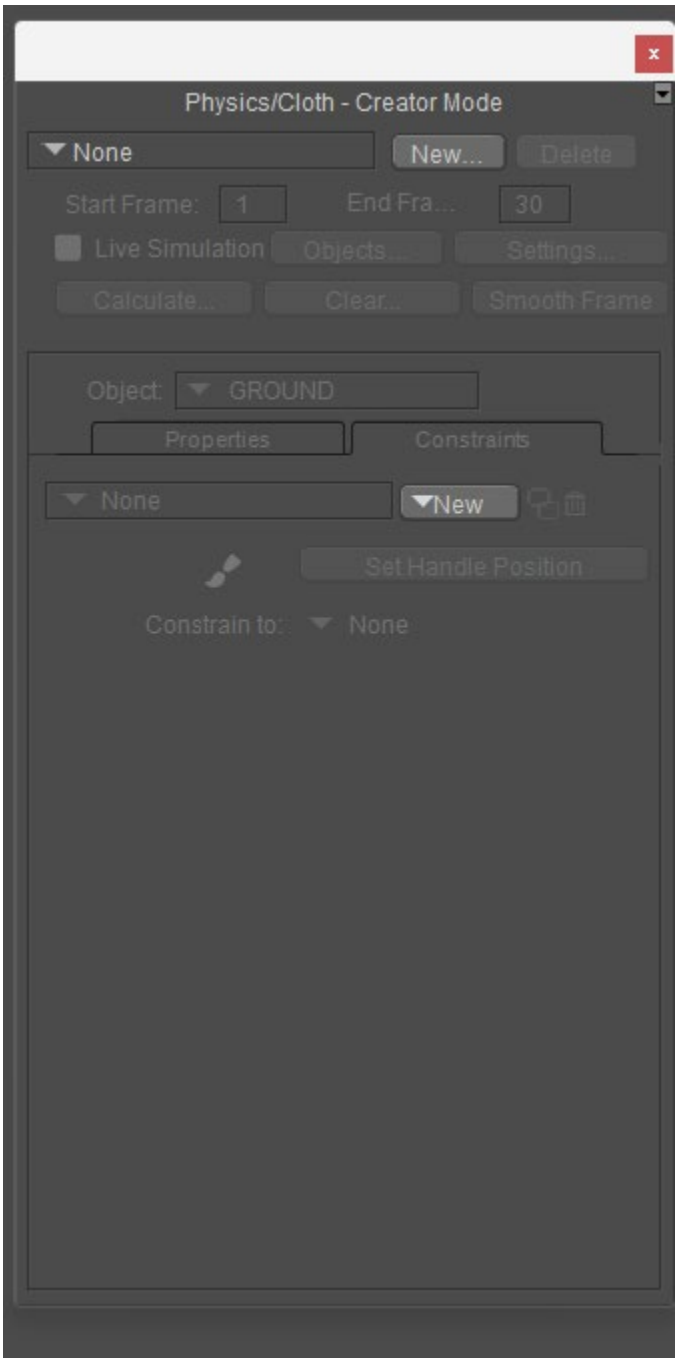
How to setup a Poser Cloth and draw the weight maps.

