



The Viva Mesh System

Master HUD: Skin Component Tutorial & Help Documentation Level 3 (Full Featured Version)

Reminder: The *Viva System* sends most of its help and informational messages to the Second Life chat window. In most cases, the messages are accompanied by an audible sound to alert you to their presence. The messages are very helpful and you'll want to keep your chat window open as you use *Viva's* Master HUD.

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Skin is that magical quality of an avatar that makes it seem life-like. It starts as a texture, artistically and lovingly created in a graphic program. For the creator, it's no easy task, for what appears on their two dimensional canvas must eventually wrap around a three dimension body. But when done right, skin is a joy to behold.

Once uploaded into Second Life, the skin texture must have some way to form itself around the body. There are two ways in which that's done:

- It can be applied by an **applier**
- Or, it can come as a **wearable** from your inventory

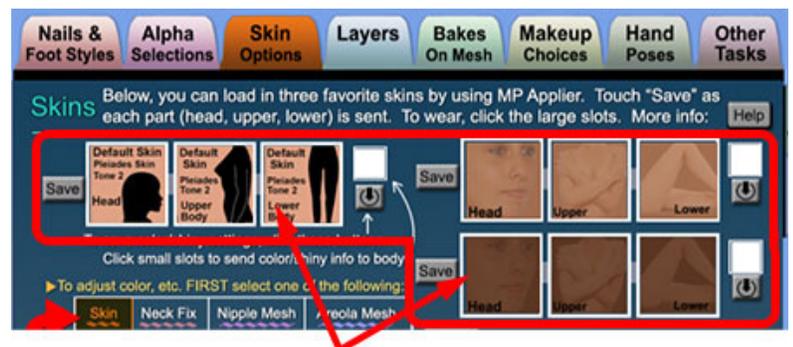
The Skin component of the Master HUD can work with both methods. Let's look at both.

Applied Skins

When you look at the Skin component in the Master HUD, **the top third (the red area outlined in the illustration to the right) is related to the applier type of skin.**

The boxes (also called slots) with the skin images hold textures which were received from an applier.

Two examples of applier are the Free Skins HUD and the Default Skin applier, both of which are found in the Viva package and both of which can be used to apply skins to the body when Bakes on Mesh is *not* enabled.



This portion of the Skin component of the Master HUD is related to Applied Skins.

Wearable Skins

The wearable type of skin comes into play when you have Bakes on Mesh (BoM) enabled ([BoM Tutorial and Help Information](#)). Wearable skins are found in your inventory and are identified with this icon beside them:  When the body is BoM enabled, your mesh avatar will pick the skin texture from the wearable in your inventory.

We'll start by looking at the "Applier" type skin, so let's look at Appliers

Appliers & Skins

To move skin textures to base layer of your avatar, you use an "applier." An applier is a script that sends an unique identifier of a texture (called a UUID) to the receiving script to Viva's body. The receiving script then applies the texture to the body and presto, you have skin. ([Bakes on Mesh](#), on the other hand, doesn't use an applier. Rather, you "wear" the skin found in your inventory by right clicking and selecting "wear.")

Along with the skin texture, the applier may also send other information. For example, the creator may have included a specular map (which adds shininess) or a normal map (which adds roughness or bumpiness).

The Viva system accepts textures from two different types of appliers. One is the standard method used by almost all mesh avatar systems in which the creator uses a [notecard](#) to input texture information. The data from the notecard is assembled in an applier object which is then used by the customer to send the texture to their avatar.

The other method utilized by Viva is one in which the creator drags the texture into a HUD. The end user wears the HUD and clicks on the desired texture to send it to the mesh layer.

Since it can handle a variety of applier needs, this type of applier is a “[Multi Purpose Applier](#)” or “MP Applier” for short. It makes the process a bit easier and quicker since you can completely dispense with the notecard stage. The MP Applier not only sends texture to your avatar, it also sends the texture to the Master HUD. If it’s a skin that you might use often, you can save it to Skin component.

Getting Ready for Tutorial Exercises

The best way to understand the workings of the Skin component is to use an example. First, a little preparation.

