

Moving to github

ctrlr is moving to **github** to make the use of the website more friendly. Please post all issues there. Also a discussion addon is enabled. I'm still working on how to deal with panel uploads.




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Using Layers Tutorial 1.0

[Home](#) › [Forums](#) › [Development](#) › [Other stuff](#) › Using Layers Tutorial 1.0

Tagged: [getCanvas](#), [layers](#)

This topic has 19 replies, 6 voices, and was last updated 3 years, 1 month ago by  dnaldoog.

Viewing 20 posts - 1 through 20 (of 20 total)

Author	Posts
October 11, 2020 at 12:09 pm	#120250
	<h3>How to use layers in a panel.</h3> <p>Layers are very useful for stacking different interfaces and controls independent of each other or for use as a backdrop/background for a layer above it.</p> <p>[1] To create a new layer: MENU (Panel -> Layer Editor -> Edit -> Add Layer)</p>
<p>dnaldoog Participant Topics: 4 Replies: 480 Total: 484 ★★</p>	

[2] Rename the layer by double clicking on the name and optionally set a background colour by right clicking on the default background ARGB **00000000** (*this is black with opacity set to 0*)

[3] To hide a layer or show a layer when the program is run, I prefer to create a lua table of layer names. This table could be global or local to the **change_layer()** function.

```
layers={"A","B","C"}
```

Here I have three layers, each named unhelpfully A,B and C

[4] Create a function:

```
change_layer=function(selected)
for _,v in ipairs(layers) do
panel:getCanvas():getLayerByName(v):setVisible(false)
end -- loop
panel:getCanvas():getLayerByName(selected+1):setVisible
end --function
```

[5] Create a callback function in for example a *uiCombo*:

```
select = function(--[[ CtrlModulator --]] mod, --[[ nu
change_layer(value)
end
```

Notes::


When a selection is made, in this case using *uiCombo*, a function call is made to **change_layer(selection)** function. The selected Index of the *uiCombo* is passed into the function. *uiCombo* Indexes start at 0, but lua tables start at 1 so we have to increment by 1 in the function.


In that function a loop runs through and sets all layers to *not visible*. After the loop is finished, the layer in the 'layers' table in a position corresponding to the selected value is set to *visible*.

The top visible layer is the only layer that is editable. To edit other layers, hide layers sitting above the layer by clicking on the 'eye' icon or temporarily *move down* a layer you want to edit (meaning it is at the top!) **edit -> move down** (*or move up*).

You can create uiSliders and other components in any layer and move them to another layer by right clicking on the modulator: **send to layer**

See attached example panel.

This topic was modified 3 years, 4 months ago by  [dnaldoog](#). Reason: more editing

This topic was modified 2 years, 6 months ago by  [dnaldoog](#). Reason: added increment to variable selected (it is correct in the panel code)

Attachments:

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October 11, 2020 at 7:03 pm

#120262



Tedjuh

Participant

Topics: 9
Replies: 97
Total: 106
★★

Nice work, Dnaldoog. Easy to follow and transparent explanation.

— Rant mode on —

I don't know who maintains the Ctrlr site or who is a moderator at this forum. But isn't it a good idea to make a category for manuals? Because those "manuals" are a very valuable source on how to get things done in Ctrlr. I know a lot of answers can be found on the forum and inside panels but it doesn't make searching for an answer to a particular problem that much easier.

For example: If I had known earlier on that it's good practice to do:
modulatorNamedSomething =
panel:getModulatorByName("modulatorName")
in a init file, and then later call it with
modulatorNamedSomething:getProperty("property")
it would have saved me an amount of time going over all my Lua files again.

Hell, I wish I knew how LookAndFeel works because the Demo file doesn't work for me. How to start with a Custom Component? How do you add children to a parent component? How to make a librarian? So many questions but not easy to find an answer for it.

I would even like to contribute as I did with the manual on how to compile Ctrlr. Goodweather made a manual once but it's somewhere at page 65. Dnaldoog knows his stuff and writes easy to understand manuals as well like above. Let's make life easier. Let's see what open-source is really about.

— Rant Mode Off —

October 12, 2020 at 11:30 am

#120269

Mmmmmm, that's interesting I was solving this particular problem by using **uiGroup** Modulators on top of each other and then just setting them to visible / invisible like this:



spiffo

Participant

Topics: 12

Replies: 38

Total: 50



```
panel:getModulatorByName("plate_reverb_group"):GetComponent():setVisible(false)
panel:getModulatorByName("chamber_reverb_group"):GetComponent():setVisible(true)
panel:getModulatorByName("infinite_reverb_group"):GetComponent():setVisible(false)
```

So what is the killer advantage of using Layers then?
I mean what am I missing out on?

October 12, 2020 at 11:50 am

#120271



dnaldoog

Participant

Topics: 4

Replies: 480

Total: 484



Hi Spiffo,

Probably another way of doing it, but then I am not familiar with using uiGroup and Goodweather, who has never used layers but is a veteran, didn't know how to use layers, so I guess it shows the depth of Ctrlr (and JUCE) – several ways to achieve a similar result!