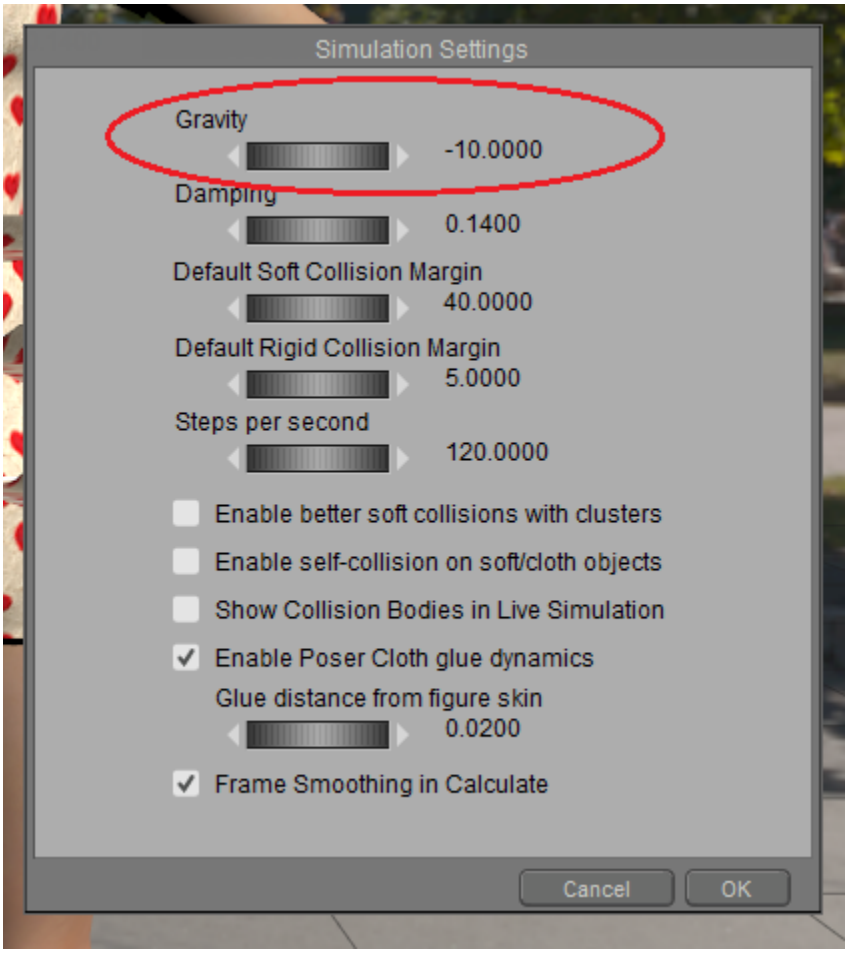
First load your figure and the cloth item that you want to simulate. Below is La Femme 2 with Tipol's Valentine Day dress. I chose this because it has several areas that require adjustments due to how close the parts of the dress are compared to the main body parts. This is something you will have to keep in mind as there is nothing wrong with how the dress is set up just that some parts of a cloth item are going to be too near a body part and will get overflow when the Auto Glue feature applies weight maps for you.

Ok, so we now have the figure and cloth item loaded and are ready to begin the simulation setup phase. So, under window click on Physics/Cloth creator mode. You will see the following.

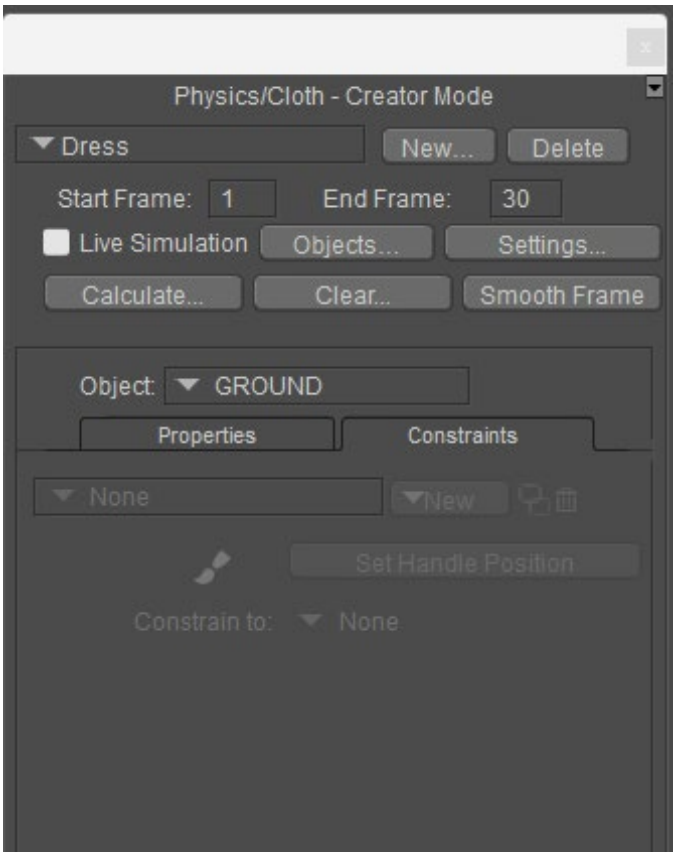


Click new and give it a name to start. Mine is going to be dress.

