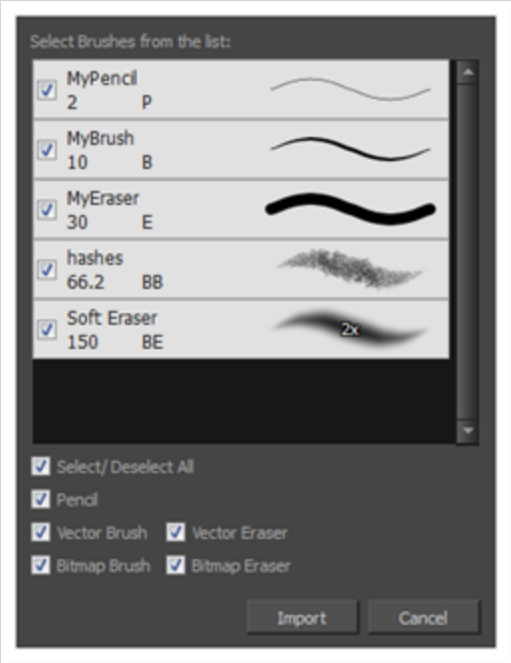
Importing Brush Presets

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. In the Tool Properties view, 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 way presets are previewed in the Tool Properties view

1. In the Tool Properties view, open the Brush Presets menu.
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.

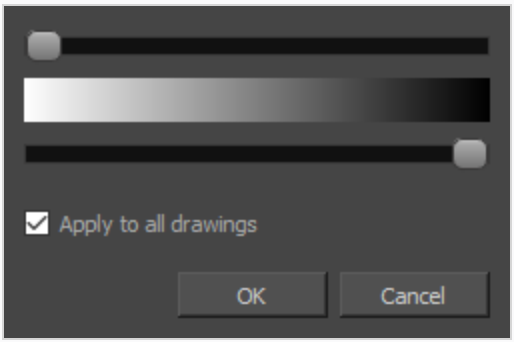
Adjusting Texture Opacity

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.

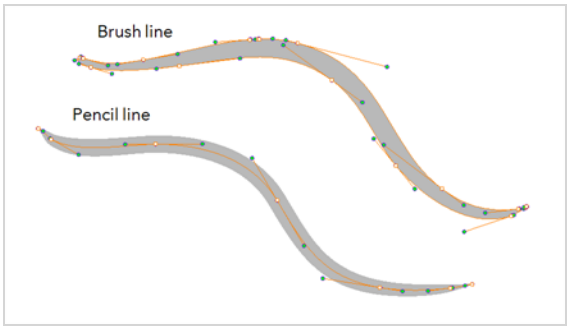
3. Do one of the following:
   - Drag the upper slider towards the right to increase the transparency of the more transparent pixels.
   - Drag the lower slider towards the left to increase the opacity of the more opaque pixels.
4. If you want to apply the changes to all drawings exposed on the layer, enable the **Apply to All Drawings** option.
5. Click **OK**.

About the Pencil Tool

T-HFND-004-004

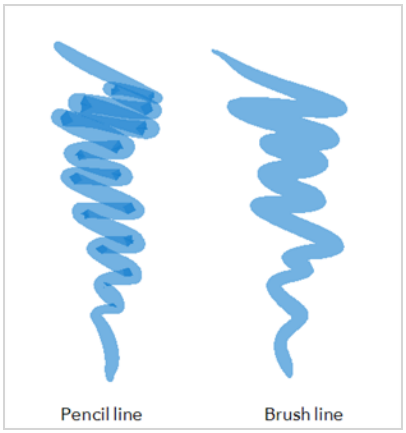
The Pencil tool is for drawing the final images, such as character nodes, cut-out puppet and clean animation. The pencil creates a central vector shape. Pencil lines support pressure sensitivity and texture.

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:



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.

NOTE

To learn more about the Pencil tool options, see the Reference Guide.

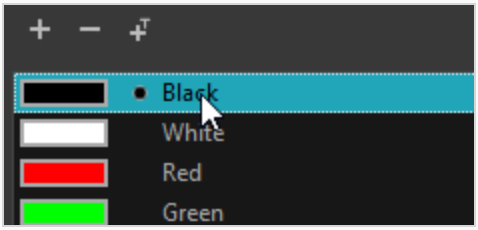
Drawing with the Pencil Tool

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.

TIPS

- You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
- If you press and hold the Shift key before or while drawing, you will draw a straight line.
- If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.
- If you press and hold the Shift and Alt keys before or while drawing, you will draw a straight horizontal or vertical line.
- If you press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing, your drawing stroke will turn into a closed shape.
- If you press and hold Alt before drawing a stroke, and start drawing near existing artwork, the start of your drawing stroke will connect to that artwork.
- If you press and hold Alt while drawing a stroke, and end your drawing stroke near existing artwork, the end of that drawing stroke will connect to that artwork.

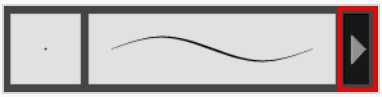
Creating a Pencil

T-LAY-001-001

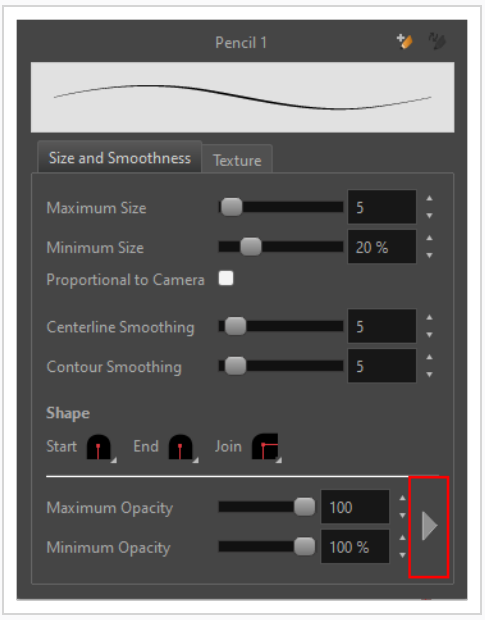
You can configure a pencil's size, how much Harmony should automatically smooth your pencil lines when drawing, the shape of the tips and corners of your pencil line as well as its texture.

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.

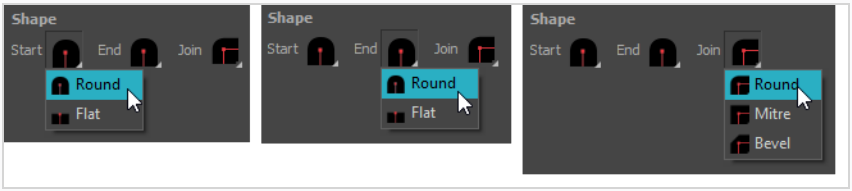
3. Use the **Maximum Size** slider to set the maximum size of your pencil line.
4. If you are using a pressure-sensitive pen tablet, use the **Minimum Size** slider to set the size of your pencil when using your pen with very little pressure. The minimum size is set to a percentage of your pencil's maximum 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. If you want your pencil to keep the same size relative to the camera frame when the camera zooms in on or zooms out of the scene, check the **Proportional to Camera** option.

6. Use the **Centerline Smoothing** slider to set the amount of smoothing Harmony should perform on your pencil stroke's centreline. 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.

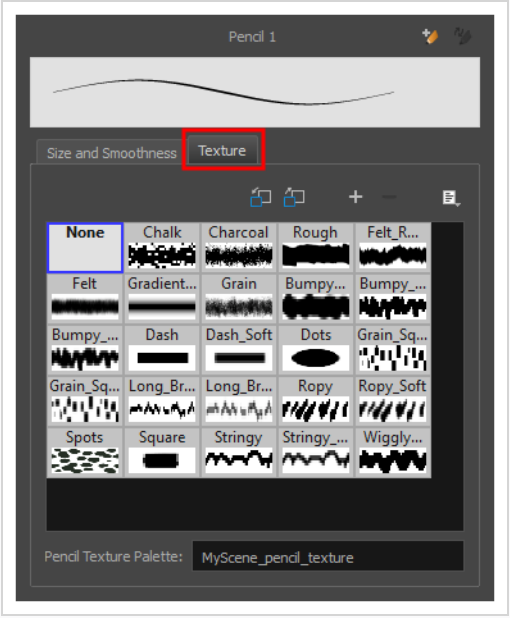
7. If you are using a pressure-sensitive tablet, use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your pencil stroke's contour. A higher setting will smoothen the variations in your pencil line's thickness and reduce its amount of control points, but may affect the precision of the variations in line thickness.

> **NOTE**
>
> This parameter is only useful if you are drawing with a pressure-sensitive tablet, as it only affects the control points for the thickness of your pencil line. When drawing with a mouse, the pencil line has a uniform thickness, and hence its contour only has control points at its extremiities.

8. 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.



9. Click on the **Texture** tab.

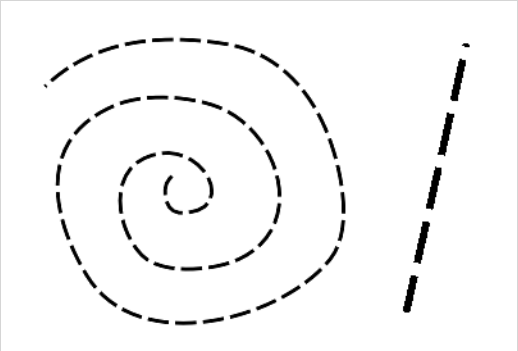


10. If you want your pencil line to have a texture, select the desired pencil line texture from the pencil line texture library. Otherwise, select None. For more information on pencil line textures, see *About Pencil Line Textures* on page 136.
11. Either close or set aside the Pencil Properties dialog.
12. In the Drawing view, start drawing to test your pencil settings.

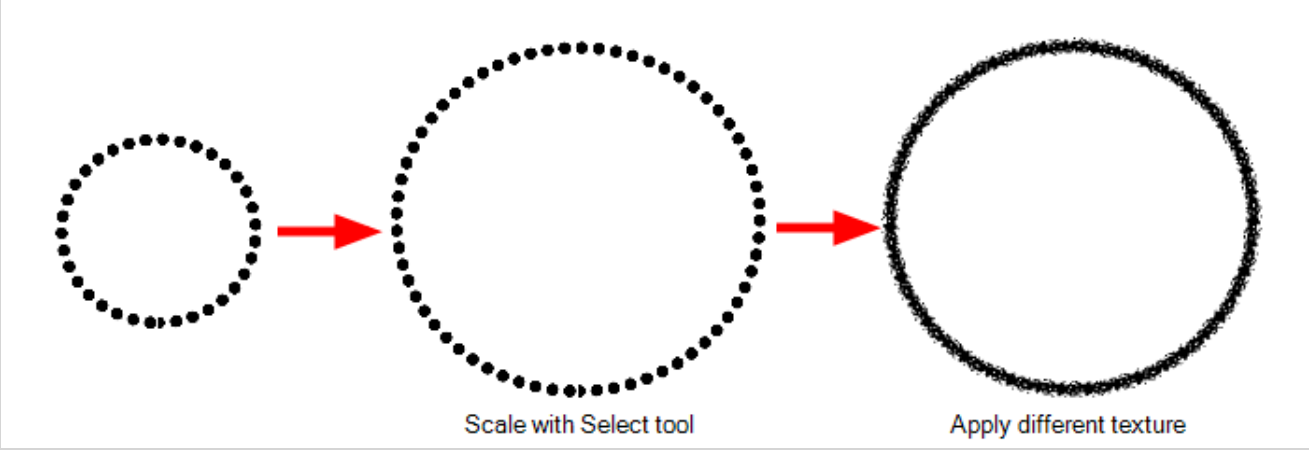
About Pencil Line Textures

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 updated 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.



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. In the Colour view, you can select a pencil texture palette, then one of its pencil texture swatches, 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.

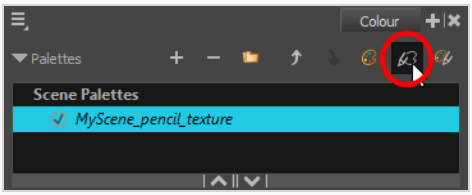
Your pencil texture will be combined with the selected colour to make a textured colour line.

NOTE

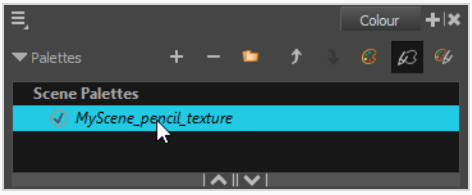
You can also draw with textured pencil lines with the Line, Rectangle and Ellipse tools.

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

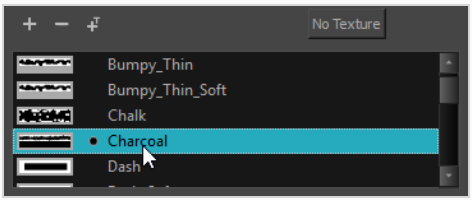
1. In the Tools toolbar, select the Pencil tool or press Alt + /.
2. In the Colour view, select the colour with which you wish to draw.
3. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



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



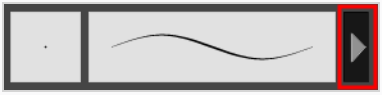
5. In the swatch list, select the pencil texture you want to use.



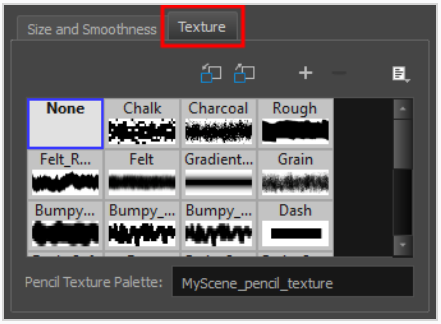
6. In the Drawing view, draw a pencil line.

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 Texture to a Pencil Line

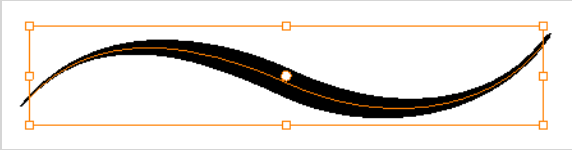
You can apply a pencil texture to an existing pencil line. You can also change a textured pencil line's texture by following the same steps.

NOTE

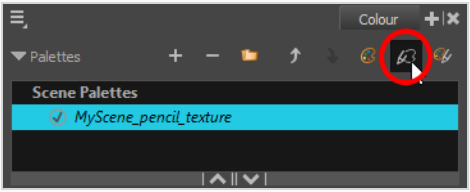
You can also apply pencil line textures on artwork created with the Line, Rectangle, Ellipse and Polyline tools.

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

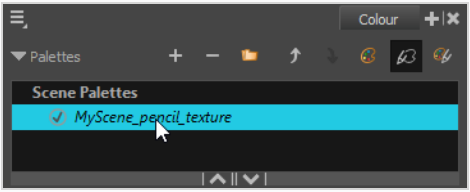
1. In the Tools toolbar, select the Select tool or press Alt + S.
2. In the Drawing view, select a pencil line.



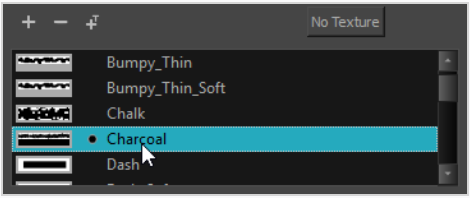
3. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



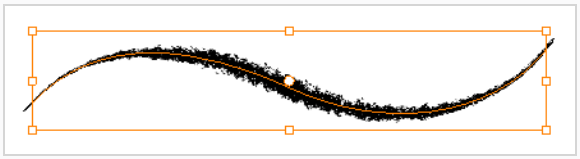
4. In the palette list, select the pencil texture palette containing the desired pencil texture.



5. In the swatch list, select the pencil texture you want to apply to your pencil line.

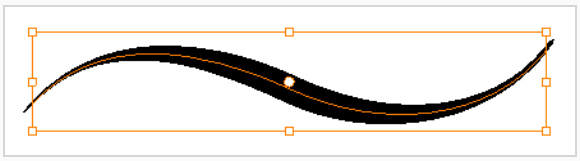


6. The selected pencil line now uses the selected pencil line texture.

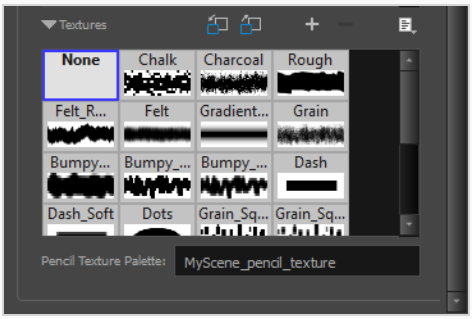


How to apply a pencil line texture to an existing pencil line using the Tool Properties view

1. In the Tools toolbar, select the Select tool or press Alt + S.
2. In the Drawing view, select a pencil line.

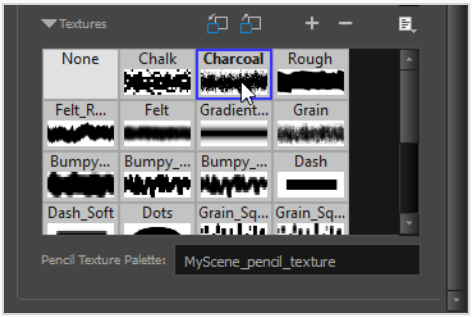


3. In the Tool Properties view, scroll down to the pencil texture library panel.

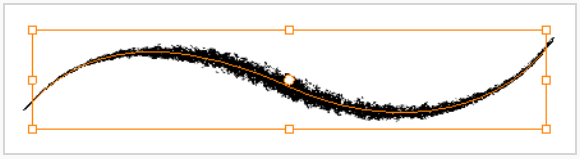


> **NOTE**
>
> The texture library in the Tool Properties view lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

4. Select the pencil texture you wish to apply.



5. The selected pencil line now uses the selected pencil line texture.

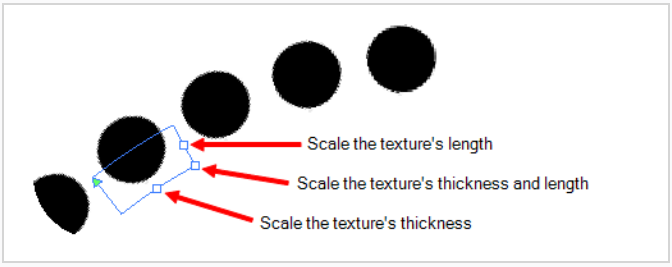


Editing a Pencil Line's Texture

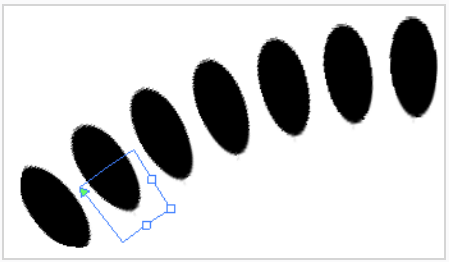
There are two kinds of modification you can make to a pencil line's texture. Using the Edit Gradient/Texture tool, you can scale the texture by its length and thickness, as well as offset its starting position. Using the Pencil Editor tool, you can change the texture's symmetry relative to the line's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

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.

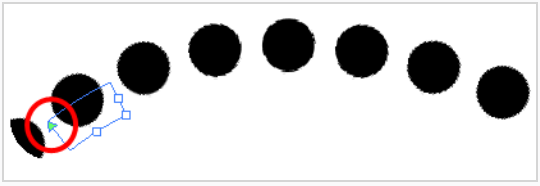


3. Drag one of the square-shaped handles to scale the texture's length, thickness, or both simultaneously.

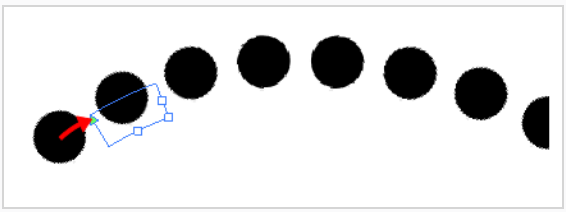


How to offset a pencil line's texture.

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.

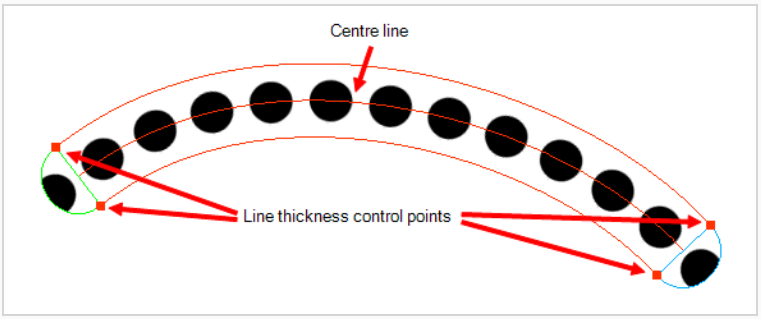


3. Drag the triangle-shaped handle to offset the texture.

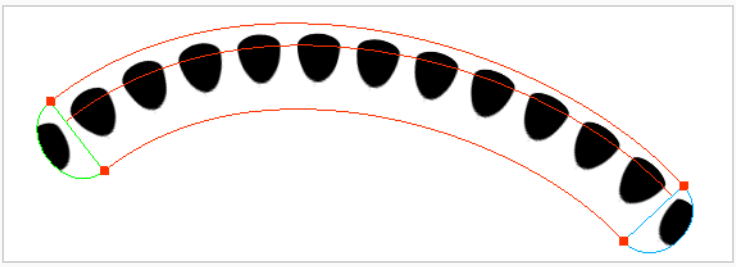


How to change a pencil line's symmetry

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.



How to change a pencil line's gradient

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 top control point closer or further away from the center line to change the gradient

Picking a Pencil Texture from Artwork

Just like you can pick a colour from your artwork using the Colour Eyedropper tool, you can pick a pencil texture from your artwork and make it the current pencil texture using the Pencil Texture Eyedropper tool.

How to pick a pencil texture from your artwork

1. In the Tools toolbar, double-click or long-click on the Colour Eyedropper button. Then, in the pop-up menu, select Pencil Texture Eyedropper.
2. In the Drawing view, click on a pencil line that uses the pencil texture you want to select.

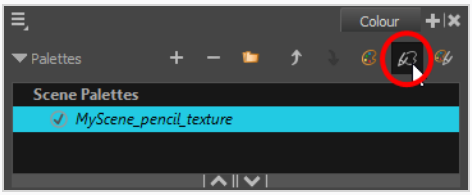
   The pencil texture used by that line will become the active pencil texture, and pencil lines you draw from that point will use that texture.

Disabling Pencil Line Textures

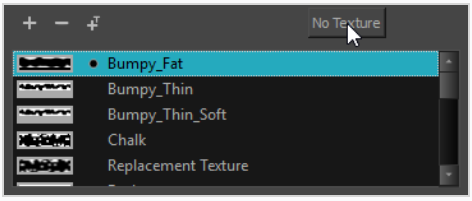
After you selected a pencil line texture, if you wish to resume drawing solid pencil lines again, you can do so using either the Colour view or the Pencil Properties dialog.

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.



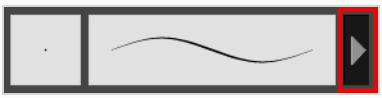
2. Over the swatch list, click on the **No Texture** button.



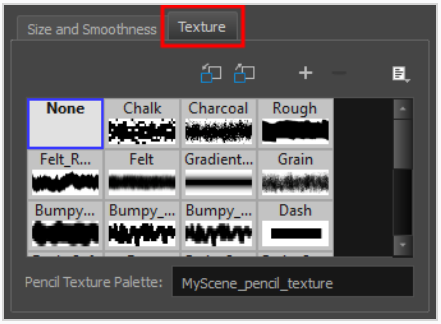
From now on, the pencil lines you draw will not have a texture.

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. .

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. .

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

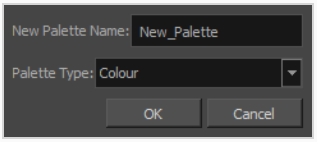
If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:

- 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.



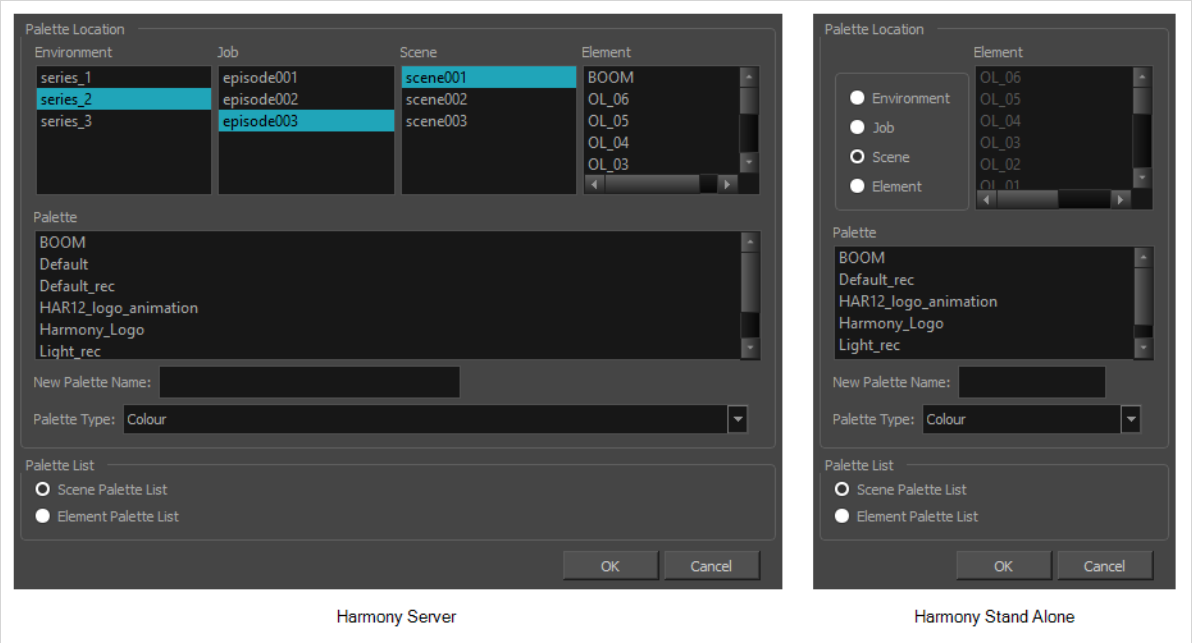
4. In the **Palette Type** drop-down, select **Pencil Texture**.
5. Click **OK**.

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

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

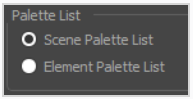
1. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.
2. If you want to add the palette to an element's palette list, select a drawing from the element for which you want to create a palette in the Timeline, Xsheet or Camera view.
3. Do one of 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.



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 346.
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 345.



8. Click **OK**.

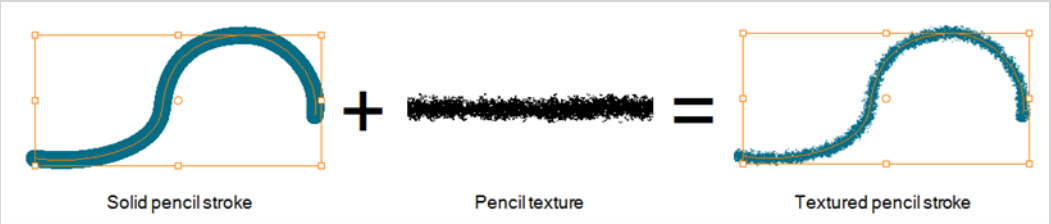
   The new palette appears in the palette list.

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:



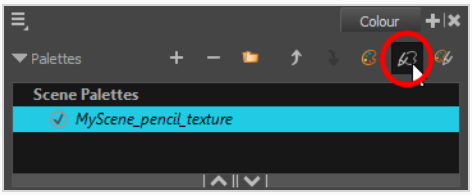
NOTE

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

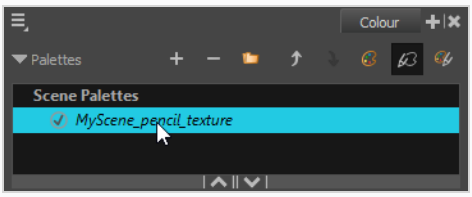
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu, select **Palettes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

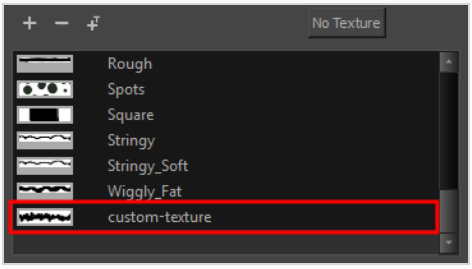


2. In the palette list, select the pencil texture palette containing the desired pencil texture.



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**.

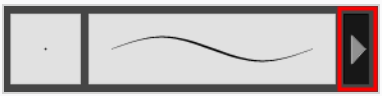
    The texture is added to your pencil texture palette.



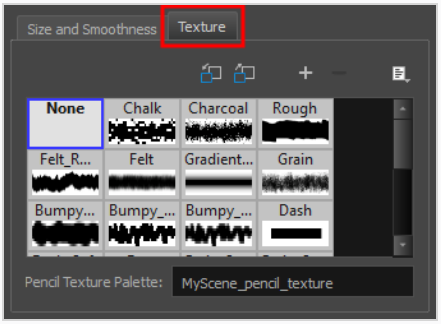
You can start drawing with your new pencil texture.

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.



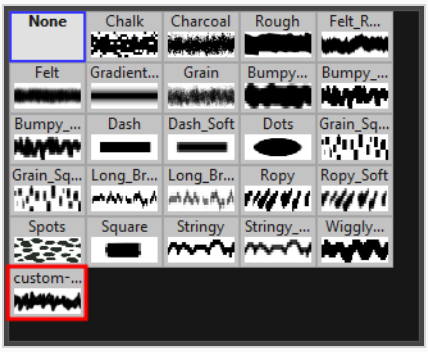
3. In the Pencil Properties dialog, click on the **Texture** tab.



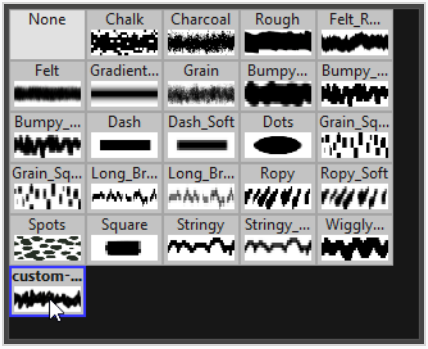
> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

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.

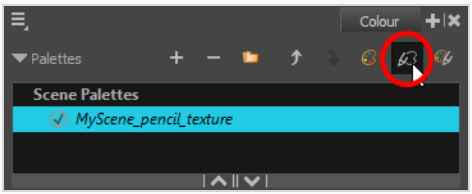
NOTE

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

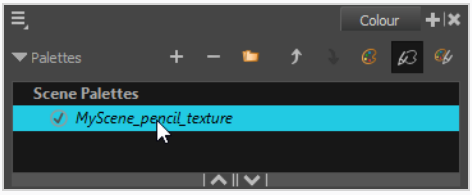
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu, select **Palettes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

How to rename a pencil line texture using the Colour view

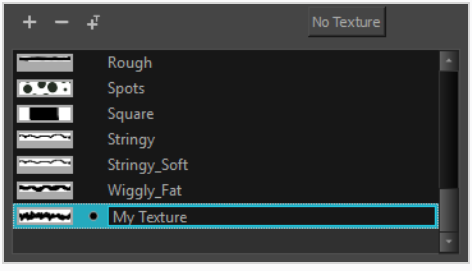
1. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



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



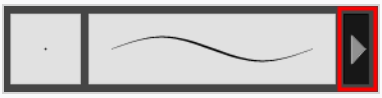
3. In the swatch list, double-click on the name of the texture you wish to rename.



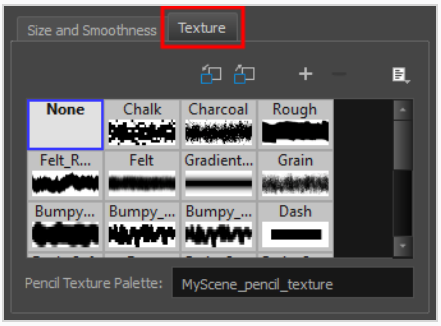
4. Enter the texture's name, then click outside of the text input field to confirm the new name.

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.

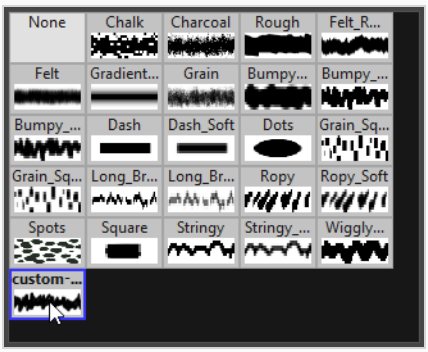


3. In the Pencil Properties dialog, click on the **Texture** tab.



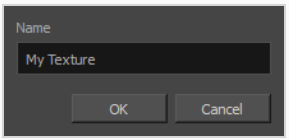
> **NOTE**
>
> The texture library in the Texture tab lists the same pencil textures as the ones in the currently selected pencil texture palette in the Colour view.

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.

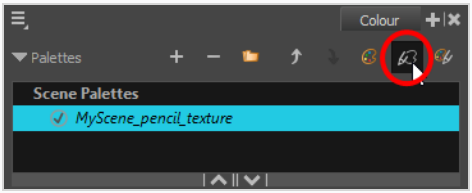
NOTE

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

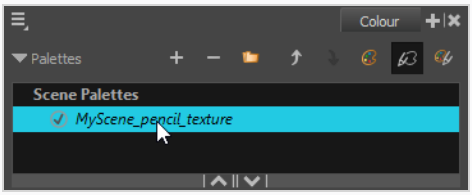
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu, select **Palettes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

How to rename a pencil line texture using the Colour view

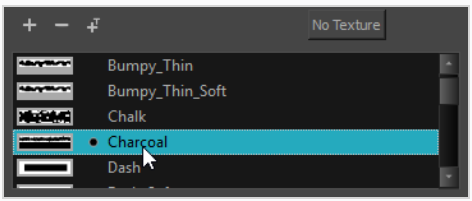
1. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



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



3. In the swatch list, select the pencil texture you wish to delete.

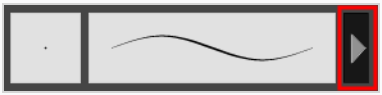


4. Do one of the following:
    - Click on the Remove Colour button.
    - Right-click on the pencil texture and select **Delete**.
    - Open the Colour view menu and select **Colours > Delete**.
    - Press Del (Windows/Linux) or Backspace (macOS).

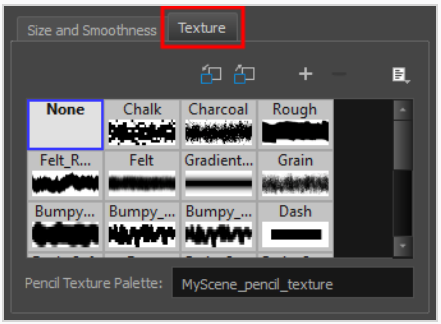
    The selected pencil texture is removed from the pencil texture palette.

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.

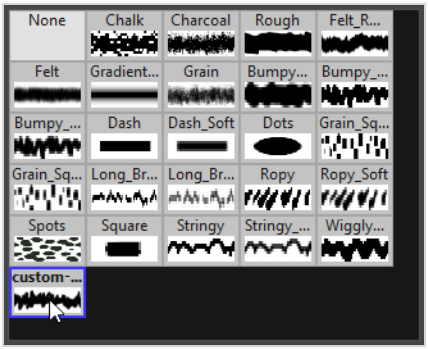


3. In the Pencil Properties dialog, click on the **Texture** tab.



> **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.

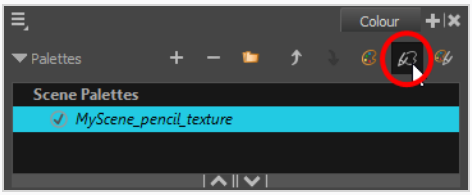
NOTE

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

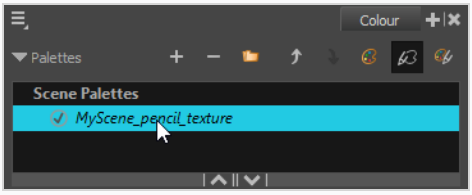
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu, select **Palettes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

How to replace an existing pencil line texture

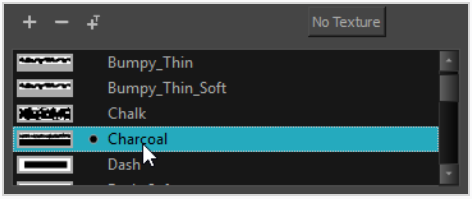
1. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



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.

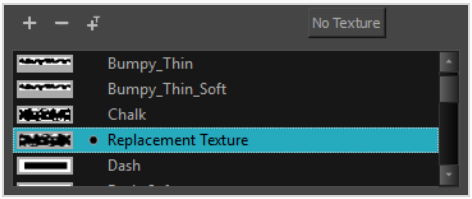


4. Do one of the following:

- 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.



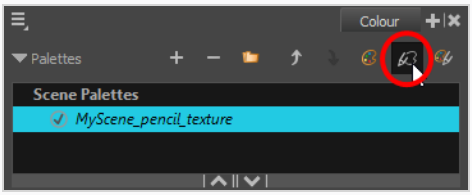
   Any pencil line that was drawn with the older pencil texture will now be drawn with the new pencil texture.

Setting the Default Pencil Texture Palette

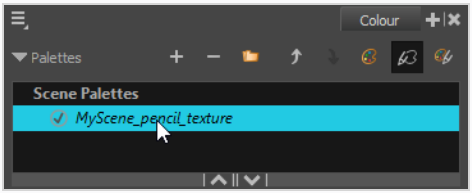
You can make a pencil texture palette into the default texture palette which is added to every new scene you create. This will be saved in your user preferences.

How to add a texture to your preferences

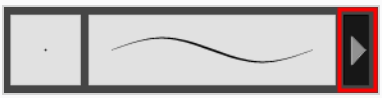
1. In the Colour view, click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



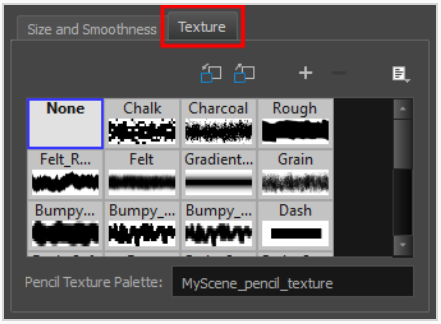
2. In the palette list, select the pencil texture palette containing the desired pencil texture.



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**.

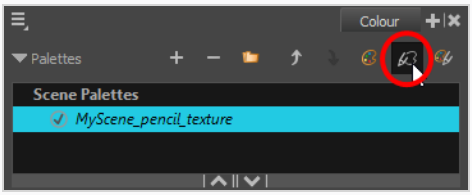
   From now on, new scenes created in Harmony will have the selected pencil texture palette as their default pencil texture palette.

Recovering the Default Pencil Texture Palette

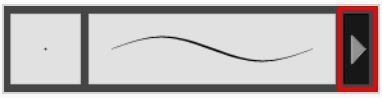
If you have made modifications on the default pencil texture palette in your scene that you wish to undo, you can easily re-import the default pencil texture palette back into your scene as a new pencil texture palette.

How to recover the default pencil texture palette into your scene

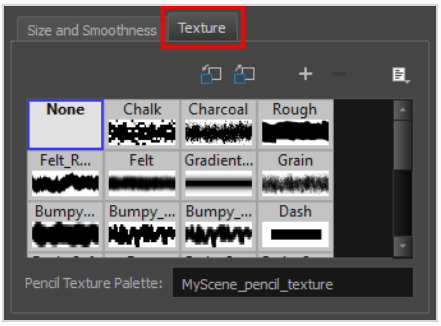
1. Click on the Show Pencil Texture Palettes button to display your pencil texture palettes.



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**.

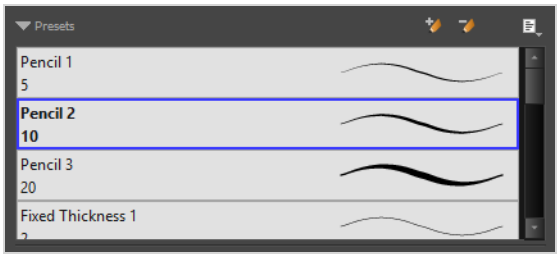
How to convert a colour palette to a pencil texture palette

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.

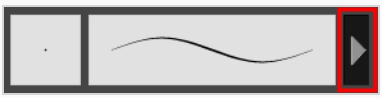
Regular pencil presets allow you to set the size and smoothing of the line or shape. As you draw, the thickness of the line varies according the amount of pressure you apply with a pen and tablet.

NOTE

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

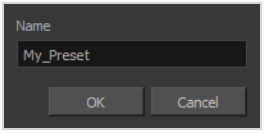
How to create a pencil preset

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 133.
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.