1. To start with, it’s best to wear the “**Completely Assembled**” mesh avatar. Later you’ll probably pick and choose what parts you need (à la Viva’s [Modular System](#)). But this will make things run smoother for the exercises. (Along with the mesh body, you’ll need to wear “Alpha: Primary.”)

2. We’ll be playing with shininess, and it’s helpful to have the Second Life environment lighting set up in advance. The simplest way to do this without downloading something special is to select **World >> Environment Editor >> Environment Settings**. “Click on “Customize my environment” And choose “A-3 PM” from the Fixed Sky settings.



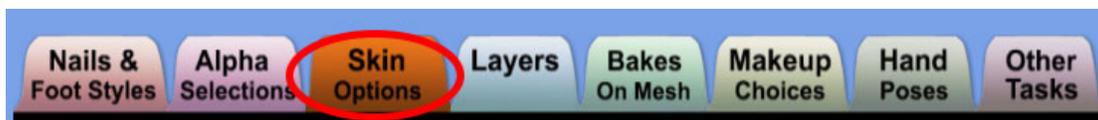
3. Attach the Master HUD (Level 3). Or if you are using the Lite version, attach the Level 2 Master HUD.

4. Level 3 users: make sure **BoM is not enabled**. Do that by clicking on the “Bakes on Mesh” tab on the Master HUD. “Off” should be highlighted.



5. You want to see mostly skin on your avatar, so if some of the Layers are on, click on the “**Layers**” tab on the Master HUD, and **turn off at least the clothing layer**.

6. Click on the “**Skin Options**” Tab on your Master HUD.



7. You now have the Master HUD open to the Skin component, but we’ll now add a second HUD: “**Applier HUD: Default Skin & Practice Skin for Tutorial**.” This is an Multi Purpose (MP) Applier. You’ll find it in Viva’s Main Folder. When you find it, right click and attach it as a HUD. *When you right click, be sure to select “Attach to HUD.” Choose a location so you can see both the Master HUD and the Applier HUD.*

Here's how I arrange things on my screen. I can see both HUD's with my avatar in between. Additionally, I can also see the chat window. That's important because Viva sends messages to the Chat window. While this works for me, you may come up with a different arrangement that works for you.



Saving a Skin from an Applier

To start out, we'll be saving a texture to the head. In order to do that, we need to replace the system head (which you are most likely wearing now) with a head that can accept textures.

1. First, look in the **“Extra Alphas”** subfolder. You'll find **“Full Body Alpha.”** Wear it. Your head will disappear, but just for a moment.



2. Look in the **“Modular System”** subfolder. Right click on **“Special Use Head: Bento Mesh (NOT BoM Enabled)”** and select **“Wear.”**

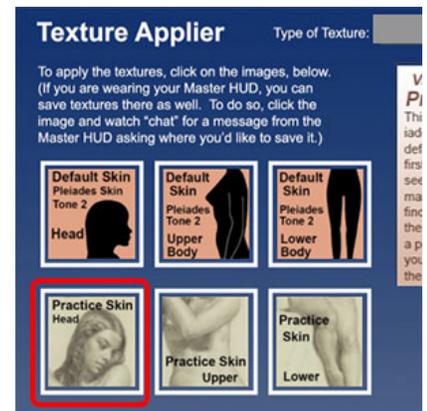


You have three heads: System head, BoM head, and Non BoM Enabled head. Of those three, only the Non BoM head accepts textures from an applier. Both the system head and the BoM Head get their textures from wearables in your inventory. In this exercise, we are working with an applier so we need to use the Non BoM head.

3. Now that we have the right head on, we can send the texture. **On the MP Applier screen**, click on **“Practice Skin - Head”** image.