After you have given it a name then several more options will be available. You will want to press Settings.

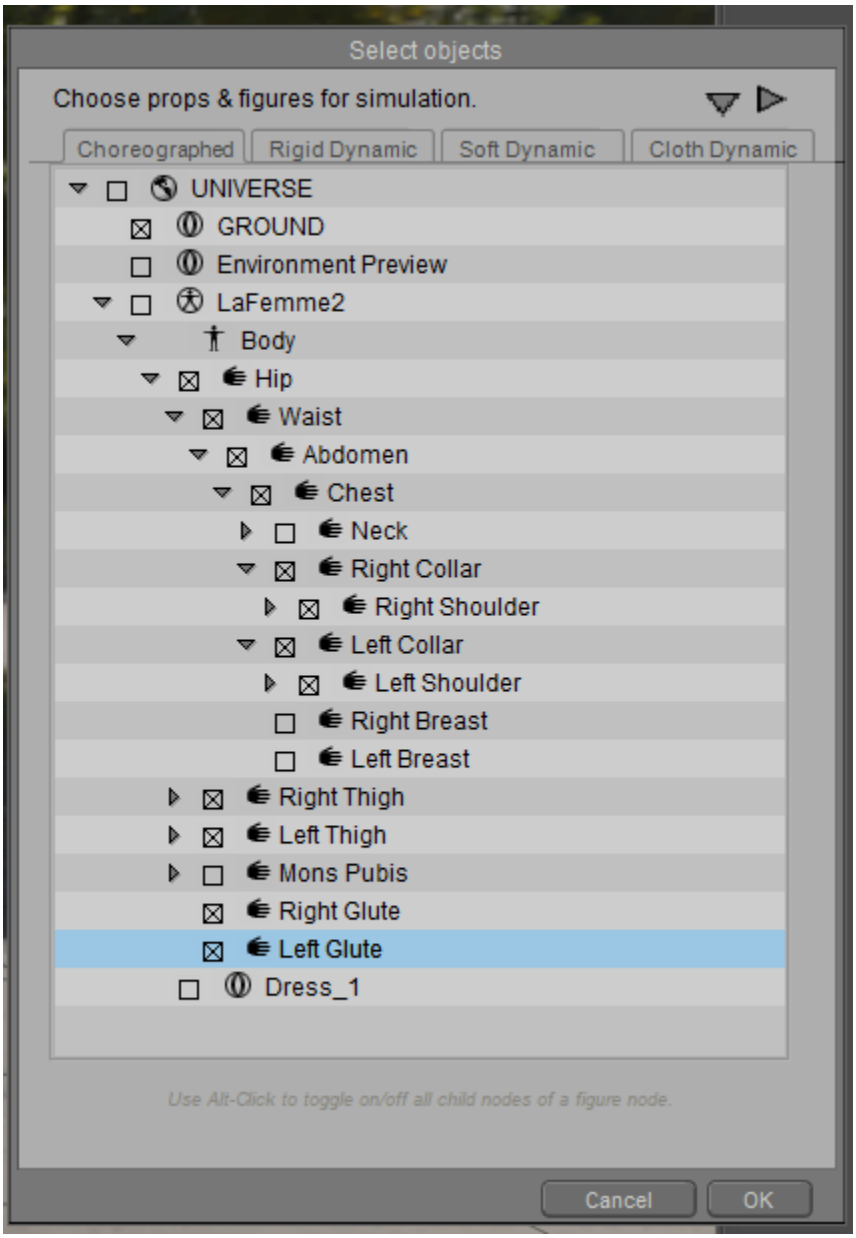


The biggest thing is to change gravity from -10 down to a more reasonable number (at least for cloth). I find the range between -1 to -3 is good. I am going to set this up using -3 as our gravity. The higher the value of gravity the more the cloth will compress, and more energy is put into the system. This will also cause the cloth to cut through things much like the wire on a cheese slicer will cut through a block of cheese. Also, for the first time having Enable Poser Cloth glue checked is good as the auto Glue will set up the close-fitting parts with decent results. Also, I set the Soft Collision margin down to 10 (my units are set for MM) and the numbers are based on what your measurement units are in preferences.