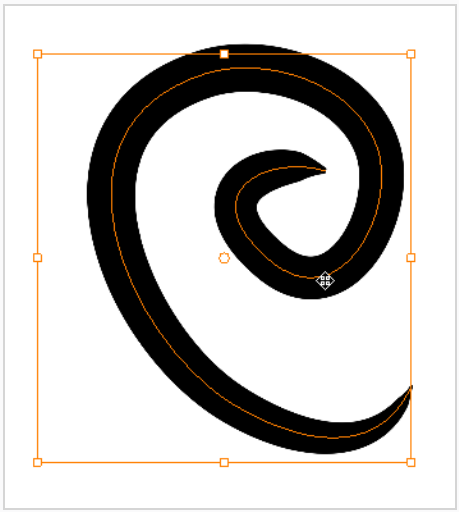
Creating Pencil Thickness Presets

T-LAY-002-003

Thickness stencils that are indicated with this icon 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.

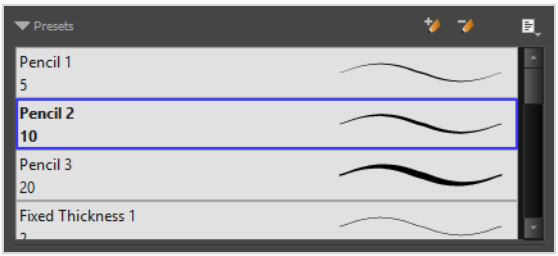
Selecting a Pencil Preset

T-ANIMPA-010-001

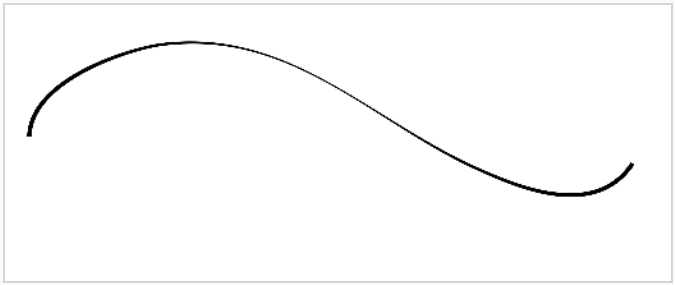
A pencil preset is a pencil with specific properties. You can work with regular pencil presets and thickness stencils.

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.



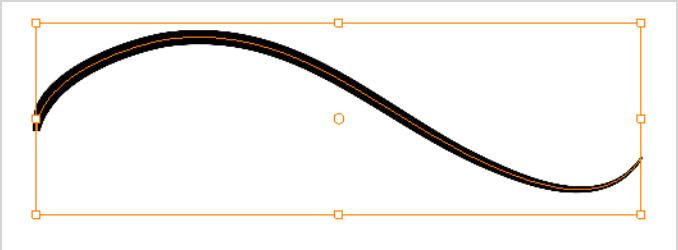
Applying a Pencil Preset

T-ANIMPA-010-004

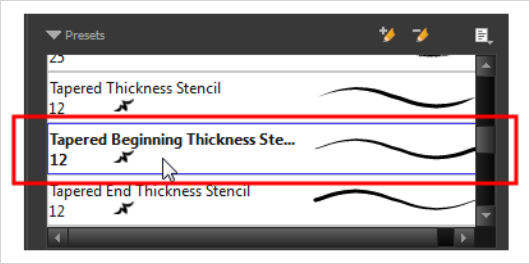
You can apply a pencil preset on already drawn pencil lines using the Select tool.

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

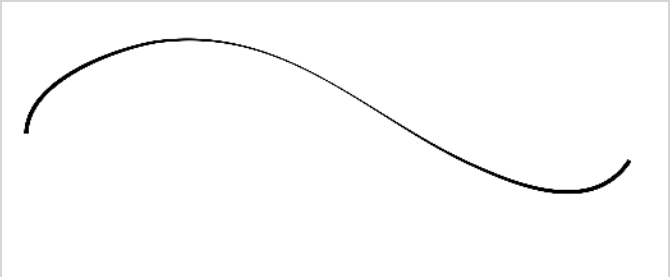
1. In the Tools toolbar, select the Select tool.
2. In the Drawing view, select the pencil line or shape on which you want to apply a style.



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.



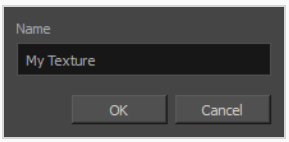
Renaming Pencil Presets

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

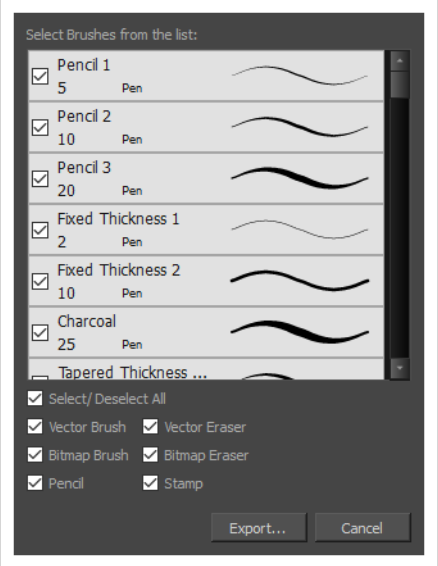
T-ANIMPA-010-005

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. In the Tool Properties view, open the Brush Preset menu and select **Export Brushes**.

   The Export Brushes 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 Pencil Presets

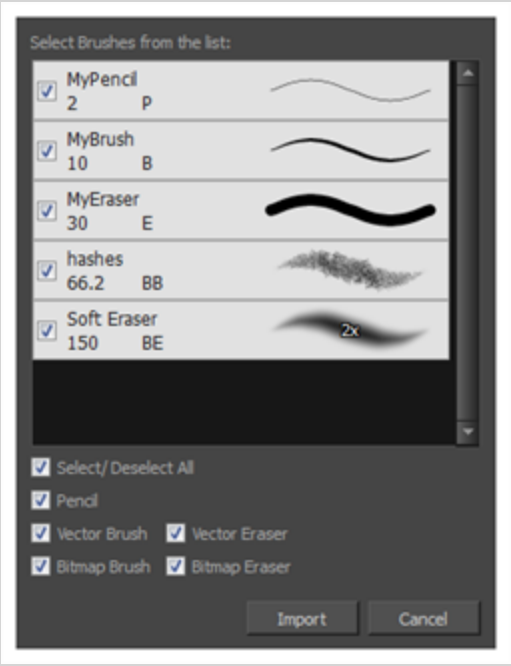
T-ANIMPA-010-006

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. In the Tool Properties view, 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 way presets are previewed in the Tool Properties view

1. In the Tool Properties view, open the Brush Presets menu.
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.

About Shape Tools

T-HFND-004-006

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 250 and *About the Pencil Editor Tool* on page 261.

The available shape tools are:

- Line tool
- Rectangle tool
- Ellipse tool
- Polyline tool

NOTES

- 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 129.
- To learn more about the shape tool parameters, see the Reference guide .

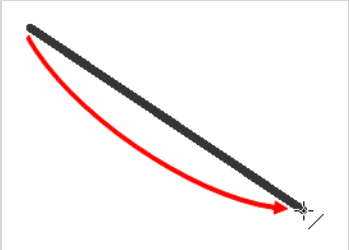
Creating Lines, Rectangles and Ellipses with the Shape Drawing Tools

T-HFND-004-006A

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

How to draw with the Line tool

1. Select a drawing from the Drawing Thumbnails panel.
2. In the Tools toolbar, select the Line tool.
3. In the DrawingCamera view, click and hold where you want the line to start, then move the mouse cursor where you want the line to end.



   - If you want to snap the angle of your line to the nearest 15° angle, hold the Shift key.
   - If you want to snap the end of your line to the nearest shape, hold the Alt key.
   - If you want to draw a curved line, hold Ctrl (Windows/Linux) or ⌘ (macOS). The line will end where your mouse cursor currently is, and moving the mouse cursor will pull the line's curve towards it.

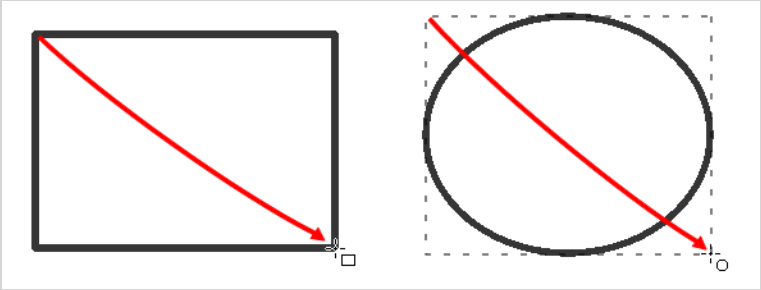
TIP

You can use the Contour Editor tool to tweak the shape of your line—see *About the Contour Editor Tool* on page 250.

How to draw with the Rectangle or Ellipse tool

1. Select a drawing from the Drawing Thumbnails panel.
2. In the Tools toolbar, select the Rectangle or Ellipse tool.
3. To automatically fill the shape, in the Tool Properties view, enable the Auto Fill option.

4. In the DrawingCamera view, click and hold where you want one of the corners of your shape to be, then move the mouse cursor where you want the opposing corner of the shape to be.



TIPS

- To draw a perfect square or circle (with equal width and height), hold the Shift key. You can also enable the Draw Square or Draw Circle option in the Tool Properties view.
- To draw the rectangle or ellipse from its centre instead of its corner, hold the Alt key.

Drawing Curved Lines with the Line Tool

The Line tool allows you to draw curved lines very quickly by drawing a straight line, then defining its curve right after.

There are three ways to do this:

- In **Straight Line Mode**, the default mode of the Line tool, you can press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing a line to define a simple curve for it.
- In **Curved Line Mode**, after drawing a line, you are prompted to move the mouse cursor or tablet pen and click once to define the line's curve.
- In **S Curve Line Mode**, after drawing a line, you are prompted to click once to position the line's first Bezier handle, and then once more to position its second Bezier handle.

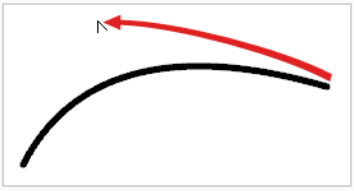
NOTE

You can also define the curve of an existing line using the Contour Editor tool—see *About the Contour Editor Tool* on page 250.

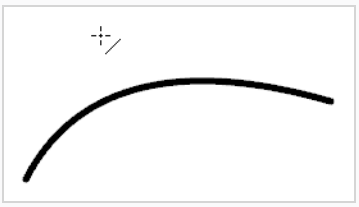
How to draw a curved line in Straight Line Mode

1. In the Tools toolbar, select the Line tool.
2. In the Tool Properties view, click Straight Line Mode.
3. In the Drawing view, click and drag to draw a line, but don't release the mouse button or tablet pen.

4. While holding the mouse button or tablet pen down, press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key.
5. Move the mouse or pen in the general direction of the desired curve.



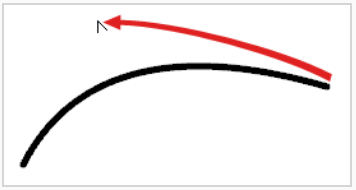
6. When the curve looks as intended, release the mouse button or pen to preserve it.



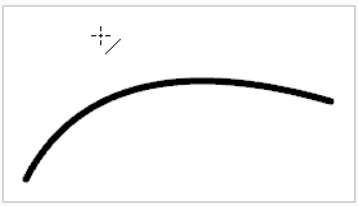
How to draw a curved line in Curve Line Mode

1. In the Tools toolbar, select the Line tool.
2. In the Tool Properties view, click Curve Line Mode.
3. In the Drawing view, click and drag to draw a line, then release the mouse button or tablet pen.

4. Move the mouse or pen in the general direction of the desired curve.

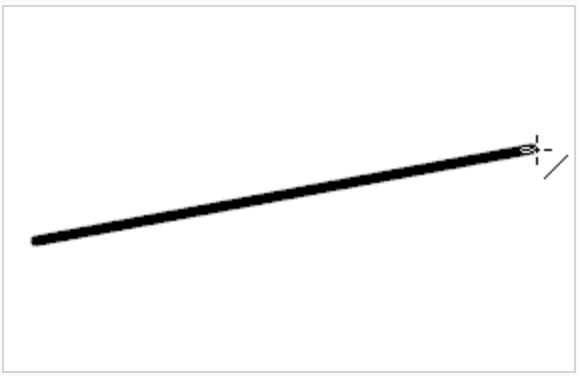


5. When the curve looks as intended, click to preserve it.

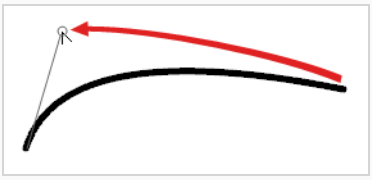


How to draw a curved line in S Curve Line Mode

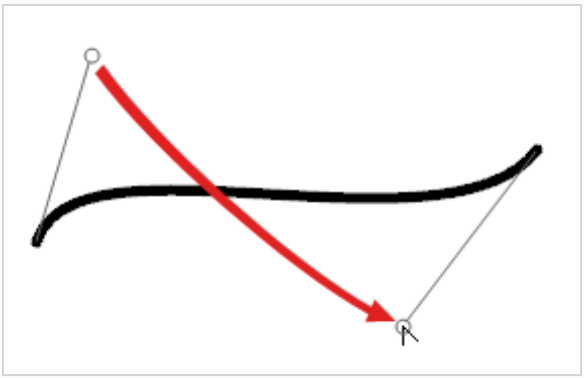
1. In the Tools toolbar, select the Line tool.
2. In the Tool Properties view, click Curve Line Mode.
3. In the Drawing view, click and drag to draw a line, then release the mouse button or tablet pen.



4. Move the mouse cursor or pen where you want the curve's first Bezier handle (from the start of the line) to be positioned, then click.



5. Move the mouse cursor or pen where you want the curve's second Bezier handle (from the end of the line) to be positioned, then click.



Creating Vector Shapes with the Polyline Tool

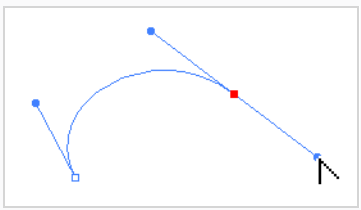
You can use the Polyline tool to draw complex segmented lines or curved lines by creating each point constituting the line.

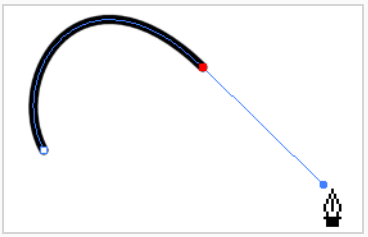
How to draw with the Polyline tool

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, do one of the following:
   - Click to create a point with no Bezier handles.
   - Click and drag to create a point and its Bezier handles in the same stroke.

   TIP

   While dragging to create a Bezier handle, you can:
   - Hold the Alt key to only change the angle of the outer handle, and leave the inner handle at its current angle.
   - Hold the Shift key to lock the angle of the handle at every 15 degrees.
4. Click or click and drag somewhere else to create the second point in your line. A line will be drawn between the first point and the second point.

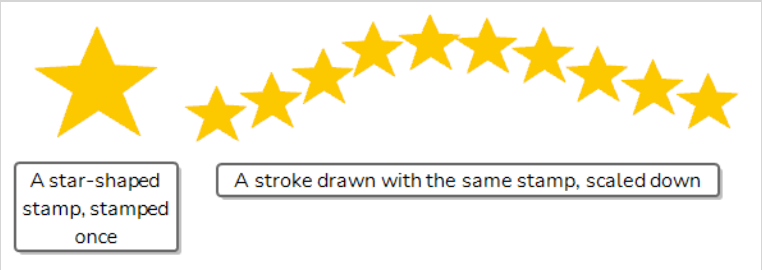




5. Repeat the previous step until your line is complete.
6. While holding Ctrl (Windows/Linux) or ⌘ (macOS), click anywhere in the drawing space to release the Polyline tool from the line you've been building. You can then start building a new line.
7. If you want to make adjustments to the line you created, you can use the Contour Editor tool—see *Reshaping a Shape, Pencil Line or Stroke with the Contour Editor Tool* on page 251.

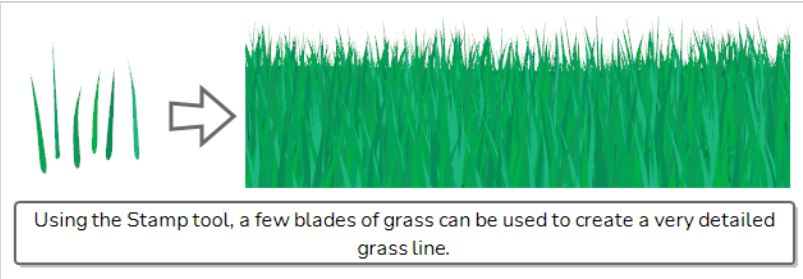
About the Stamp Tool

The Stamp tool allows you to create stamps out of drawings in your projects, then stamp those drawings over your artwork. You can click on your artwork to apply your stamp once, or draw a stroke with the Stamp tool, as you would with the Brush or Pencil tool, to apply the stamp repeatedly along the stroke.



A stamp can contain one or several drawings. When a stamp is made of multiple drawings, it will cycle through each one of its drawings each time it is stamped onto your artwork. Hence, when you draw a stroke with a multi-drawing stamp, you will see the stamp tool cycle through the sequence of drawings as you draw the stroke. The way the drawings in a multi-drawing stamp are cycled through can even be customized. Among other settings, you can make it cycle backward, stamp random drawings or even stamp only a specific drawing in the sequence.

Other than being able to easily re-use drawings, The Stamp tool can be used to streamline drawing if you need to draw something that requires a lot of repetitive detail, such as starry skies, grass, weather conditions or particle-type effects. For example, a stamp made of a few different drawings of a blade of grass can be used to draw a grass line by drawing a few strokes of that stamp over the same horizontal line. The ability to randomize the size, angle and distance of the stamping can give the result of using this procedure a more natural look.



NOTES

- To learn more about the Stamp tool properties, see the Reference Guide
- The Stamp tool replaces the Dynamic Brush option of the Brush tool in Harmony 15.0 and earlier.

Creating a Stamp

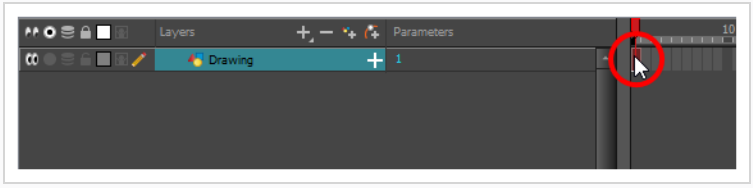
You can create a stamp by drawing the artwork for your stamp, then selecting it and creating a stamp preset.

How to create a stamp

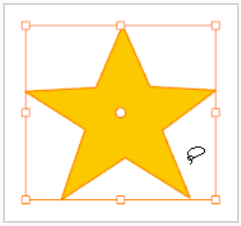
1. In the Drawing view, draw the artwork with which you want to create a stamp.

2. Do one of the following:

   - If you want to create a stamp with all the artwork in the drawing, select this drawing in the Thumbnails list.



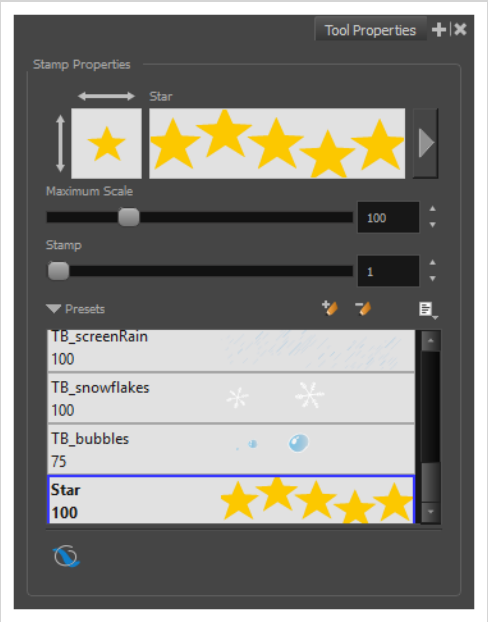
   - If you want to create a stamp with part of the artwork in the drawing, select the Select tool in the Tools toolbar, then select the artwork that you want to use to create a stamp—see—*Selecting, Repositioning and Transforming Artwork* on page 230.



3. In the Tools toolbar, select the Stamp tool.
4. In the Tool Properties view, click on the New Preset button.
5. In the New Preset dialog, type the desired name for your new stamp.
6. Click **OK**.

   A stamp containing the selected artwork is added to the Presets list for the Stamp tool. You can

now draw with the Stamp tool using this stamp.



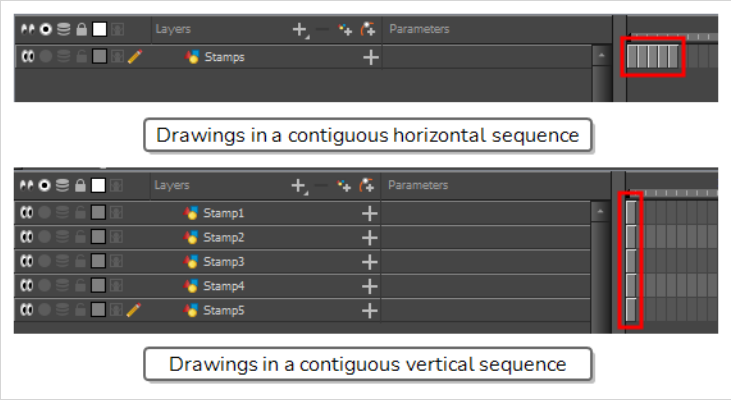
NOTE

Once your stamp has been created, you can delete the artwork you used to create it from your project. The artwork in your stamps will be saved in your preferences.

Creating a Multi-Drawing Stamp

You can create a stamp containing a series of drawings. All you need to do is create each drawing you want to add to your stamp in a separate drawing cell, then create a stamp with those drawings selected. The resulting stamp will cycle through each one of those drawings as you use it.

In order to create a stamp using multiple drawings, your drawings must either be in a single contiguous horizontal or vertical sequence.

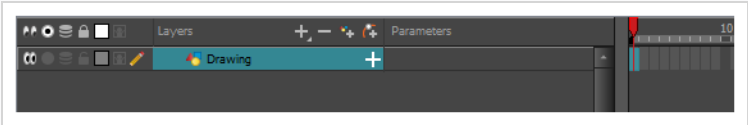


NOTE

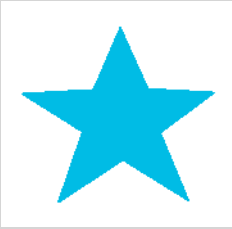
You cannot create a multi-drawing stamp in Paint. To follow these steps, you must open your scene in Harmony.

How to create a multi-drawing stamp

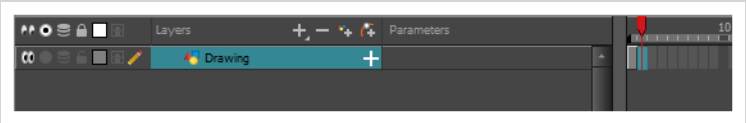
1. In the Timeline view, select an empty cell.



2. In the Camera or Drawing view, create the first drawing you want to have in the drawing sequence of your stamp.

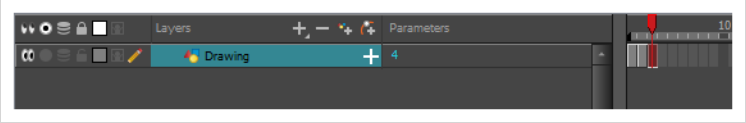


3. In the Timeline view, select the cell right after the current cell.



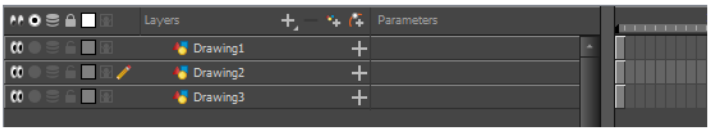
4. In the Camera or Drawing view, create the second drawing you want to have in the drawing sequence of your stamp.

5. Repeat these previous steps until you have all the drawings you want to have in your stamp, in one continuous sequence of drawings, in the same layer.

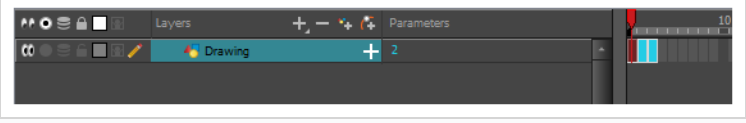


NOTE

You can also create a stamp using drawings in a sequence of layers, provided that those drawings are all in the same frame and that those layers are adjacent to each other. The drawings in the stamp will be ordered from top to bottom.



6. In the Timeline view, select all the cells containing the drawings you want to add to your stamp.



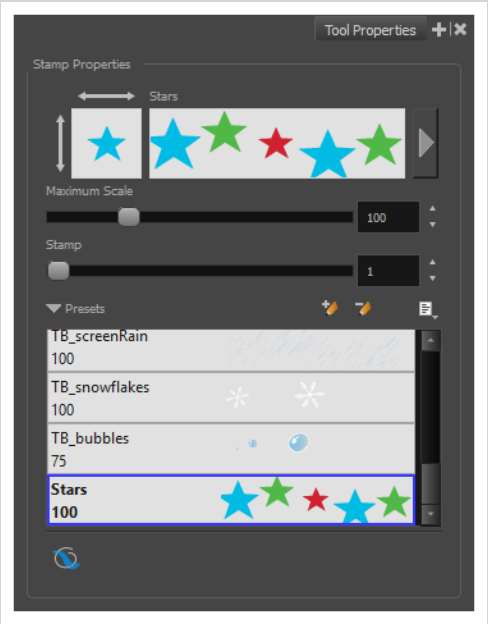
TIPS

- You can click and drag over a sequence of drawing cells to select them.
- You can also select multiple cells by clicking on the first cell you want to select, holding shift, then clicking on the last cell you want to select.

7. In the Tools toolbar, select the Stamp tool.
8. In the Tool Properties view, click on New Preset.

   The New Preset dialog appears.
9. In the New Preset dialog, type the desired name for your new stamp.
10. Click **OK**.

    A multi-drawing stamp containing the artwork in all the selected layers is added to the Presets list.



NOTE

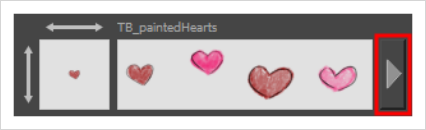
Once your stamp has been created, you can delete the artwork you used to create it from your project. The artwork in your stamps will be saved in your preferences.

Configuring a Stamp

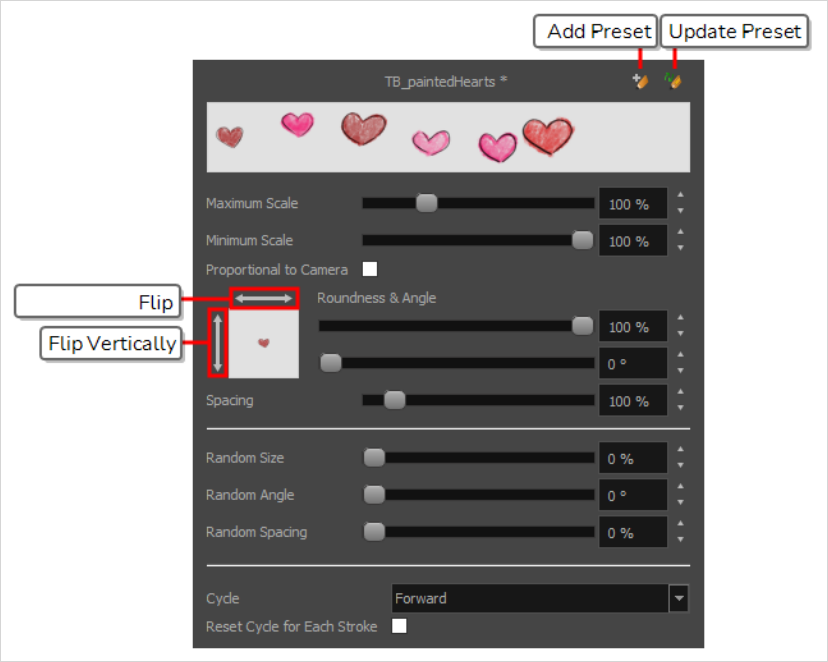
When drawing a stroke with the stamp tool, the way the stamp is applied in terms of size, angle, spacing can be customized.

How to configure the size, pressure sensitivity, roundness, angle and spacing of a stamp

1. In the Presets list of the Tool Properties view, select the stamp that you want to configure.
2. In the Tool Properties view, just right of the stroke preview area, click on the Show Extended Properties button.



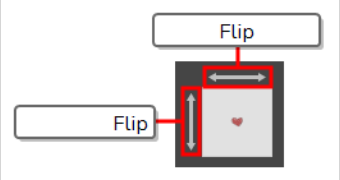
The Stamp Properties dialog opens.



3. If you want to adjust the size of the stamp, change the **Maximum Scale** setting until you obtain the desired size.

> **NOTE**
>
> The Scale of a stamp is relative to the original size of the drawing used to create the stamp. At 100% scale, the stamp added to your artwork will be the same size as its original drawing.

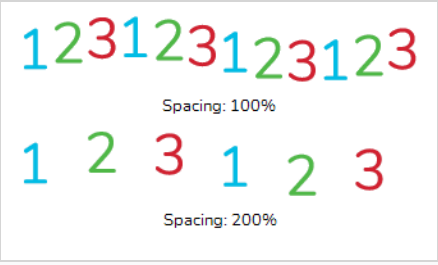
4. If you're using a pressure-sensitive pen tablet and want the size of the stamp to depend on the amount of pressure you put on your pen, reduce the **Minimum Scale** setting.
5. If you would like to flip the stamp *horizontally*, click on the two-ended *horizontal* arrow over the stamp thumbnail. If you would like to flip the stamp *vertically*, click on the two-ended *vertical* arrow left of the stamp thumbnails.



6. If your stamp is round or square, and you would like it to appear flat or squished, reduce the **Roundness** parameter. This will scale down the stamp vertically.

7. If you want your stamp to be added to your artwork at an angle, change the **Angle** parameter. This setting rotates the stamp counterclockwise, on a 360 degrees scale.

8. If you want to change the amount of space between each stamp when you draw a stroke with the Stamp tool, adjust the **Spacing** parameter.



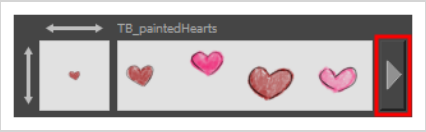
9. If you want the current settings to be saved to your stamp preset, click on the Update Brush Preset button at the top-right corner of the Stamp Properties dialog.

> **NOTE**
>
> You can use the Stamp tool with the currently selected settings without updating your preset.

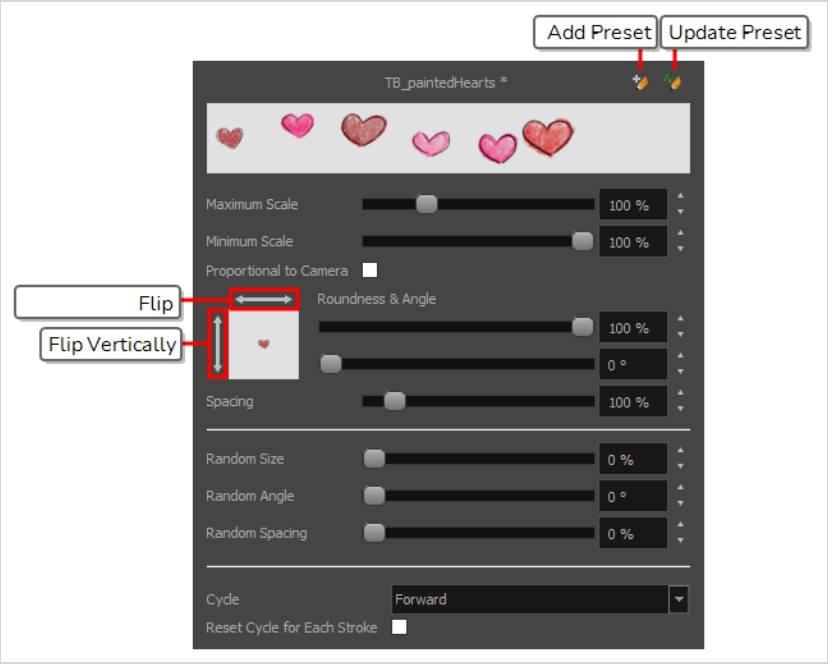
You can randomize the size, angle and spacing of the stamp. This will make the Stamp tool apply a randomly picked value to these parameters every time it applies a stamp to your artwork.

How to randomize the size, angle and spacing of a stamp

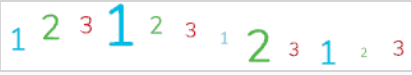
1. In the Presets list of the Tool Properties view, select the stamp that you want to configure.
2. In the Tool Properties view, just right of the stroke preview area, click on the Show Extended Properties button.



The Stamp Properties dialog opens.



3. If you want the size of the stamp to be randomized every time the stamp is added to your artwork, decrease the **Minimum Scale** setting, then increase the **Random Size** setting.



> **NOTE**
>
> The **Random Size** setting makes the size of each stamp vary randomly between its **Minimum Scale** and **Maximum Scale**. The higher the Random Size is, the closer to its Minimum Scale the random size can be.

4. If you want the angle of your stamp to be randomized every time the stamp is added to your artwork, increase the **Random Angle** setting.

5. If you want the spacing of your stamp to be randomized every time the stamp is added to your artwork, increase the **Random Spacing** setting.

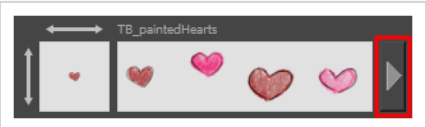
6. If you want the current settings to be saved to your stamp preset, click on the Update Brush Preset button at the top-right corner of the Stamp Properties dialog.

> **NOTE**
>
> You can use the Stamp tool with the currently selected settings without updating your preset.

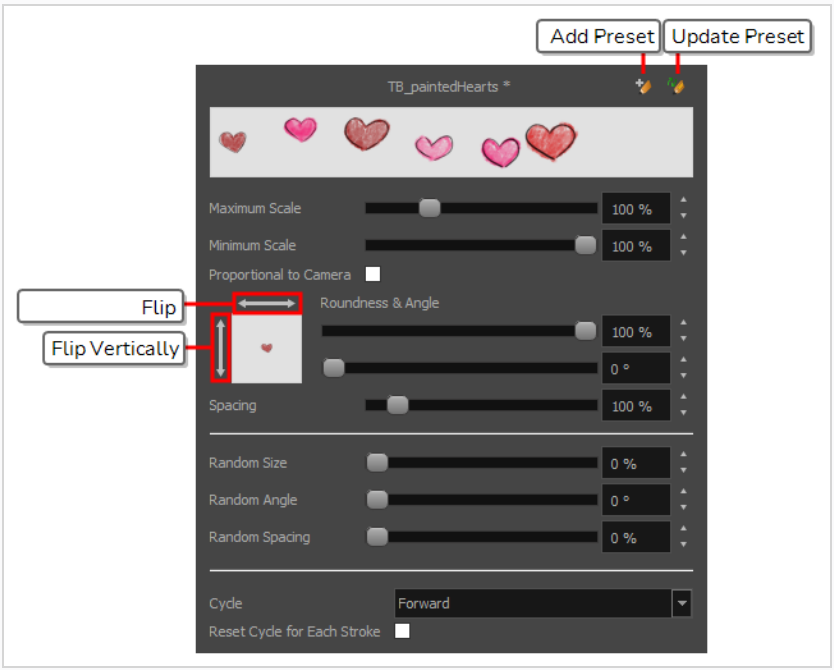
You can make a multi-drawing stamp cycle through its sequence of drawings in several different ways. You can also randomize the cycle, or disable it so that it only stamps the drawing of your choice.

How to change the way a multi-drawing stamp cycles through its drawings

1. In the Presets list of the Tool Properties view, select the stamp that you want to configure.
2. In the Tool Properties view, just right of the stroke preview area, click on the Show Extended Properties button.



The Stamp Properties dialog opens.



1. In the Cycle drop-down, select the desired cycling method:

    - **Forward:** Starts by applying the first drawing in the sequence, then the next one, and so on until it reaches the last drawing in the sequence, then cycles back to the first one.

    - **Reverse:** Starts by applying the last drawing in the sequence, then the previous one, and so on until it reaches the first drawing in the sequence, then cycles back to the last one.

    - **Forward->Reverse:** Starts by cycling forward through the sequence until it reaches the last drawing, then cycles backward to the first drawing, and so on.

    - **Reverse->Forward:** Starts by cycling backward through the sequence until it reaches the first drawing, then cycles back to the last drawing, and so on.

- **Random:** Applies a random drawing in the sequence each time the stamp is applied.

- **Hold:** Applies a single one of the drawings in the sequence over and over again.

2. If you selected the Hold option, select which one of the stamps in the sequence you wish to stamp onto your artwork by changing the **Stamp** setting in the Tool Properties view. For example, if you only want to stamp the second drawing in the sequence, set the Stamp setting to 2.
3. If you want the cycle to restart at the beginning of each one of your drawing strokes, enable the **Reset Cycle for Each Stroke** option.
4. If you want the current settings to be saved to your stamp preset, click on the Update Brush Preset button at the top-right corner of the Stamp Properties dialog.

> **NOTE**
>
> You can use the Stamp tool with the currently selected settings without updating your preset.

Updating a Stamp

A stamp in your Presets list does not only contain its drawings, but also its properties. If you have made any changes to the properties of your stamp, and wish for those properties to be set automatically whenever you use that stamp, you can update the stamp. This will save the current properties of the stamp into its preset.

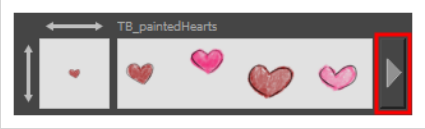
Once that is done, the current properties of the stamp will be loaded the next time you select it from the Presets list, even after you close and reopen the project.

NOTE

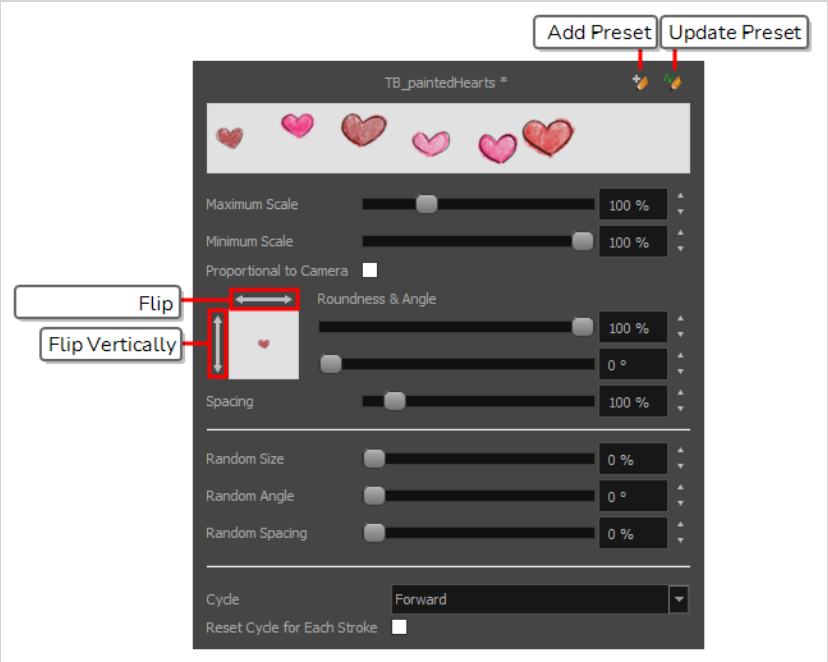
You cannot update the drawings in a stamp. You can only update its parameters. If you need to use different drawings for your stamp, you must create a new stamp—see *Creating a Stamp* on page 188 and *Creating a Multi-Drawing Stamp* on page 190.

How to update a stamp

1. In the Presets list of the Tool Properties view, select the stamp that you want to configure.
2. In the Tool Properties view, just right of the stroke preview area, click on the Show Extended Properties button.



The Stamp Properties dialog opens.



3. In the Stamp Properties dialog, adjust the settings of your stamp as desired—see *Configuring a Stamp* on page 193.
4. In the top-right corner of the Stamp Properties dialog, click on the Update Preset button.

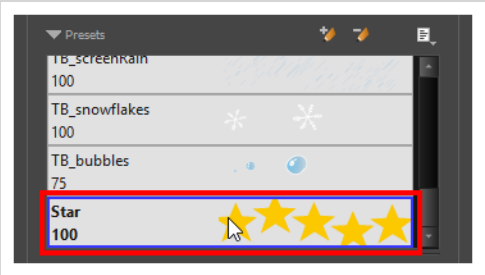
   The selected stamp properties will be loaded whenever you select this stamp, even after you close and reopen your project.

Drawing with the Stamp Tool

Once you have created a stamp, you can start drawing with it. You can either stamp it into your artwork once at a time, or draw strokes with the tool, making it apply the stamp repeatedly onto your artwork along your strokes.

How to draw with the Stamp tool

1. In the Layer panel of the Stage or Camera view or the Layers view, select the layer on which you want to apply the stamp.
2. In the Tools toolbar, select the Stamp tool.
3. In the Tool Properties view, select a stamp from the Presets list—see *Creating a Stamp* on page 188 and *Creating a Multi-Drawing Stamp* on page 190.



4. Move the mouse cursor over the Stage or Camera view. You will see the stamp under your mouse cursor as it will be applied into your artwork. If you want to adjust the size in which it will be applied, adjust the Maximum Scale setting in the Tool Properties view.
5. By default, your stamp will be applied at an even size, angle and distance. Also, if your stamp is a multi-drawing stamp, it will cycle through its drawings in their original order. If you want your stamp to be applied with different parameters, see Configuring a Stamp.
6. In the Drawing view, do one of the following:
   - To apply the stamp once, simply click where you want to apply it.