Once you click on the image, two things happen:

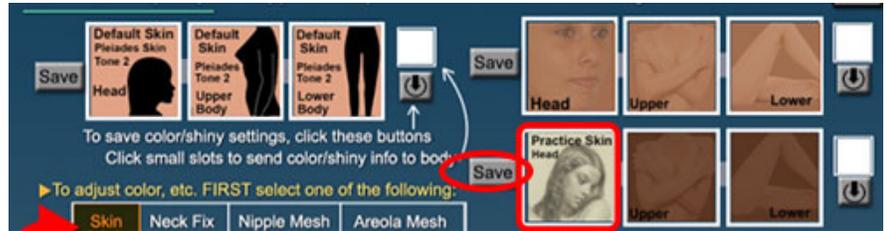
First: You should see the new skin appear on your avatar. If you are wearing the default skin, the practice skin will be a bit darker.



Second: You should also see message appear in your Chat window: “The following body part has been sent by the applier: Head. If you’d like to save it for later use, click ‘Save’ beside a row of three slots.”)



- 4. We’ll save it to the third set of texture boxes. Click the **third “Save”** button:



(There’s no time limit to save after sending an item from the MP Applier, but if you do something else with the Master HUD or send another texture, then you can no longer save the skin. If you forget to save a part of the skin, you can just re-send the texture from the applier and then click “Save.”)

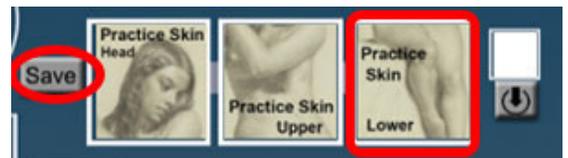
- 5. On the **MP Applier**, click on the “**Practice Skin - Upper**” image.

- 6. You’ll get the same message, but telling you that the “Upper” skin has been sent. Click the same “**Save**” as before:



The Skin component knows that an “Upper” body skin is coming, so when you click “Save,” the texture is saved to the second slot. Head always goes the first of the three slots. Upper body goes to second and lower body goes to third.

- 7. Back to the **MP Applier**. Click on the “**Practice Skin - Lower**” image. And click on “**Save**” again in the Skin component.

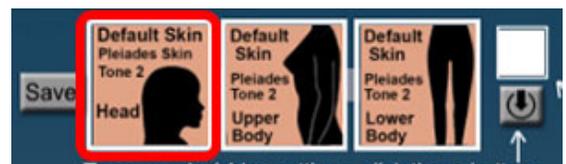


Now your avatar should have the same skin tone from head to toe - and we have saved the skin textures to the Skin component.

Sending Skins to the Body

In the previous exercise, we saved textures to the skin component. In this one, we’ll go the opposite direction: from the Skin component to the body.

- 1. On the **Skin component**, click on the “**Default Skin - Head**” image slot. You’ll see your avatar’s head lighten with the new skin tone.



2. Repeat the same, clicking on the **Default Upper Body** and the **Lower Body**.

Now your avatar will be back to the original default skin.

Coloring Skins

You can use the Skin component to change the skin tone of applied skins. Or it can be used to change the skin tone of wearable skins when the body is BoM enabled. (In either case, you should be aware that there are caveats and I'll talk about those after the following steps.)

The Skin component works similar to the [Layers component](#), but there is a difference. In the Layers component, you usually need to click on one of the layer to highlight it in orange. Once it is orange, you can click the color palette and send a color to that layer.

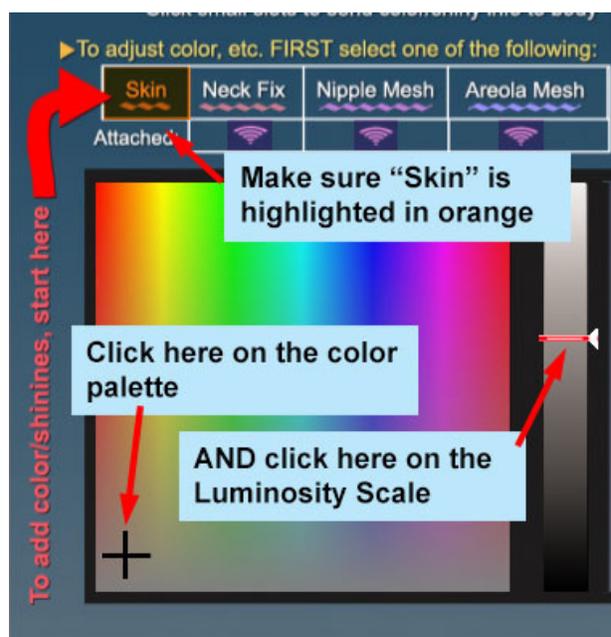
In the Skin component, however, one of the four options (Skin, Neck Fix, Nipple, Areola) is always highlighted in orange. The default highlight is usually "Skin." That means as soon as you select a color it will go directly to the skin.

