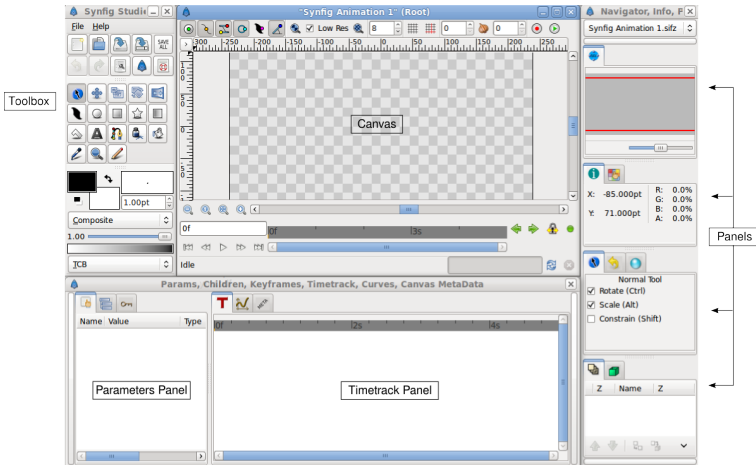


Synfig Studio 0.62.01 User Manual

0.1 Getting Started

0.1.1 Introduction

When you start Synfig Studio, the following windows will be displayed:



The main components of the Synfig Studio interface are:

- **Toolbox** — is the main Synfig Studio window. Closing that window means exiting from application. It contains system menu and buttons, tools and more to create and edit your artwork.
- **Canvas** — this is where your artwork and animations will appear.
- **Panels** — contain tools and information about certain elements of your project. Some panels will even allow you to modify those elements.

Note:

If your Synfig Studio interface layout looks different, fortunately the arrangement shown in the screenshot is pretty easy to recover. In the "File" menu from the Toolbox select "Panels" → "Reset Windows to Original Layout".

The window at the center is called Canvas Window. Each time you start Synfig Studio, a new Canvas Window is opened. This window represents the Root Canvas, not that that means much to you at the moment, but that's OK — We're just trying to show you around. In the upper left corner of the Canvas Window, you'll see a button with a caret. If you click on this caret button, the canvas window menu will pop up. (By the way, if you right-click in the canvas area and there is not a Layer under the mouse position, this menu will also appear.) So now you know where the **most important canvas menu** is, right in the Canvas Window. Good.

The other two windows (one on the bottom, and one to the right) are customizable dock dialogs. Each dock dialog contains a set of panels, arranged horizontally or vertically. Some panels share the same space inside the dock dialog and you can switch between them by clicking on their tabs. You can rearrange the contents of dock dialogs as you wish by dragging the panel tab to where you want it. You can even create a new dock dialog by dragging a tab out of its dock dialog.

If you accidentally close a panel (by dragging it out of the dock dialog, and closing the new dock dialog that gets created), no worries. Simply go to the Toolbox, select "File" → "Panels" in toolbox menu and then click on the name of the panel you need.

The **most important panels** are:

- Layers Panel — This panel shows you the hierarchy of layer of your working canvas. It also allows you to manipulate these layers.
- Params Panel — This panel shows you the parameters of the layer currently selected. When multiple layers are selected, only the parameters that the selected layers have in common are displayed.
- Tool Options Panel — This panel shows you any options specific to the currently selected tool.
- Navigator — This shows a thumbnail image of what the currently selected canvas looks like. You can also zoom in and move the focus around with this panel.
- History Panel — This shows you the history stack for the current composition. You can also edit the actions in history.

There are many panels in Synfig Studio. If you have no idea what a panel does, simply hold your mouse over its icon and a tooltip will pop up describing its function.

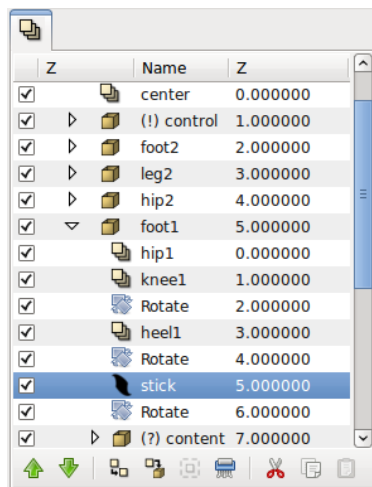
0.1.2 Under the hood

Synfig Studio, like most every other competent graphics program, breaks down individual elements of a canvas into layers. However, it differs from other programs in two major ways:

1. An individual layer in Synfig usually represents a single "Primitive". I.e. a single region, an outline of a region, an imported image, etc... This allows you to have a great deal of flexibility and control. It is not uncommon for a composition to have hundreds of layers (organized into a hierarchy for artist's sanity of course).
2. A layer can not only composite information on top of the image below it, but also distorts and/or modify it in some other way. In this sense, Synfig's Layers act much like filters do in Adobe Photoshop or the GIMP. For example, we have a Blur Layer, Radial Blur Layer, Spherize Layer, Color Correct Layer, Bevel Layer, etc...

Each layer has a set of parameters which determine how it behaves. When you click on a layer (either in the canvas window, or in the illustrated Layers Panel), you will see its parameters in the Params Panel.

Synfig Studio has an **autorecovery** feature. If it crashes, even if the current file has not been saved, it will not lose more than 5 minutes of work. At restart it will automatically prompt the user to recover the unsaved changes. Unfortunately history isn't recovered yet.



0.1.3 First steps

Let's create something fun so that we can play with it!

First, go over to the toolbox and click on the Circle Tool (if you don't know which one it is, just mouse over them until you find the one with the tooltip that says "Circle Tool").

