



## Animation

### Create successive animated frames

Example animation steps are as follows:

1. In the **Display** panel, select **Onion skin previous frame** .
2. Draw an item, such as a character in a foreground layer.
3. In the **Timeline** panel, select **Duplicate Frame** .
4. Modify the item as needed. For example:
  - a. Select the item, such as with **Ctrl+A** to select all.
  - b. Move the item by selecting the **Move** tool  and then dragging it.
  - c. Deselect the item by clicking or tapping outside of it.
5. Duplicate additional frames and modify them as needed.

### Insert one or more frames between existing frames

1. If the playhead, which is identified by the vertical red bar on the timeline, is on the frame where you want to perform the insertion, then move the playhead to another location.
2. Select **Alt** and select the frame that's in the time slot where you want to insert one or more frames.
3. Drag the selected frame(s) to the right one or more frames.

### Add soundtrack

1. In the **Timeline** panel, go to **Add Layer**  > **New Sound Layer**.
2. Go to **File > Import > Sound**.

## Artwork

### Rotate selected item

1. Select the **Select** tool .
2. Select the item that you want to rotate.
3. Select the **Move** tool .
4. Inside the selected area, select **Ctrl** and drag horizontally.

### Trace an image in another program's window

1. Go to **Edit > Preferences > General**.
2. Under **Window opacity**, use the **Opacity** slider to reduce the opacity of the Pencil2D window.
3. Drag the Pencil2D window so that the canvas is over the item that you want to trace.

## Colors

### Change color in part of artwork

1. Select a color to use by using the **Color Box**, **Color Inspector**, or **Color Palette** panel.
2. Select the **Paint Bucket** tool .
3. In the **Options** panel, enter a **Color Tolerance** value. Low Color Tolerance values change the color of pixels that are very similar to the one you click or tap and are nearby it. High Color Tolerance values change a larger range of colors.
4. Click or tap on the spot that you want to change to the color you selected in the first step.

## Camera

### Pan or zoom camera

1. In the **Timeline** panel, select the camera layer that you want to pan or zoom.
2. On the numbered timeline header, select the frame in which you want to pan or zoom.
3. If a keyframe is not present in the selected timeline position, then add one by selecting **Add Frame** .
4. Do one of the following, depending on whether you want to pan or zoom:
  - **Pan:**
    - a. Select the **Hand** tool .
    - b. Drag the canvas to change the image inside the camera's view, which is the light-colored area centered on the canvas.
  - **Zoom:** Rotate the mouse wheel while the

pointer is over the canvas, or select **Ctrl+Up Arrow** or **Ctrl+Down Arrow**.

### Change aspect ratio or size of camera view

Note that the larger the camera view, the more computer processing time and memory are needed.

1. In the **Timeline** panel, double-click the name of the camera layer of the one that you want to change.
2. Enter horizontal and vertical values in pixels in the **Camera size** fields.

## Keyboard shortcuts

Below is a subset of the available keyboard shortcuts. To configure these and others, go to **Edit > Preferences > Shortcuts**.

| Function                                   | Shortcut        |
|--|-----------------|
| Add Frame                                  | F7              |
| Duplicate Frame                            | F6              |
| Flip In Between (animation)                | Alt+Z           |
| Flip Rolling (animation)                   | Alt+X           |
| Grid <sup>1</sup>                          | G               |
| Move Frame Backward                        | Ctrl+,          |
| Move Frame Forward                         | Ctrl+.          |
| Next Frame                                 | .               |
| Next Keyframe                              | Alt+.           |
| Onion Skin View/Hide Next <sup>2</sup>     | Alt+O           |
| Onion Skin View/Hide Previous <sup>2</sup> | O               |
| Play Animation                             | Ctrl+Return     |
| Previous Frame                             | ,               |
| Previous Keyframe                          | Alt+,           |
| Remove Frame                               | Shift+F5        |
| Zoom In <sup>3</sup>                       | Ctrl+Up Arrow   |
| Zoom Out <sup>3</sup>                      | Ctrl+Down Arrow |

<sup>1</sup> To change gridline spacing, go to **Edit > Preferences > General**.

<sup>2</sup> To change the number of onion skins displayed, go to **Edit > Preferences > Tools**.

<sup>3</sup> Zooming can also be done by rotating a mouse wheel.

## Additional information

For more information on using Pencil2D, see the following sites:

- [www.pencil2d.org/doc/user-manual.html](http://www.pencil2d.org/doc/user-manual.html)
- [www.pencil2d.org/doc/tutorials.html](http://www.pencil2d.org/doc/tutorials.html)
- [www.pencil2d.org/doc/faq.html](http://www.pencil2d.org/doc/faq.html)