   - To draw a stroke along which the stamp is applied multiple times, simply draw a stroke with the tool as you would with the Brush or Pencil tool.

TIPS

- If your stamp has multiple drawings in it, you can select which drawings to stamp by using the **Stamp** slider in the Tool Properties view. You can also cycle through the stamp's drawings by pressing the Left Arrow and Right Arrow keys.
- You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
- If you press and hold the Shift key before or while drawing, you will draw a straight line.
- If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.
- If you press and hold the Shift and Alt keys before or while drawing, you will draw a straight horizontal or vertical line.
- If you press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing, your drawing stroke will turn into a closed shape.

Renaming Stamps

You can rename stamps you have created to make them easier to identify in the Presets list.

How to rename a stamp.

1. In the Tools toolbar, select the Stamp tool.
2. In the Presets list of the Tool Properties view, select the stamp you want to rename.
3. Open the Brush Presets menu, then select **Rename Brush**.
4. In the Rename Brush dialog, enter the new name for your stamp.
5. Click **OK**.

   The stamp's new name updates in the Presets list.

Deleting Stamps

You can delete stamps you no longer need from the Presets list.

How to delete a stamp.

1. In the Tools toolbar, select the Stamp tool.
2. In the Presets list of the Tool Properties view, select the stamp you want to delete.
3. Click on the Delete Brush button just above the Presets list.

   The stamp is removed from the Presets list.

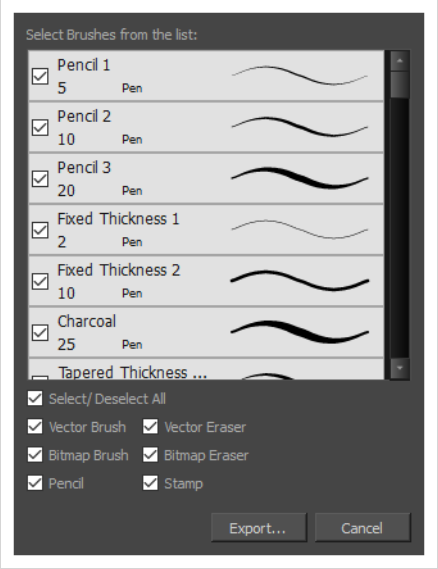
Exporting Stamps

You can export stamps you have created to keep a backup of them, or to import them for use in another project.

How to export stamps

1. In the Tools toolbar, select the Stamp tool.
2. In the Tool Properties view, open the Brush Preset menu and select **Export Brushes**.

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



3. By default, the presets for all your tools will be selected for export. If you only wish to export your stamps, uncheck **Select/Deselect All**, then check **Stamp**.
4. Click on **Export**.

   A save dialog appears.
5. Browse to the location where you want to save the `.xml` file that will contain your presets.
6. Enter the desired file name for your presets file.
7. Click on **Save**.

Importing Stamps

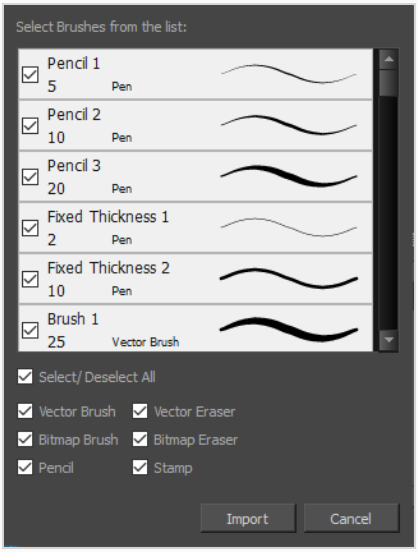
You can import stamps you have exported from another project into your current project, allowing you to reuse them between projects or to restore backups of your stamps.

How to import stamps

1. In the Tools toolbar, select the Stamp tool.
2. In the Tool Properties view, open the Brush Preset menu and select **Import Brushes**.

   An Open File dialog appears.
3. In the browser window that appears, navigate to and select the `.xml` file in which you exported your stamps
4. Click **Open.**

   The Import Brushes dialog box opens.

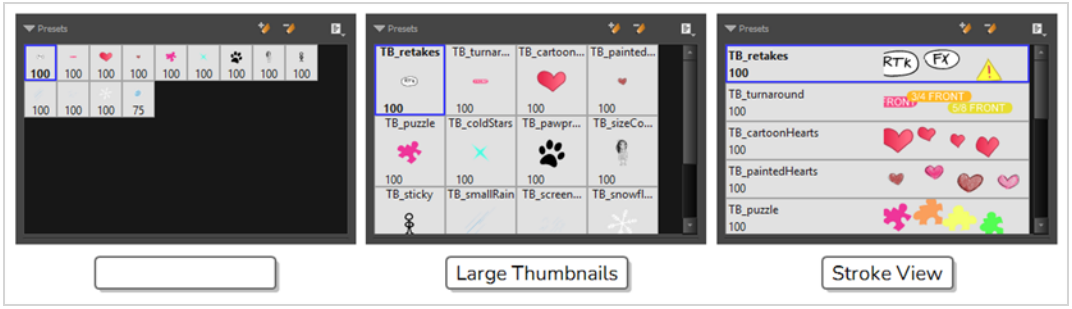


5. By default, the presets for any tools included in the file will be selected for import. If you only wish to import the stamps from this file, uncheck **Select/Deselect All** and check **Stamps**.
6. Click on **Import**.

   The imported stamps will be added to the Presets list in the Tool Properties view.

Changing The Way Stamps Are Displayed

By default, your stamps are listed in the Tool Properties dialog as strokes. You can also preview them as big thumbnails if you want to be able to pick them without scrolling, or as small thumbnails if you have a lot.

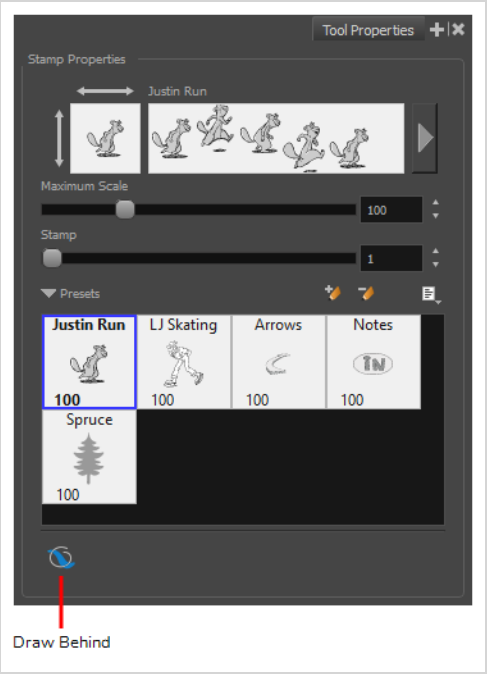


How to change the way presets are previewed in the Tool Properties view

1. In the Tool Properties view, open the Brush Presets menu.
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.

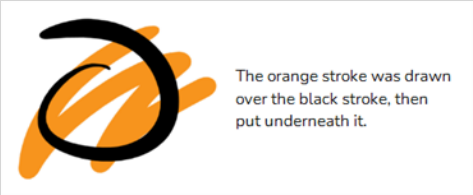
Stamp Tool Modes

When you select the Stamp tool, its properties are displayed in the Tool Properties view.



Draw Behind Mode

When enabled, your drawing strokes will be added underneath the existing artwork instead of over it.



NOTE

Your stroke will appear over your artwork as you draw it, until you release the mouse cursor or tablet pen.

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 .

Creating Invisible Lines with the Stroke Tool

T-HFND-004-013A

You can draw invisible lines with the Stroke tool. These lines can be used to delimit or close off colour areas when you colour drawing with the Paint tool.

How to draw invisible lines with the Stroke tool

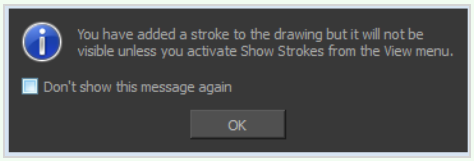
1. Select a drawing from the Drawing Thumbnails panel.
2. Make sure strokes are visible in your drawing space by doing one of the following:
    - In the top menu, select **View > Show Strokes**
    - Press K.
3. Select the Stroke tool by doing one of the following:
    - In the Tools toolbar, double-click on Paint. In its drop-down menu, select the Stroke tool
    - Press Alt + V.
4. In the Drawing view, start drawing.

TIPS

- If you press and hold the Shift key before or while you are drawing, your stroke will be a straight line until you stop drawing or release the Shift key.
- If you press and hold the Shift and the Alt keys before drawing, your stroke will be a straight line in an angle that is a multiple of 15 degrees.
- If you press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key while drawing, your stroke will be a closed shape.
- If you press and hold Alt before drawing a stroke, and you start your stroke near another stroke, the start of your stroke will connect to the other stroke. Likewise, if you press and hold the Alt key and end your stroke near another stroke, the end of the stroke will connect to that stroke.

NOTE

If the Show Strokes option is not enabled, the following message will appear after you draw a stroke. To remedy this, refer to step 2.



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About the Eraser Tool

T-HFND-004-010

Using the Eraser tool, you can erase portions of your drawing by drawing strokes over it.

Just like the Brush tool, the Eraser tool is pressure-sensitive, allowing you to erase with more precision if you are using a pen tablet.

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.

Just like the Brush tool, you can use the Eraser tool on both vector and bitmap layers, and you can configure an eraser to have a solid or textured tip, to have automatic smoothing, a dual tip and a paper texture.

NOTE

To learn more about each individual parameter of the Eraser tool, see the Reference Guide.

Erasing

T-HFND-004-010A

Using the Eraser tool, you can erase portions of your drawing by drawing strokes over it.

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 Presets list of the Tool Properties view, select a brush preset to use.

> **NOTE**
>
> To learn how to create an Eraser preset, see *Creating a Solid Eraser* on page 214 and *Creating a Textured Eraser* on page 218.

4. 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.

5. In the Drawinga view, start erasing.

> **TIPS**
>
> - You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
> - If you press and hold the Shift key before or while drawing, you will draw a straight line.
> - If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.
> - If you press and hold the Shift and Alt keys before or while drawing, you will draw a straight horizontal or vertical line.

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.

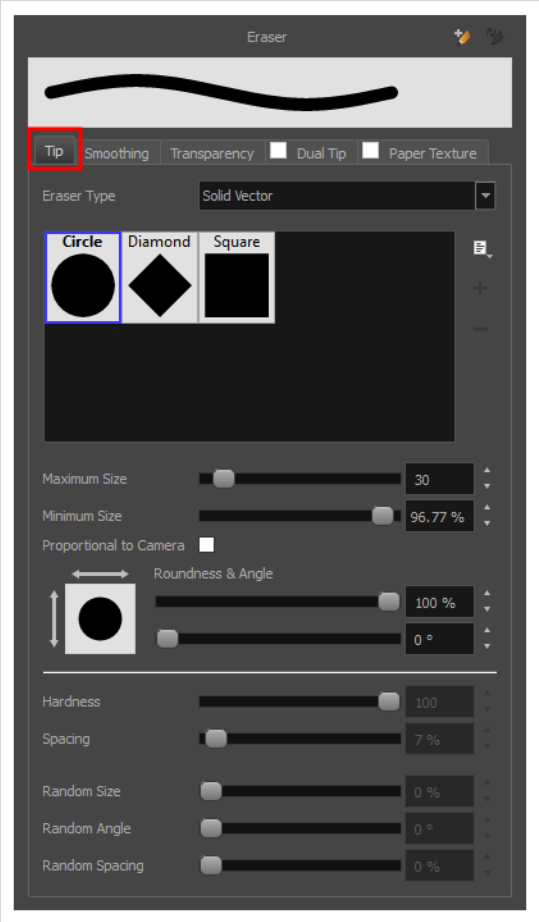
A solid vector eraser's tip can be shaped like a circle, a diamond or a square, and can be configured to have a specific size, aspect ratio and angle. Also, solid vector erasers can be automatically smoothed by Harmony as you draw.

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.

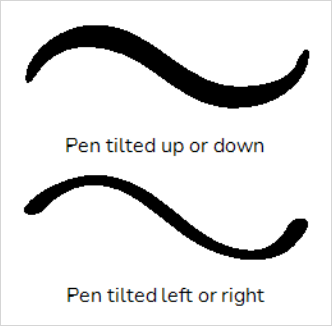


3. In the **Eraser Type** dropdown list, select **Solid Vector**.
4. In the brush tip list, select either **Circle**, **Diamond** or **Square**.
5. Use the **Maximum Size** slider to set the maximum size of your eraser tip, in pixels.

> **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. If you want your eraser tip to stretch when you tilt your pen, use the **Pen Tilt Sensitivity** slider to set how much the tip should stretch. The tip will stretch by the percentage you set, in the direction in which you tilt the pen.

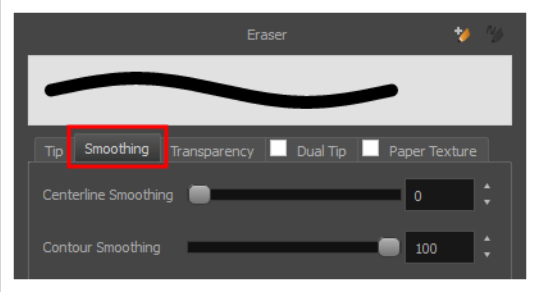


> **NOTE**
> This option only works if your tablet and your pen support tilt sensitivity.

10. If you want your eraser ip to rotate when you rotate your pen, check the **Use Pen Rotation** check box.

> **NOTE**
> This option only works if your tablet and your pen support pen rotation.

11. Click on the **Smoothing** tab.



12. 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.

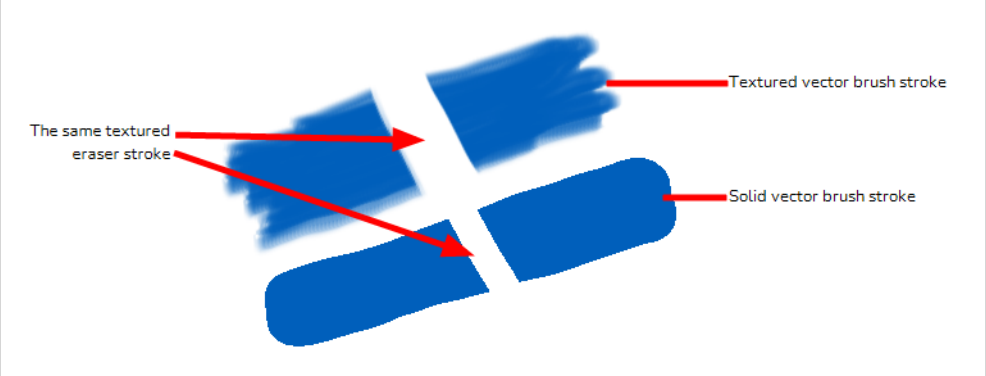
13. Use the **Contour Smoothing** slider to set the amount of smoothing Harmony should perform on your stroke's contour. A higher setting will round sharp corners and reduce the amount of control points for the resulting vector shape.
14. Either close or set aside the Eraser Properties dialog.
15. In 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.

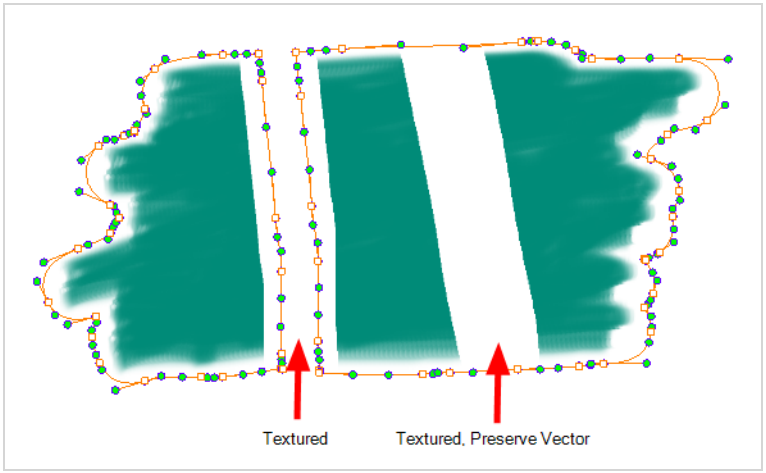
A textured eraser works like a reverse textured brush: It makes the pixels in a brush stroke's texture more—or completely—transparent, depending on the eraser's intensity. This effect can only be obtained by using a textured eraser on a textured brush stroke. If you use a textured eraser on solid vector 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.

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.



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.

NOTES

- 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.
- 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 eraser preset

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. In the Eraser Properties dialog, configure your eraser—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.

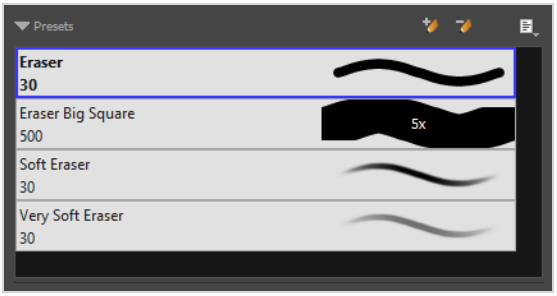
   Your new eraser preset is added to the end of the list of eraser presets.

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 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.

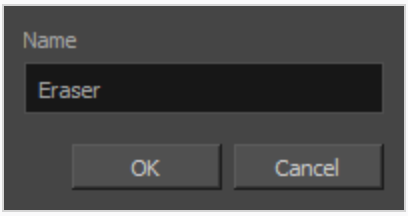
4. Click on the Update Brush Preset button in the upper-right corner of the Brush Properties dialog.

Renaming 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**.

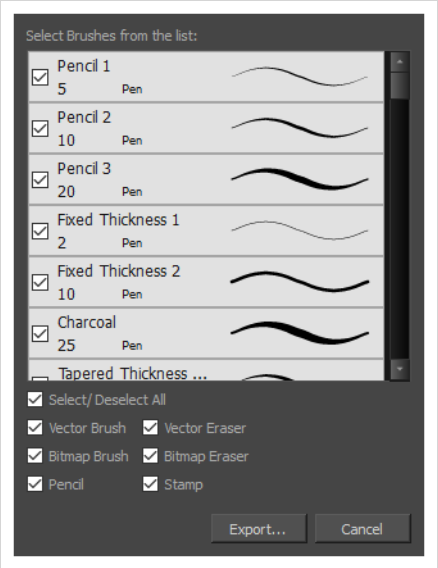
Exporting Eraser Presets

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. In the Tool Properties view, open the Brush Preset menu and select **Export Brushes**.

   The Export Brushes 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**.

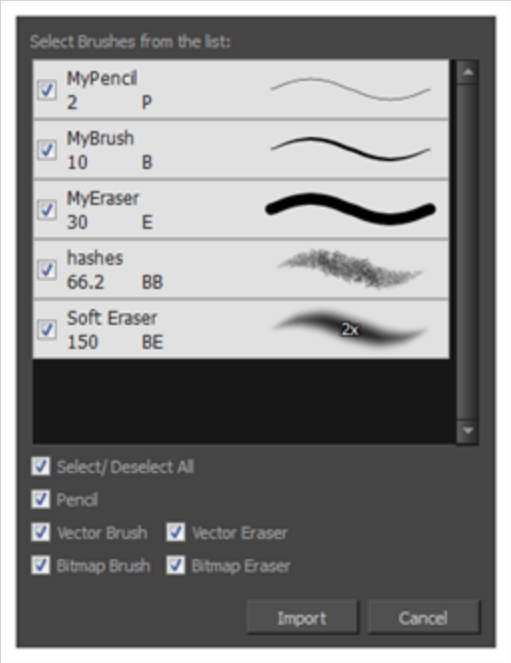
Importing Eraser Presets

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. In the Tool Properties view, 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 way presets are previewed in the Tool Properties view

1. In the Tool Properties view, open the Brush Presets menu.
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.

About the Select Tool

T-HFND-004-005

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.

NOTES

- The Select tool can only be used to select, reposition and transform whole drawing strokes. If you need to cut out part of your artwork to reposition or transform it, you must use the Cutter tool—see About the Cutter Tool.
- To learn more about the Select tool options, see the Reference Guide .

Selecting, Repositioning and Transforming Artwork

T-HFND-004-005A

Using the Select tool, you can select drawing strokes and groups, then reposition, rotate, scale and skew them.

NOTE

The select tool can only select whole drawing strokes. If you need to cut out part of your artwork, use the Cutter tool instead—see *About the Cutter Tool* on page 243.

How to select artwork

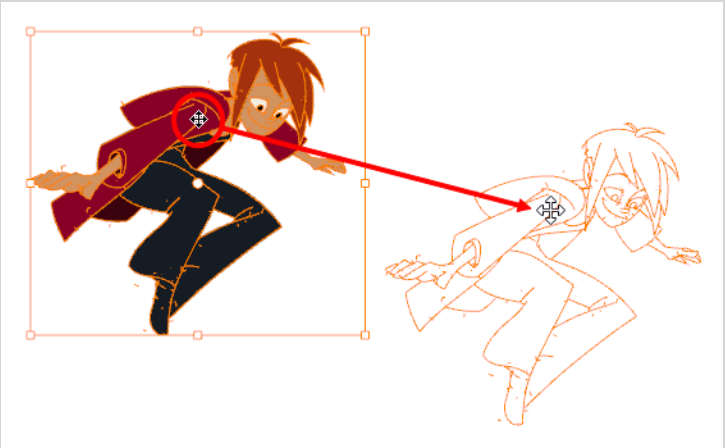
1. Select a drawing from the Drawing Thumbnails panel.
2. In the Tools toolbar, select the Select tool or press Alt + S.
3. In the Camera or Drawing view, select the artwork you want to edit by doing one of the following:
   - Click on a drawing stroke to select it.
   - Draw a lasso around drawing strokes to select them simultaneously.

TIPS

- To add more drawing strokes to the selection, press and hold the Shift key and either click or draw a lasso around the strokes you want to select.
- Press SHIFT+ALT to unselect all the strokes you have selected previously. You can also unselect strokes on multiple layers in the Timeline by pressing SHIFT+ALT +CTRL.
- By default, you can only select artwork in the currently selected layer. You can select artwork from any visible layer by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.
- If you prefer drawing a rectangle rather than a lasso to select artwork, click on the Lasso button in the Tool Properties view and select **Marquee**.
- You can select all the drawing strokes in the drawing by select **Edit > Select All** from the top menu or by press ing Ctrl + A (Windows/Linux) or ⌘ + A (macOS).

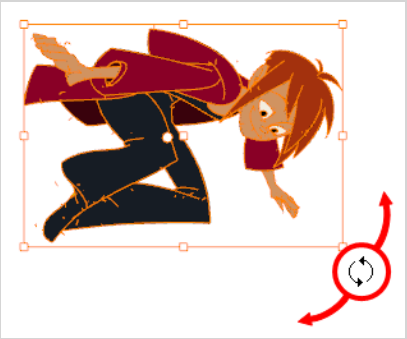
4. Do one of the following to edit your selection:

    - To reposition the selected artwork, click on it and drag where you want to position it.

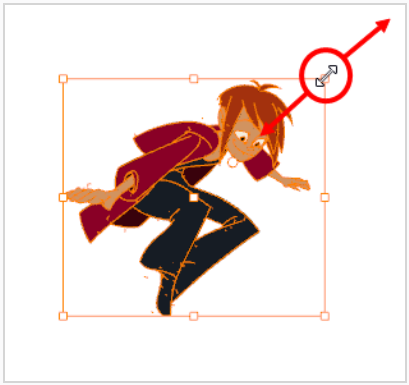


> **NOTE**
>
> You can also nudge your selection using the arrow keys, and fast-nudge your selection by holding Shift and pressing the arrow keys.

    - To rotate the selected artwork, click and grab just outside one of the handles at the corners of the control box and rotate it.



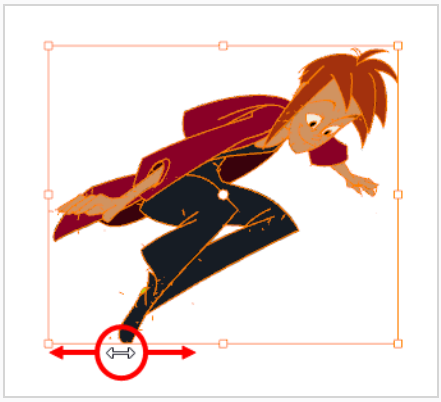
    - To scale the selected artwork, click and drag on one of the control points at the corners or the middle of the edges of the control box.



TIP

While scaling artwork, you can preserve its proportions by pressing and holding the Shift key.

- 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).

Selecting Artwork in Several Drawings

You can use the Select tool to select and manipulate artwork in several drawings in the same layer at the same time. There are two approaches to doing this, both of which are options available in the Tool Properties view:

- **Apply to All Frames:** When you draw a lasso or marquee in the Drawing views, it will select strokes in that area in all of the exposed drawings in the current layer.
- **Apply to Onion Skin Range:** When you draw a lasso or marquee in the Drawing views, it will select strokes in that area in all of the drawings currently displayed in the Onion Skin. This method allows you to select and manipulate artwork in a specific range of drawings, and allows you to see the artwork you selected in the Drawing view.

How to select artwork in a specific range of drawings

1. In the thumbnails list, select a drawing somewhere in the middle of the range that you want to edit.
2. In the Tools toolbar, click on the Onion Skin button to enable Onion Skin.
3. Using the Options in the **View > Onion Skin** menu, adjust the amount of previous and next drawings displayed in the Onion Skin until all the drawings you want to pain simultaneously are displayed.

   The drawings included in the Onion Skin range will appear in red and green in the Drawing view.
4. In the Tools toolbar, select the Select tool.
5. In the Tool Properties view, click and hold on the Apply to All Frames button and, in the pop-up menu, select **Apply to Onion Skin Range**.

   > **NOTE**
   >
   > If this button is already set to Apply to Onion Skin Range, simply click on it to toggle it on.
6. In the Drawing view, draw a lasso or marquee around the artwork you want to select.

   Strokes in the current drawing and in the drawings displayed in the Onion Skin that fit inside the lasso or marquee you drew will be selected.

How to select artwork in all exposed drawings in a layer

1. In the thumbnails list, select any drawing.
2. In the Tools toolbar, select the Select tool.

3. In the Tool Properties view, click on the Apply to All Frames button to enable the Apply to All Frames mode.

   NOTE

   If this button is currently set to Apply to Onion Skin Range mode, click and hold on the button to open its pop-up menu and select **Apply to All Frames**.

4. In the Drawing view, draw a lasso or marquee around the artwork you want to select.

   Strokes in the current drawing as well as in all other drawings exposed in the current layer that fit inside the lasso or marquee you drew will be selected.

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.

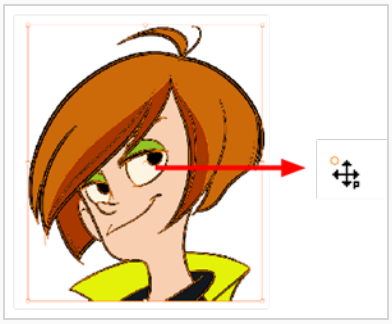
How to temporarily reposition the pivot point

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).

Selecting Artwork by Colour or Texture

You can select all the shapes in your artwork that are painted with a specific colour or texture. You can also select all the pencil lines that use a specific pencil texture.

How to select all the artwork painted with the same colour as your selection

1. In the Tools toolbar, select the Select tool.
2. In the Tools toolbar or Tool Properties view, toggle on Select by Colour.
3. In the Drawing view click on a shape filled with the colour you want to select.

   All the shapes in the drawing that are painted with the same colour as the shape you clicked on will be selected.

How to select all the artwork filled with a specific colour or texture

1. In the Colour view, click Show Colour Palettes.
2. In the upper list, select the palette containing the colour or texture you want to select
3. In the lower list, select the colour or texture you want to select.
4. In the top menu, select **Edit > Select Strokes with Current Colour**.

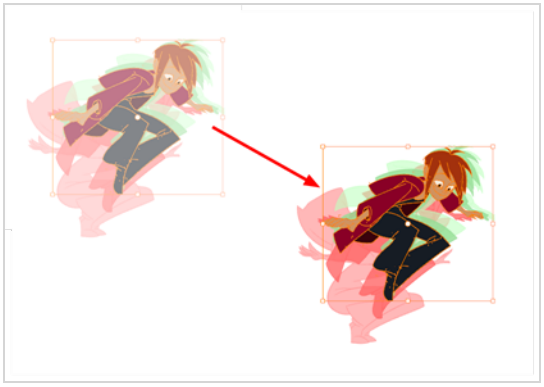
How to select all the pencil lines using a specific pencil texture

1. In the Colour view, select Show Pencil Texture Palettes.
2. In the upper list, select the palette containing the pencil texture you want to select.
3. In the lower list, select the pencil texture you want to select.
4. In the top menu, select **Edit > Select Strokes with Current Pencil Texture**.

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 repositioned 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.

NOTE

To learn more about the Reposition All Drawings tool options, see the Reference guide .

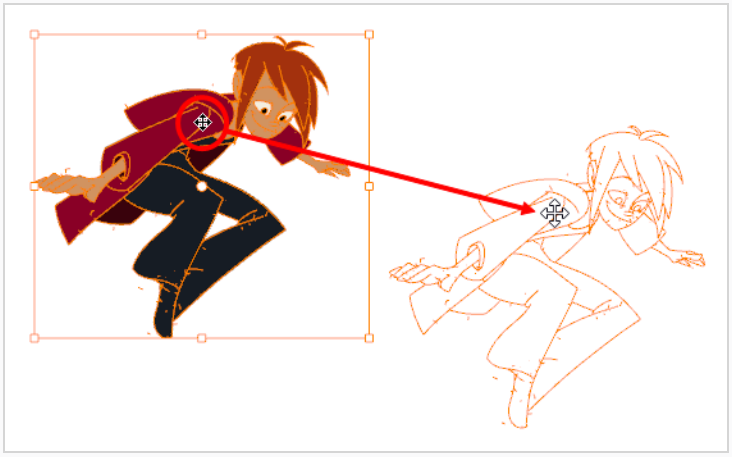
Repositioning All Drawings in a Layer

T-ANIMPA-010-009

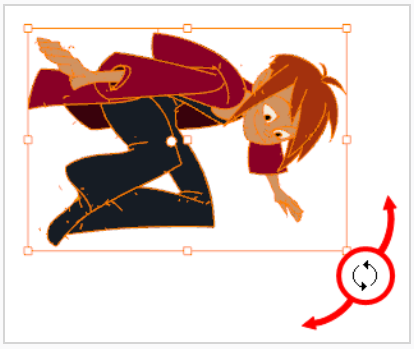
Use the Reposition All Drawings tool to reposition all the drawing strokes on all drawings exposed in the current layer.

How to reposition all drawings

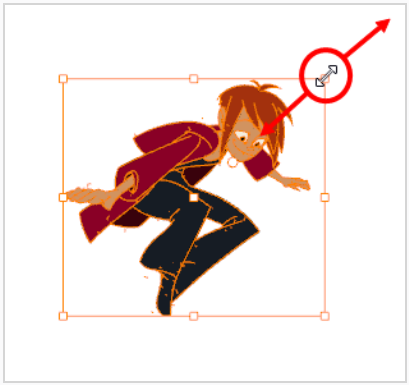
1. From the Tools toolbar, select the Reposition All Drawings tool. This also automatically selects every stroke in your drawing in the Drawing and Camera view.
2. Do any of the following:
   - To reposition, click and drag your selection to a new area.



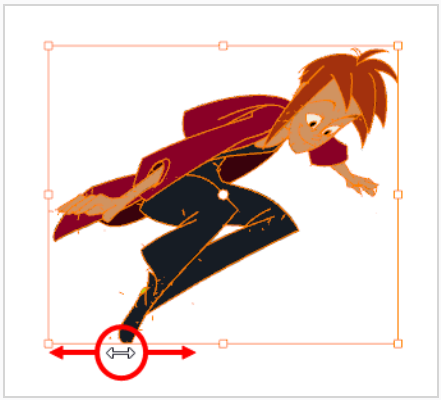
   - To rotate, rotate the selection box handle.



   - 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

T-HFND-004-007

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

Cutting Artwork

T-HFND-004-007A

Use the Cutter tool to trim and cut your artwork.

You can also use the Cutter tool to trim the ends of overshot lines. Line ends can be trimmed up to the point where they intersect with another line. This technique can be used to clean sketches much faster. Enable the Single Line Cutting Gesture mode for precision or the Multiple Line Cutting Gesture mode for speed.

How to cut drawings

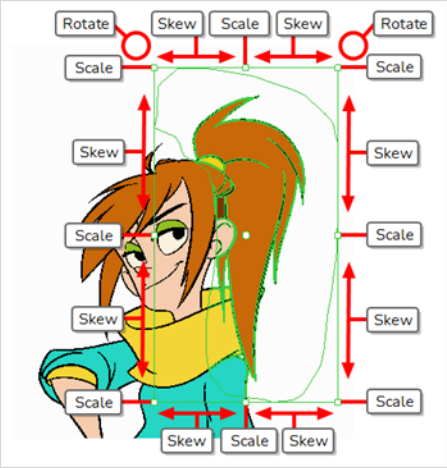
1. In the Tools toolbar, select the Cutter tool or press Alt + T.
2. In the Drawing view, draw a lasso around the artwork you want to cut away.

The artwork inside the lasso you drew will be cut from the rest of the artwork and will be selected.

TIPS

- You can add another part of your artwork to the selection by holding Shift and drawing another lasso.
- By default, the Cutter tool will only work on the current layer. You can cut artwork from all visible layers by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.

3. Once you've cut out artwork, you can manipulate it like with the Select tool. For example:
   - To move the selected artwork, click and drag it.
   - To delete the selected area, press Del.
   - To scale, rotate or skew the selection, use the controls around the selection's bounding box.



How to trim a single line

1. In the Tools toolbar, select the Cutter tool or press Alt + T.
2. In the Tool Properties view, under the Cutter Tool Options, select the Lasso .

   The Line Cutter Gesture modes are enabled.
3. Select the Single Line Cutting Gesture Mode .
4. In the Stage or Camera view, sweep the Cutter tool across the end of a line you wish to trim.

   The line end disappears.

Before

After

NOTE

Even if your mouse gesture touches other lines, only the first line that the Cutter tool makes contact with disappears.

How to trim multiple lines

1. In the Tools toolbar, select the Cutter tool or press Alt + T.
2. In the Tool Properties view, under the Cutter Tool Options, select the Lasso.

   The Line Cutter Gesture modes are enabled.
3. In the Tool Properties view, select the Multiple Lines Cutting Gesture Mode.
4. In the Stage or Camera view, sweep the Cutter tool across the end of a lines you wish to trim.

   The line ends disappear.

   Before

After

Cutting Artwork in Several Drawings

You can use the Cutter tool to cut out and manipulate artwork in several drawings in the same layer at the same time. There are two approaches to doing this, both of which are options available in the Tool Properties view:

- **Apply to All Frames:** When you draw a lasso or marquee in the Drawing views, it will cut out artwork in that area in all of the exposed drawings in the current layer.
- **Apply to Onion Skin Range:** When you draw a lasso or marquee in the Drawing views, it will cut out artwork in that area in all of the drawings currently displayed in the Onion Skin. This method allows you to cut out and manipulate artwork in a specific range of drawings, and allows you to see the artwork you cut out in the Camera or Drawing view.

How to select artwork in a specific range of drawings

1. In the thumbnails list, select a drawing somewhere in the middle of the range that you want to edit.
2. In the Tools toolbar, click on the Onion Skin button to enable Onion Skin.
3. Using the Options in the **View > Onion Skin** menu, adjust the amount of previous and next drawings displayed in the Onion Skin until all the drawings you want to pain simultaneously are displayed.

   The drawings included in the Onion Skin range will appear in red and green in the Drawing view.
4. In the Tools toolbar, select the Cutter tool.
5. In the Tool Properties view, click and hold on the Apply to All Frames button and, in the pop-up menu, select **Apply to Onion Skin Range**.

   > **NOTE**
   >
   > If this button is already set to Apply to Onion Skin Range, simply click on it to toggle it on.
6. In the Drawing view, draw a lasso or marquee around the artwork you want to select.

   The artwork in the current drawing and in the drawings displayed in the Onion Skin will be cut out by the lasso or marquee you drew and will become selected.

How to select artwork in all exposed drawings in a layer

1. In the thumbnails list, select any drawing.
2. In the Tools toolbar, select the Cutter tool.

3. In the Tool Properties view, click on the Apply to All Frames button to enable the Apply to All Frames mode.

   NOTE

   If this button is currently set to Apply to Onion Skin Range mode, click and hold on the button to open its pop-up menu and select **Apply to All Frames**.

4. In the Drawing view, draw a lasso or marquee around the artwork you want to select.

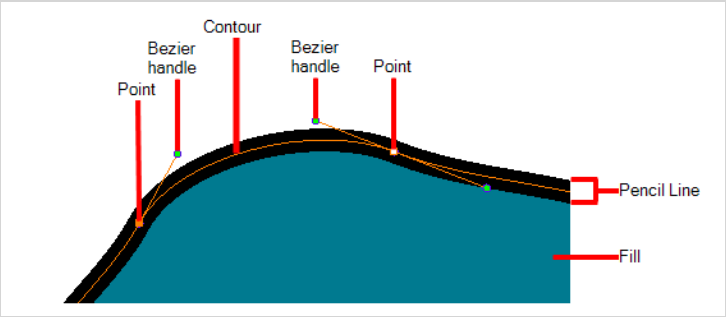
   The artwork in all the drawings in the current layer will be cut out by the lasso or marquee you drew and will become selected.

About the Contour Editor Tool

T-HFND-004-008

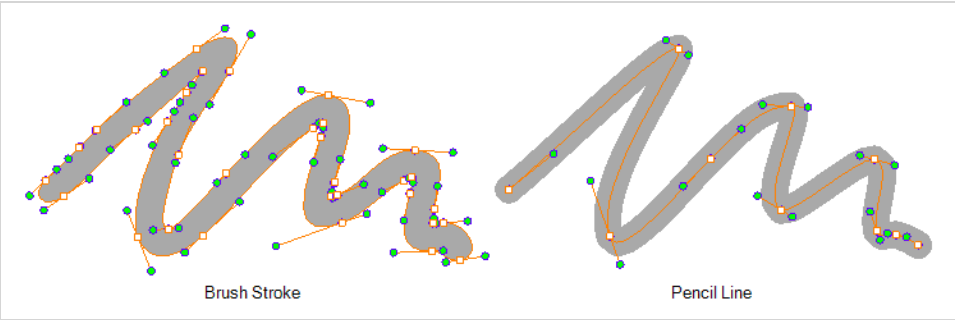
The Contour Editor lets you reshape vector shapes, brush strokes and lines in your drawings.

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

To learn more about the Contour Editor tool options, see the Reference Guide.

Reshaping a Shape, Pencil Line or Stroke with the Contour Editor Tool

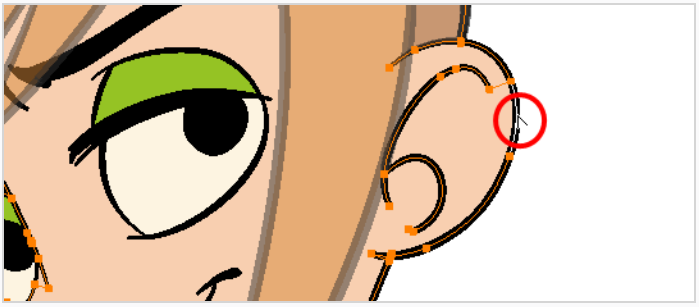
T-HFND-004-008A

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.

How to reshape drawings

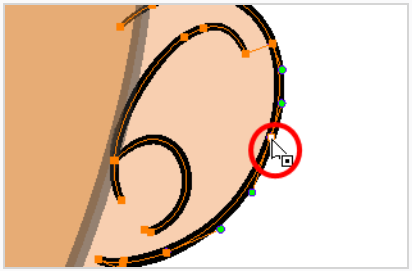
1. In the Tools toolbar, select the Contour Editor tool or press Alt + Q.
2. In the Drawing view, click the shape, contour or pencil line you want to edit near the area you wish to change.

   The shape or line's control points appear.



3. Click on one of the points to select it.

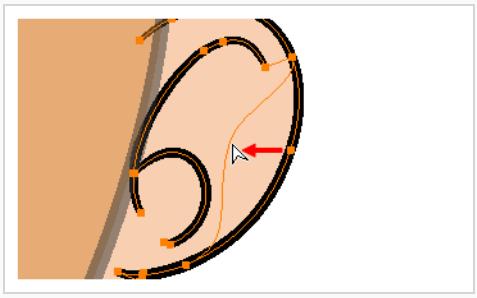
   The point's Bezier handles appears, as well as Bezier handles for the surrounding points.



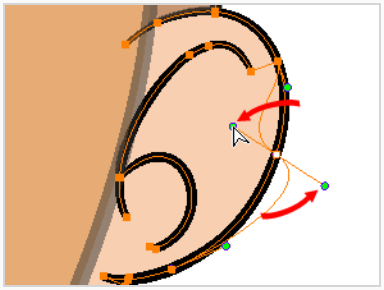
> **TIP**
>
> You can select several points by drawing a lasso around the points, or by holding Shift while clicking on points to add them to your selection. You can use the Contour Editor to scale and rotate a selection of multiple points by enabling the Show Contour Editor Control option in the Tool Properties view.