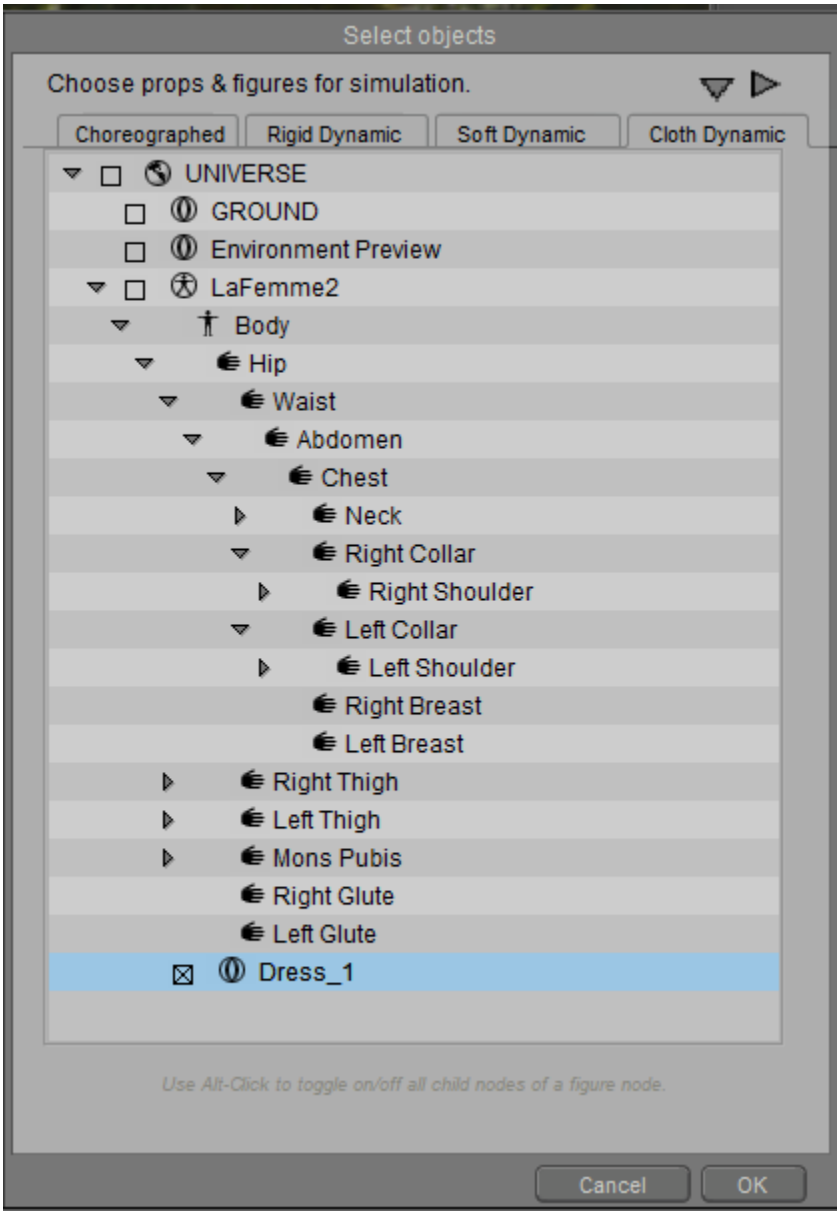


Press the objects button to select the parts.

Next you will choose the objects that are part of the simulation.



The above is for the Choreographed body parts. Choose anything that can/will interact with the other objects in the course of the simulation.