Before clicking on the color palette always check to see what is highlighted in orange. If you accidentally color the wrong item, click "Reset" which will remove the color.

In this exercise, we will be darkening the skin tone. Note that you can make small adjustments in the color of a skin tone and you can darken a skin, but **you can't lighten a skin**. When you send colors from the Skin component, you are sending an "overlay" color. The color overlays the existing color of the skin texture.

1. On Skin component of the Master HUD, make sure "Skin" is highlighted in orange. **Click on the lower left hand corner of the color palette** as shown in the illustration below. When changing a skin tone, you'll find that often you'll be selecting colors from the lower, left of the color palette.
2. Click the **Luminosity Scale** about midway down as shown in the illustration.

You should see the avatar's skin darken in color. Try click on different parts of the color palette and watch the changes on the avatar.



3. Now that you've seen how coloring works, let's go back to the avatar's original skin color. It's quite easy to do: click on "Reset."



Coloring Skin: Important Points to Keep in Mind

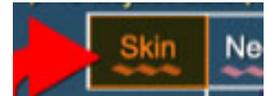
As I mentioned, you can color both applied skins or wearable skins, but there are a couple of things to take into consideration before coloring.

- **Applied Skins.** With applied skins, you need to use the **Non-BoM head**. In order to have make-up options for applied skins, the creator needs to **provide several skin textures with pre-applied make-up**. You can change the skin color, but when you are coloring, be sure to check to make sure the overlay color doesn't overly change make-up colors.
- **Wearable Skins.** If you have BoM turned on, you can use the Skin component to color wearable skin. However, make sure you are using the "**BoM Enabled**" **Bento Head**. *The System head can not be colored.* The other thing to keep in mind is that **any clothing that you are wearing on the base layer will be colored with the skin** - and you probably don't want that. Fortunately, Viva has the capability of adding a second BoM layer. That's all explained in the [BoM Tutorial](#) and as the tutorial describes, the clothing needs to be contained in a **Universal wearable**. That could possibly be a drawback. If you do not have clothing in a Universal, then it's probably not a good idea to color the skin.

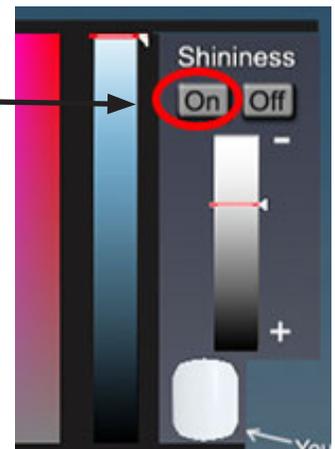
Adding Shininess

The Skin component can be used to add shininess to skin. Like coloring, the shininess can be added to either applied or wearable skins, When done subtly, it can be quite effective.

1. Make sure that "**Skin**" is **highlighted in orange**. Whenever you want to color or add shininess, always double check to make sure the correct item is highlighted.



2. Position the body so that you have some daylight shining on it.
3. Keeping an eye on your body, click the "**On**" button below "Shininess."

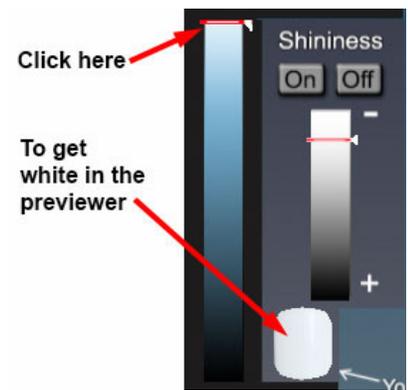


4. Watch some portion of your body as you click on different locations on the vertical bar to move the shininess pointer. If you have some daylight shining on the body, you'll see that the reflection of light from the legs will change.