4. Do one of the following:

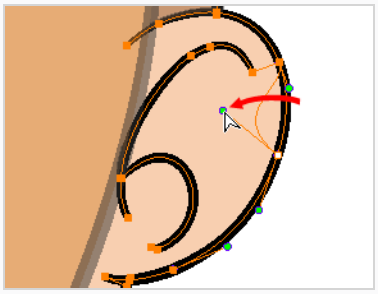
    - To move a point or a selection of multiple points, click and drag it.

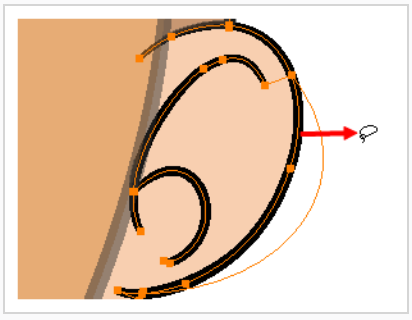
    - To change the curve on both sides of a point, drag one of its Bezier handles.

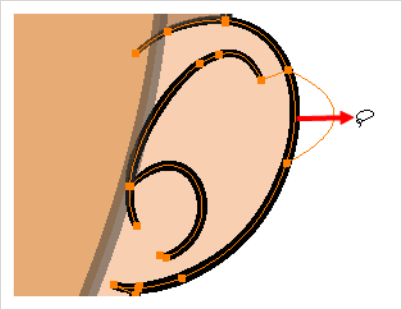
    - To change the curve on only one side of a point, press and hold the Alt key, then drag one of its Bezier handles.

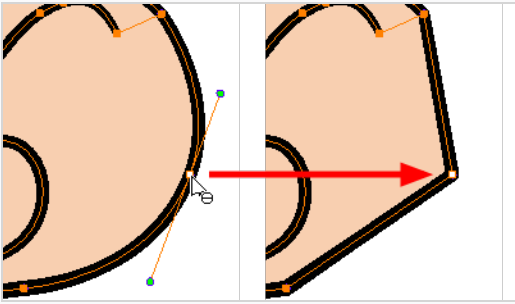
    - To deform the contour, drag a part of the contour between two points.

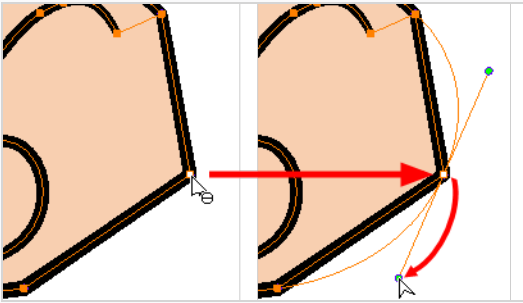
- To deform the curve between two points, hold the Shift key and drag the contour between two points.



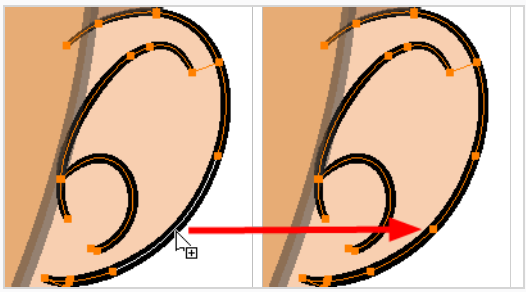
- To remove a point's Bezier handles and make the lines it is connected to straight, press and hold the Alt key and click on the point.



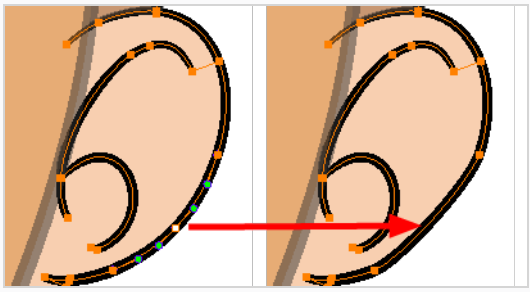
- Straight lines have no Bezier handles at their points by default. To create Bezier handles for these points and make their lines curved, pres and hold the Alt key, then click and hold the point and drag the mouse cursor away from it. A new Bezier handle will follow your mouse cursor until you release 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.



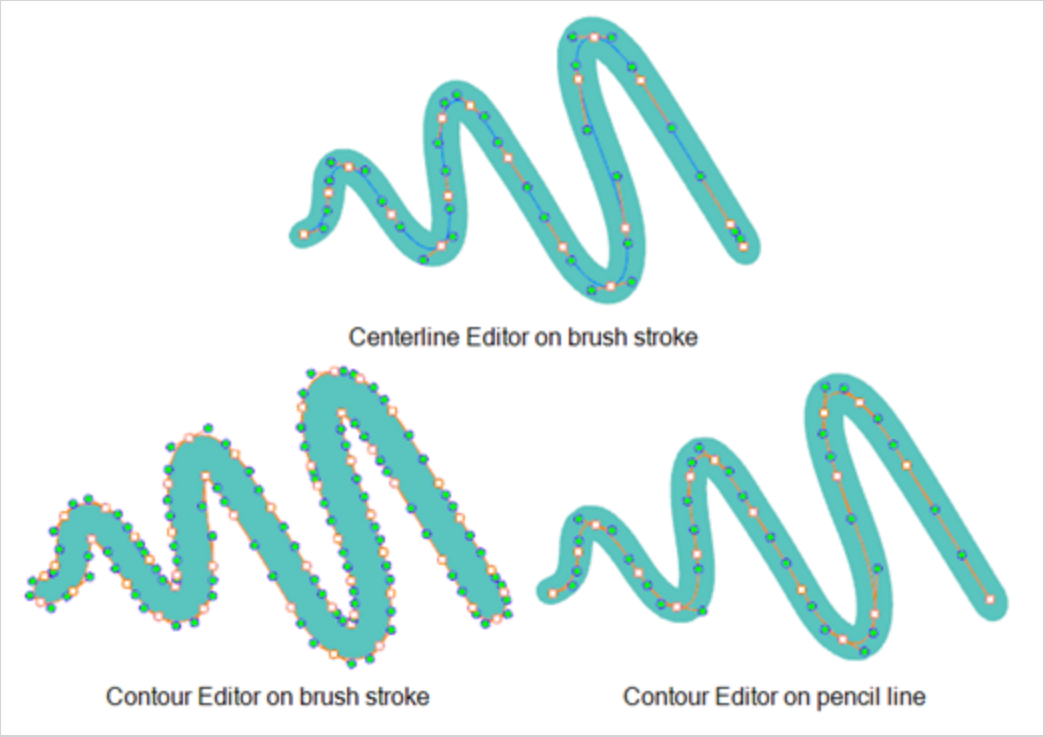
- To remove a control point, select the control point and press Del (Windows/Linux) or Backspace (macOS).



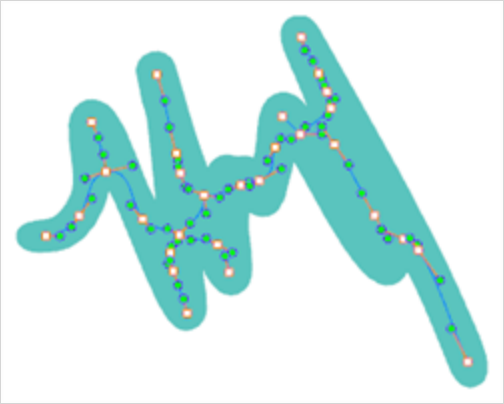
About the Centerline Editor

T-HFND-004-009B

The Centerline Editor allows you to tweak and reshape a brush stroke by manipulating its centre line rather than its contour (you can manipulate its contour using the Contour Editor tool). This gives a flexibility similar to manipulating a pencil line with the Contour Editor tool.



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 centreline 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 accurate centreline out of brush strokes that merge together, that look scrambled or that otherwise do not have a clear direction.



NOTE

If you use the Centerline Editor on a textured brush stroke, it will deform the texture to make it fit the new shape of the stroke.

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.

NOTE

To learn more about the Centerline Editor tool options, see the Reference Guide.

Reshaping Brush Strokes Using the Centerline Editor

T-HFND-004-009C

You can use the Centerline Editor tool to reshape brush strokes from their centreline rather than their contour, like you would reshape pencil lines using the Contour Editor.

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 centreline manipulator based on the outline's shape, with control points.

3. In the Tool Properties view, use the **Centerline Smoothness** slider to adjust the amount of control points on the centreline as needed:

   - If you find that the generated centreline has too many control points to be easily manipulated, reduce the Centerline Smoothness parameter.
   - If you need more control points to make precise manipulations, increase the Centerline Smoothness parameter.

4. Click on one of the points to select it.

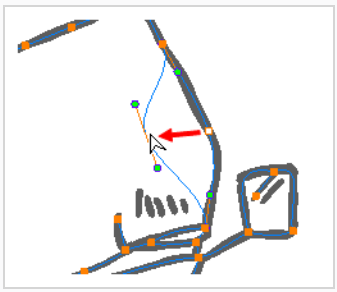
   The point's Bezier handles appears, as well as Bezier handles for the surrounding points.

TIP

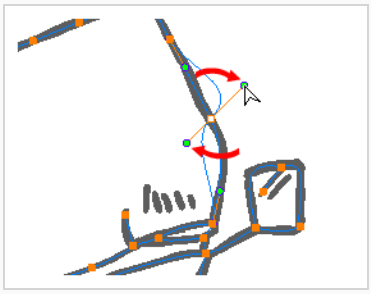
You can select several points by drawing a lasso around the points, or by holding Shift while clicking on points to add them to your selection. You can use the Contour Editor to scale and rotate a selection of multiple points by enabling the Show Centerline Editor Control option in the Tool Properties view.

5. Do one of the following:

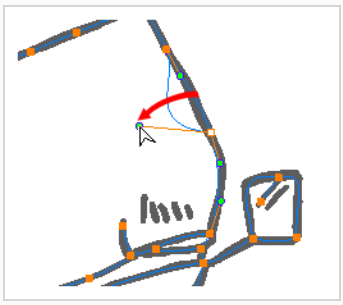
   - To move a point or a selection of multiple points, click and drag it.



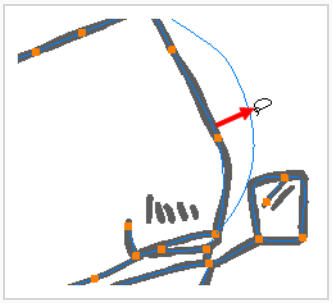
   - To change the curve on both sides of a point, drag one of its Bezier handles.



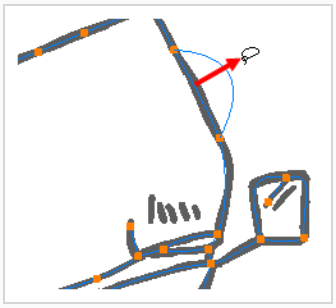
   - To change the curve on only one side of a point, press and hold the Alt key, then drag one of its Bezier handles.



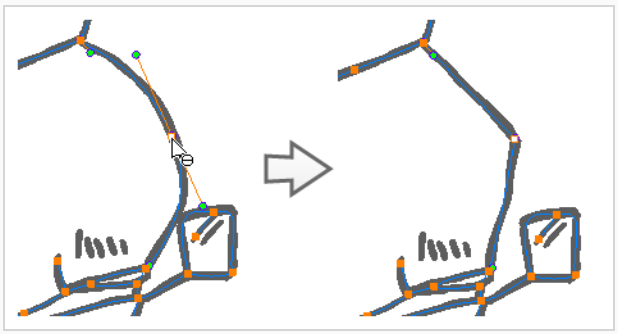
- To deform the contour, drag a part of the contour between two points.



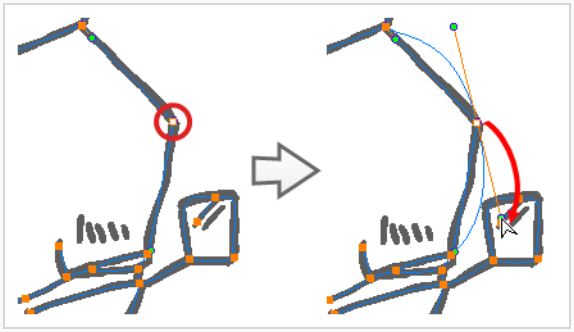
- To deform the curve between two points, hold the Shift key and drag the contour between two points.



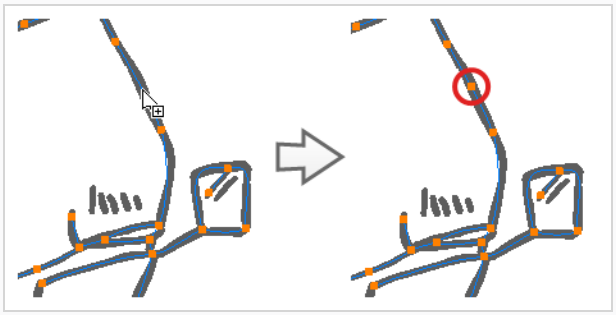
- To remove a point's Bezier handles and make the lines it is connected to straight, press and hold the Alt key and click on the point.



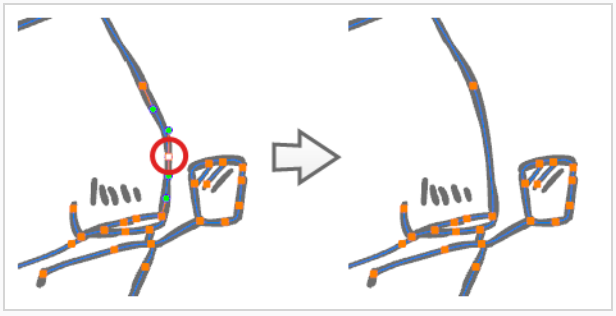
- Straight lines have no Bezier handles at their points by default. To create Bezier handles for these points and make their lines curved, pres and hold the Alt key, then click and hold the point and drag the mouse cursor away from it. A new Bezier handle will follow your mouse cursor until you release 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 delete the control point, select it and press Del.



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 .

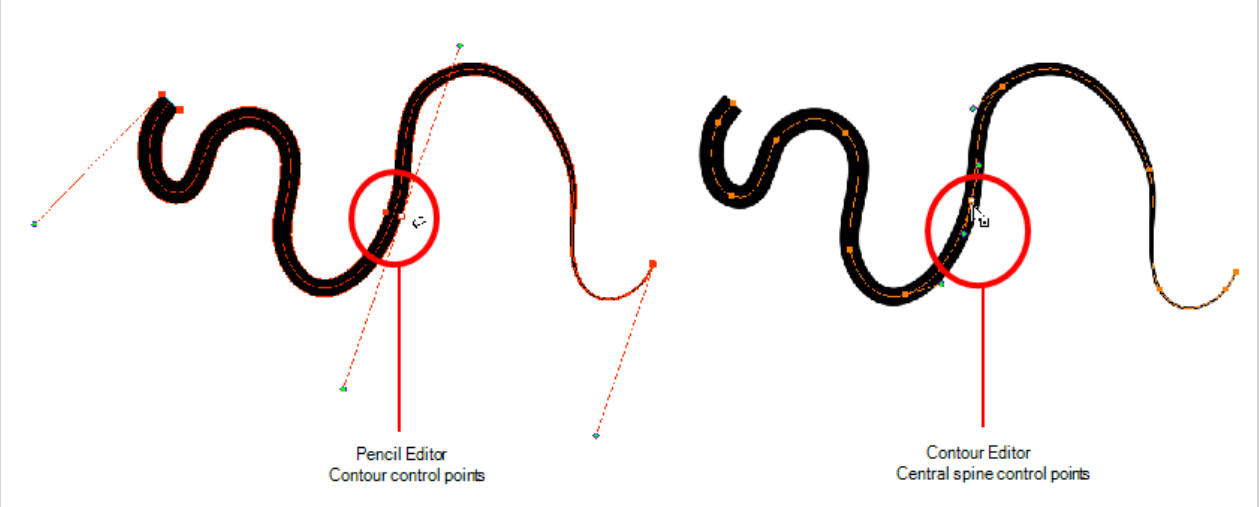
Tweaking the Thickness of Pencil Lines with the Pencil Editor Tool

T-HFND-004-009A

You can use the Pencil Editor tool to reshape the pencil line thickness.

How to reshape pencil lines

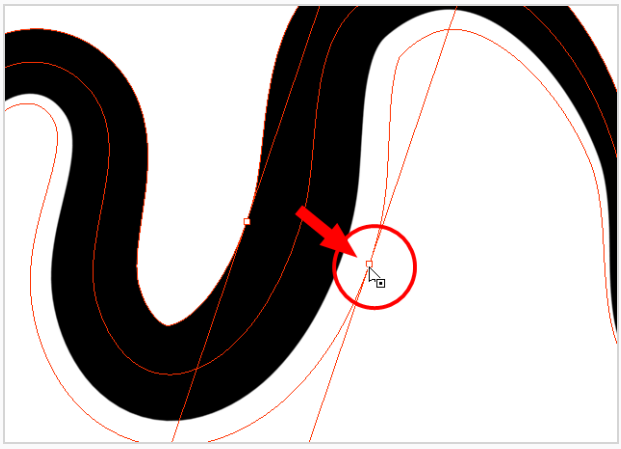
1. In the Tools toolbar, select the Pencil Editor tool.
2. In the Drawing view, select a pencil line and click to reshape it.



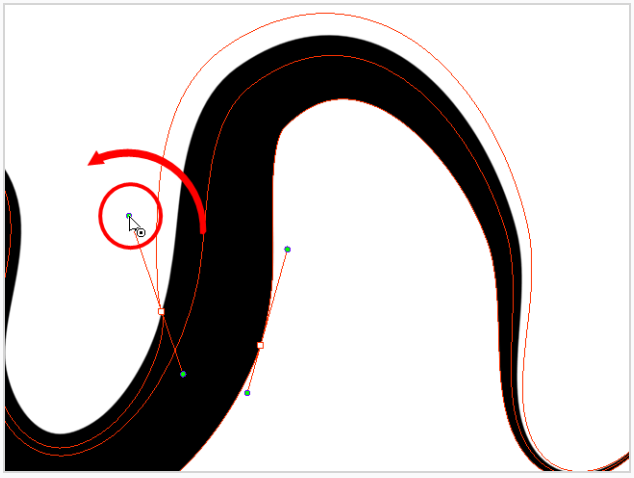
3. Select one or several points by clicking them or circling around.

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

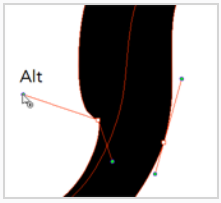
line from both sides at the same time.



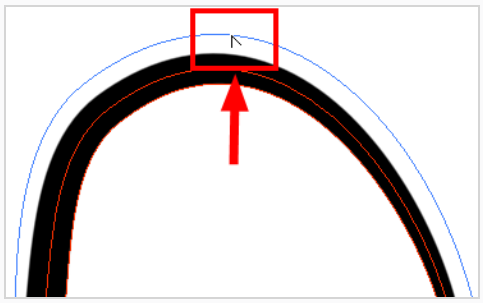
- Pull on the Bezier handle to move both points' handles as one.



- Hold down Alt and pull on one of the Bezier handles. It moves the handle independently from the other one.



- 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.



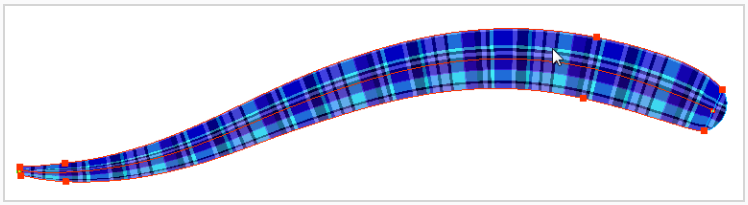
- If an anchor point has no visible Bezier handle, hold down Alt to display them.

Editing a Pencil Line Texture with the Pencil Editor Tool

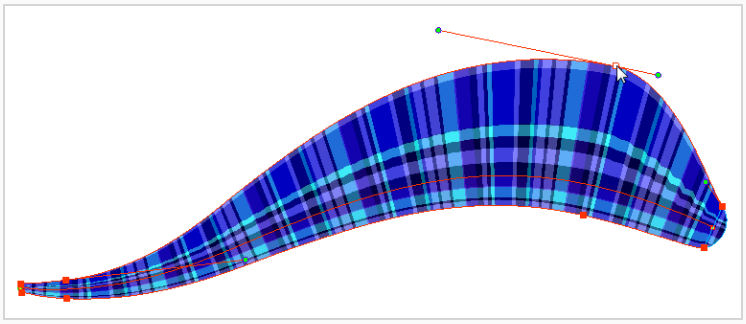
When working with textured pencil lines, the Pencil Editor will deform the textures starting from the centre lines.

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.

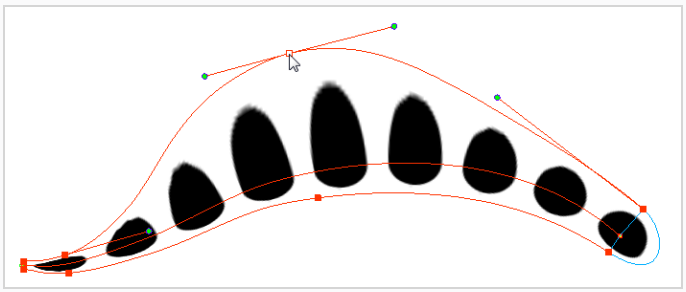


3. Select one of the contour points around the envelope and move its position to change the size of the tiled texture or gradient. You can also pull directly on the lines of the contour envelope or play with the Bezier handles of any given point in order to continue to modify the envelope form.



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.

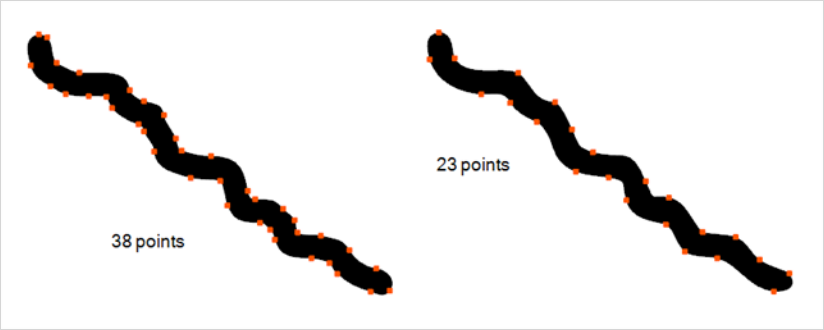
Reducing the contour's width perpendicular to the pencil line's central vector will reduce the number of tiles, while expanding it will increase the number of tiled images.



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 .

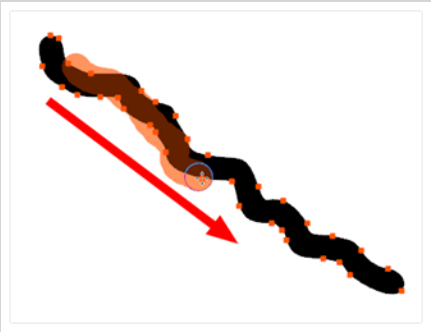
Smoothing Artwork Using the Smooth Editor

T-ANIMPA-010-011

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.

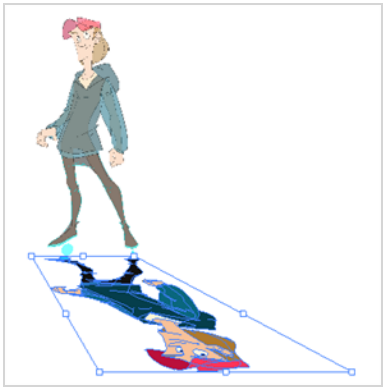


TIPS

- You can quickly adjust the size of the selected drawing tool by pressing and holding the O key, then clicking and dragging in the drawing space. If you are using a tablet pen, doing this with the eraser tip of your pen will adjust the size of the Eraser tool, regardless of which drawing tool is selected.
- If you press and hold the Shift key before or while drawing, you will draw a straight line.
- If you press and hold the Spacebar key while drawing a straight line, the angle of your line will lock. If you are using a pressure-sensitive tablet, you can draw over your line to adjust its thickness.

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 Perspective tool on a textured brush stroke, it is will deform its texture to fit the new shape of the brush stroke. Keep in mind that this will resample the texture, which is liable to make it lose quality.

NOTES

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.

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 the artwork you want to deform by doing one of the following:
   - Click on a drawing stroke to select it.
   - Draw a lasso around drawing strokes to select them simultaneously.

   TIPS
   - To add more drawing strokes to the selection, press and hold the Shift key and either click or draw a lasso around the strokes you want to select.
   - Press SHIFT+ALT to unselect all the strokes you have selected previously. You can also unselect strokes on multiple layers in the Timeline by pressing SHIFT+ALT +CTRL.
   - By default, you can only select artwork in the currently selected layer. You can select artwork from any visible layer by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.
   - If you prefer drawing a rectangle rather than a lasso to select artwork, click on the Lasso button in the Tool Properties view and select **Marquee**.
   - You can select all the drawing strokes in the drawing by select **Edit > Select All** from the top menu or by press ing Ctrl + A (Windows/Linux) or ⌘ + A (macOS).
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 Envelope tool on a textured brush stroke, it is will deform its texture to fit the new shape of the brush stroke. Keep in mind 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

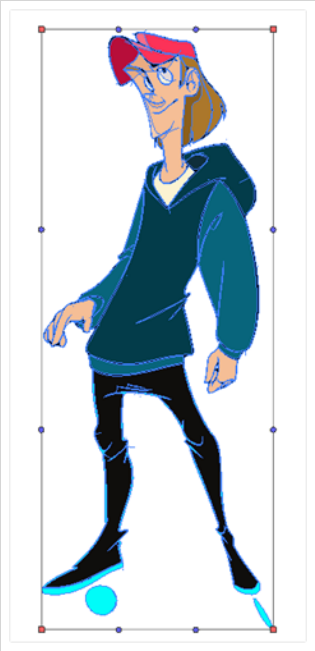
You can warp your drawings using the Envelope tool.

How to warp a drawing with the Envelope tool

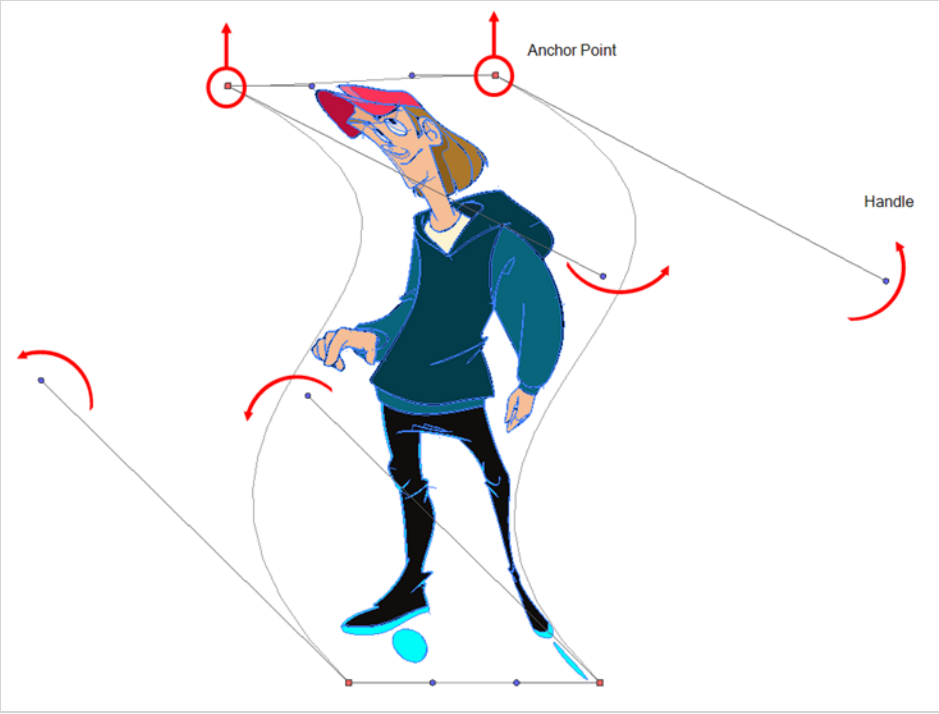
1. In the Tools toolbar, select the Envelope tool from the Contour Editor drop-down menu.
1. Select a drawing from the Drawing Thumbnails panel.
2. In the Drawing view, select the artwork you want to deform by doing one of the following:
    - Click on a drawing stroke to select it.
    - Draw a lasso around drawing strokes to select them simultaneously.

    TIPS
    - To add more drawing strokes to the selection, press and hold the Shift key and either click or draw a lasso around the strokes you want to select.
    - Press SHIFT+ALT to unselect all the strokes you have selected previously. You can also unselect strokes on multiple layers in the Timeline by pressing SHIFT+ALT +CTRL.
    - By default, you can only select artwork in the currently selected layer. You can select artwork from any visible layer by holding the Ctrl (Windows/Linux) or ⌘ (macOS) key.
    - If you prefer drawing a rectangle rather than a lasso to select artwork, click on the Lasso button in the Tool Properties view and select **Marquee**.
    - You can select all the drawing strokes in the drawing by select **Edit > Select All** from the top menu or by press ing Ctrl + A (Windows/Linux) or ⌘ + A (macOS).

    A rectangle appears around the selected artwork. Bezier handles stem from each corner of the rectangle, which can be manipulated to make the sides of the rectangle into curves.

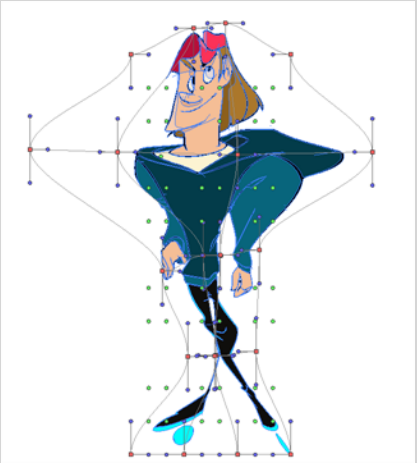


3. Click and drag the different anchor points and handles to deform the image.



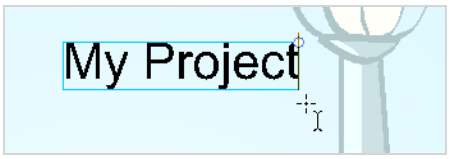
TIPS

- In the Tool Properties view, you can enable the Show Advanced Controls option to control the warp points inside the control box.
- You can also divide the control box into several sections by increasing the value in the Width and Height fields of the Tool Properties view.



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 .

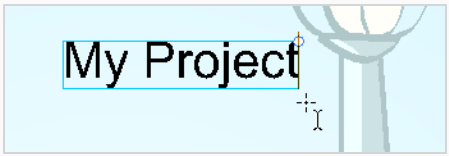
Adding Text to Drawings

You can use the Text tool to add text to your drawings.

How to add text to drawings

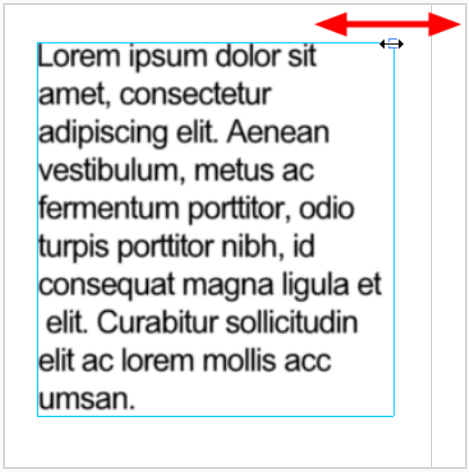
1. Do one of the following:
    - In the Tools toolbar, select the Text tool.
    - From the top menu, select **Tools > Text**.
    - Press Alt + 9.
2. In the Timeline view, select the cell containing the drawing on which you want to add text.
3. In the Drawing view, click on the location you want the 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.

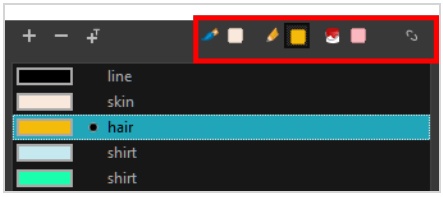
About the Tool Colour Swatches

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

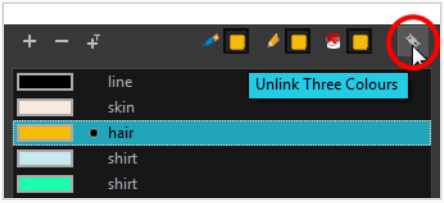
T-ANIMPA-010-019

You can unlink the tool colour swatches and use separated colours for the Brush, Paint, and pencil line tools.

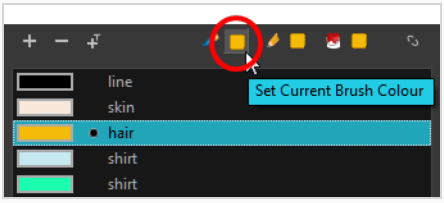
If you prefer to have Harmony use the same colour swatches regardless of the selected tool, you can link the three swatches together.

How to unlink the tool colour swatches

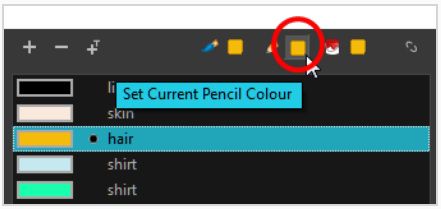
1. In the Colour view, if the storage swatches are linked, click the Link button to unlink them.



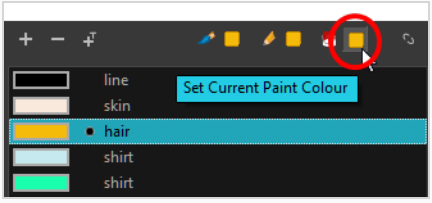
2. Click on the Brush storage swatch.



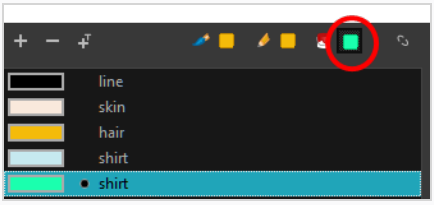
3. In the Colour list, select the desired colour.
4. Click the Pencil storage swatch.



5. In the Colour list, select a colour.
6. Click the Paint storage swatch.



7. In the Colour list, select a colour.

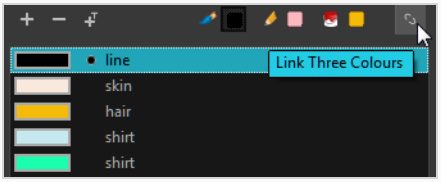

line
skin
hair
shirt
shirt

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.

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

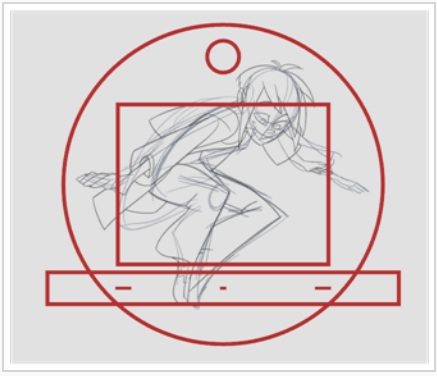
The Rotate View tool lets you rotate the Drawing view, the same way as you would do with a real animation disc for increased flexibility. This tool can also be used in the Perspective view.

The Rotate View tool has no options in the Tool Properties view.

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 rotation disc appears.

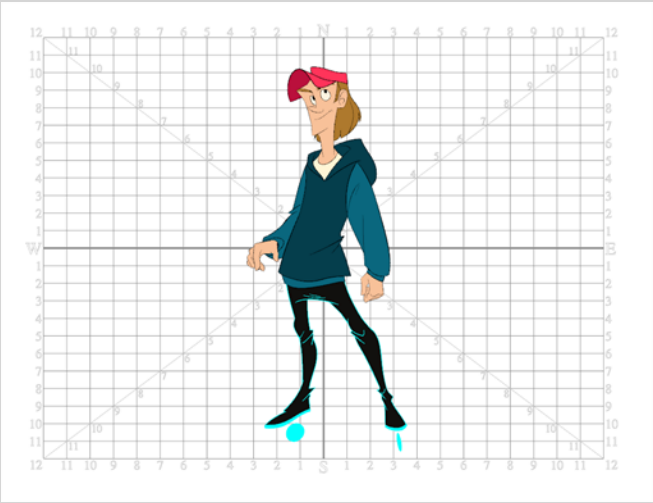
    

2. In the Drawing view, click and drag to rotate the space.

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

T-ANIMPA-010-017

You can enable the Full Scene Antialiasing preference to smooth out the OpenGL artwork.

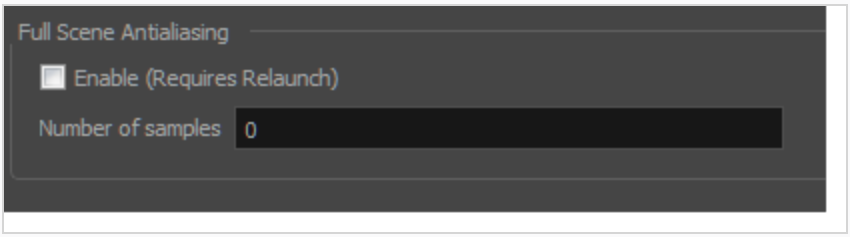
NOTE

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).

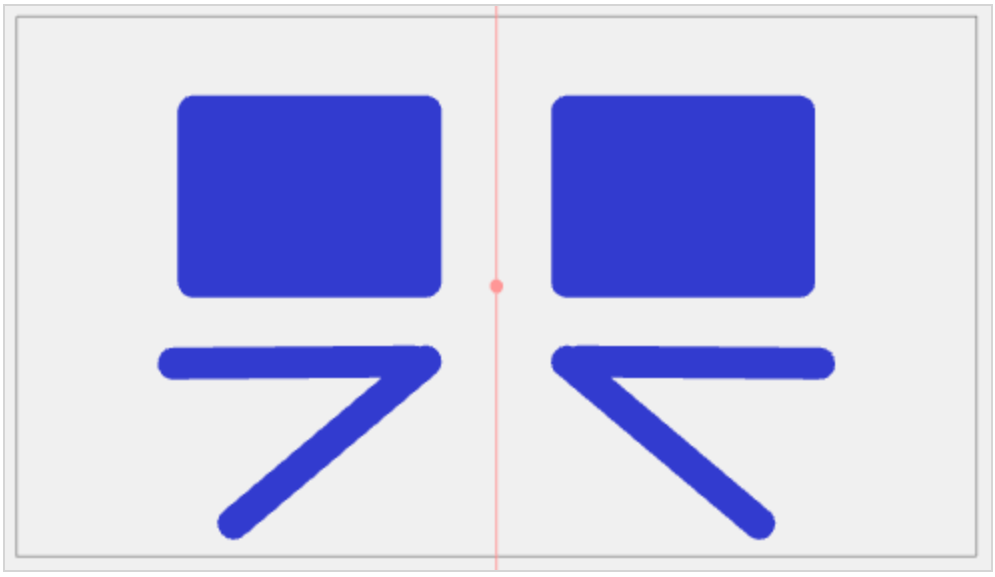
   The Preferences dialog box opens.
2. In the OpenGL tab, select the **Enable** option in the Full Scene Antialiasing section.



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 heavier it will be on performance.
4. Restart Harmony.

Drawing with Symmetry Guides

Symmetry Guides allow you to create drawings with symmetry automatically applied.



When you apply a Horizontal, Vertical, or Dual Axis Symmetry Guide, the selected line of symmetry will appear in the Camera view. Drawing on one side of the symmetry line will automatically produce the reflected drawing on the opposite side.

The three symmetry guides available are:

- **Vertical Symmetry** - Automatically creates horizontal symmetry based on a vertical line.
- **Horizontal Symmetry** - Automatically creates a vertical symmetry based on a horizontal line.
- **Dual Axis Symmetry** - Automatically creates four quadrants of symmetry based on dual axis horizontal and vertical lines.

Adjusting a Horizontal Symmetry Guide

The Horizontal Symmetry Guide creates a guide along the x-axis that will automatically mirror your strokes vertically.

The guide has a Pivot point that can be moved anywhere in the Camera View.