When you click on the circle tool, you should notice that the Tool Options Panel changed. But we'll get to that later.

With the Circle Tool selected, you can now create circles in the Canvas Window. This works as you might expect — click on the canvas, drag to change length of the radius, and release the mouse button when you are done. Go ahead and create two

Development Notes:

You may find that Synfig Studio is SLOW, making it practically unusable on hardware that is over 3 years old even if it behaves acceptably on recent hardware. The biggest reason for this is that all of the color calculations are done in floating point — to enable High-Dynamic-Range Imaging.

HOWEVER, some major re-implementations and optimizations are to be made that should quite dramatically improve the performance of Synfig on all platforms. The goal is not a 200% speed increase, but at least a **2000% speed increase**. Currently there is a work in progress in development branch implementing those optimization via OpenGL. It already shows very promising results, but is not ready for usage yet.

circles (or more, if you fancy). If you accidentally release the mouse button before dragging, you end up creating a circle with 0 radius and it is effectively invisible! No need to worry, you can easily fix this. In the Params Panel, you can change the parameters of the selected object. If you just made a 0 radius circle, it should be the current selected object. You can change its radius to some value other than 0, say 10, and manipulate it to your liking with the canvas ducks later.

Now go back to the toolbox and click on the Transform Tool (the blue circle with the arrow on it). After you do this, click on one of your circles. You will then see a Bounding box (which is kind of useless at this point in time, but I digress), a green dot at the center, and a cyan dot on the radius. Those dots are called *ducks*. If you want to modify the circle, grab a duck and drag it around. Easy!

You can select a Layer by clicking on it. If you want to select more than one layer, hold down `<shortcut>ctrl</shortcut>` key while you are clicking — this works in both the Canvas Window and the Layers Panel. Try it!

You can also select multiple ducks. You can do this in several ways. First, you can hold down `<shortcut>ctrl</shortcut>` and individually click the ducks that you want selected, but this can be tedious. However, there is a much faster method — just create a selection box by clicking the mouse and dragging it over the area of ducks that you want selected.

Go ahead, select two circles and select all of their ducks. With several ducks selected, moving one duck will move all of the ducks. This behavior is dependent on the Transform Tool. Thus, a more descriptive name for this tool might have been the "move" or "translate" tool.

Note:

Some users might experience the following problem: when you click-drag on the canvas using the Circle Tool, either nothing seems to happen or you end up making insanely huge circles. This is a known problem. To fix this go to "File" → "Input Devices" and **disable all the devices** you can find there (such as Macintosh mouse button emulation or USB Optical mouse). If you have an extended input device that you want to use, such as a pressure-sensitive pen, then enable it in this screen. After this change Synfig will work as expected.

The rotate and scale tools work much like the Transform Tool, except in the case where you have multiple ducks selected. It is much easier to just try it than read about it. Select a few circles, select all of their ducks, and try using the rotate and scale tools.

Note that, duck manipulation tools have options associated with them. If a particular tool isn't doing what you want, take a look in the Tool Options Panel to see if it is set up the way you want.

0.1.4 Linking

Now let's try linking. Let's say we always want these two circles to be the same size. Select two circles, and then select both of their radius ducks (the cyan dots).

To select multiple ducks, either drag a rectangle around them, or select the first one, then hold the <shortcut>ctrl</shortcut> key while selecting the rest. Once you have the two radius ducks selected, right click on either duck and a menu will pop up. Click on "Link". Boom. The parameters are linked together. You can prove it to yourself by selecting just one of the circles and changing its radius — the other one will change as well. Neat stuff, eh?

Linking is a fundamental concept in Synfig. You can create links not only between ducks, but also between parameters as well by selecting multiple layers, right clicking on the parameter in the param tab, and selecting "Link".

0.1.5 Color selection

Let's say you want one of the circles to be a different color. If you look in the toolbox below the tools, you'll see the outline/fill color selector, the outline width selector, and some other stuff like the default blend method and gradient. The outline/fill

Digression:

This is how outlines are attached to their regions — but I'm getting ahead of myself. At the moment, the fundamental power and flexibility of linking in Synfig Core is beyond what Synfig Studio currently allows for. This will change in the future. Anyway, back on track...

color widget works exactly as you might expect — you can click on the fill color, and a modest color chooser will appear. Now to can change the color pretty easily.

But sometimes you just want to click on a color and go. This is where the palette editor tab comes in. Its functionality isn't quite 100% yet (ie: saving and loading custom palettes hasn't been implemented yet), but the default palette is pretty decent. Click on the Palette Editor panel tab and have a look — it's the one with the palette-ish looking icon. Clicking on colors with the left mouse button will immediately change the default outline color and clicking with the middle mouse button will change fill color.

That's all great, but we still haven't changed the color of the circle. There are three ways to do this. The first is to select the circle layer you want to modify, go to the Params panel and double-click on the "Color" parameter. A color selector dialog will then show up, and you can just tweak away. But let's say you already selected your color as the default fill or outline color. Then you can right-click on the Color parameter in the Params panel and select "Apply Fill Color" or "Apply Outline Color" at you preference. Finally, you can just click on the "Fill Tool" from the toolbox, and then click on the circle in the canvas window. Boom. Circle changes color. This works with more than just circles, but we'll get to that in a sec.

Try playing around with the circles for a bit. Muck around with the parameters, and see what happens. To get you started, try out to set the Feather Parameter to 5.

0.1.6 Digging deeper

Of course, so far you just found out how to use the basic features of Synfig Studio but not how you animate a drawing. This is covered in the next chapter.