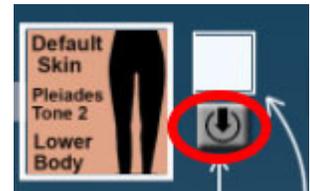
Moving the **shininess pointer lower on the bar increases** the shininess value. With an increase of shininess value, the **reflection gets more pointed and stronger**. For our case, we really don't want that. The high settings make the skin appear almost like plastic. Rather we want the **lower setting which spreads out the reflection** and makes the skin more silky in appearance. Move the shiny pointer so it is near the **top of the vertical bar**.

5. You probably don't have to worry about this, but it is worth mentioning. Unless you want to color the skin, make sure that all color is off. Click on the very, very top of the luminosity scale so that **color that appears in the previewer is white**.

Why are we doing this? In just a moment, we'll be saving the shininess value, but when shininess is saved, an overlay color is also saved with it. In this case, we don't want to change the original texture color. We want to leave that the same. Whenever you don't want to change the original texture color of skin, use an overlay color of white.



6. Now we are ready to save the shininess (along with the overlay color of white). **Click on the save icon**  beside the color box located to the right of the three default skin textures slots. The color box will be white, but saved along with the white overlay color will be the shininess.



7. To test this, watch the body and then click the “Off” button. You should see the shininess disappear.
8. Now **click the color box beside to the right of the default skin**. (Be sure to click the color box, not the save icon) The shininess comes back.

The color box that we are using is beside the default skin, but you can use it for a different skin. For example, if you were wearing the Practice skin and clicked on the default skin color box, the Practice skin would pick up the same shininess. In most cases if you are coloring or adding shininess to a skin, you'll use the color box next to the skin you are dealing with, but it's nice to have access to the other color boxes for different skins since skin preferences are often in a narrow range. By making all of the color boxes available, you can access all saved colors and shiny settings.

Here is an important bit of information on shininess. Shininess requires something called a **specular map**. A specular map is constructed by the creator to go along with the skin. When you use an applicer, the applicer sends the skin texture to the avatar body, but if the creator has provided it, the applicer will also send the specular map to the body.

Now and then, you'll find a creator that will include a customized specular map with the skin, but it's not common. The skins that are included with Viva, for example, do not include specular maps. Whenever the creator doesn't supply a customized specular map, and you turn on shininess, Viva uses an internal **default specular map**.

How do you know when a skin has a customized specular map? There is a tool built into the Skin component that you will tell you. But let's just delay that a bit. We'll talk about it shortly.

When the applicer sends the specular map to the body, it also sends along a **shininess value**. The value can be high or low depending on what the creator is trying to achieve. You can change the creator's shininess value by clicking on the shininess bar. Be aware that if you change it, Viva doesn't remember the creator's original value. Usually that's not problem because what's important is how the skin looks to you, but if you did want to return to the creator's value, it's just a matter of re-applying the skin.

When using Reflective Tint be sure to keep track of when it is off or on. Since reflective tint is not used frequently, Viva will switch it off when you take a different action in the Skin component. If you are not paying attention, however, you can end up accidentally sending reflective color as a overlay color - or visa versa. But if that happens, of course, you can get back to the original by clicking on the color box.

You may not use reflective tint very much, but it is a feature that can create some interesting effects. When you are doing a bit of experimentation, here's something to try. Set shininess to a low diffuse level. Then add a reflective tint slightly different than the skin color. It will add a becoming and captivating sheen to skin.

In this exercise, the shininess of the skin and its reflective color occur on the default specular map. As I mentioned previously, a creator can send a custom made specular map to add shininess to the skin. She can also send along a specular color (reflective color) to go along with the map. How do you tell if the default is used or whether the creator has provided a map? Glad you asked. Viva has a way of telling . . .