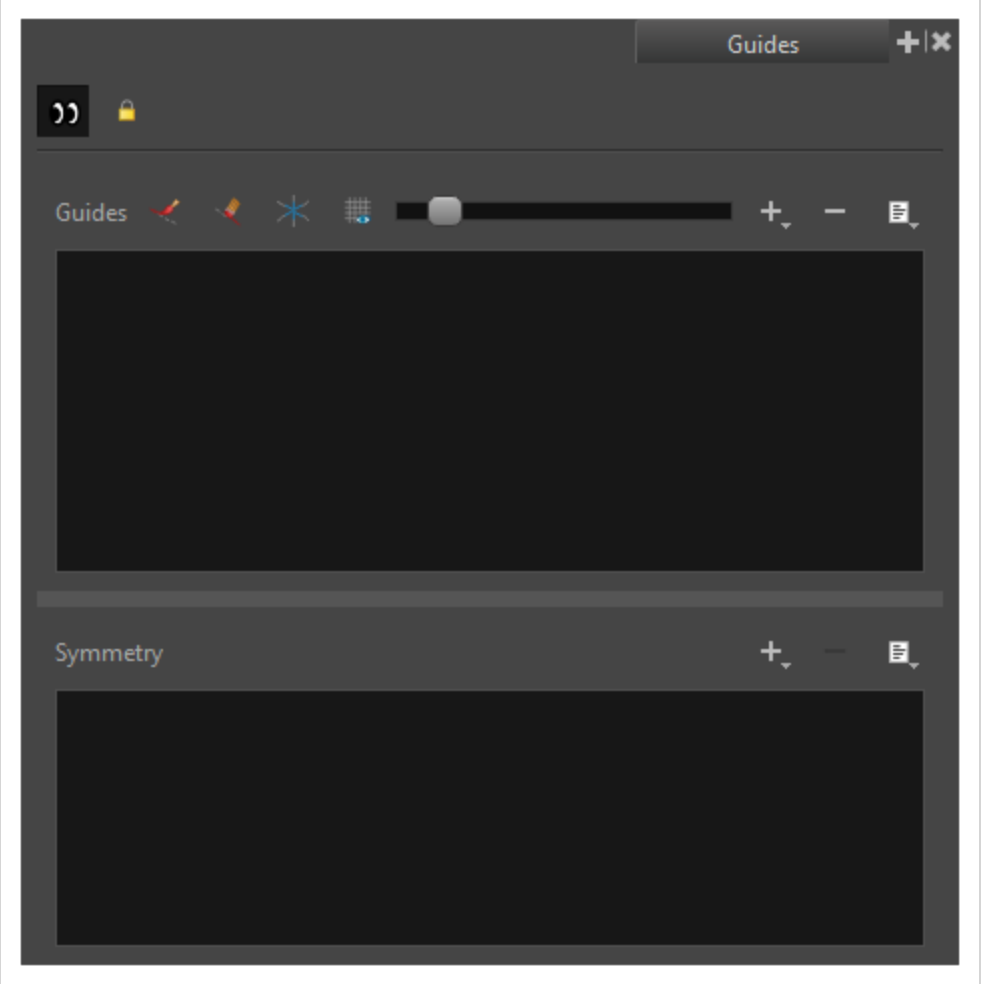
How to Adjust the Horizontal Symmetry Guide

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

> **NOTE**
>
> Drawing guides are only visible in the Camera view when one of these tools are selected.

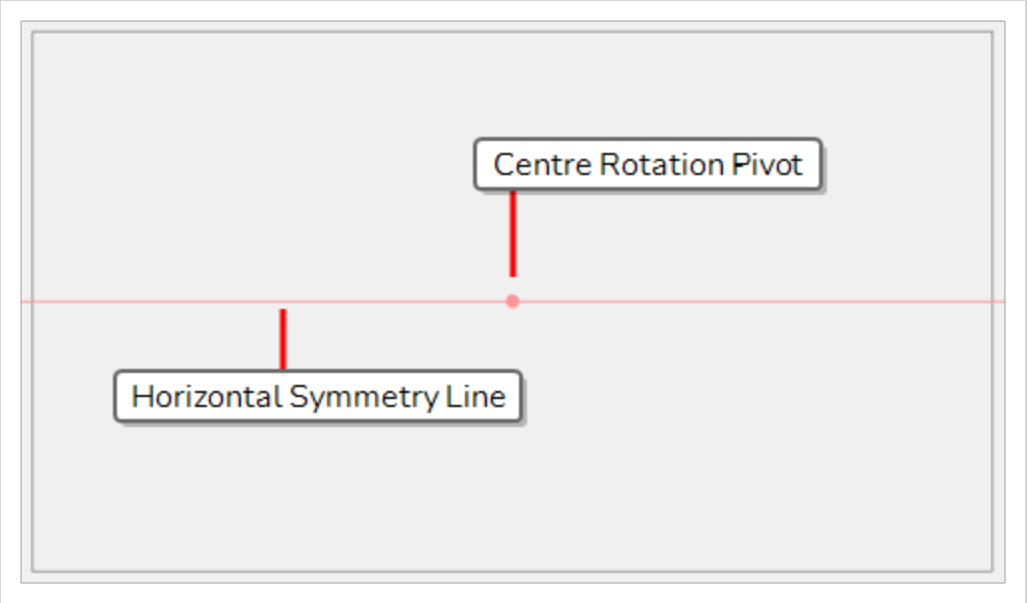
2. Add the Guide view to your workspace by doing one of the following:

    - In the top-right corner of any view in your workspace, click on the ➕ Add View button and select **Guides**.
    - In the top menu, select **Windows** > **Guides**.



3. In the Guides view, make sure that the Enable Guides option button is toggled on.
4. In the guides list, select **Horizontal Symmetry**.

    The Horizontal Symmetry Guide appears in the Camera View.



To rotate the guide, click and drag on its horizontal line.

TIP

- When the mouse is positioned over the Horizontal Symmetry Line, the mouse cursor will change to to indicate that you are about to rotate the guide.
- When rotating a guide, its angle displays in the top-left corner of the Camera view.

Once you are done making adjustments to the guide, you can click on the Lock Guides button in the Guides view to avoid accidentally modifying your guide while drawing.

Adjusting a Vertical Symmetry Guide

The Vertical Symmetry Guide is a guide that creates a guide along the y-axis that will automatically mirror your strokes horizontally.

The guide has a Pivot point that can be moved anywhere in the Camera or Stage Views.

How to Adjust the Vertical Symmetry Guide

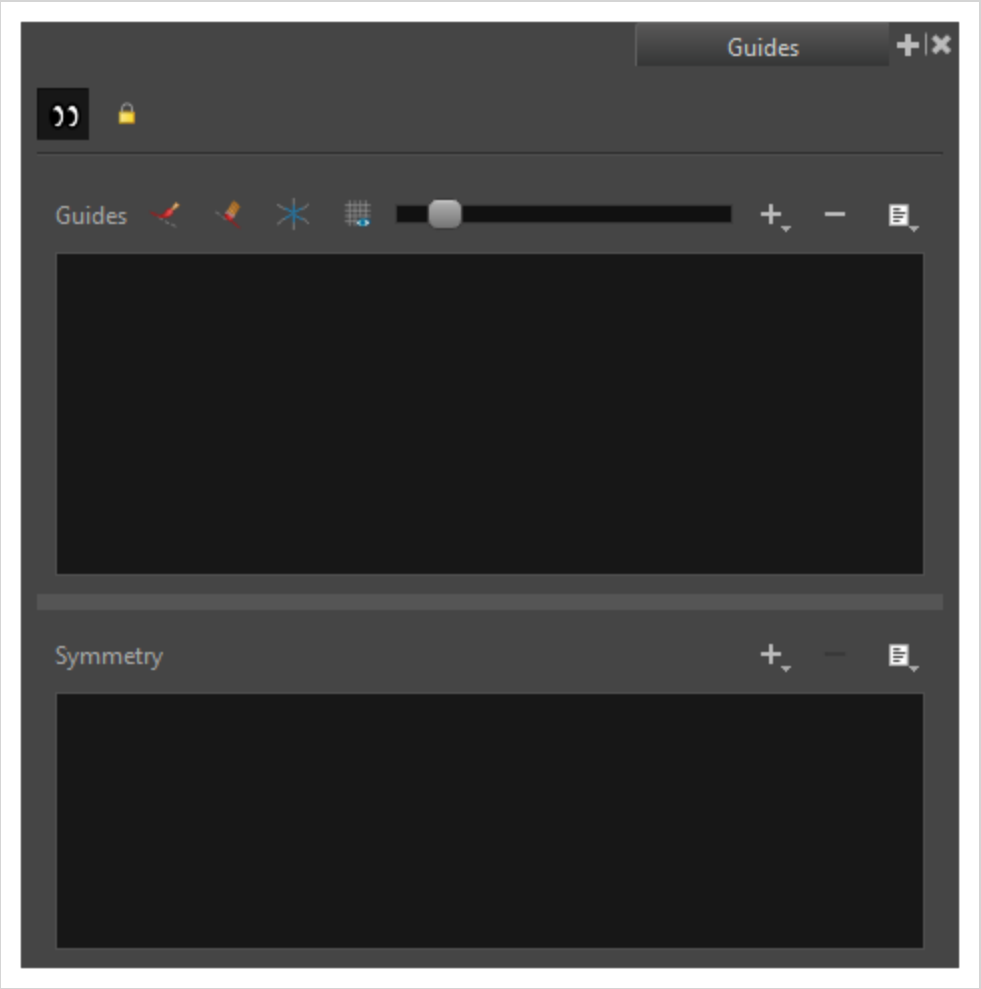
1. In the Tools toolbar, select either the Brush, Stencil Brush, Pencil, Stamp, Eraser, or Shape tool.

   > **NOTE**
   >
   > Drawing guides are only visible in the Camera view when one of these tools are selected.

2. Add the Guide view to your workspace by doing one of the following:

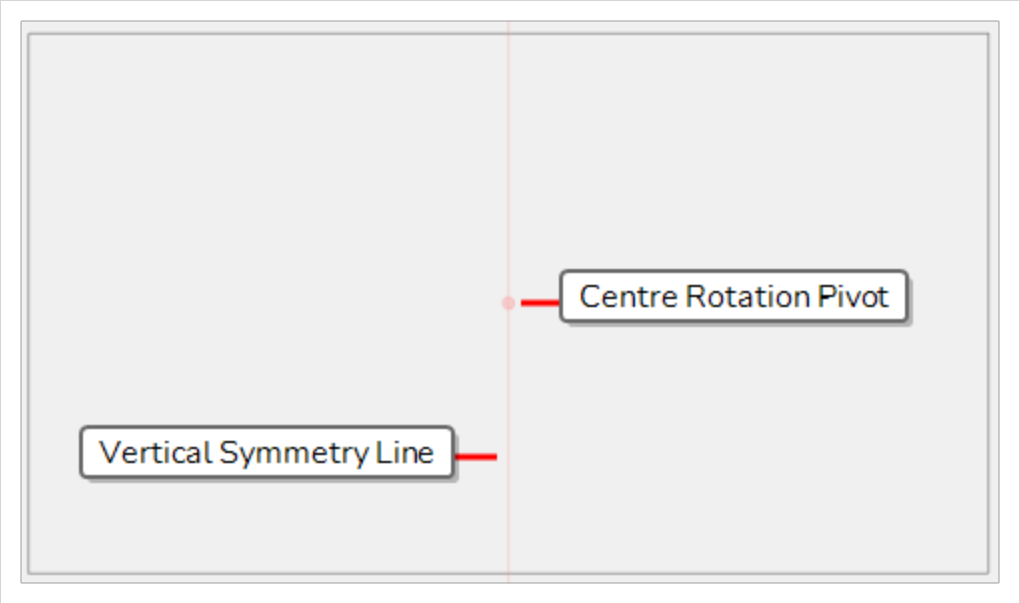
   - In the top-right corner of any view in your workspace, click on the ➕ Add View button and select **Guides**.

- In the top menu, select **Windows** > **Guides**.



3. Ensure the Enable Guide view is toggled on.
4. In the symmetry guides list select **Vertical Symmetry**.

   The Vertical Symmetry Guide appears in the Camera View.



To rotate the guide, click and drag on its vertical line.

TIPS

- When the mouse is positioned over the Vertical Symmetry Line, the mouse cursor will change to to indicate that you are about to rotate the guide.
- When rotating a guide, its angle displays in the top-left corner of the Camera view.

Once you are done making adjustments to the guide, you can click on the Lock Guides button in the Guides view so as to avoid accidentally modifying your guide while drawing.

Adjusting a Dual Axis Symmetry Guide

The Dual Axis Symmetry Guide is a guide that applies both horizontal and vertical symmetry to your stroke.

The point where both lines intersect acts as the Pivot point can be moved anywhere in the Camera view .

How to Adjust the Dual Axis Symmetry Guide

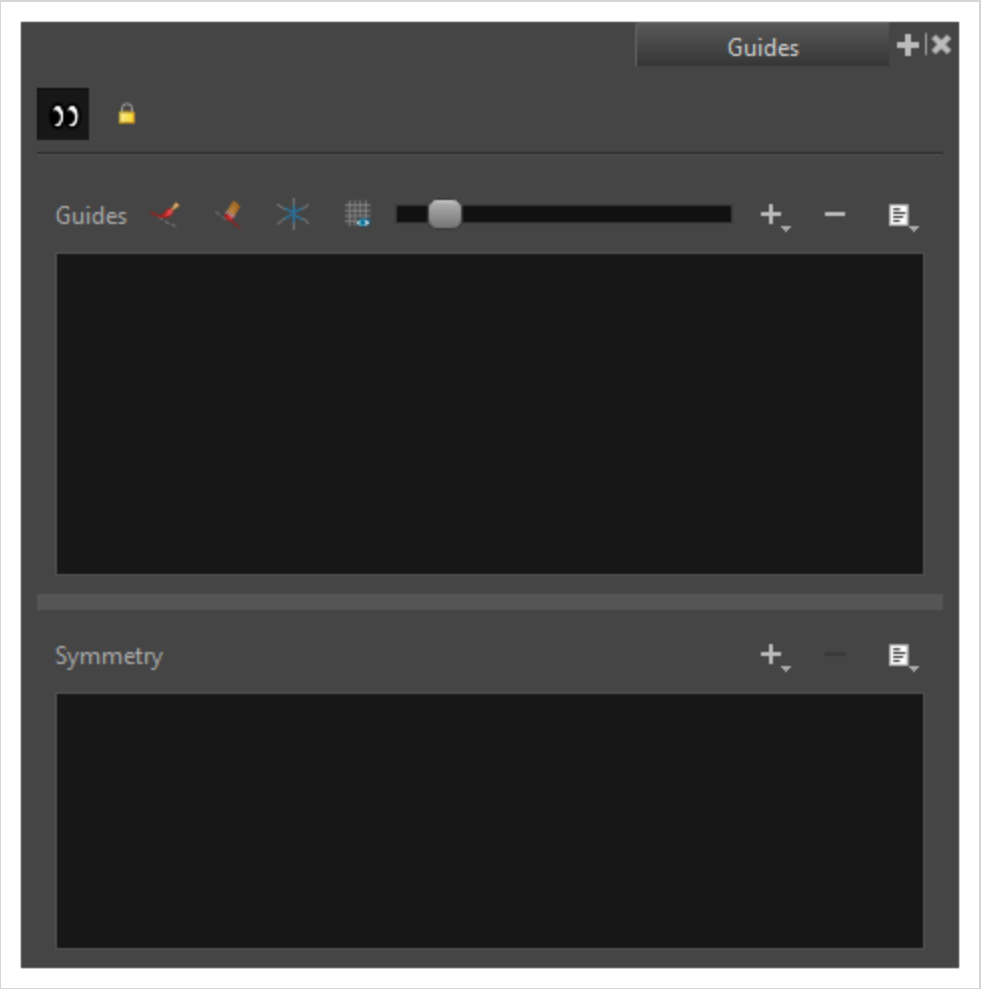
1. In the Tools toolbar, select either the Brush, Stencil Brush, Pencil, Stamp, Eraser, or Shape tool.

   > **NOTE**
   >
   > Drawing guides are only visible in the Camera view when one of these tools are selected.

2. Add the Guide view to your workspace by doing one of the following:

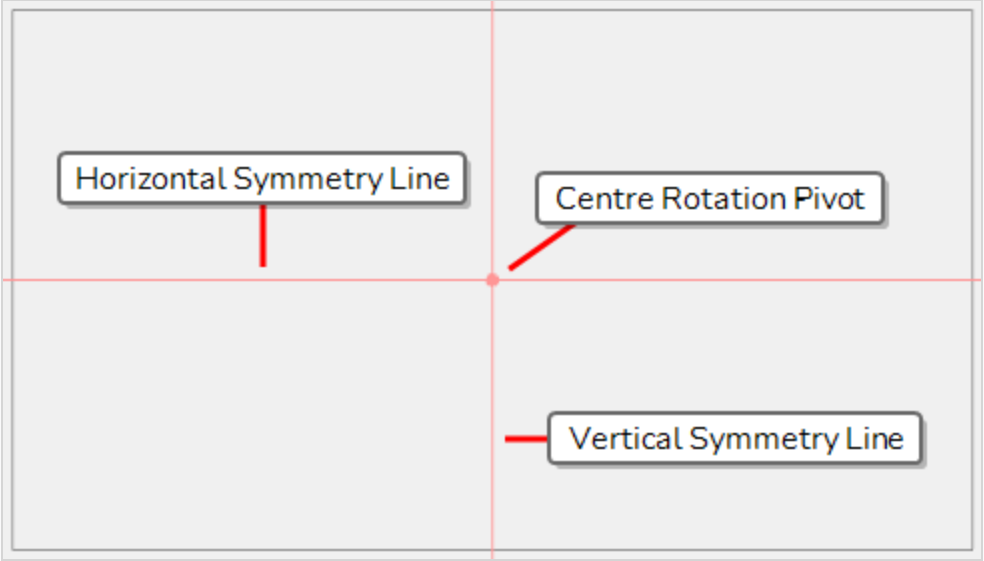
   - In the top-right corner of any view in your workspace, click on the ➕ Add View button and select Guides.

- In the top menu, select Windows > Guides.



3. Ensure the Enable Guide view is toggled on.
4. In the Symmetry Guides list, select Dual Axis Symmetry.

   The Dual Axis Symmetry Guide appears in the Camera View.



5. Do one of the following:

   To rotate the guide, click and drag on its horizontal or vertical line.

   TIPS

   - When the mouse is positioned over a line of the Dual Axis Symmetry horizontal and vertical lines, the mouse cursor will change to to indicate that you are about to rotate the guide.
   - When rotating a guide, its angle displays in the top-left corner of the Camera view.

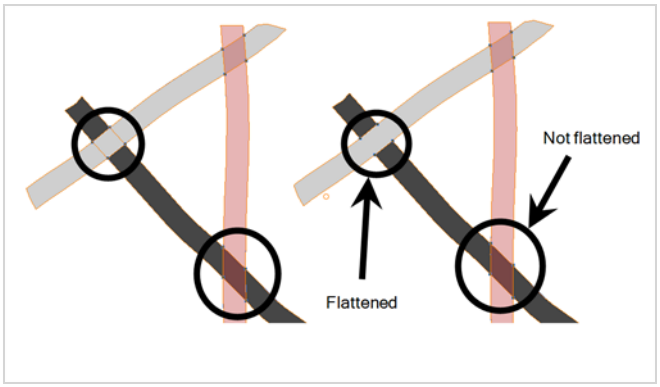
6. Once you are done making adjustments to the guide, you can click on the Lock Guides button in the Guides view to avoid accidentally modifying your guide while drawing.

About Drawing Optimization

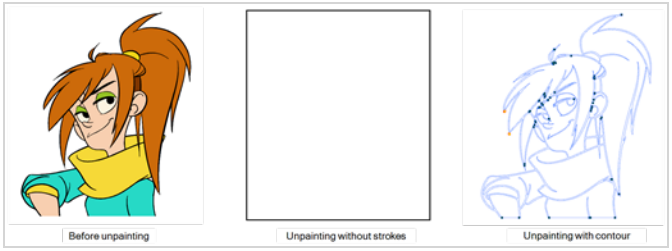
As you work, you drawing can get complex and contain multiple strokes. You may want to optimize those drawings to reduce the number of brush strokes, pencil lines, and invisible strokes. You may also want to flatten your artwork or optimize your brush stroke textures.

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.



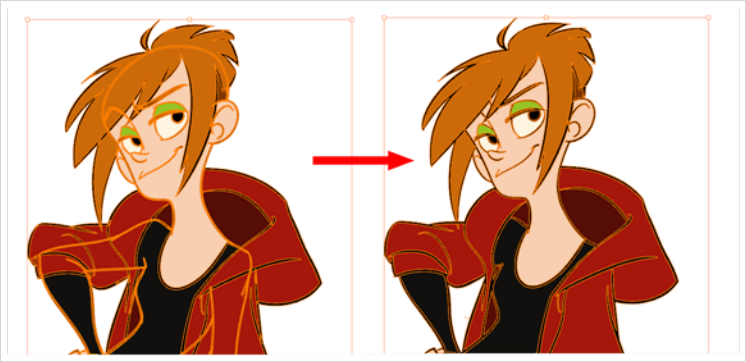
Flattening Drawings

T-ANIMPA-002-006

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.



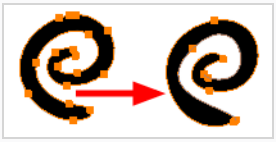
Smoothing Drawings

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.

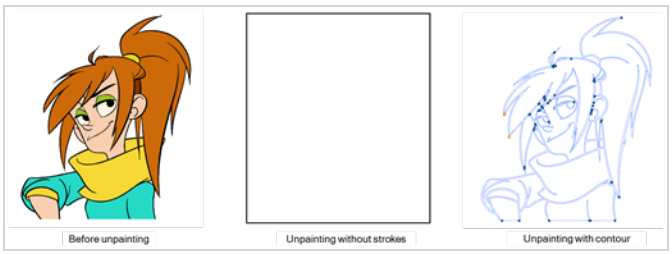
How to smooth drawings

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.

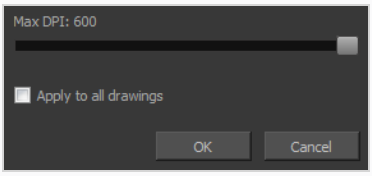
How to optimize a drawing

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**.

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 278.

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. This feature works for both solid and textured pencil 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** .
   - Right-click on the selection, select **Convert > Pencil Lines to Brush Strokes.**
   - 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

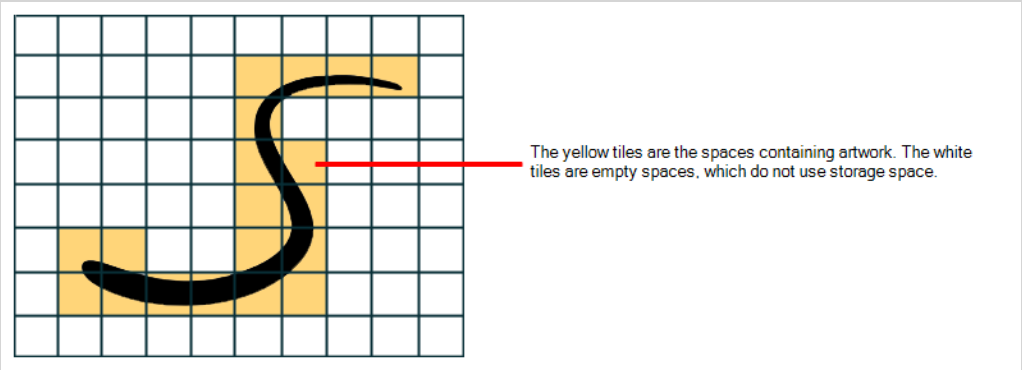
T-LAY-001-002

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.



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

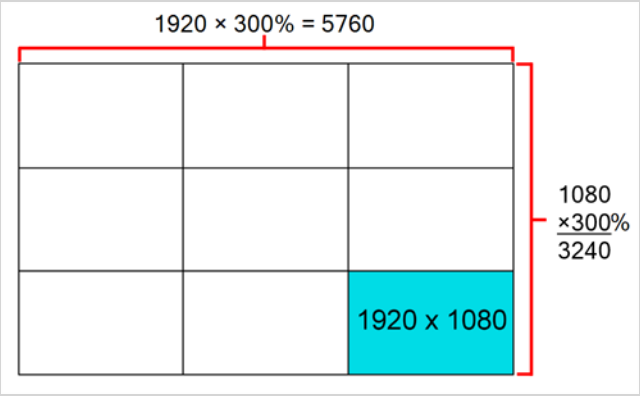
Setting the Bitmap Resolution

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.

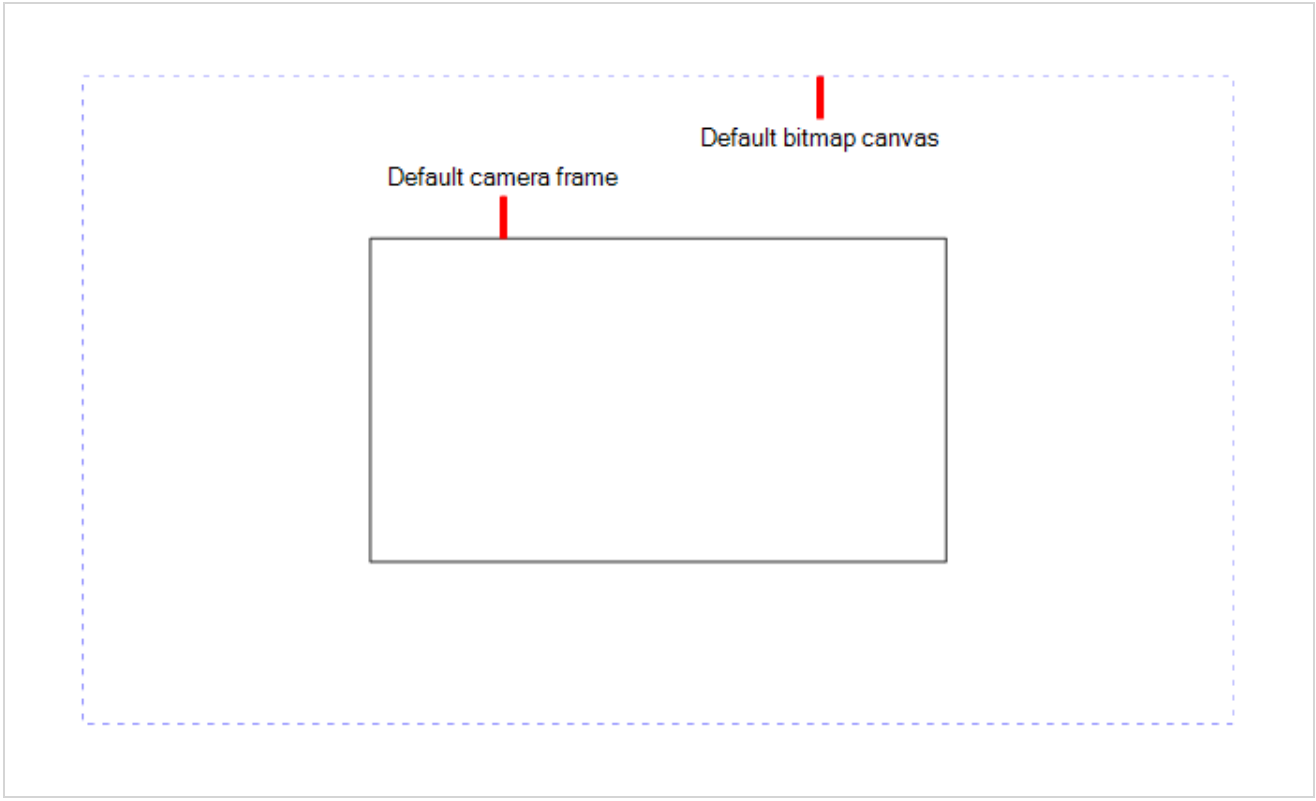
By default, bitmap layers created in Harmony have a pixel density of 100%. At this density, when your scene is not zoomed in and your artwork is not scaled up, each pixel in your artwork corresponds to one pixel in the rendered image. Scaling it up or zooming in will require Harmony to render several 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.



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 Paint, you cannot set the canvas size and pixel density for the whole scene, since 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.

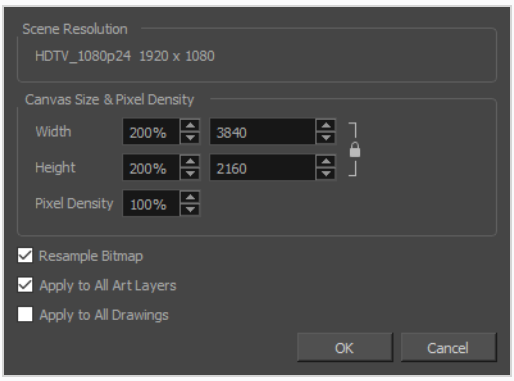
NOTE

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 115.

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, i.e., 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.

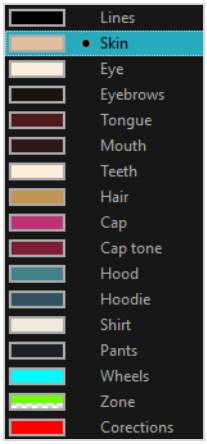
NOTE

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.

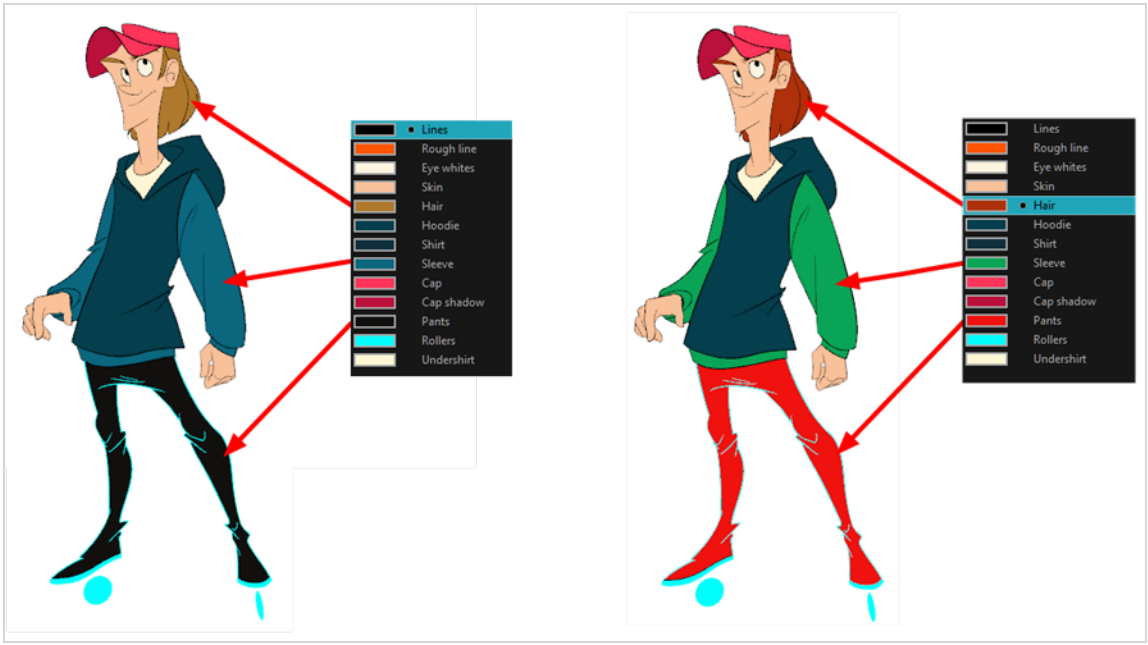
Chapter 4: Painting and Colours

T-ANIMFX-003-001

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

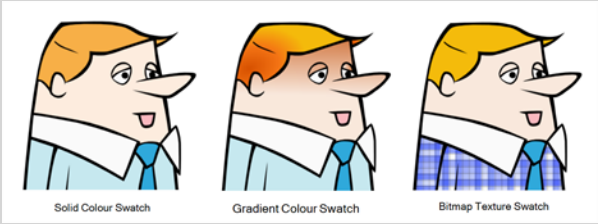
using colours that are duller and less vibrant than the dry daytime colours, or yet another for using in a night scene. Using palettes linked to your character in this way allows you to instantly change its colouring to suit the mood and atmosphere of the scene without having to repaint each element.

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

T-HFND-006-017

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.

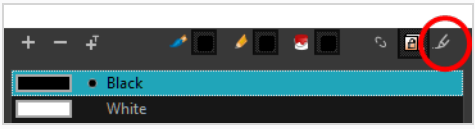
Locking and Unlocking the Colour List

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

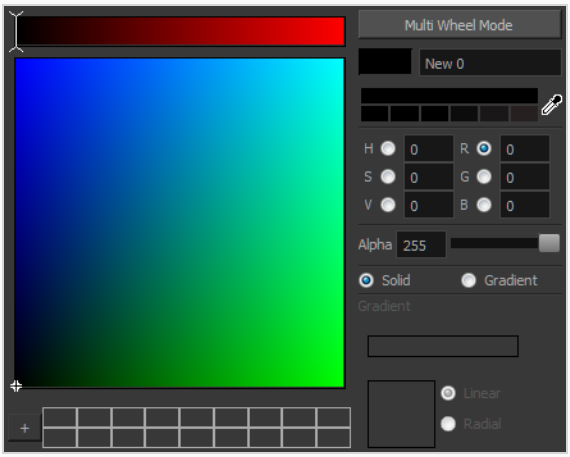
If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:

- 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

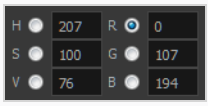
1. In the Colour view, click the Add Colour button.
2. Do one of the following to edit the colour swatch:
   - From the Colour view menu, select **Colours > Edit.**
   - Double-click on the colour swatch.

   The Colour Picker window opens.

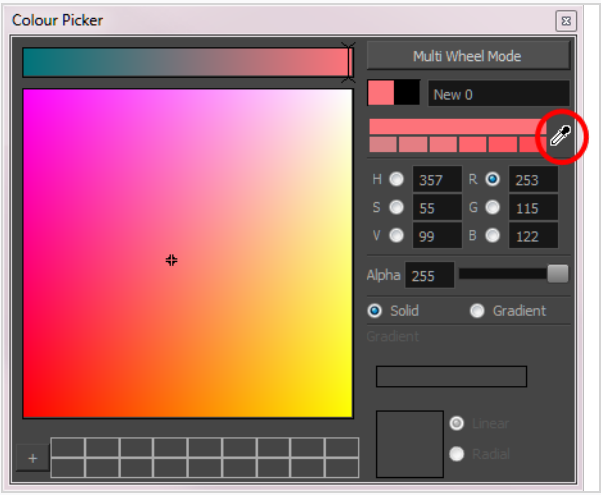


3. To set your colour, do one of the following:
   - Select either **R**ed, **G**reen, **B**lue, **H**ue, **S**aturarion of **V**alue to change the colour wheel's spectrum, then click on the desired colour in the colour wheel.

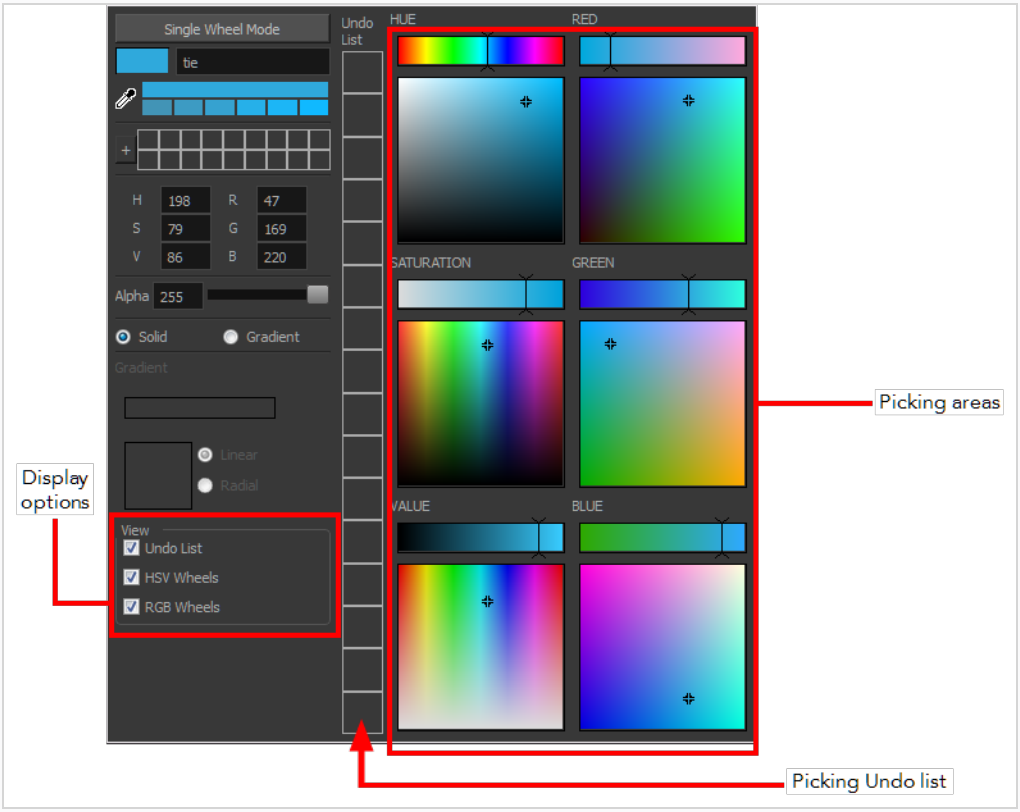
- Enter the hue, saturation, value, red, green and blue values manually into their corresponding fields. All values range from 0 to 255.



- 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**.

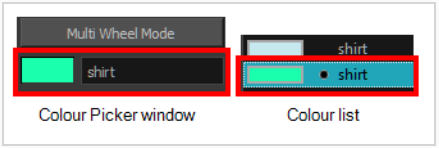


4. Click on the Shade Scale swatches to modify the shade of the selected colour.

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.

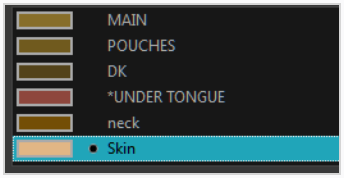
NOTE

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

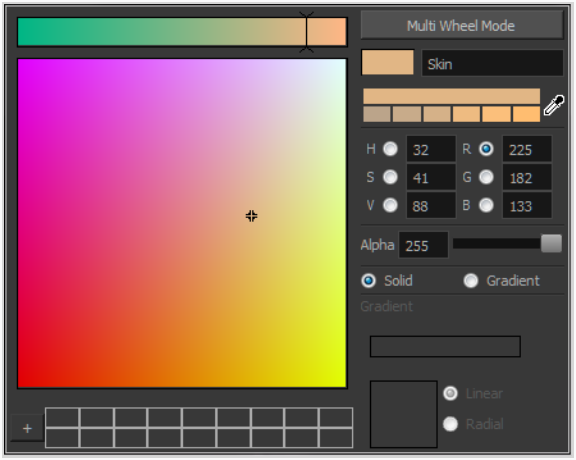
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu, select **Palettes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

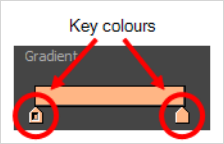


The Colour Picker window opens.



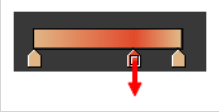
3. Select the **Gradient** option.
4. Select the **Linear** or **Radial** option.
5. In the Gradient slider, create your gradient:

    - 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 418.

Adding a Texture Colour Swatch

T-HFND-006-017C

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**.

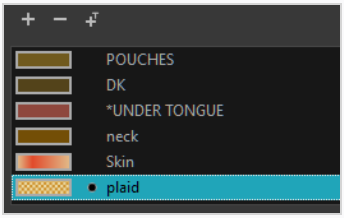
How to create a texture colour

1. From the Colour menu, select **Colours > New Texture** or click the New Texture button.

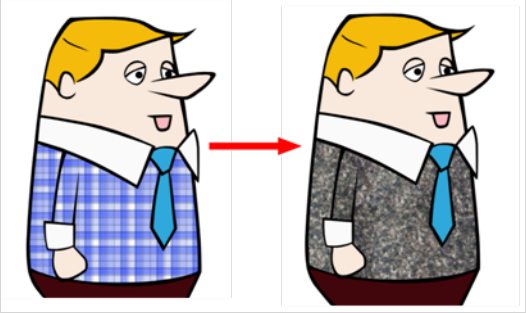
   The Browser window opens.

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 418.

Copying and Pasting Colours

There are three ways to copy and paste colour swatches:

- Paste as New Colours: This create a new colour swatch with the same colour value, but with a different colour ID as the original swatch.
- Paste as Clones: This creates a new colour swatch with the same colour value and the same colour ID as the original swatch.
- Paste Colour Values: This replaces the colour values in the selected colour swatch with the colour values from the copied swatch.

Pasting a colour as a clone is useful if you've created a clone of a palette, then added a new swatch in the original palette, and need to add a swatch with the same colour ID in the clone palette.

NOTE

A palette cannot have two swatches with the same colour ID. Hence, you can only paste colours as clones in a different palette than the ones the colours were copied from.

If, for any reason, you need to obtain the colour ID of your colour swatches, whether to make a reference table of them, or to compare the colour IDs of two swatches, you can copy the colour ID of a colour swatch to the clipboard. You cannot paste a colour ID anywhere on a colour swatch, but you can paste it in a text editor or a spreadsheet application for your own purposes.

A colour ID is a string of 16 hexadecimal digits, i.e.: **`075cf5b552401130`**.

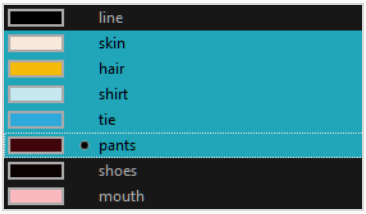
NOTE

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

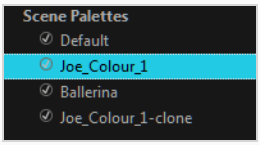
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu , select **Palettes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



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.
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 from which you want to copy the ID.
2. From the Colour View menu, select **Colours > Copy Colour ID** or press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).
3. Paste the copied colour ID in a document.

Deleting a Colour Swatch

T-ANIMPA-003-007

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.