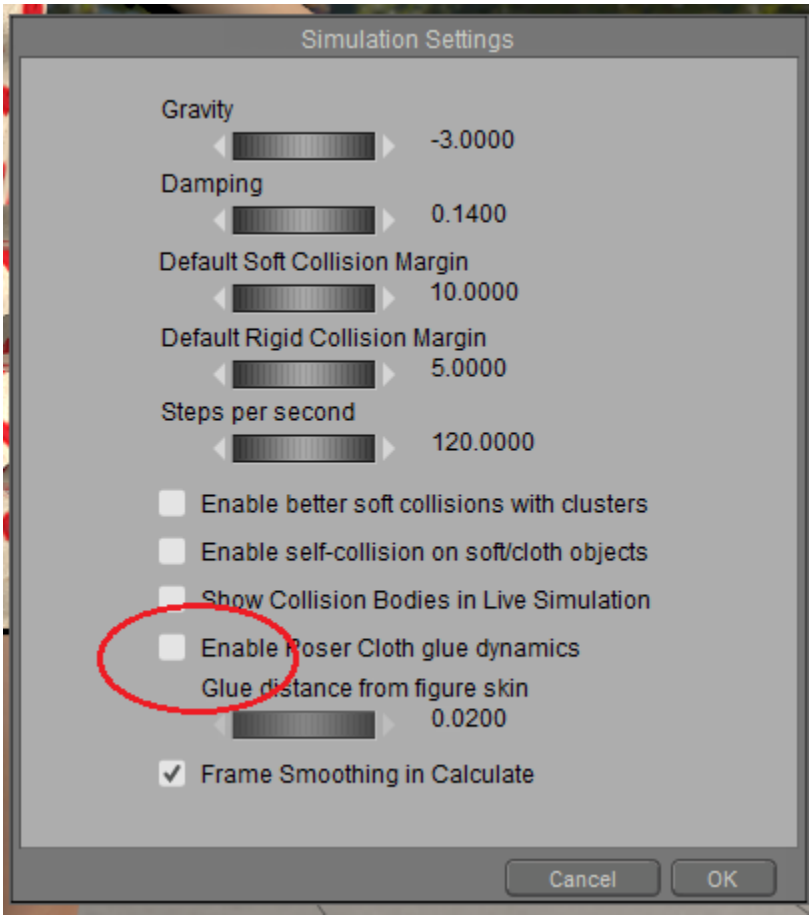


And finally select the dress in the Cloth Dynamic tab. Notice body parts are not an option in the Cloth Dynamics tab.

After you have set the objects that are going to be used in the simulation then you want to save the scene before going any further. This is just in case something is wrong with the cloth item, and the program goes into a loop. The second item on the Settings menu "Enable self-collision on soft/cloth objects" can led into endless loops depending on the layout of a cloth item. So, use caution when checking that option. Normally I leave it unchecked.

Now that we have everything set up and saved just in case, it is time to press the Live Simulation check box. If everything is good after a couple of seconds, the cloth will start to move and below the Clear Button the Sim Step will start to increase and it will list the number of items that are part of the simulation. You only need to run a couple of steps with Live Simulation checked as the Auto Glue will figure out where and how to place the constraints for the parts of the dress that are close to a body part and will most likely affect that part of the dress the most.

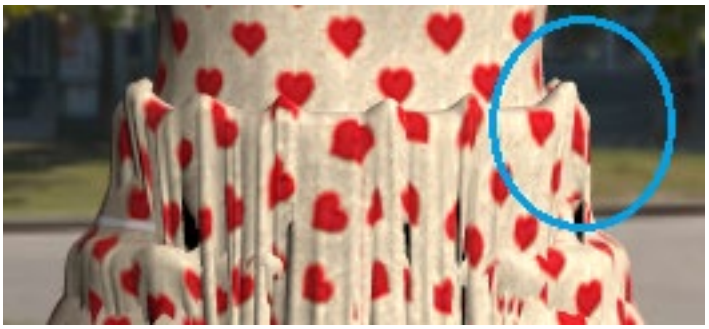
After you un-checked the Live Simulation button re-open the Settings and Uncheck the Enable Poser Cloth Glue check box.