List to Chat

The “List to Chat” button is the way to find out whether a creator has provided a specular map - or even a normal map which adds texture to the skin.

1. Click on the “List to Chat” button

2. Take a look at your chat Window. If you've been following with the last couple of exercises, this is what you'll see in your chat window



This feature provides a list of what body part are attached. That's helpful when using the [Modular](#) system and you can't quite remember what parts you've assembled.

I had mentioned previously that you can tell whether Viva is using it internal generic specular map or a custom made specular map which has been made by the creator. You can see that on the listing. **In the case of the default skin, it is using the “Internal Generic.” If it was using the creator’s map, it would say: “Custom Made.”**

Associated with shininess, you'll see that the exact amount of shininess (the specular value) is provided. This number might be helpful to you if you doing creative work, but even if you are a creator, you are probably more interested in the range of shininess, rather than an exact number. For the great majority of users and individuals using Viva for creative work, it's far more useful to think in terms of what range of shininess makes my clothing item look the best. Shininess figures go from 0 (no shininess) to 255 (the highest amount). So if you see a value which is roughly 125, you are in the mid range area. Or if you have a value around 63, you are in the lower mid range, etc.

The other thing that you'll see on the list is there is an entry for Reflective (Specular) Tint and it gives the value. The value is shown as a Second Life color code, looking something like : <0.19608, 0.55294, 0.78824>. Like shininess, the color code might be helpful if you're a creator and need the exact code for technical rea-

sons, but from a general user standpoint, it's just helpful to know whether or not an overlay color has been applied.

In this case, we didn't have an overlay color, but if we had, the list would have provided the color code for it.

Note that Viva only tells you if certain types of textures or specular or normal maps exist. It does not provide the identifying UUID's. UUID can be used by unscrupulous individuals to steal a creator's hard work, and Viva never provides that information.

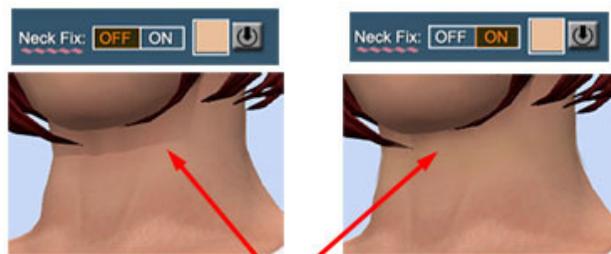
Firestorm Users: Depending on your settings, each of the lines may have the time beside it which makes trying to read the list difficult. But you can turn it off. To do so, select Avatar >> Preferences and click on the "Chat Windows" tab. Remove the checkmark from "Use V1 chat style headers." Now things will look much better when you use "List to Chat."

Neck Fix

The Neck Fix is used primarily if you are **combining a mesh body with a system head**. When the two are combined you may see a slight color difference at the joint where the neck and the head meet. The Neck Fix smooths out the joint area, blending the two together without any noticeable difference.

The use of a Neck Fix is generally not necessary for either a BoM enabled body or Non-BoM body as long as they are combined with the corresponding Bento head.

1. To do the following exercise we need to be wearing the System Head. If you've been following the exercises, thus far you will have the Bento head attached. To get things ready for the Neck Fix, find the "Full Body Alpha" in the "Extra Alpha" subfolder. Right click and select "Take Off." Then find the "Alpha: Primary" in the Main Folder, right click and "Wear."
2. Next, look in the Modular System subfolder and detach the Bento Head. With the Bento head detached, you'll be **wearing the system head**.
3. If you've been following the exercises, you should have the default skin applied to the body. If not, you can apply it by clicking on the default skin texture boxes in the Skin component. Also, check to make sure that your current wearable skin is the default. That is what will show on the System head. Look for "Default Skin Wearable" in Viva's Main Folder. It should be highlighted. If not, right click on it and select "Wear."
4. We are ready for the Neck Fix. To use it, click the "On" button beside "Neck Fix." As you click "On," watch your neck. You'll see the head and neck blend together. You can try clicking it off and on to see the effect.