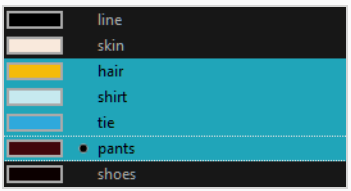
NOTE

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

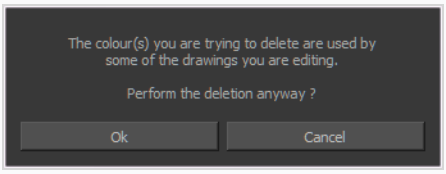
1. In the Colour view, select the colour swatches to delete.



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.

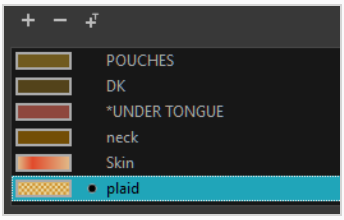
NOTE

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.

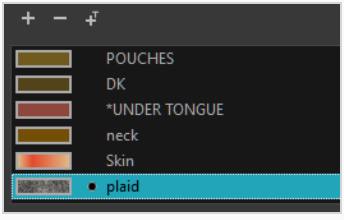


2. From the Colour View menu, select **Colours > Edit Texture** or double-click on the swatch.

   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

T-H15NEW-004-001

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 323, About the Edit Gradient and Texture Tool, *Adding a Texture Colour Swatch* on page 330 and *Adding a Pencil Line Texture* on page 152.
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

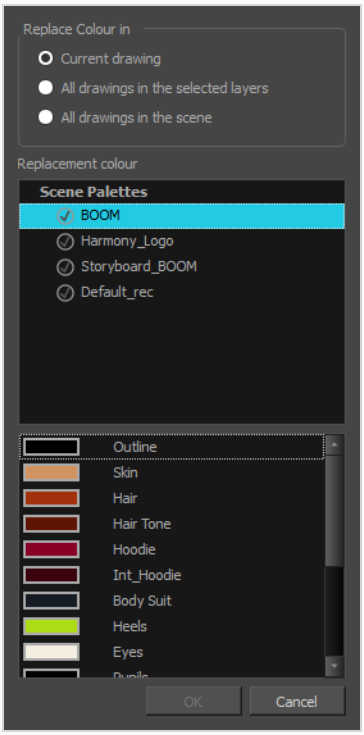
   You can skip this step if you intend to recolour all the drawings in your scene.
3. In the Colour view, click on Show Colour Palettes if you want to replace a colour, gradient or texture, or on Show Pencil Texture Palettes if you want to replace a pencil texture. You can also click on Show All Palettes.
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 Colour Eyedropper 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

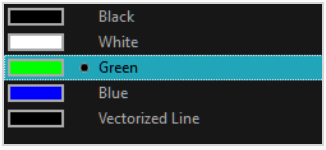
T-ANIMPA-011-006

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.

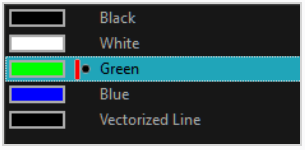
How to protect colours

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

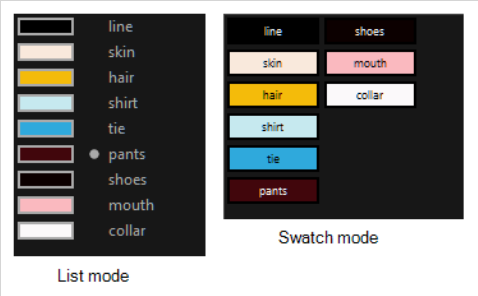
The Colour view has two display modes:

- 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

T-ANIMPA-003-001

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:

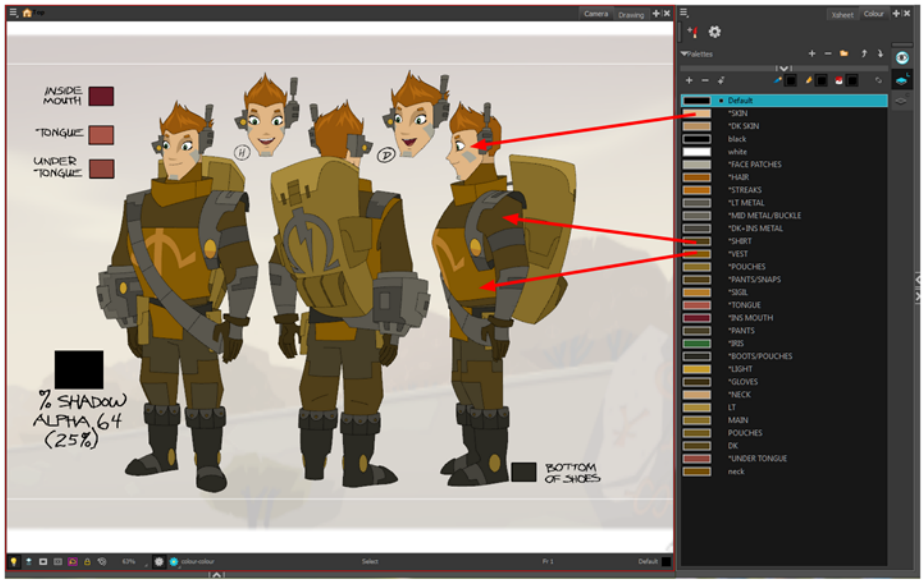
- Each character consistently retains their dedicated colours.
- You cannot accidentally use a colour which is not in the master palette.
- Standardization and colour consistency throughout the production.
- Multiple artists can use the same colour palette and produce the same results.

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.

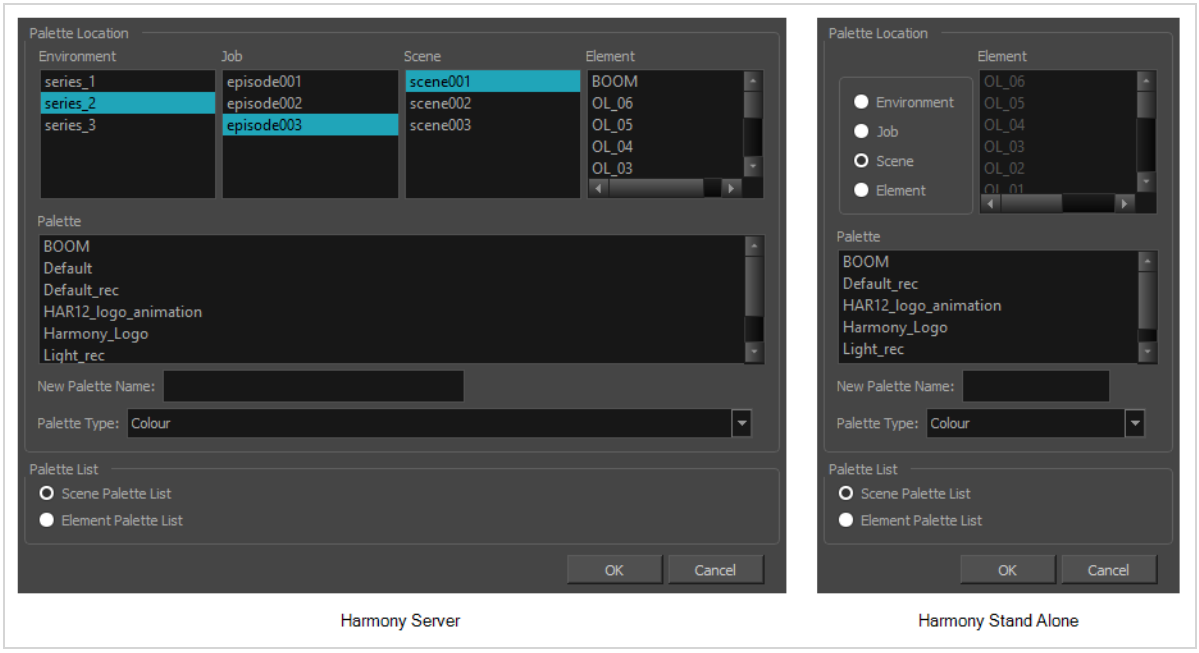
About Advanced Palette Management

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.

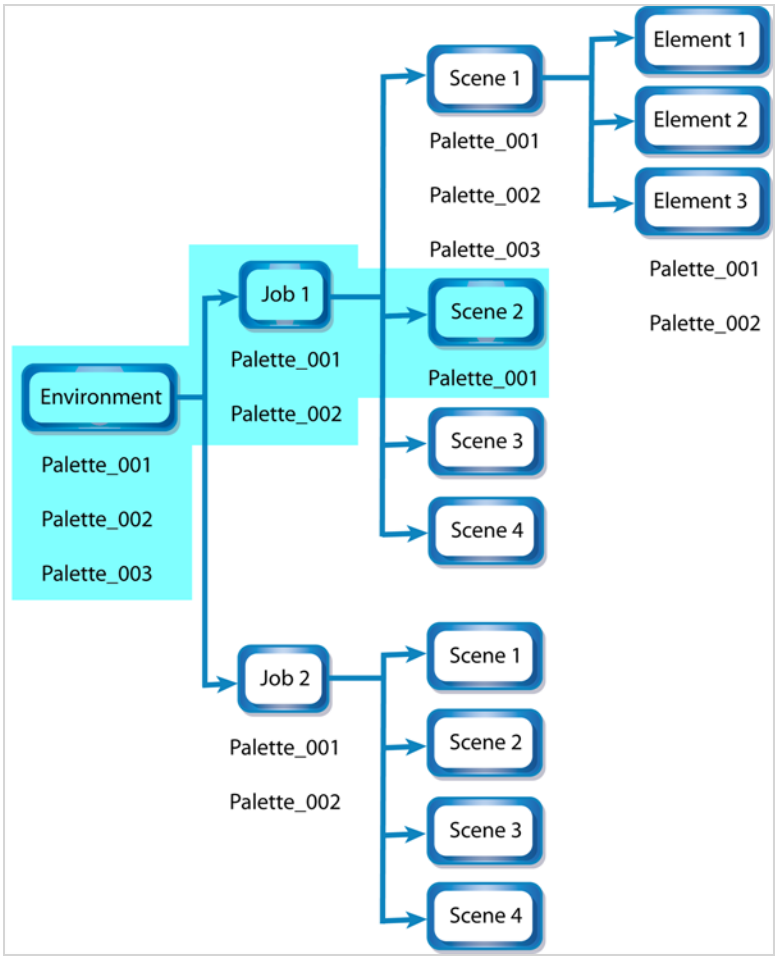
About Exporting Palettes

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.

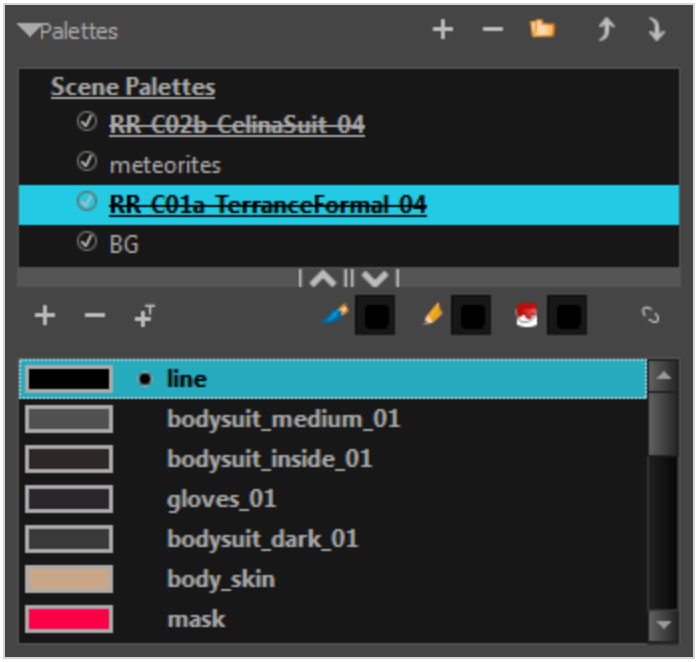
For example, in the following chart, if you export Scene 2 from Job 1, the package will carry the palettes from Scene 2, Job 1 and Environment. It **WILL NOT** carry the palettes from Element 3 in Scene 1, Scene 1 and Job 2. If Scene 2 was linked to any of these, the system will create a recovery palette 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 382.

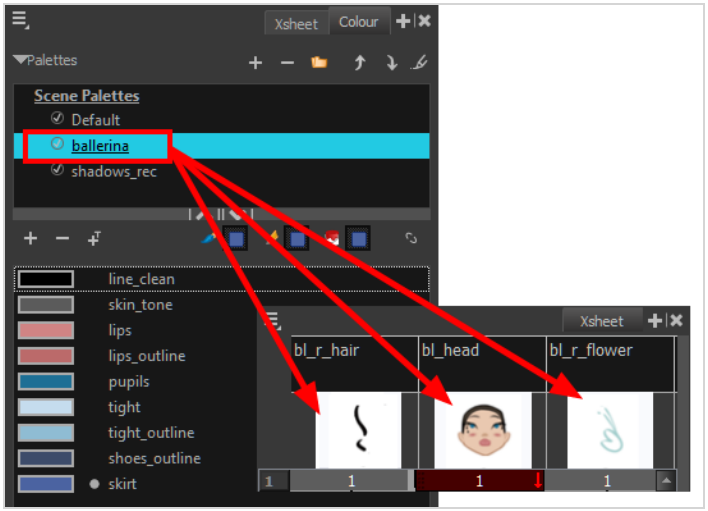
About the Palette List

T-ANIMPA-003-006

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 344.

- **Scene Palette List**

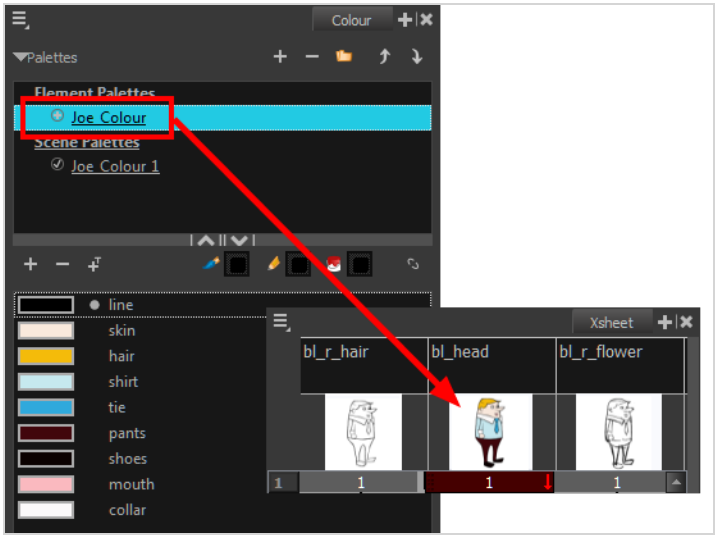
  The scene palette list is simple to understand and convenient. Every element in your scene can use colours from a palette in your scene's palette list. This is especially useful for digital animation, as a cut-out character model will often be divided into dozens of different layers which will all use 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.

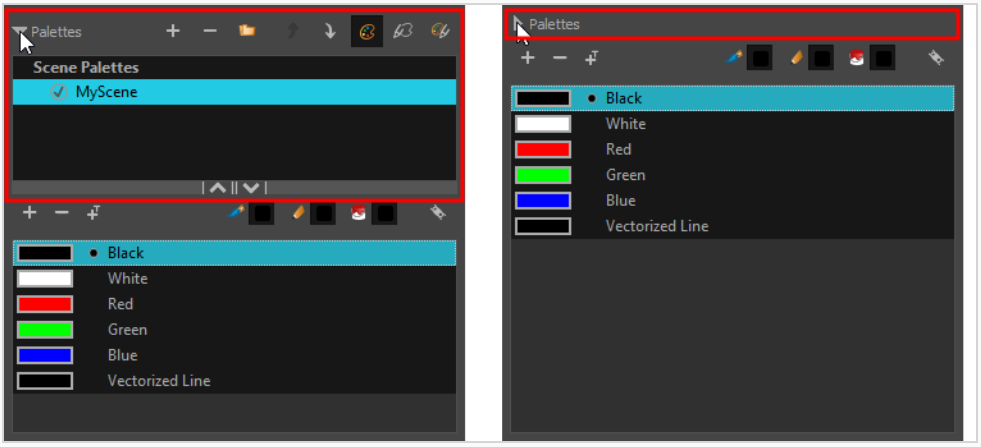
	Indicates a potentially dangerous situation. For example, a palette file that is stored in one of the scene's element folders, but which is added to your scene's palette list. The whole scene can use the palette, but since it's stored inside an element, deleting that element will make your whole scene 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.



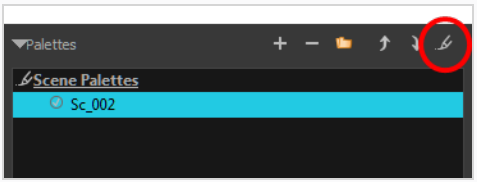
Locking and Unlocking the Palette List

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 136.

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

T-ANIMPA-003-002

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 344.

NOTE

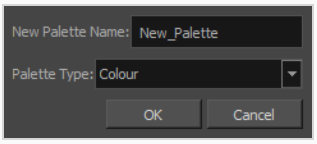
If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:

- 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)

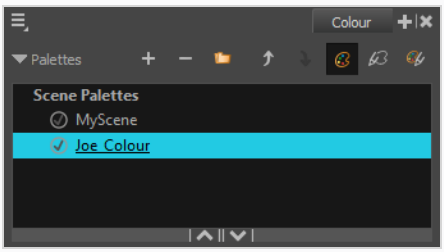
1. Do one of the following:
   - In the Colour View, click the New Palette + button over the palette list.
   - From the Colour view menu, select **Palettes > New**

   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**.

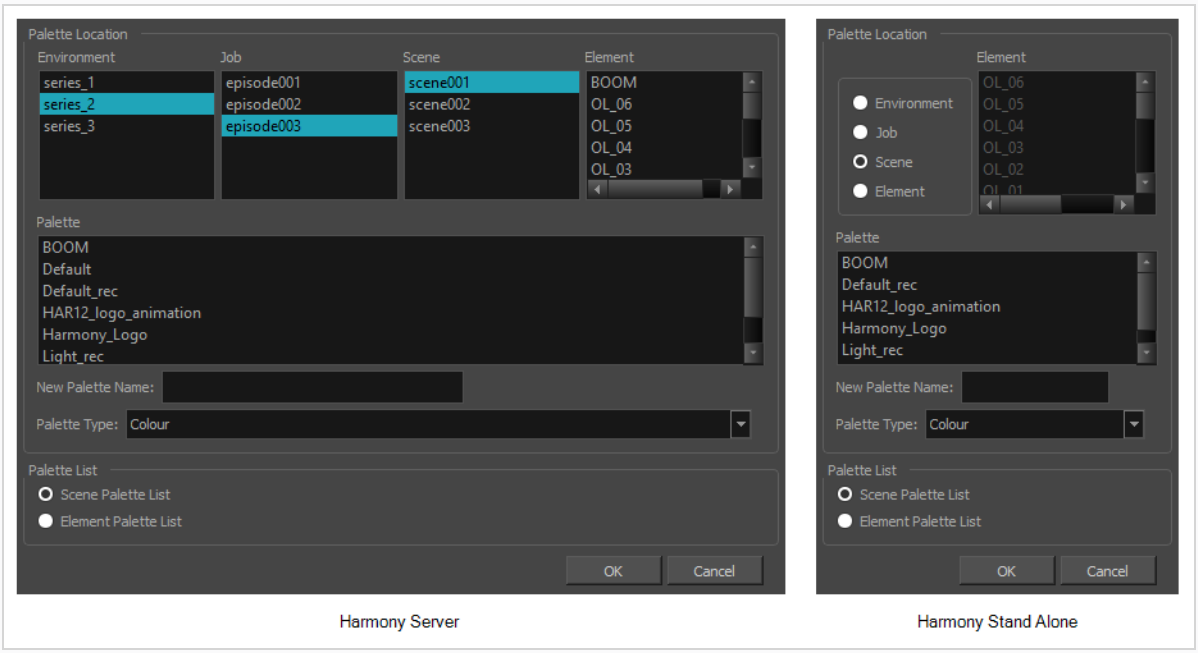
   The palette appears in the drawing element's palette list.



How to create a palette (Advanced palette list mode)

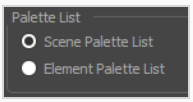
1. If you want to add the palette to an element's palette list, select a drawing from the element for which you want to create a palette in the Timeline, Xsheet or Camera view.
2. Do one of the following:
   - In the Colour View, click the New Palette + button over the palette list.
   - From the Colour view menu, select **Palettes > New**

   The Palette Browser dialog box opens.



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 346.

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 345.



7. Click **OK**.

   The new palette appears in the palette list.

Linking a Colour Palette

T-ANIMPA-003-004

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

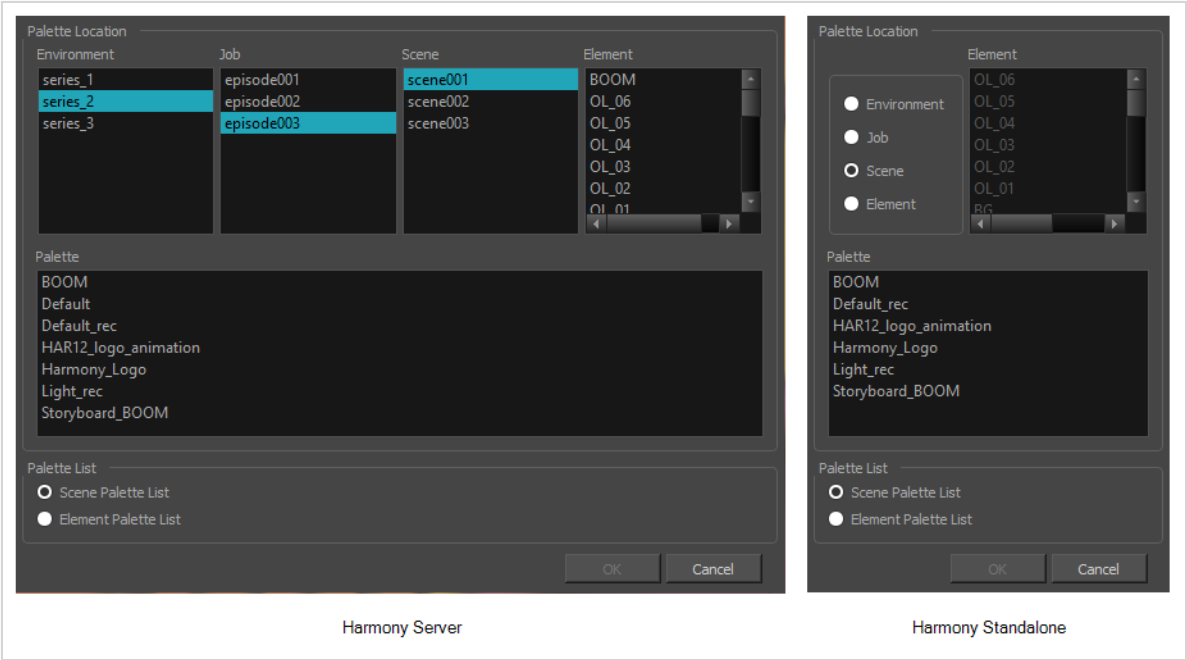
If you are using Harmony Server, make sure you have the rights to modify the palette list by doing one of the following:

- 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.



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 345.

   The palette appears in the Colour view.

Importing a Colour Palette

T-ANIMPA-003-005

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:

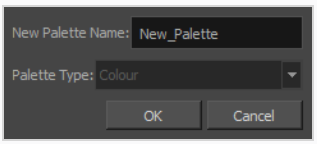
- From the top menu, open the **Edit** menu and ensure the **Edit Palette List Mode** option is checked
- Right-click on the palette list and select **Get Rights to Modify Palette List**.
- From the Colour view menu ☰, select **Palettes > Get Rights to Modify Palette List**

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 which you want to create a palette in the Timeline, Xsheet or Camera view.

2. Do one of the following:

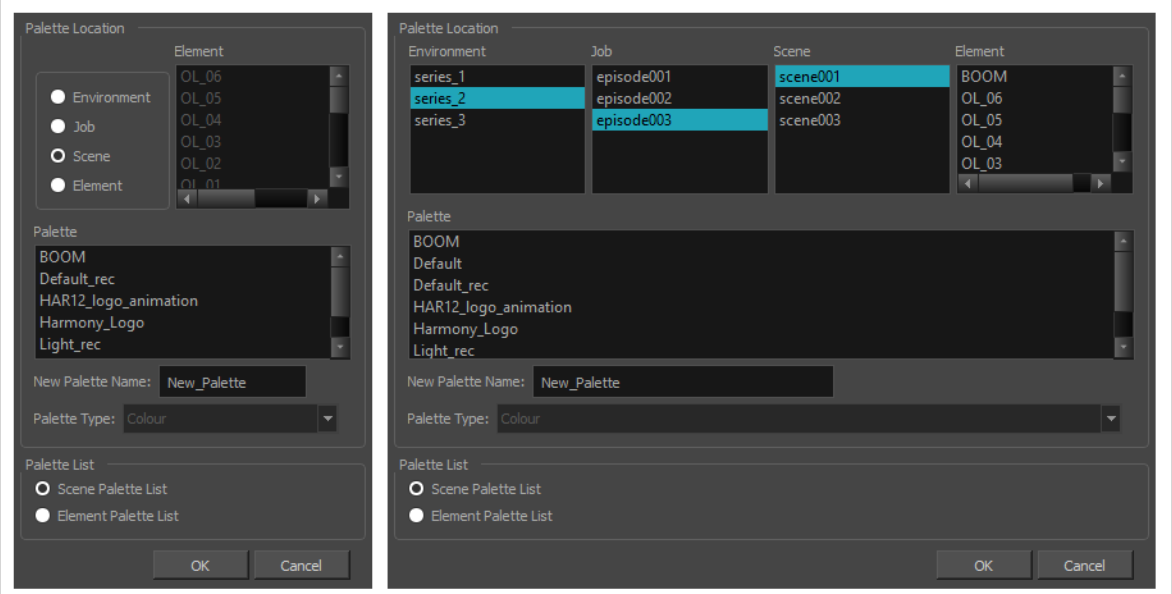
   - From the Colour menu ☰, select **Palettes > Import**.
   - Right-click on the palette list and select **Import**.

   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.



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 346.

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 345.

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.

Consolidating Used Colours Into a Single Palette

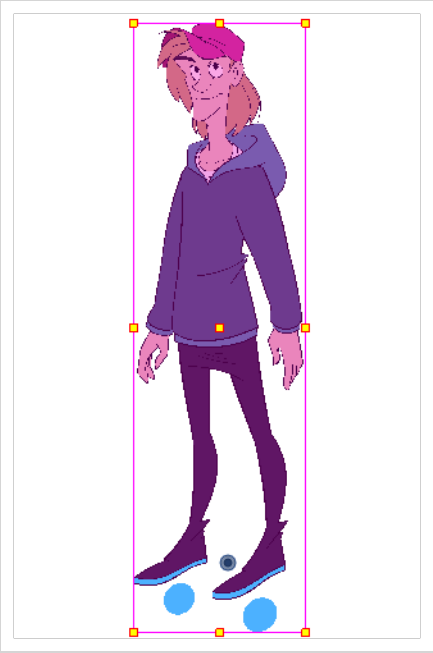
Using the Create Palette from Selection dialog, you can instantly generate a single palette that contains all the colours used in your artwork, and no other colours. This can be useful if you have used colours from several different palettes to design the colours for a character, background or prop, and want this asset to have its own dedicated palette.

NOTE

The Create Palette from Selection dialog uses the colours in all the drawings in the selected layers, even drawings that are not exposed.

How to create a single palette with the colours used by one or several drawings

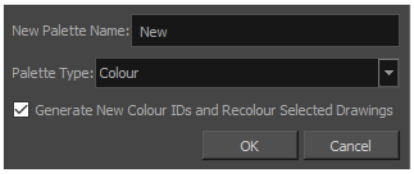
1. In the Timeline, Camera, Xsheet or Node view, select all the layers for which you want to create a single colour palette.



TIPS

- To select multiple layers, press and hold the Ctrl (Windows/Linux) or ⌘ (macOS) key, then click on each layer you want to select.
- In the Timeline or Xsheet view, you can select a contiguous series of layers by clicking on the first layer you want to select, then, while holding Shift, clicking on the last layer you want to select. Every layer in-between will also be selected.
- If your scene has a complex layer hierarchy, you can expand all the layers in the Timeline view by pressing 9 before selecting all the layers in your scene.
- To select all layers in your scene, select **Edit > Select All** in the top menu or press Ctrl + A (Windows/Linux) or ⌘ + A (macOS).
- To select all but a few specific layers, select the layers you want to exclude, then select **Edit > Invert Selection** in the top menu or press Ctrl + Shift + I (Windows/Linux) or Shift + ⌘ + I (macOS).

2. In the top-left corner of the Colour view, open the View Menu and select **Palettes > New Palette from Selected Drawings**.The Create Palette from Selection dialog appears.



NOTE

If the Advanced Palette Lists preference is enabled, the dialog will also have a palette browser to allow you to select where to store the palette and whether to associate the palette to the scene or to an element. For information on how to create a palette in Advanced Palette Lists mode, see Creating a Palette.

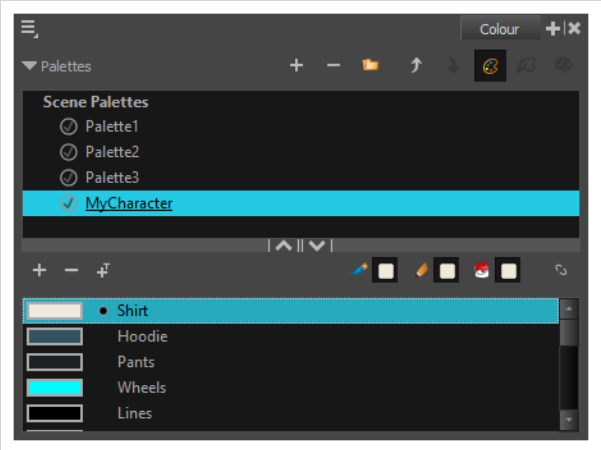
3. In the **Name** field, type in the name for the palette to create.
4. In the **Palette Type** drop-down, select **Colour** if you want to create a palette containing all the colours, gradients and bitmap textures in the selected layers, or select **Pencil Texture** if you want to create a palette containing all the pencil textures in the selected layers.
5. If you want the swatches in the new colour palette to have different colour IDs than the ones currently used by the selected drawings, check the **Generate New Colour IDs and Recolour Selected Drawings** option.

NOTES

- This option creates a palette with new colour IDs, and replaces the old colour IDs in your artwork with the new ones. This will typically not cause any visible change, and it will prevent your new palette from using the same colour IDs as the palettes that are currently in your scene. This is important because, when two colour swatches in two different palettes have the same colour ID, the zones filled with that colour ID will appear in the colour in the top-most palette. If you want to prevent this, it is recommended to check this option.
- If there are any Colour-Override in the selection, they will not be updated to use the new colour IDs, which will cause them to no longer work with your artwork unless you reconfigure them manually. Using this option is not recommended in this case.

6. Click on **OK**.

   A new palette is generated containing all the colours used in all the drawings in the selected layers and is added to the palette list.



Renaming a Palette

T-ANIMPA-003-003

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**

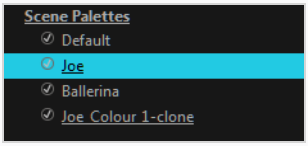
NOTE

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

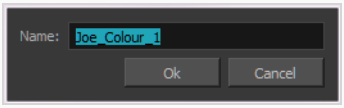
- In the Colour view, make sure the Edit Palette Mode toggle button is pressed in.
- In the palette list of the Colour view, right-click on the selected palette and select either **Get Rights to Modify Palette** or **Get Rights to Modify All Palettes**.
- From the Colour view menu ☰, select **Palettes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

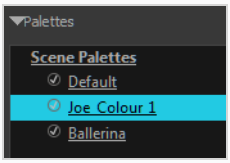
NOTE

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.

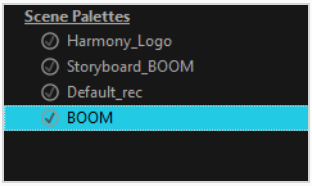
NOTE

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)

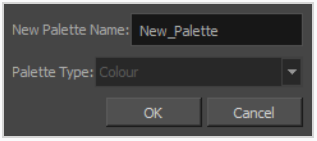
1. In the Colour view, select a palette to duplicate.



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**.

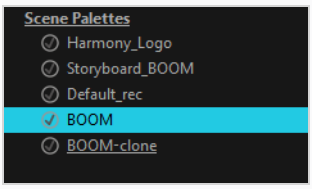
   The Duplicate palette dialog box opens



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.

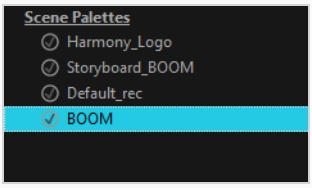
4. Click **OK**.

   The duplicated palette appears in the palette list.



How to duplicate a palette (Advanced palette list mode)

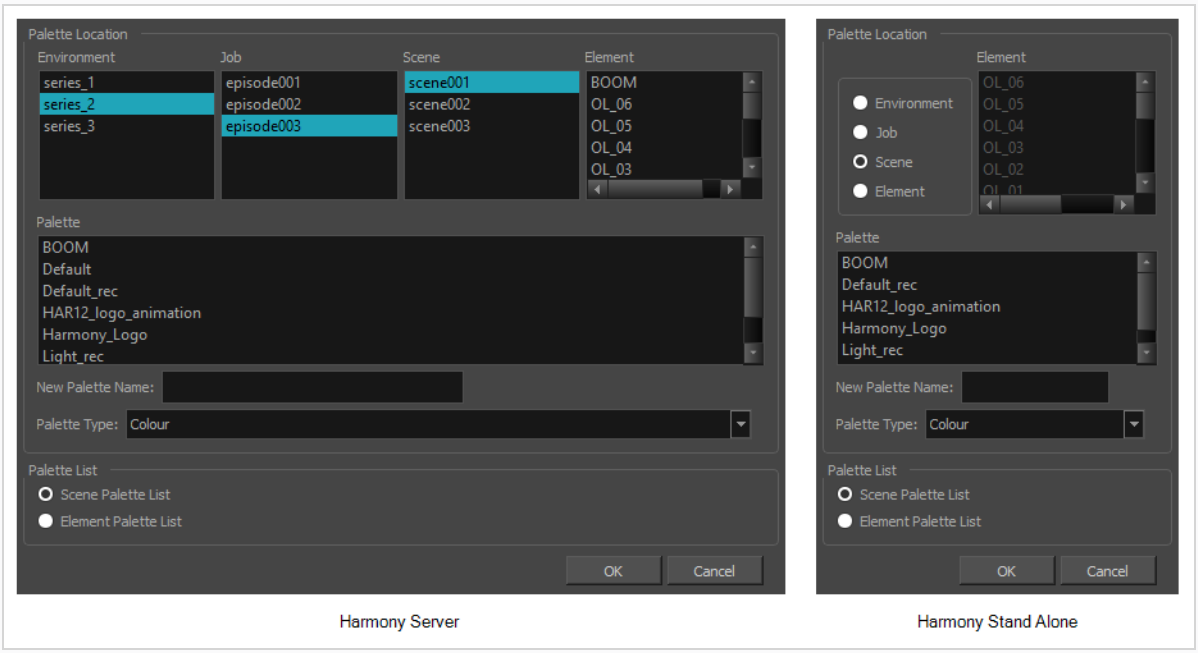
1. In the Colour view, select a palette to duplicate.



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**.

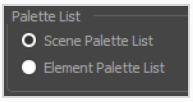
   The Palette Browser dialog box opens.



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 346.

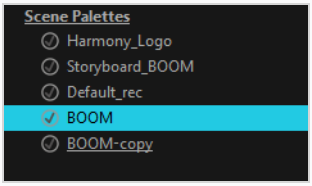
4. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-copy". The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not 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 345.



6. Click **OK**.

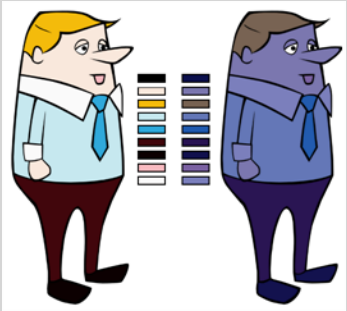
   The duplicated palette appears in the palette list.



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.

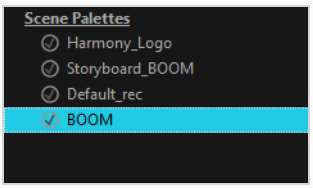
NOTE

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)

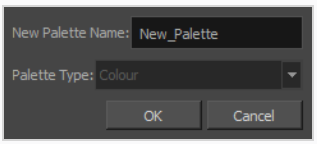
1. In the Colour view, select a palette to clone.



2. Do one of the following: From the Colour menu, select **Palettes > Clone** or right-click and select **Clone**.

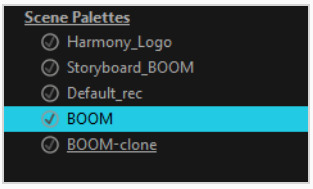
   - Right-click on the palette and select **Clone**.
   - Open the Colour menu ☰, then select select **Palettes > Clone**.

   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**.

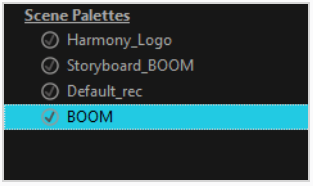
   The cloned palette appears in the palette list.



All Scene Palettes will appear in the Palettes tab of the Export to Sprite Sheet Publish for Game Engine window.

How to clone a palette (Advanced palette list mode)

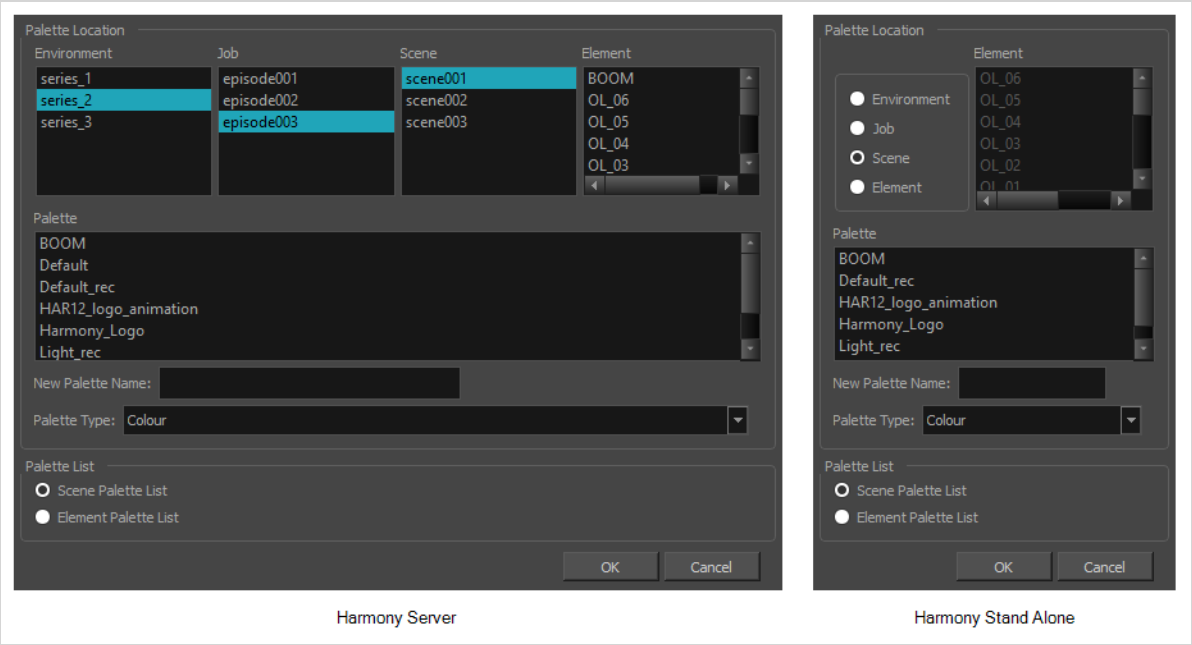
1. In the Colour view, select a palette to clone.



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**.

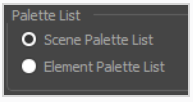
   The Palette Browser dialog box opens.



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 346.

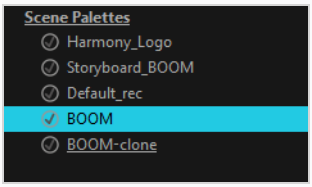
4. In the **New Palette Name** field, enter the name for the new palette. By default, the palette's name is based on the original palette name followed by "-clone". The palette list above this field lists the palettes that already exist in the selected location. Make sure you enter a name that is not 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 345.



6. Click **OK**.

The cloned palette appears in the palette list.

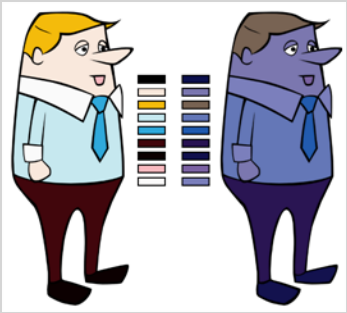


NOTE

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 376.