My latest panel for the Zoom RFX-2000 uses 15 layers!

Also, I often have hidden modulators in a hidden layer. That's pretty useful.

Regards,

October 12, 2020 at 3:44 pm

#120280



dasfaker

Keymaster

Topics: 80

Replies: 793

Total: 873



[Tedjuh wrote:](#)

I don't know who maintains the Ctrlr site or who is a moderator at this forum. But isn't it a good idea to make a category for manuals?

If someone compile those manuals and give me the links, I'll upload them in Downloads/Manuals

October 12, 2020 at 7:24 pm

#120281

Will do Dasfaker. Thank you. I'll start a new topic soon with some links to manuals/ tutorials instead of hijacking this thread. Excusez-moi for that Dnaldoog.



Tedjuh

Participant

Topics: 9
Replies: 97
Total: 106
★★

Back on topic. I prefer layers over tabs. I don't like the "folder structure" of tabs but that's more of an aesthetic thing. I think Layers are easier to maintain, as in how to set them up in Ctrlr. The only thing that is kind of a shame is that layers are the "full panel" that is layered. But I think Spiffo has shown that a uiGroup can be handled as a "partial panel layer". I knew I could set modulators to visible or invisible but never thought about doing it with a uiGroup. Nice!!

October 18, 2020 at 1:23 pm

#120362



spiffo

Participant

Topics: 12
Replies: 38
Total: 50
★

Mmmmm, I spoke too soon.

Placing one uiGroup on top of another one automatically makes the one on top a member of the lower group. So that means that setting the lower uiGroup invisible automatically makes all the other uiGroups on top of it invisible as well. If you set both uiGroups visible then you end up with a jumble of modulators from both groups all visible at the same time, which is not what I was after at all!

Removing the 'Component Generic – Group' setting or unticking the 'Is component a member of a group' doesn't seem to make any difference. If you have one uiGroup on top of another one then it belongs to the lower group and that's that!

I'm going to take a break and see if any divine inspiration strikes me when I'm doing something else 😊

October 18, 2020 at 3:34 pm

#120363



dnaldoog

Participant

Topics: 4
Replies: 480
Total: 484
★★

I probably tried all that at some point and found it very frustrating – Stuff getting jumbled around lost – it is much harder than layers – once you get used to using layers, you will never look back! ?

October 19, 2020 at 11:27 am

#120368

OK, after more testing, please find attached 2 Test Panels, one with **uiGroups** on top of one another and another with **uiTabs**



spiffo

Participant

Topics: 12
Replies: 38
Total: 50
★

It is definitely possible to layer (for want of a better word) Tabs and Groups on top of one another and then make selective ones Visible / Invisible.

I was struggling with my PCM80 Panel but doing things in the following order seems to work:

- 1 Delete any text from the 'Component Generic – Group' entry
- 2 Un-Tick the 'is component a member of a group', the uiGroup will leap to the 0,0 position on the Panel
- 3 Drag the uiGroup back down to it's original position
- 4 Check that in the Component Generic section that there is nothing in the 'Group' entry and 'is component a member of a group' is stil un-ticked

At the moment that is working, I can put 4 uiGroups in the same physical place on the Panel and make only one visible at any one time.

Attachments:

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October 19, 2020 at 1:46 pm

#120371



dnaldoog

Participant

Topics: 4
Replies: 480
Total: 484
★★

Thanks for that Spiffo!

Something weird going on with that Tabs-Experiment panel though.

When you first open it, there's a tab group inside another one, but when you click on the comboBox it disappears forever!

October 19, 2020 at 3:01 pm

#120372



spiffo

Participant

Topics: 12
Replies: 38
Total: 50
★

Strange, I just opened it there and it works fine for me!

I've noticed that with the uiGroups you have to be careful not to accidentally move one that's on top of another because if you do it gets automatically assigned to the lower group again and the whole thing stops working again 😞

Basically you're right, probably better off with layers, with that in mind, some questions:

- 1 When in Layer Editor the Layer listed at the bottom is the only one you can Edit, is that the only consequence of the list order?
- 2 Does a Layer always cover the entire area of the Panel, with you're

example they seem to?

3 If I used layers then personally I would want certain areas of the Panel to remain unaffected whilst other localised areas changed layers depending on something else, is that possible?

This reply was modified 3 years, 3 months ago by  spiffo.

October 19, 2020 at 3:51 pm

#120374



spiffo

Participant

Topics: 12

Replies: 38

Total: 50



OK I'll answer some of this myself, please find attached a Layers Experiment.

The Order of the Layers is important even when not in Edit Mode, as it affects what is Visible and what is NOT Visible.