The head and neck blend better together

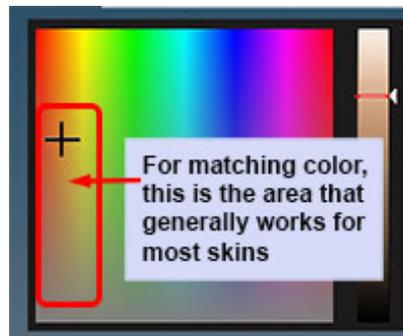
A couple of observations. When you click "On," Viva automatically highlights "Neck Fix" (by the big red arrow) in orange. That means if you make color adjustments, they will go to the neck fix. We don't have to worry about right now. **For this exercise, I have pre-set the color of the Neck Fix so it matches that of the default skin. But, of course, that's not always going to be the case. When wearing a different skin, you will need to adjust the color so it matches that skin.**

To make things a bit easier for you, I've done a little pre-coloring. I have prepared neck fixes with the proper matching color for each of the ten included skins. You'll need to use them with the [modular system](#) whereby you assemble the avatar with whatever parts you need. You'll find the neck fixes in the "Free Skins" subfolder.

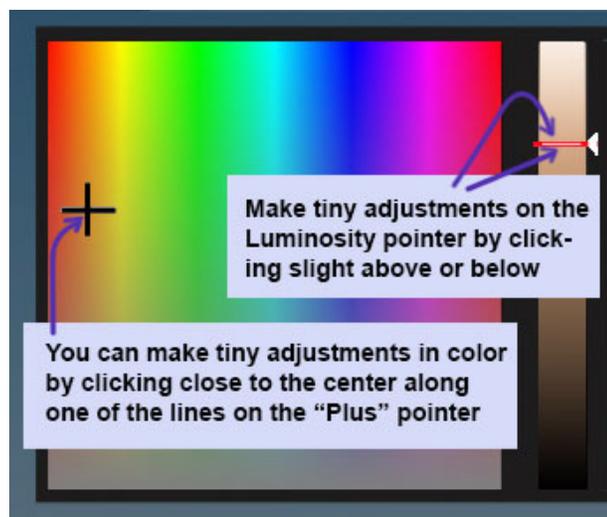
Coloring a Neck Fix

If you are using skin from a creator, you would need to select colors from the color palette to match the skin color. Here's how to go about it.

1. First make sure that "Neck Fix" is **highlighted in orange** before you begin.
2. You'll find that the best color choices for skins will be on the far left of the color palette, somewhere between the middle and the bottom. **Try clicking in that area.**



3. Once you get close to the skin color, it only takes very **little movements of your cursor**. What is helpful is to use the black lines of the "Plus" marker and click a tiny bit lower or high - or either right or left.