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

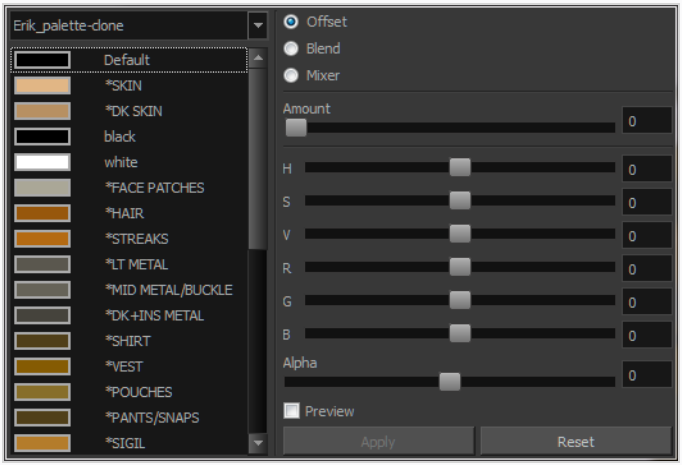
If you are using Harmony Server, make sure you have the rights to modify the selected palette by doing one of the following:

- 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**.

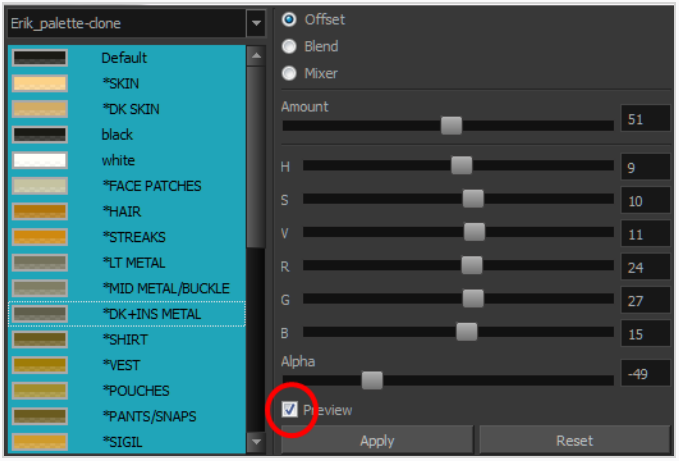
How to tint a palette

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.

Mixing Colours

If you want to modify a series of colours to blend a tint in them or offset their RGBA values, you can use the Tint panel. You can also create palette styles, such as night and day styles.

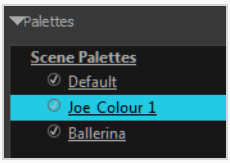
NOTE

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**.

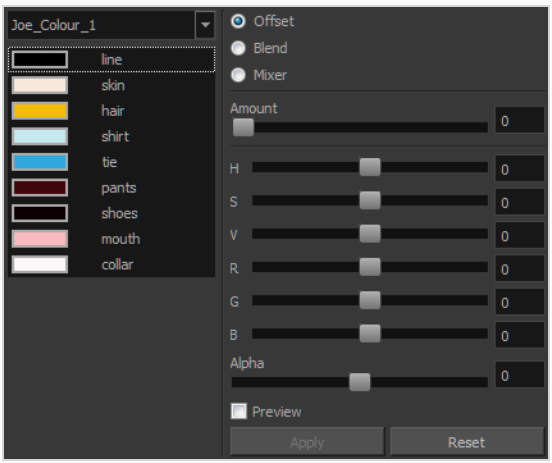
How to mix colours

1. In the Colour view, select the palette that contains the colours you want to offset or blend.

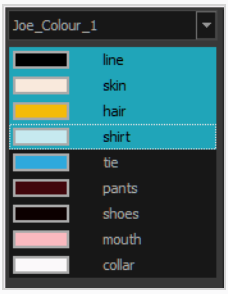


2. Do one of the following:
   - From the Colour View menu, select **Palettes** > **Tint Panel**.
   - Right-click and select **Tint Panel**.

   The Tint Blend/Offset panel opens.

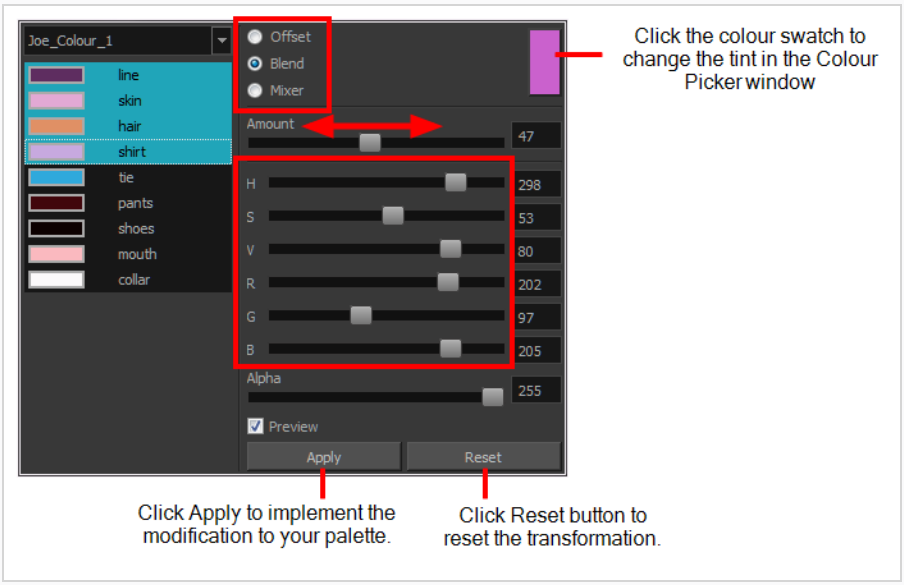


3. Select one or more colours to modify in the colour list. To select all the colours, press Ctrl + A (Windows/Linux) or ⌘ + A (macOS).



4. Select **Preview** option.

5. Select the **Offset**, **Blend**, or **Mixer** option.



Parameter	Description
Offset	Offsets the selected colours by the adjustments made using the HSB and RGB sliders. Use the Amount slider to adjust the degree of offset. Use the Alpha slider to adjust the opacity of the selected colour.
Blend	Blends the selected colours with the colour swatch in the top-right corner. Use the Amount slider to adjust the degree of blend. A blend of 100% turns the selected colours into the same colour as the swatch. Adjusting the HSB and RGB

	sliders affect the swatch colour, which in turn affects the selected colours on the left. Use the Alpha slider to adjust the opacity of the swatch.
Mixer	Select a Base and Tint colour to form a third colour swatch. Use the slider just beneath to mix the Base and Tint colours by different amounts. This will affect the mixed swatch whether it is selected or not. Select either the Tint or Base swatch and use the HSB and RGB sliders to adjust its colour. This will affect the mixed swatch colour, which in turn affects the selected colours on the left.

6. Click **Apply**.

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 372.

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.

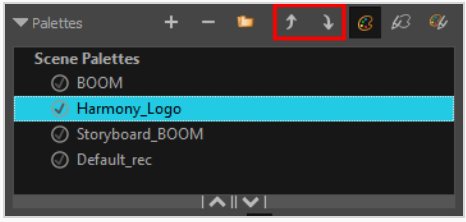
NOTE

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**.

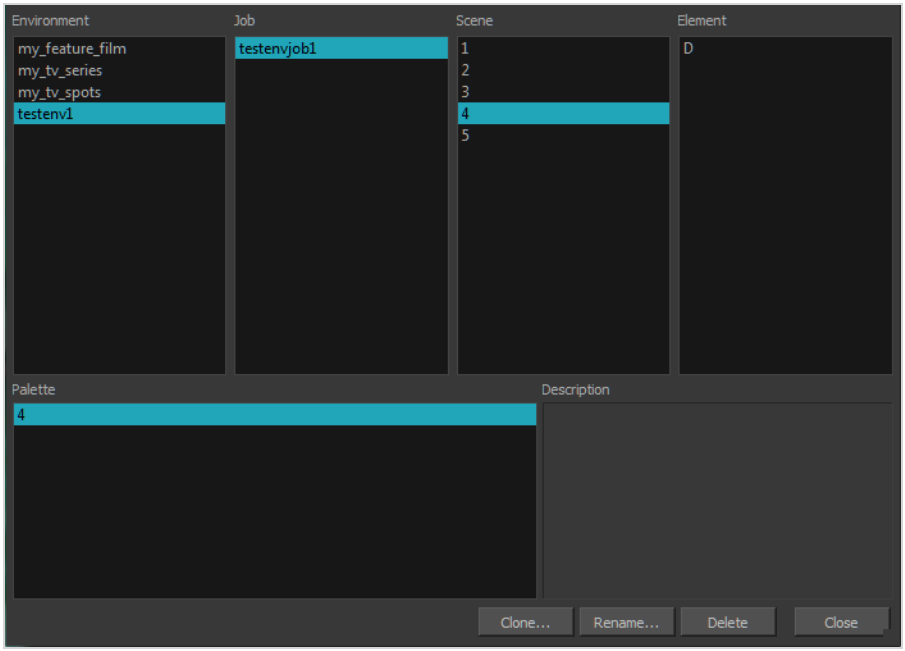


Palette Operations

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.

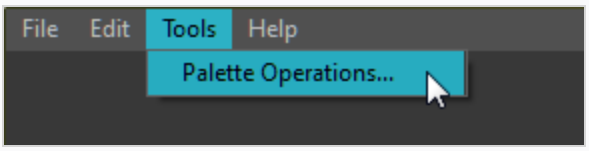


Opening the Palette Operations Dialog Box

You can open the Palette Operations dialog box in Harmony Server.

How to open the Palette Operations dialog box

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



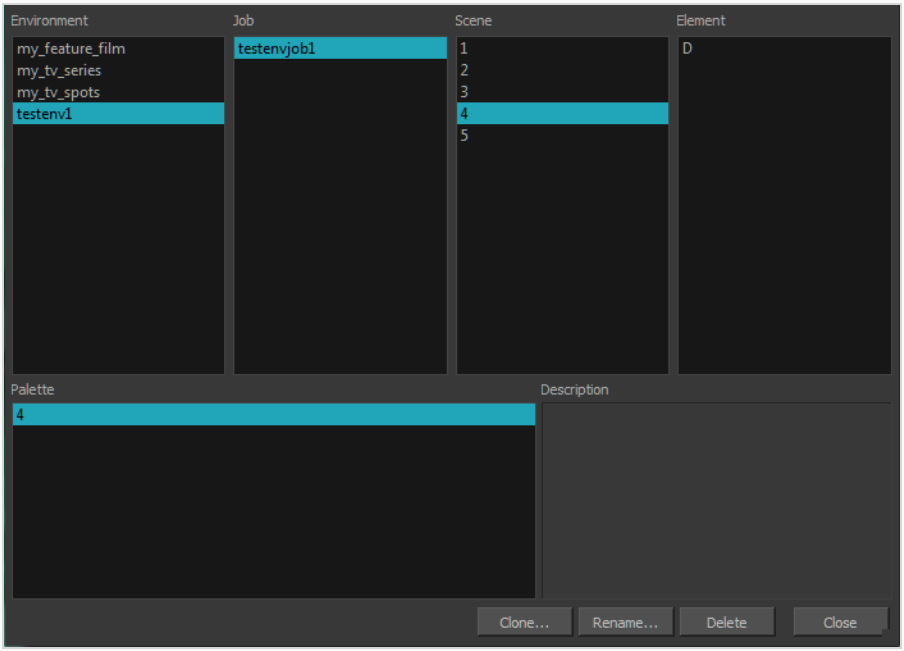
The Palette Operations dialog box opens.

Cloning a Palette in the Palette Operations Dialog Box

From the Palette Operations window, you can clone palettes in Harmony Server.

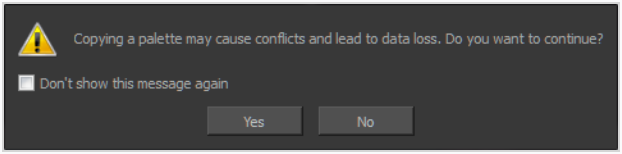
How to clone a palette in the Palette Operations dialog box

1. Select the palette you want to clone at the location and level in which it was stored.



2. Click **Clone**.

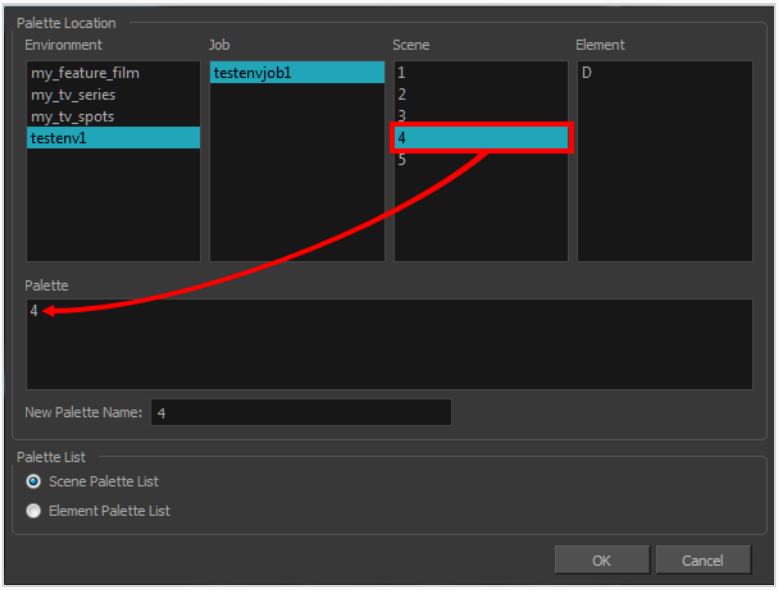
   A Warning dialog box opens.



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.



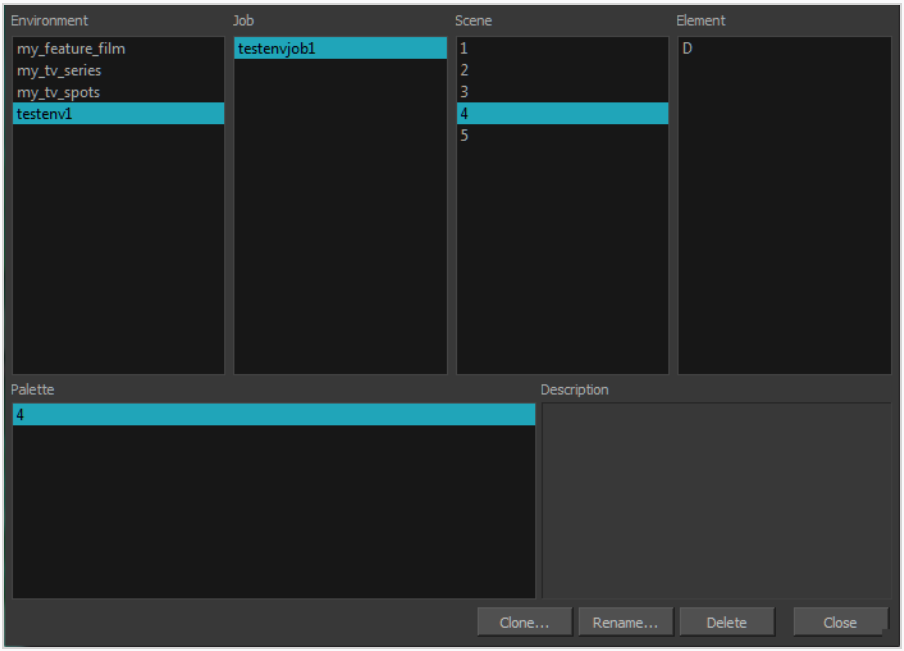
6. In the New Palette Name field, enter the name of your palette.
7. Click **OK**.

Renaming a Palette in the Palette Operations Dialog Box

You can rename palettes in the Palette Operations dialog box in Harmony Server.

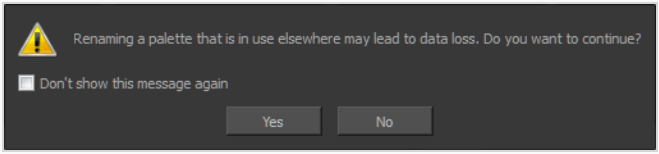
How to rename a palette in the Palette Operation dialog box

1. Select the palette you want to rename at the location and level in which it was stored.



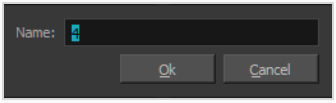
2. Click **Rename**.

   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.

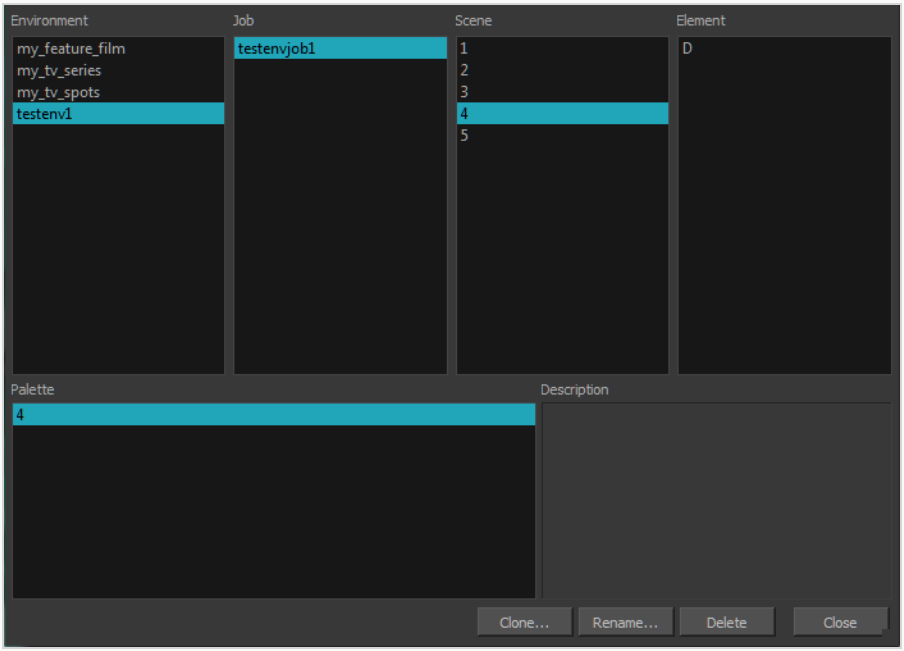
6. Click **OK**.

Deleting a Palette in the Palette Operations Dialog Box

You can delete palette files from the Palette Operations dialog box in Harmony Server.

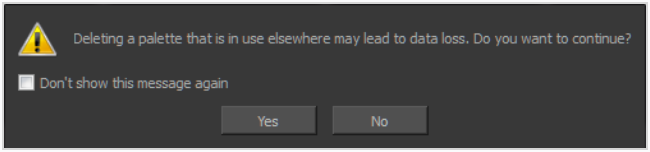
How to delete a palette in the Palette Operation dialog box

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**.

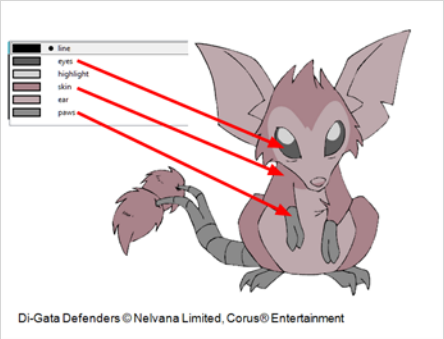
About Painting

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.

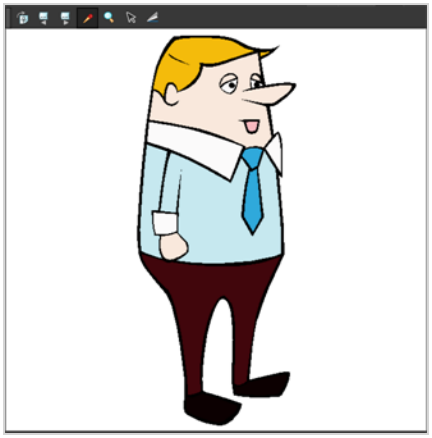
For paperless animation, the drawings are cleaned up directly in Harmony, so there is generally no dirt to clean, only painting and inking.

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 341.



About Colour Models

Once you have a fully painted drawing, you can use it as a colour model and load it in the Reference view. That drawing can be used and loaded in any of your Harmony scenes—see *Painting Drawings* on page 401.



Once a drawing is loaded in the Reference view, you can use the Reference view's Colour Eyedropper tool 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 Reference View and select **Import References**.
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 Reference 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 files 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 Reference View and select **Load Default References**.

Clearing Colour Models

You can remove colour models from the Reference view.

How to clear a colour model

- Right-click in the Reference view, select **Clear Model** or press Del.

Flipping Between Models

T-LAY-002-001

Once your models are loaded in the Reference 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 Reference view and select **Next** or **Previous**.

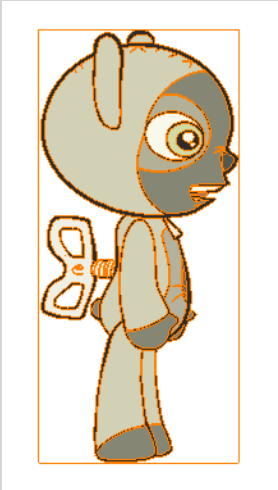
   The previous or next model appears in the Reference view.

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 Reference view, select your model.

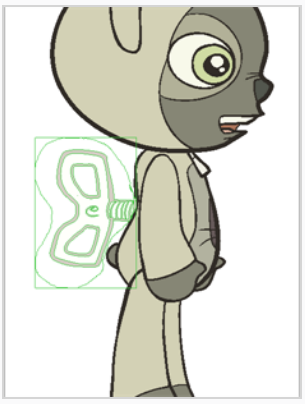


3. Press Ctrl + C (Windows/Linux) or ⌘ + C (macOS).
4. Select the Drawing view, then go to the top menu and select **Edit > Paste Drawing Object** or press Ctrl + V (Windows/Linux) or ⌘ + V (macOS).

   The model appears in the selected view.

How to copy part of the model from the Reference view

1. Right-click in the Reference view and select Cutter Selection or press Alt + T.
2. In the Reference view, use the Cutter tool to create a selection around the part of your model that you want to copy.



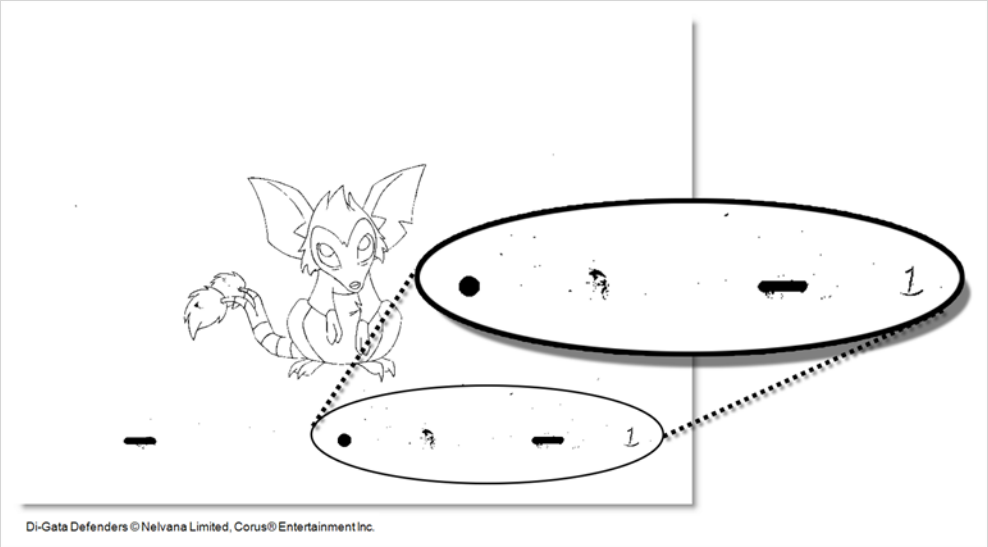
3. PressCtrl + C (Windows/Linux) or ⌘ + C (macOS).
4. In the Timeline view, make sure you have the correct layer and frame selected.
5. Do one of the following:
    - Select the Drawing view and select **Edit > Paste Drawing Object**.

    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.



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

T-INK-002-002

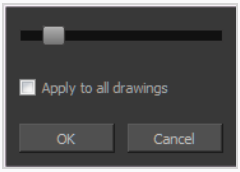
The Remove Dirt tool selects small dots and hairs on the drawing.

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.

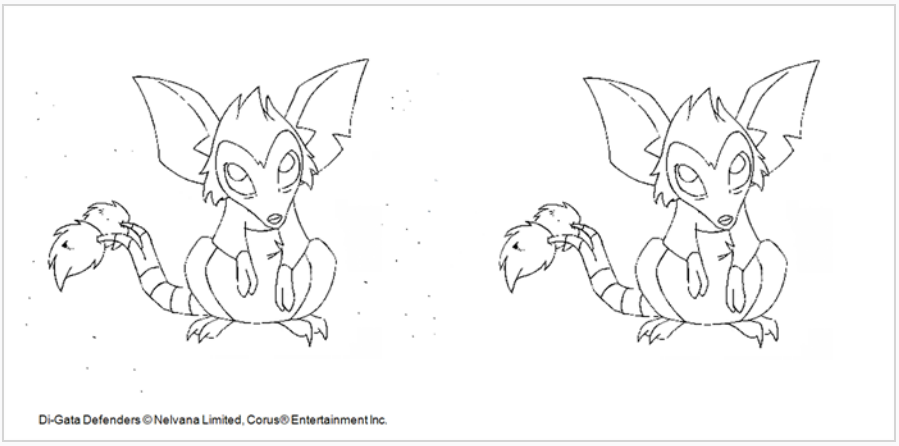
During this process, the dirt that will be removed is highlighted in red.

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.



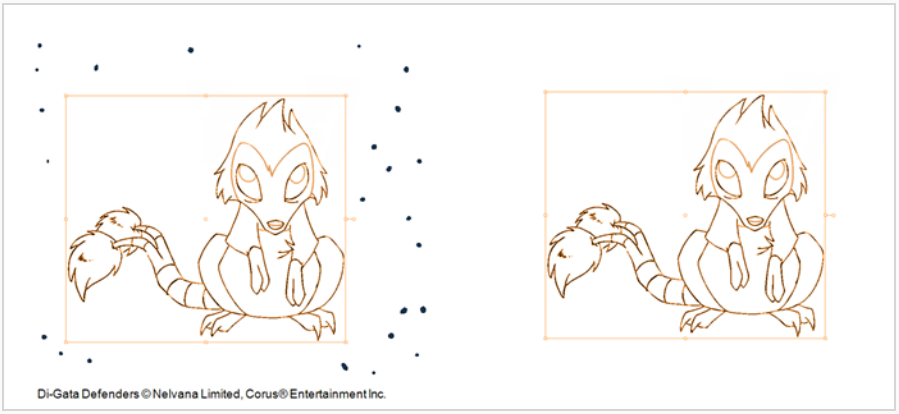
Removing Dirt Outside the Selection

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.



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

T-INK-002-004

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

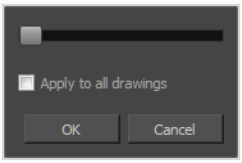
T-INK-002-005

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.

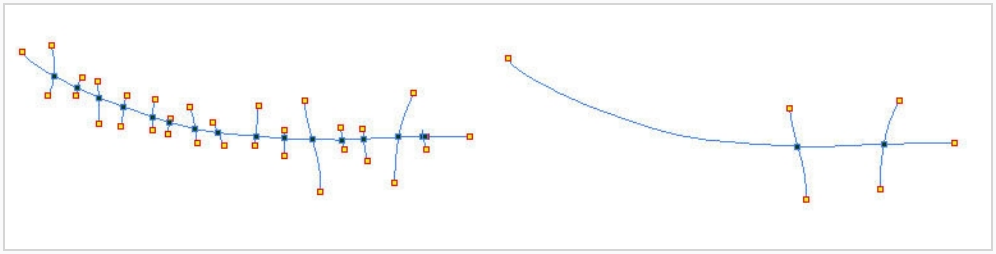
How to use the Remove Hair tool

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

T-HFND-004-011

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

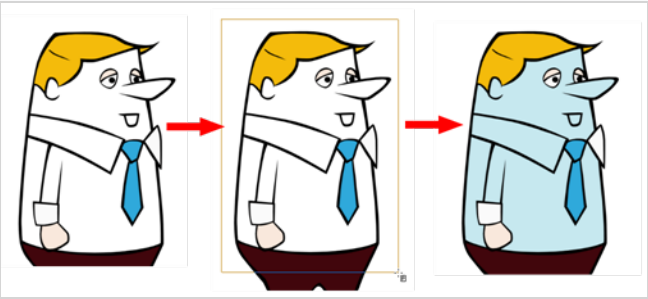
To learn more about the Paint tool options, see the Reference guide .

How to paint drawings

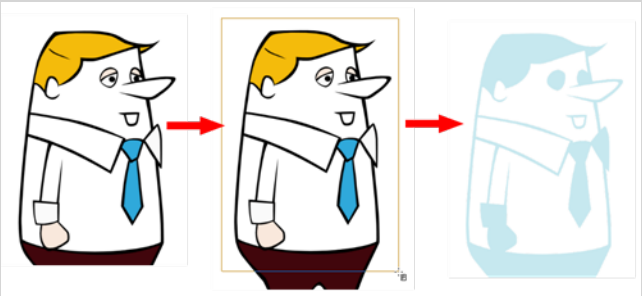
1. Select the drawing on which you want to paint.
2. Do one of the following:
   - In the Tools toolbar, click the Paint tool.
   - From the top menu, select **Tools > Paint** or press Alt + I..
   - Press Alt + I.

   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.

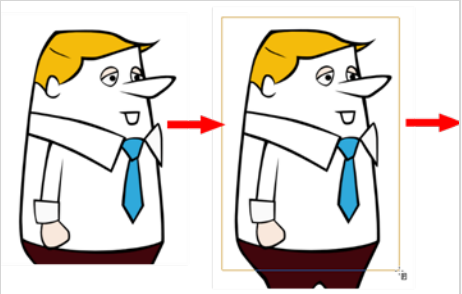
   - The Paint Unpainted mode paints only empty zones. Any line or filled zone will remain unchanged.



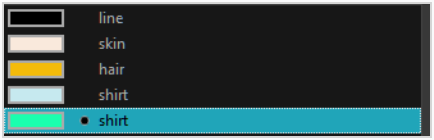
- The Repaint mode paints everything it touches except empty zones. Any zone that is not painted will remain intact.



- 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 select the Paint tool if you're using the unlocked painting tools in the Colour view.

Authors

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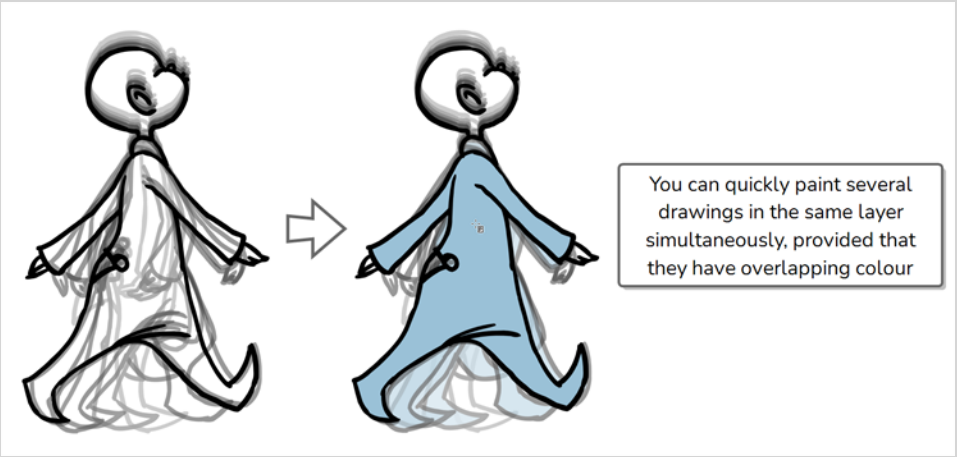
Painting Several Drawings Simultaneously

You can use the Paint tool on several drawings in the same layer at the same time. When you set up the Paint tool to work on several drawings, if you click on a colour zone in the current drawing to fill it, it will fill any colour zone located where you clicked in other drawings as well. This can be useful if you have several drawings with colour zones that mostly overlap each other, such as in a typical walk cycle, or in any animation where the character mostly stays in place:



There are two approaches to painting several drawings at the same time. Both are options available in the Tool Properties view:

- **Apply to All Frames:** When you click on a colour zone in the Drawing view, it will fill the area you clicked on in every exposed drawing in the current layer.
- **Apply to Onion Skin Range:** When you click on a colour zone in the Drawing view, it will fill the area you clicked on in every drawing that is displayed in the Onion Skin. This method allows you to only fill a specific range of drawings, and allows you to see those drawings in the Drawing view as you fill them.

How to paint a specific range of drawings simultaneously

1. In the thumbnails list, select a drawing somewhere in the middle of the range that you want to paint.
2. In the Tools toolbar, click on the Onion Skin button to enable Onion Skin.
3. Using the Options in the **View > Onion Skin** menu, adjust the amount of previous and next drawings displayed in the Onion Skin until all the drawings you want to pain simultaneously are displayed.

   The drawings included in the Onion Skin range will appear in red and green in the Drawing view.
4. In the Tools toolbar, select the Paint tool.

5. In the Tool Properties view, click and hold on the Apply to All Frames button and, in the pop-up menu, select **Apply to Onion Skin Range**.

> **NOTE**
>
> If this button is already set to Apply to Onion Skin Range, simply click on it to toggle it on.

6. In the Drawing view, click in an area where the colour zones for all the drawings in the Onion Skin overlap each other to fill them all simultaneously.

How to paint all exposed drawings in a layer simultaneously

1. In the thumbnails list, select any drawing.
2. In the Tools toolbar, select the Paint tool.
3. In the Tool Properties view, click on the Apply to All Frames button to enable the Apply to All Frames mode.

> **NOTE**
>
> If this button is currently set to Apply to Onion Skin Range mode, click and hold on the button to open its pop-up menu and select **Apply to All Frames**.

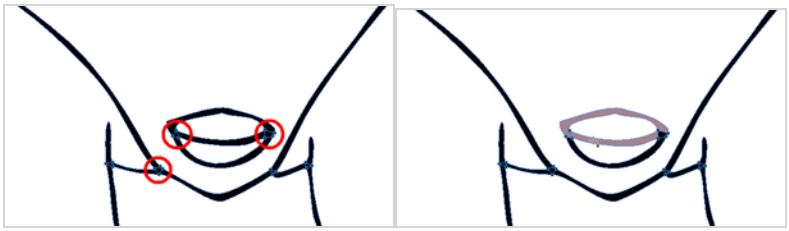
4. In the Drawing view, click in an area where the colour zones for most or all of your drawings overlap each other to fill them all simultaneously.

Repainting

T-ANIMPA-011-004

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 415. 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

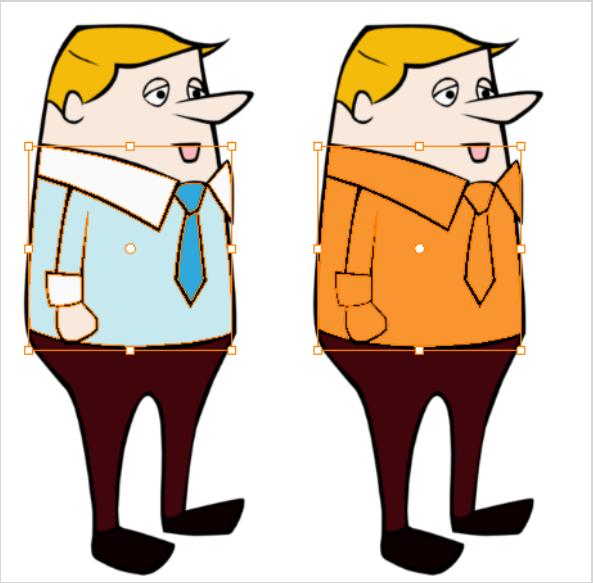
1. In the Tools toolbar, select the Repaint tool. You can also find the option in the Tool Properties view when the Paint tool is selected.
2. In the Drawing view, click on the zones to repaint. You can also make a lasso or marquee selection around several zones.

How to enable the Repaint Brush mode

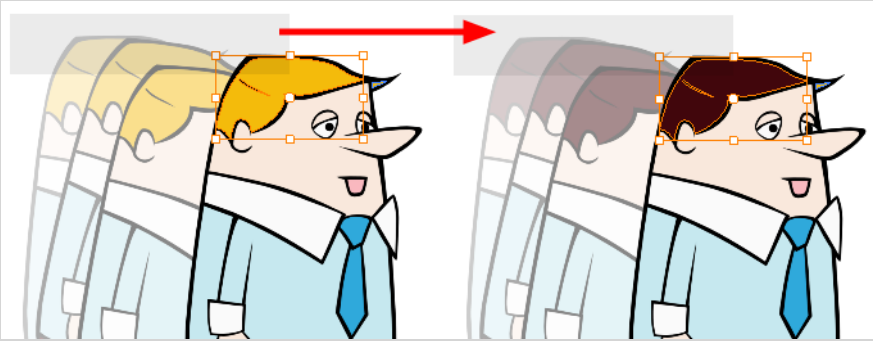
1. In the Tools toolbar, select the Brush tool.
2. In the Tool Properties view, click the Repaint Brush button.
3. In the Drawing view, draw on the zones to repaint.

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

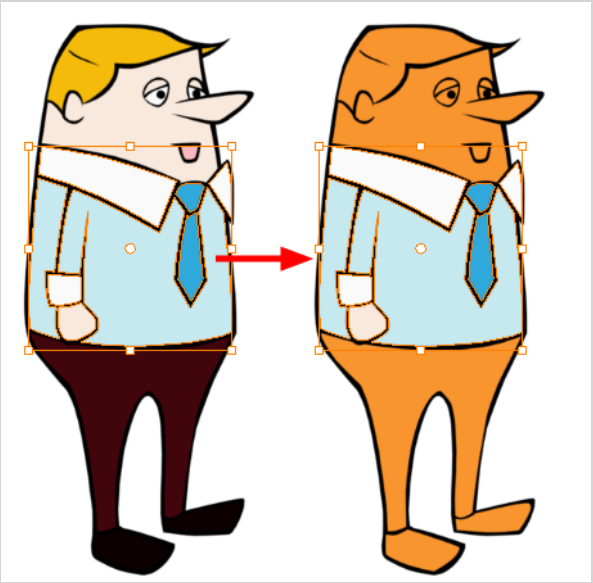
To avoid repainting specific colours, see Protecting Colours

How to repaint a selection

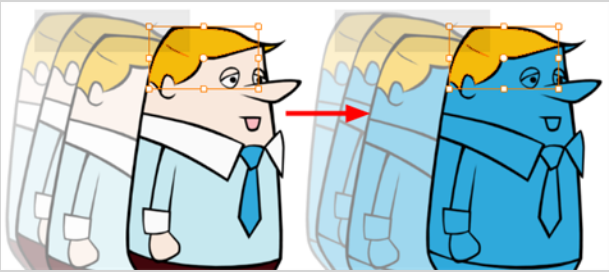
1. In the Tools toolbar, select the Select tool.
2. In the Drawing view, select the zones to repaint.
3. To repaint the selection on all drawings, enable the Permanent Selection option in the Select tool Tool Properties view.
4. Do one of the following:
    - From the top menu, Camera or Drawing view 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

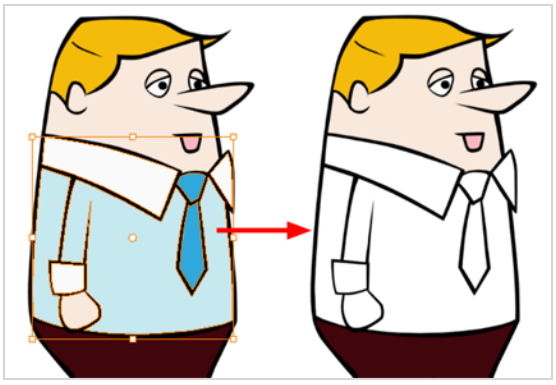
How to repaint outside a selection

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**.

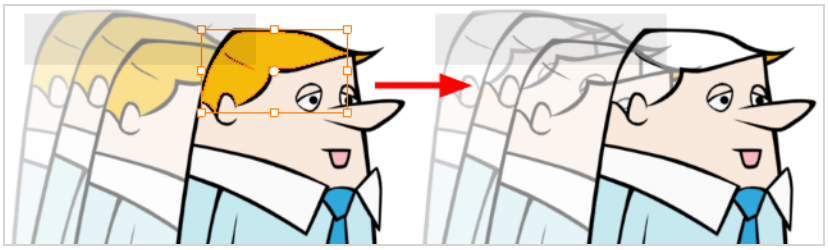
Unpainting a Selection

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.