As far as I can work out, Layers at the bottom of the Layer Editor window are in the Foreground and Layers at the top of the list are in the Background, so if you have Modulators in the same physical X, Y space then you need to make sure that any modulator which needs to be visible on top of another is lower down in the list, closer to the Foreground if you will, or it could get hidden behind!

For instance with this panel attached if you move Layers 3 or 4 up higher in the list than Layers 1 and 2 then they end up getting hidden behind the tabs (which are on Layers 1 and 2).

Attachments:

You must be [logged in](#) to view attached files.

October 20, 2020 at 3:03 am

#120376



dnaldoog

Participant

Topics: 4

Replies: 480

Total: 484



Hi Spiffo,

That's right – a layer covers the whole panel, but if a component is not covered by another object in a layer above it, it can be accessed, so with a bit of design, so it's actually a very useful feature.

Also, in those *if else* statements, that last `else` is not necessary.

```
function switch_tab_contents()
```

```
mod1 = panel:getModulatorByName("modulator-2"):getModulatorValue()
```

```
if mod1 == 0 then
```

```
panel:getCanvas():getLayerByName("Layer3"):setVisible(true)
panel:getCanvas():getLayerByName("Layer4"):setVisible(false)
```

```
elseif mod1 == 1 then
```

```
panel:getCanvas():getLayerByName("Layer3"):setVisible(false)  
panel:getCanvas():getLayerByName("Layer4"):setVisible(true)
```

```
elseend  
end — function
```

This reply was modified 3 years, 3 months ago by  [dnaldoog](#).

This reply was modified 3 years, 3 months ago by  [dnaldoog](#).

October 20, 2020 at 12:45 pm

#120389



[spiffo](#)

Participant

Topics: 12

Replies: 38

Total: 50



OK, thanks dnaldoog, I think I have my head around it now.

I'm off to give it a go on the PCM80 Panel I have on the go at the moment.

This reply was modified 3 years, 3 months ago by  [spiffo](#).

October 20, 2020 at 2:50 pm

#120391



Great Spiffo!

See this panel for an example of layers ctrlr.org/zoom-rfx-2000-editor/

[dnaldoog](#)

Participant

Topics: 4

Replies: 480

Total: 484



If you click on the EXTRA button each selection from the combo is a separate layer with the top section always visible in a top layer.

Regards,

October 21, 2020 at 3:21 pm

#120407



Hey Spiffo,

here's another simple panel that uses layers. I posted it here <https://ctrlr.org/forums/topic/did-i-mess-up-my-panel-size/>

[dnaldoog](#)

Participant

Topics: 4

Replies: 480

Total: 484

but will attach it here again.

Attachments:



You must be [logged in](#) to view attached files.

October 25, 2020 at 9:00 pm

#120448



**goodweath
er**

Participant

Topics: 45
Replies: 550
Total: 595
★★★

Excellent thread and discussion.

Thx a lot dnaldoog!!!

If OK for you, I add this info in my ever expending and never ending Step by Step guide (I continued filling it and revising it even if only published the 1.x version)

October 26, 2020 at 12:34 am

#120452



dnaldoog

Participant

Topics: 4
Replies: 480
Total: 484
★★

Hi Goodweather,

By all means – that would be fantastic, otherwise the post will eventually get buried with all the other posts as time goes on! I plan to do a few of these eventually, especially for subjects that keep popping up on the forums.

Thank you!

December 21, 2020 at 8:59 pm

#121174



BAUS

Participant

Topics: 2
Replies: 22
Total: 24
★

I have started working with layers in my next panel and it is less frustrating.

Layer 9 is a static layer supplying the 'graphics' or lay-out of the panel. I still used groups to create that but in this case a group only holds a small number of larger elements instead of all the modulators.

Layer 1 holds all the modulators and it is such a relief to just be able to move them around freely without them (or a whole group) disappearing somewhere. I am copying all the locations/positions of the modulators into an excel sheet so I can easily copy them to Layers 2 to 8 later on. If there's an easier/smarter way to do this the please let me know.

On this panel I can see static layer with an other layer on top of it. If layer 1 is selected in the layer editor I see the modulator values of layer 1, if layer 2 is selected I can see the values of layer 2.

However in the first panel for the Mirage that I am still working on this is not the case. I moved a whole group to (in this case) layer 2 and when I choose layer 1 only layer 1 appears. Then when I choose layer 2, layer 2 pops up while layer 1 also stays on-screen.

There are no overlapping groups/modulators.

What I want basically is both layers to be visible but only 1 layer should be editable at a time. What am I overlooking here?

Thanks in advance,

Robin.

Updating a 25 year old Editor

December 22, 2020 at 5:47 am

#121193



Hi Baus,

dnaldoog
Participant

Topics: 4
Replies: 480
Total: 484
★★

Not sure if I understand, but if you want one layer sitting under another layer to be editable there must be no objects in the top layer directly above that control you want the user to change. If there is nothing in the layer above obstructing those controls then those controls in the bottom layer should be accessible.

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