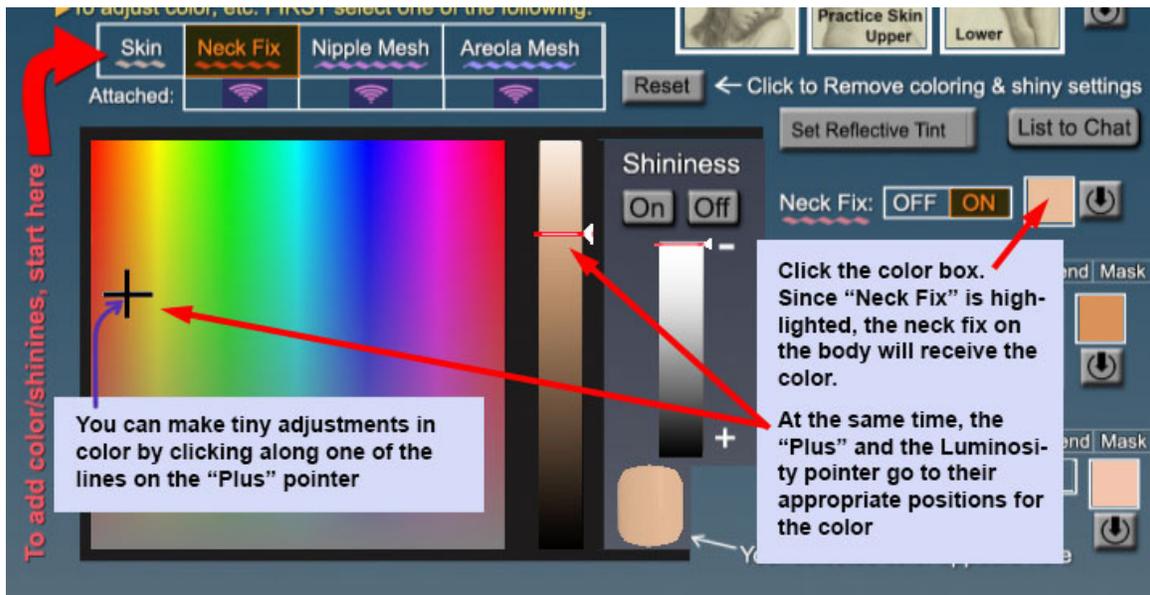


4. When you find just the right matching color, save it by **clicking the save symbol:** 

Using a Saved Color for Neck Fixes

Once you have saved Neck Fix color, you later may find that you need to tweak the color just a bit. A saved color is also helpful when are coloring a Neck Fix for a new skin.

Make sure “Neck Fix” is highlighted and then click the color box. Be sure to click the color box and not the save symbol. The neck fix will turn the color that you have saved. At the same time, the “Plus” marker on the color palette (and the Luminosity pointer) will move to the appropriate positions for that color. (See illustration below.) With the Plus and Luminosity pointers now in their correct locations, you can make minor adjustments without starting over again.



*You really want to make sure that you check what is highlighted beside the big red arrow. That's because **any of the three color boxes at the bottom of the screen can be used to send colors to the highlighted item.** For example, if you have Areola highlighted and you click on the color box beside the Neck Fix, the color will go to the Areola mesh, not to Neck Fix.*

I originally had the color box sending color only to the item next to the box, but beta testers asked for more color choices. Those who were using a Neck Fix were not using Areola and Nipples, and by having all color boxes available, they were able to color neck fixes for three different skins.

The same argument was offered for Areola and Nipples. So I altered the code to provide more flexibility. This behavior is similar to the Layers component where a saved color beside one layer can be applied to any layer highlighted in orange.

Nipple Mesh & Areola Mesh

Both Nipple and Areola mesh work the same way as the Neck Fix. You can turn them on or off and you have a selection of sizes. The two are often used together. Whether you use them or not is totally up to you. It really depends on the skin you are using and personal preference about how your body appears.

With the [modular system](#), you can assemble your avatar with or without them. If you decide not to use either one, then you can reduce your impact on the Second Life environment by leaving them out. Like any of the modular parts, you can always add them later on.

Nipple & Areola Suggestions

Like the Neck Fix, once you've turned on either nipples or areola, you will need to select a color from the palette compatible with the skin. Instead of an exact match, you'll be selecting something slightly darker than the skin tone. You can save colors by clicking the save icon .



For the nipple options, both the **Tres Petit and Petit sizes will fit under clothing worn on “Underwear” layer**. In other words, a bra worn on the Underwear layer will cover them. **The Medium size will fit under the clothing layer**. Whether the other two options (Grand and Puffy) fit under mesh clothing is highly dependent how the clothing is sized in the chest area.

If you turn on either Nipple or Areola and nothing appears to happen, click on the Mask button. See next for an explanation.

Blend & Mask buttons

The “Blend” button turns on the blending mode. That allows a gradual blending of the nipple or areola with the skin. It's not particularly important for nipple mesh since the blend mode has only a slight effect. It is, however, it is noticeable for the areola, helping it merge more naturally with surrounding skin.

Because of its full compliment of layers, **you will need to use the Mask mode with the “Fully Assembled” avatar**. Unfortunately, the mask mode doesn't have the ability to blend, and the areola is more sharply defined. Closely matching the skin helps, but you will have **better results by using the [modular](#) system**.