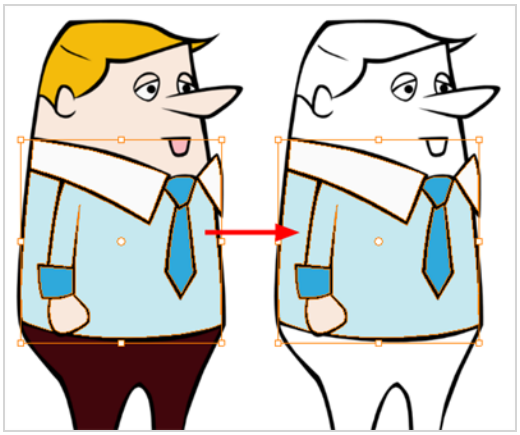


How to unpaint a selection

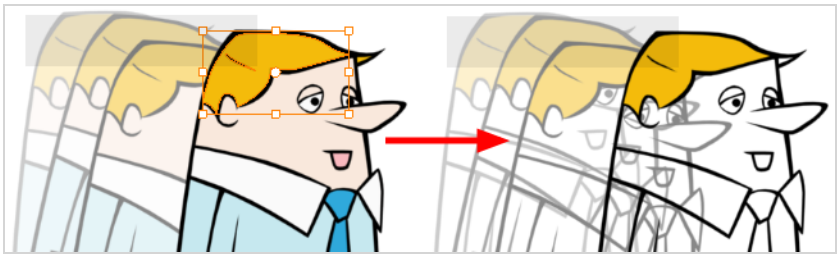
1. In the Tools toolbar, select the Select tool.
2. In the Drawing view, select the zones to unpaint.
3. To unpaint the selection on all drawings, enable the Permanent Selection option in the Select tool Tool Properties view.
4. Do one of the following:
   - From the top menu, Camera or Drawing view 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

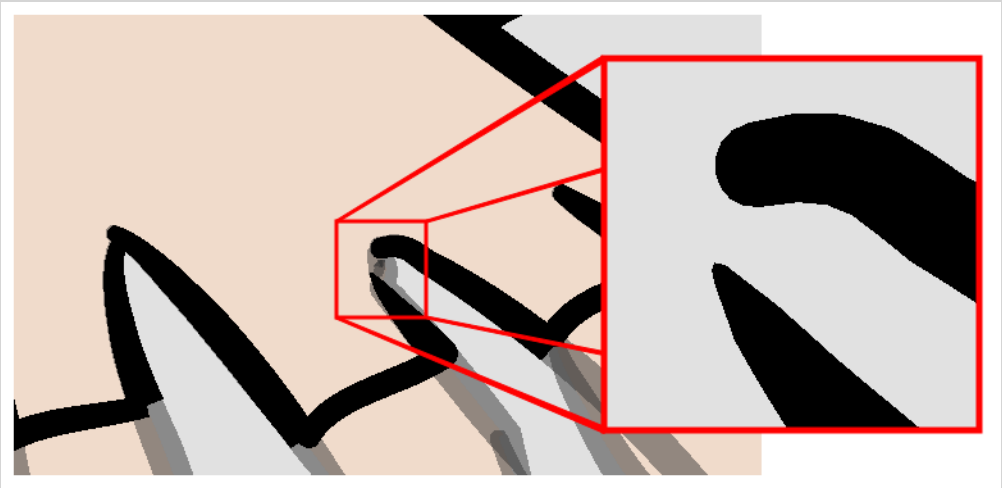
1. In the Tools toolbar, select the Select tool.
2. In the Drawing view, select the zones you don't want to unpaint.
3. To unpaint the selection on all drawings, enable the Permanent Selection option in the Select tool Tool Properties view.
4. Do one of the following:
   - From the top menu, Camera or 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

T-HFND-004-014

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.

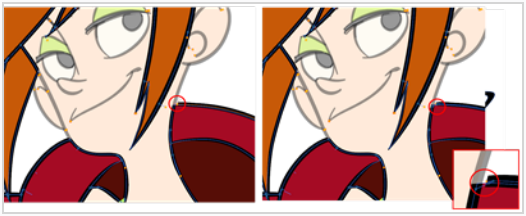
The Close Gap tool allows you to close small gaps in a drawing by creating small, invisible strokes between the two closest points to close the colour zone. You do not need to trace directly over the gap. You can draw it a few millimeters away. The two closest points automatically close the gap.



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.



Picking a Colour with the Colour Eyedropper Tool

T-ANIMPA-011-002

While working in the Drawing view, you can use the Colour Eyedropper tool to pick a colour from your drawing without going to the Colour view.

NOTE

To learn more about the Colour Eyedropper tool options, see the Reference guide .

How to use the Colour Eyedropper tool

1. Do one of the following:
    - In the Tools toolbar, select the Colour Eyedropper tool.
    - From the top menu, select **Tools > Colour Eyedropper**.
    - Press Alt + D.
2. In the Drawing view, click on the desired colour.

TIP

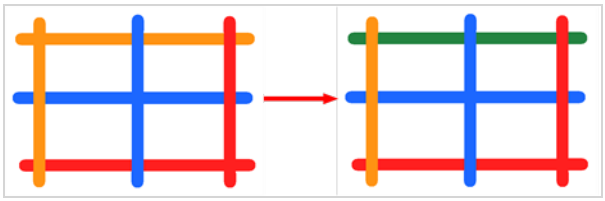
If you're using another drawing tool such as the Paint tool, you can temporarily hold down the D key and click in your drawing before releasing the key to pick a colour. When you release the key, you will return to your previous tool.

Inking Lines

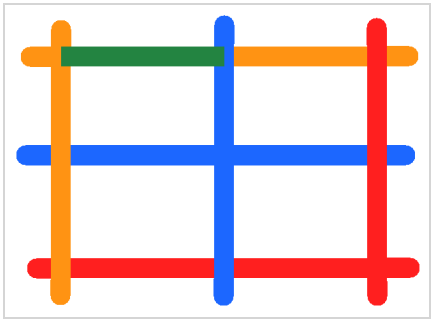
T-HFND-004-012

The Ink tool allows you to paint separate segments of pencil lines.

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.

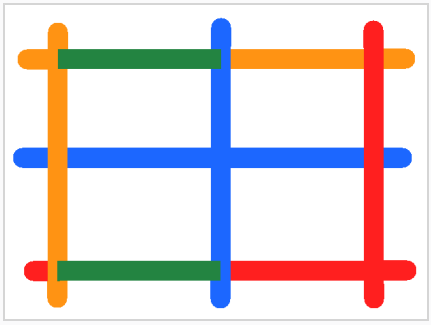
NOTES

- To avoid repainting specific colours
- To learn more about the Ink tool options, refer to the Reference Guide.

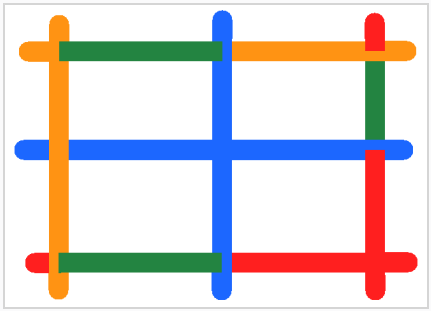
How to use the Ink tool

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.



Verifying Painted Zones

T-ANIMPA-011-008

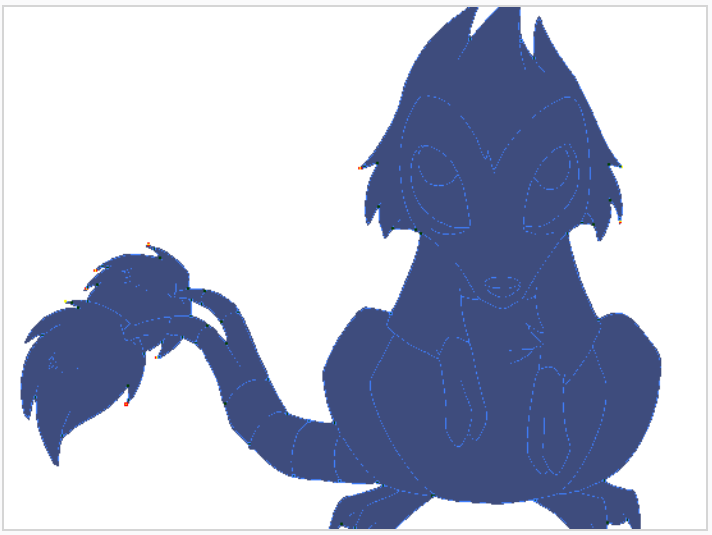
When the ink and paint process is completed, it's always a good idea to verify that every zone was painted properly.

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

T-HFND-006-019

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.

NOTE

For information on the Edit Gradient/Texture tool properties, see the Reference Guide

Using the Edit Gradient and Texture Tool

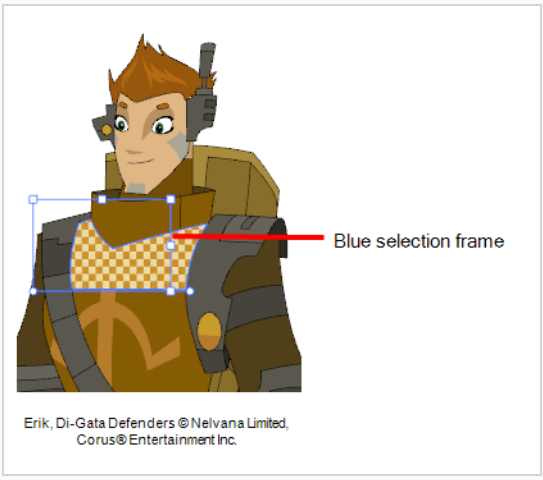
T-HFND-006-019A

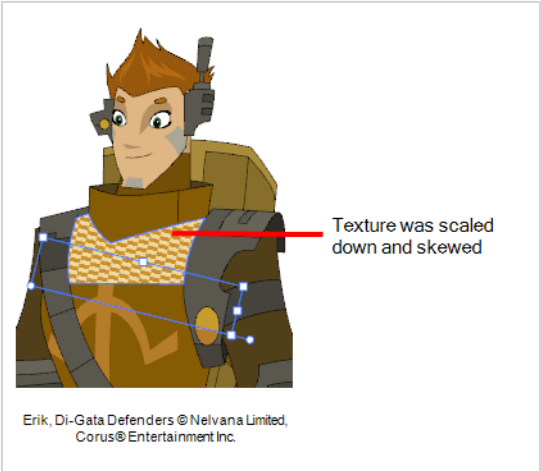
You can use the Edit Gradient/Texture tool to reposition a texture or gradient within a painted zone.

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.

A blue selection frame surrounds the selected gradient or texture.





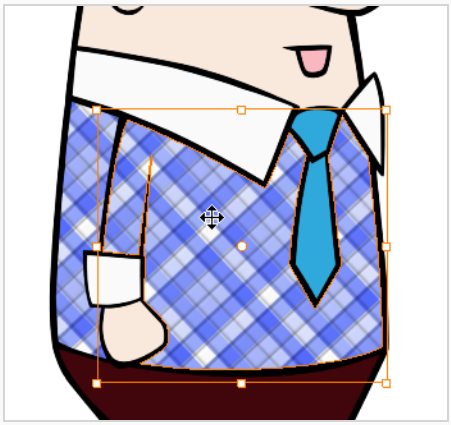
3. Edit the gradient or texture by adjusting the control handles around the selection frame.

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

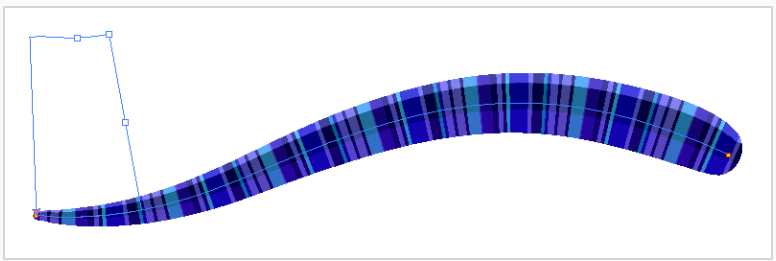
You can use the Edit Gradient/Texture tool to tweak the way a texture or gradient is applied onto a pencil line.

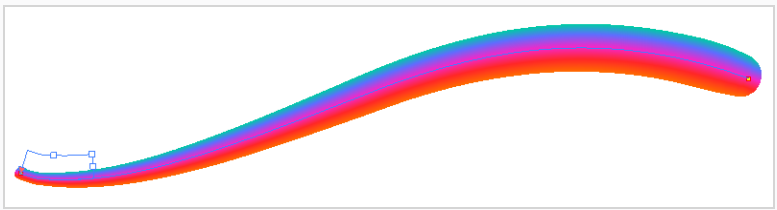
How to use Edit Gradient/Texture tool to edit the texture or gradient on a pencil line

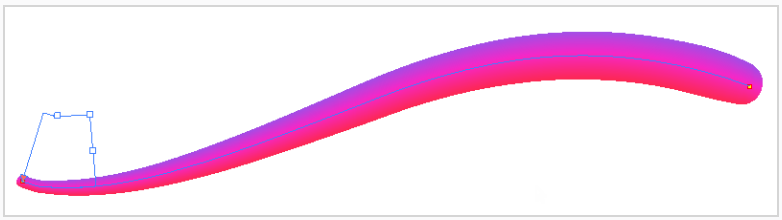
1. Do one of the following:
   - In the Tools toolbar, select the Edit Gradient/Texture tool.
   - From the top menu, select **Tools > Edit Gradient/Texture**.
   - Press Shift + F3.
2. Click on the pencil line to be modified to bring up the editor controls.

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.

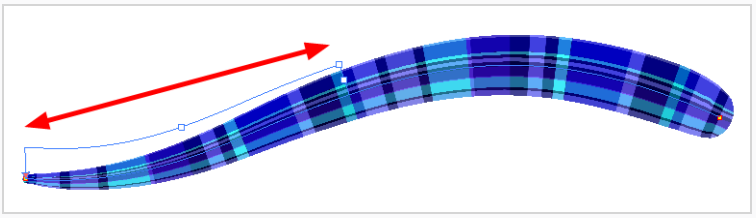
   As gradients are parallel to the stroke's central vector, this will stretch the way that the gradient is distributed in the pencil line's envelope. The envelope still acts as a boundary for the texture or gradient.





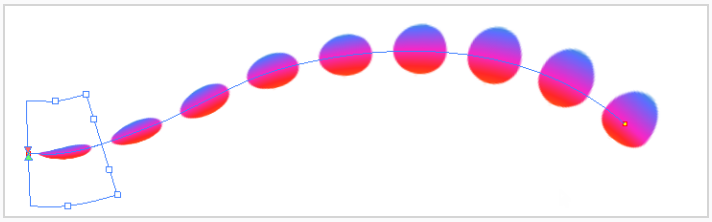


4. Drag the editor control perpendicular to the stroke. You will feel it glide along the strokes central vector line. This is another way to resize the texture tile. Instead of stretching or shrinking it vertically, this motion stretches or shrinks it vertically. As gradients are parallel to the pencil line's central vector, stretching them vertically gives no visual result.

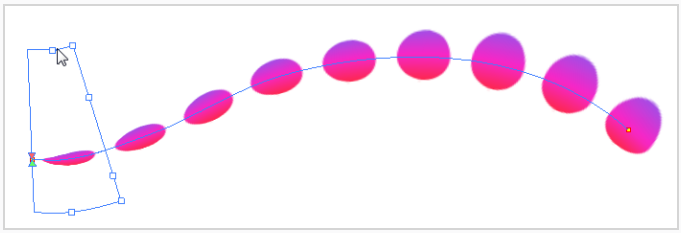


How to use Edit Gradient/Texture tool to edit a pencil line with both a texture and a gradient

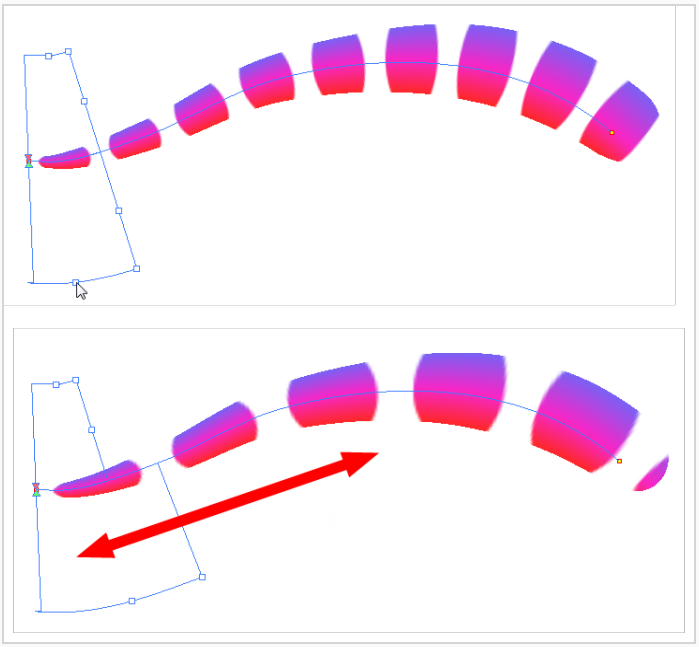
1. Do one of the following:
   - In the Tools toolbar, select the Edit Gradient/Texture tool.
   - From the top menu, select **Tools > Edit Gradient/Texture**.
   - Press Shift + F3.
2. Click on the pencil line to be modified to bring up the editor controls.



3. Use the top editor controls edit the gradient.



4. Use the bottom controls edit the “brush” texture.



About Colour Space Management

About Colour Spaces

Colour spaces are profiles defining the rules used by a display device, such as a monitor or a projector, to convert numerical colour values into colours.

In computing, as a general rule, colours are defined by three numerical values: one for red, one for green and one for blue, which are the primaries used for additive colour mixing. Each of these values vary between 0 and 255. Those primary values result in actual red, green and blue light, at an intensity proportional to said value. By mixing different primary colours, different hues such as cyan, yellow and magenta can be obtained, and mixing all three primaries results in white.

Where colour spaces come into play is how each primary value is used to determine the intensity of their respective colour signal. For example, let's say you have a blue value of 127, which is halfway between 0 and 255. The resulting blue light will not be exactly halfway between black and the lightest possible blue light the display can generate, because monitors don't convert colour values to colour signals on a linear scale, but rather, on a curvilinear scale that is a lot like an exponential function. This is because the human eye can perceive differences between lower light intensities better than between higher light intensities. Hence, to get the most nuances out of the 255 possible values of a primary, the differences between lower values must be smaller than the differences between higher values. The point is that, to the human eye, incrementing a colour value by 1 results in the same perceived intensity difference regardless of the colour value.

The curvilinear function used to convert colour values to colour intensities is referred to as the gamma conversion curve, and each colour space has its own gamma conversion curve. The most commonly used colour space in computing, sRGB, has a gamma conversion curve that is designed to reproduce that of CRT displays. However, the most commonly used colour space in HD television, Rec. 709, has a gamma conversion curve that is considered better than that of sRGB.

Another aspect of colour spaces is the range of colours they can display. Commonly used colour spaces such as sRGB, Rec. 709 and Display P3 can display the same limited subset of the colours that can be perceived by the human eye. This subset is especially limited in the range of greens it can display. In contrast, the colour space Rec. 2020 is known for supporting a much wider range of colours, especially in terms of greens, than those colour spaces. Rec. 2020 is hence preferred for high end productions, but displays that support Rec. 2020 are currently very expensive, and hence producing in Rec. 2020 comes at a cost in hardware compatibility.

Because of this, productions typically use a specific colour space that is different than that of the standard sRGB. This also incurs common production problems such as:

- Materials such as character models and backgrounds may have been created in a specific colour space that is different than the one intended for production.
- Project collaborators may be using displays that do not use the colour space intended for the project's delivery.
- Compositing artists may also prefer using a specific colour space for compositing, as special effects may wield different results with a colour space that uses linear values than with a colour space that uses a curvilinear gamma curve.

Colour Spaces in Harmony

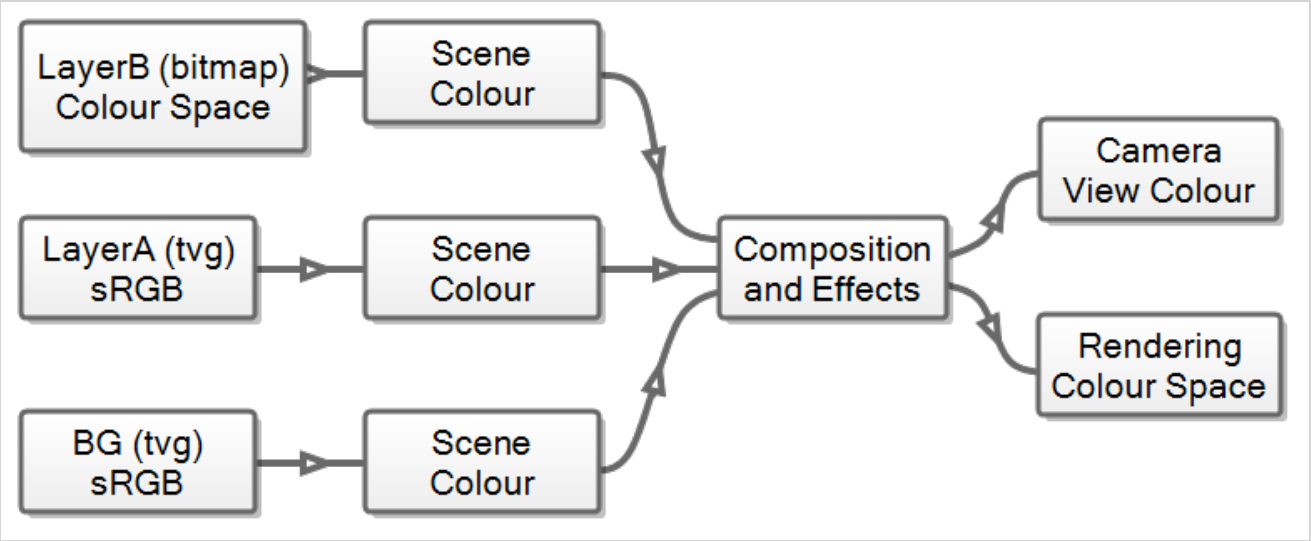
To ensure the integrity of colours across your production, Harmony uses sRGB colour space for Toon Boom drawings—see *Setting the Working Colour Space for a Scene* on page 433. It allows you to specify the colour space of your inputs (bitmap images), of your outputs (rendered frames, movies) as well as the colour space used internally for compositing your scene. More specifically, you can specify different colour spaces for:

- Each imported bitmap image
- The scene
- The preview image in the Camera view
- The rendered images and movies

The way it works, when rendering a frame in your scene, is as follows:

1. Harmony converts the colours of each drawing layer from sRGB colour space to the scene's working colour space.
2. Harmony converts the colours in each bitmap image from their respective colour space to the scene's working colour space.
3. All visual elements and effects in your scene are composited together into a single image, all in your scene's working colour space.
4. The image is converted to the colour space selected for the Camera view or for rendering, depending on whether the frame is a preview image or a final frame.

The following graph illustrates this process:



NOTE

If “Read Toon Boom Drawings Using sRGB Colour Space” option is disabled—see *Setting the Working Colour Space for a Scene* on page 433, in the Camera view the colour spaces of drawing layers are used in the Render View mode when converting their respective colour space to the scene’s working colour space. In OpenGL View mode, the colour spaces of drawing layers are ignored, and the colours of bitmap images are converted directly from their respective colour space to the preview colour space, skipping the scene’s colour space.

Hence, in order to properly manage the colours in your production, you must make sure that:

- The colour space of each bitmap image layer is set to the colour space, used in the imported images—see *Setting the Colour Space of an Element Layer* on page 431.
- The colour space for your scene is the optimal colour space chosen for composition—see *Setting the Working Colour Space for a Scene* on page 433.
- The colour space for your Camera view is set to the colour space supported by your monitor and, preferably, the one intended for delivery—see *Setting the Display Colour Space* on page 435.
- The colour space used when rendering frames or when exporting a movie is the one intended for delivery or for post-production—see *Setting the Colour Space for Rendered Movies and Frames* on page 437.

By default, Harmony supports the following colour spaces:

- **Linear Rec.709 (sRGB):** The same primaries and white point as sRGB and Rec. 709, but with no gamma transfer curve applied to the colour values. This colour space is useful for compositing intermediary images that are meant to be rendered in sRGB or Rec. 709.
- **Linear Rec. 2020:** A colour space used for Ultra High Definition TV (UHDTV). It has a complex gamma transfer curve and primaries that cover more of the human-perceivable colour space than other colour spaces, especially in the area of human-perceivable greens.
- **Linear P3-D65:** The same as Display P3, except with no gamma transfer curve. This colour space is useful for compositing intermediary images that are meant to be rendered in Display P3.
- **Display P3:** A colour space commonly used for digital projection. It has the same primaries as DCI-P3, the same white point as sRGB and the same gamma transfer curve as sRGB.
- **Rec. 709:** .The colour space used for HDTV. It has the same primaries and white point as sRGB, but has a different gamma transfer curve.
- **Rec. 709 2.4:** The same colour space as Rec. 709 or sRGB, except with a gamma transfer curve of 2.4 (per ITU-R BT.1886). This colour space exists because some editing systems use a gamma transfer curve of 2.4 instead of the standard gamma curve for Rec. 709.

- **Rec. 2020:** A colour space used for Ultra High Definition TV (UHDTV). It has a complex gamma transfer curve and primaries that cover more of the human-perceivable colour space than other colour spaces, especially in the area of human-perceivable greens.
- **Rec. 2020 2.4:** The same colour space as Rec. 2020, except with a simple gamma transfer curve of 2.4 (per ITU-R BT.1886). This colour space exists because some editing systems use a gamma transfer curve of 2.4 instead of the standard gamma curve for Rec. 2020.
- **sRGB:** A colour space typically used for standard computer monitors. It has the same primaries and white point as Rec. 709, but has a different gamma transfer curve.

Those colour spaces are defined using the OpenColourIO specification, which is a text based-technology for defining colour spaces and how to convert between them. Hence, it is possible to configure Harmony to support different colour spaces as needed. Furthermore, if other software in your pipeline use a specific OpenColourIO configuration file to define its colour spaces, Harmony is able to use that file as well for its colour space definitions. For more information, see *Customizing Available Colour Spaces* on page 439.

NOTE

Any scene created in Harmony 17 or earlier has colour space management disabled by default. To enable colour space management on a scene created in older versions of Harmony, see *Setting the Working Colour Space for a Scene* on page 433.

NOTE

Any scene created in Harmony 20 has “Read Toon Boom Drawings Using sRGB Colour Space” option disabled, see *Setting the Working Colour Space for a Scene* on page 433.

Setting the Colour Space of an Element Layer

You can set the colour space of each bitmap image layer in your scene individually. For Toon Boom vector and bitmap drawings by default, Harmony uses sRGB colour space.

When rendering your scene, the colours of each bitmap image layer will be converted from their respective colour space to the scene's colour space before they are composited together with your scene's effects. The colours of the bitmap drawing layers and vector drawing layers will be converted from sRGB colour space to the scene's colour space, ignoring the colour space selection of the drawing layers.

NOTE

In OpenGL View mode, bitmap images are converted from their colour space to the colour space selected in the Display Colour Space preference in the Camera tab of the Preferences dialog, and the colour space of drawing layers is ignored.

NOTE

If "Read Toon Boom Drawings Using sRGB Colour Space" option is disabled—see *Setting the Working Colour Space for a Scene* on page 433.

- In Render View mode the colours of the original bitmap images, bitmap drawing layers and vector drawing layers are converted from their respective colour space to the scene's colour space before they are composited together.
- In OpenGL View mode bitmap images are converted from their colour space to the colour space selected in the Display Colour Space preference in the Camera tab of the Preferences dialog, and the colour space of drawing layers is ignored.

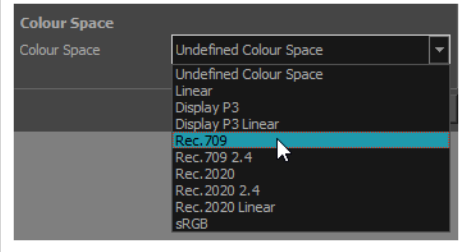
When adding a new element layer, by default sRGB is used as the layer's colour space.

How to set the colour space of an element layer

1. Open the Layer Properties for the element layer for which you want to select a colour space by doing one of the following:
   - In the Timeline view, double-click on the element layer but outside of its name (such as on the icon).
   - In the Timeline view, right-click on the element layer and select **Layer Properties**.
   - In the Node View, locate the element node and click on its Layer Properties icon.
   - In the Node View, right-click on the element layer and select **Layer Properties**.

- Add the **Layer Properties** view to your workspace, then select the element layer in the Timeline view.
- Add the **Layer Properties** view to your workspace, then select the element layer in the Timeline or Node view.

2. In the element's layer properties, select the **Drawing** tab.
3. At the bottom, in the **Colour Space** drop-down, select the colour space for the element layer.



Setting the Working Colour Space for a Scene

You can select the working colour space for your scene in the scene settings dialog.

The working colour space is the colour space to which each layer in your scene is converted before all elements in your scene are composited together along with your scene's effects. Then, the image is converted from your scene's working colour space to the intended colour space for rendering. Hence, the scene's working colour space is the intermediary colour space in which the compositing is done internally.

TIP

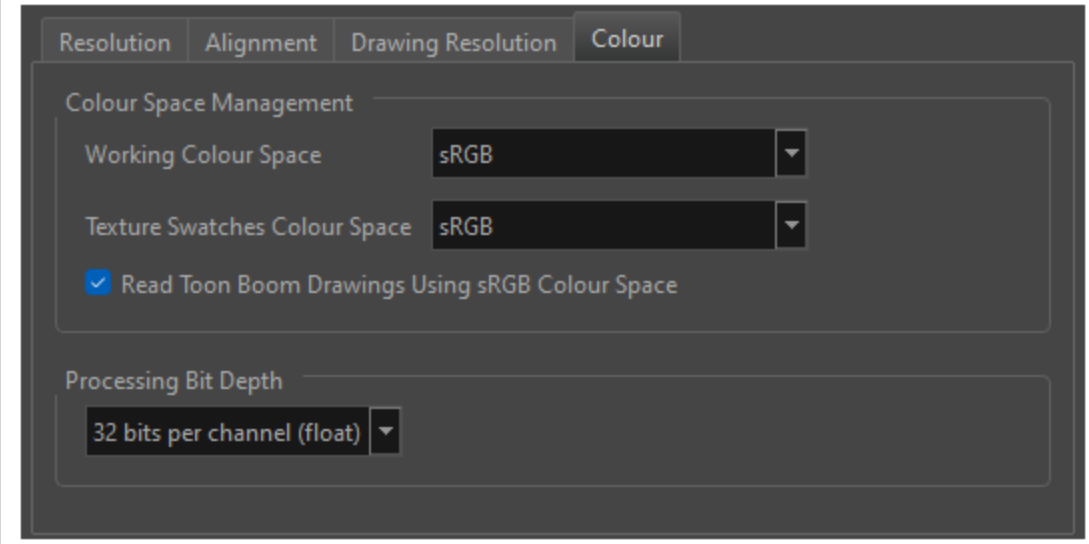
For optimal compositing, it is recommended to set your scene's working colour space to the linear version of the colour space used by your production. That way, the calculations done for the visual effects in your scene are not affected by the gamma curve of your production's colour space.

How to set the working colour space for a scene

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

   The Scene Settings dialog appears.

2. Select the **Colour** tab.



3. In the **Working Colour Space** list, select the desired working colour space for your scene.
4. Click **OK**.

NOTE

Any scene created in Harmony 20 has “Read Toon Boom Drawings Using sRGB Colour Space” option disabled. In this case the colour space information of each drawing layer will be used when converting to the scene’s working colour space in the Camera view > Render View mode, but ignored in OpenGL View mode—see *Setting the Colour Space of an Element Layer* on page 431. Moreover, display colour space in OpenGL View mode is limited—see *Setting the Display Colour Space* on page 435

Setting the Display Colour Space

You can set the colour space in which to display the preview image in the Camera view.

The generation of the preview image works exactly the same as when you're rendering your scene. You can select the colour space in which to display the preview image using the drop-down menu at the bottom of the Camera view. Furthermore, if you have several monitors and want to preview your scene in the respective colour space of each monitor, you can do so by adding several Camera views to your workspace, moving each Camera view to its own monitor and setting the colour space of each Camera view to its monitor's colour space. The different Camera views will display in their own colour space.

If "Read Toon Boom Drawings Using sRGB Colour Space" option is disabled—see *Setting the Working Colour Space for a Scene* on page 433.

In OpenGL View mode, colour management is much more limited, in the following ways:

- The colour space used for the preview image cannot be selected individually for each Camera view. Hence, instead of using the drop-down at the bottom of the Camera view, it is selected in the Display Colour Space preference in the Camera tab of the Preferences dialog.
- The colours in the bitmap images in your scene are converted directly from their own colour space to the preview colour space, without getting converted to your scene's working colour space first, and the colours in the drawing layers in your scene are not processed at all. Hence, in OpenGL View mode, the colours in the preview image are not faithful to those of the final rendered image.

How to set the display colour space for the Render View mode of the Camera view

1. At the bottom of the Camera view, select Render View.
2. In the drop-down right of the Render View button, select the colour space in which you want the render preview to be.

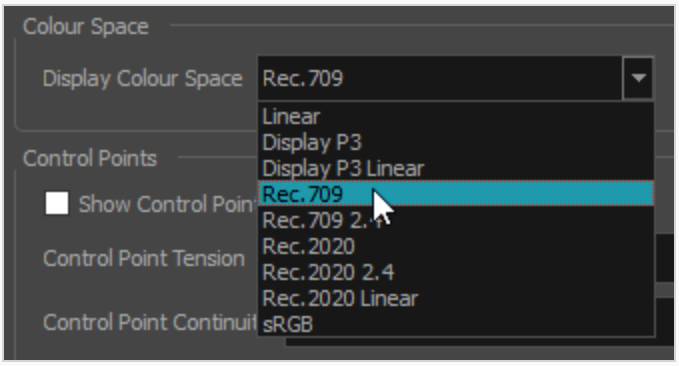
How to have an extra camera view displaying on a different monitor and a different colour space

1. In the top menu, select **Windows > Camera**.

   A floating Camera view appears over the Harmony user interface.
2. Drag the floating Camera view to the monitor where you want it to display.
3. At the bottom of the Camera view, select Render View.
4. In the drop-down right of the Render View button, select the colour space in which you want the render preview to be.

How to set the display colour space for the OpenGL View mode of the Camera view when “Read Toon Boom Drawings Using sRGB Colour Space” option is disabled

1. Do one of the following to open the Preferences dialog:
    - **Windows or GNU/Linux:**
        - In the top menu, select **Edit > Preferences**.
        - Press Ctrl + U.
    - **macOS:**
        - In the top menu, select **Harmony [Edition] > Preferences**.
        - Press ⌘ + U.
2. Select the **Camera** tab.
3. In the **Colour Space** section, open the **Display Colour Space** drop-down and select the colour space in which you want the OpenGL preview to be.



4. Click **OK**.

Setting the Colour Space for Rendered Movies and Frames

You can select the colour space in which to render your scene in the Export Images and Export Movie dialog.

When rendering a scene, the individual layers are converted from their respective colour space to the scene's working colour space, then they are composited together along with your scene's visual effects, and the resulting image is converted to the rendering colour space.

About Tagging Exported Files

Some but not all files exported from Harmony can be tagged with their colour space. Tagging is when the information for an image or movie file's colour space is embedded in the file itself, which allows some software to automatically load its colour space information instead of requiring you to provide it manually.

Tagging images and movies with their colour space is not necessary, especially if you intend to load the files in a video editing or compositing software that allows you to specify their colour space manually, but it can be convenient if your post-production software supports reading the colour space information of your source files.

Movies exported from Harmony are only tagged with their colour space information when exported in formats below:

- QuickTime ProRes Movie (*.mov): When rendering a movie in QuickTime Prores Movie (*mov) format, the movie colour space 'nclc' tag will be only set as:
    - HD (1-1-1) if using "Rec. 709" colour space
    - BT.2020 (9-1-9) if using "Rec. 2020" colour space
    - P3 D65 (12-1-1) if using "Display P3" colour space
- QuickTime Movie (*.mov) on macOS. The movie in this format will not be tagged with their colour space information if exported on Windows or GNU/Linux. When rendering a movie in QuickTime Movie (*.mov) format on macOS in a specific colour space, the movie buffer data will be tagged with the corresponding ICC colour profile.

As for exported images, colour space tagging is supported in the following formats:

- Portable Network Graphic (.png)
- Photoshop Document (.psd)
- OpenEXR (.exr)

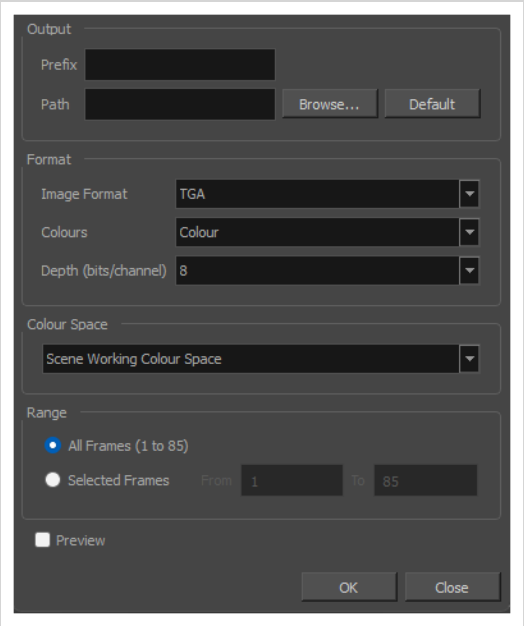
NOTE

OpenEXR files are only tagged with the coordinates for their white point and primaries.

How to set the colour space when exporting your scene as images

1. In the top menu, select **File > Export > Images**.

   The Export Images dialog box appears.



2. In the **Colour Space** field, select the colour space in which you want your exported images to be rendered.

How to set the colour space when exporting your scene as a movie

1. In the top menu, select **File > Export > Movie**.
2. In the **Colour Space** field, select the colour space in which you want your movie to be rendered.

Customizing Available Colour Spaces

By default, Harmony supports a handful of commonly used colour spaces. If your production uses a colour space that is not supported by Harmony out of the box, it is possible to customize the colour spaces supported by Harmony to suit your production's needs.

The colour spaces supported by Harmony are stored in files in the following location:

- **Windows**: C:\Program Files (x86)\Toon Boom Animation\Toon Boom Harmony 24 [Edition]\etc\colourmanagement
- **macOS**: /Applications/Toon Boom Harmony 24 [Edition]/Harmony [Edition].app/Contents/tba/etc/colourmanagement
- **GNU/Linux**: /usr/local/ToonBoomAnimation/harmony[Edition]_24/etc/colourmanagement

In this directory, you will find the following contents:

Name	Type	Purpose
config.ocio	OpenColorIO configuration file	The configuration file that contains the colour profile definitions used by Harmony.
chromaticities.xml	XML File	An XML file containing the primaries and white point for the linear colour space when used in EXR outputs.
icc	Directory	A directory containing ICC profiles matching the colour spaces defined in config.ocio.

Just like many other software that support colour space management, Harmony uses the OpenColorIO colour management technology to define its supported colour spaces. If the other software used by your production also uses OpenColorIO, this means you can easily use the OpenColourIO configuration you use with your other software with Harmony so as to use the same colour space definitions across your production.

You can customize the colour space definitions used by Harmony by setting the OCIO environment variable for your operating system to the full path of your own, custom **`config.ocio`** file. This allows you to use the same **`.ocio`** file for multiple software if needed.

NOTE

Harmony uses sRGB colour space for Toon Boom drawings—see *Setting the Working Colour Space for a Scene* on page 433). If a customized config.ocio file does not contain colour space definition named sRGB, a colour space corresponding to the default view of the default display in config.ocio file is used.

You might notice that, along with the OpenColorIO configuration files, there is a directory containing ICC colour profiles. The ICC colour profiles are only used to tag exported images when supported and movies when using QuickTime Movie (*.mov) format on macOS, and are not required for any other part of the colour management in Harmony.

Hence, if you decide to customize the colour space definitions used by Harmony, you can include the ICC colour profiles for your colour space definitions if you want. If you don't, Harmony will still render your images and movies in the appropriate colour spaces with the appropriate colour values, but will not be able to tag your exported images and movies with their colour space information.

For Harmony to be able to use an ICC colour profile to tag exported images and movies, the following conditions must be met:

- The ICC colour profiles must be located in an **`icc`** sub-directory, in the same directory as **`config.ocio`**.
- The file name of the ICC colour profile must match the name of the colour space as defined in **`config.ocio`**.

For example, if your **`config.ocio`** file contains a colour space definition named **`sRGBf`**, for Harmony to be able to tag exported movies (on macOS) and images with this colour space, then the directory containing your **`config.ocio`** file should also contain a directory named **`icc`**, which would in turn contain a corresponding colour profile for sRGBf named **`sRGBf.icc`**.

NOTES

- When rendering a movie in a specific colour space in QuickTime Movie (*.mov) format on macOS, the movie buffer data will be tagged with the corresponding ICC colour profile.
- When rendering a movie in a specific colour space in QuickTime Prores Movie (*mov) format, the movie colour space 'nclc' tag will be only set as:
  - HD (1-1-1) if using "Rec. 709" colour space
  - BT.2020 (9-1-9) if using "Rec. 2020" colour space
  - P3 D65 (12-1-1) if using "Display P3" colour space
- When rendering frames in a specific colour space, the following file formats will be tagged with their colour space information:
  - Portable Network Graphic (.png)
  - Photoshop Document (.psd)
  - OpenEXR (.exr)

  OpenEXR files are only tagged with the coordinates for their white point and primaries.

About Displays

The Display node is an important node; it is used by the export and views to display your scene, primarily the Camera and Timeline views. By default, a scene's node system always has a Display node which can be used to show your entire scene, a single node or a group of nodes through a Composite or Group node. You might use it to see one single character as you animate it, debug your node system as you create complex effects or export your complete scene or a portion of it.

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

NOTE

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

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