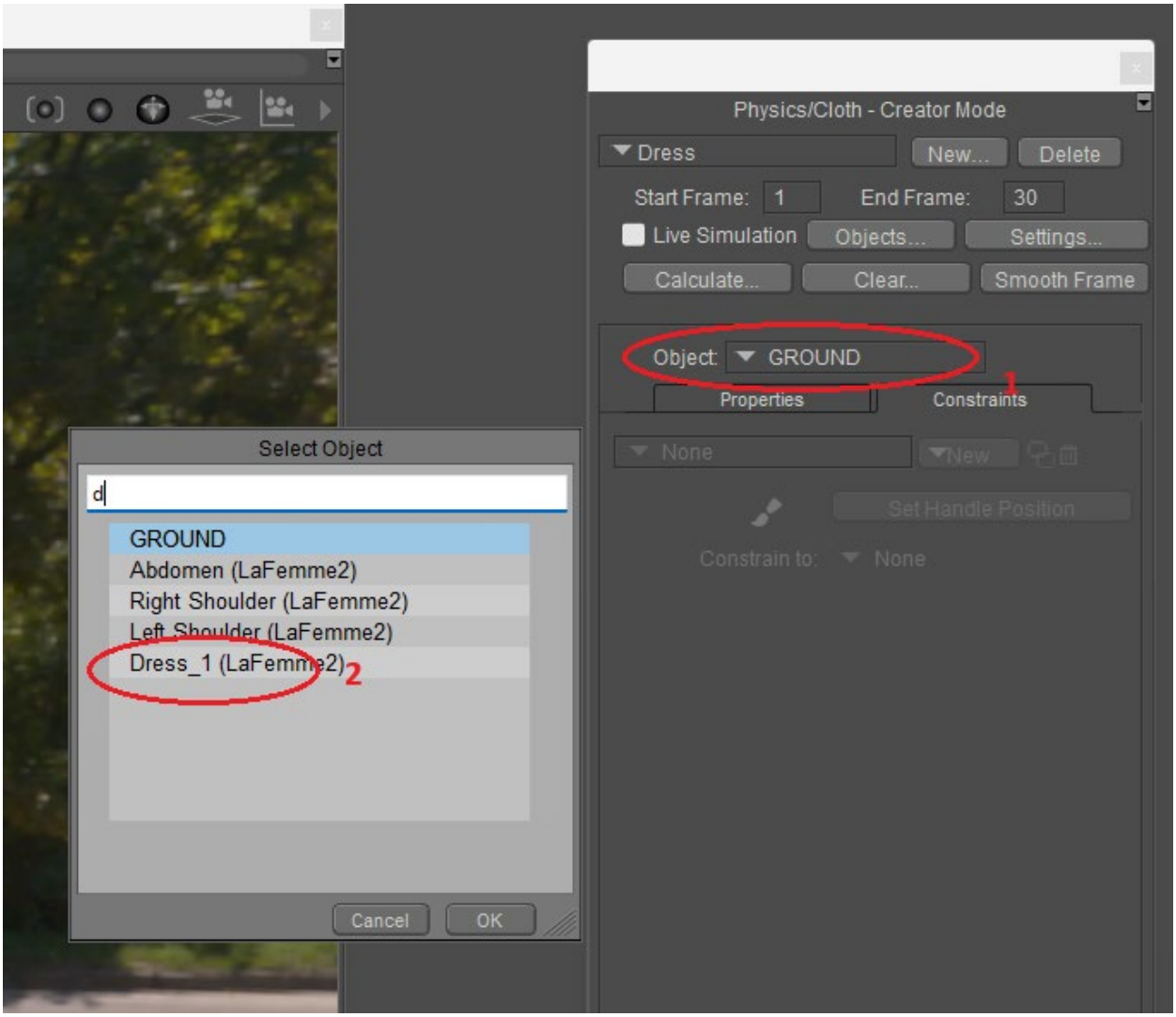
If you don't uncheck the Enable box, then the next time you run a simulation (either Live or Calculate) then Poser will reset or recreate the Auto Gen weight maps. This will mess with any changes you may have made to the weights. So best practice is to uncheck right after the first run. Then do another saving of the scene to keep your work safe. Not that I have run into Poser crashing, just that sometimes I will make a mistake and do the wrong thing and ruin a bunch of work.

Below is what the Live Simulation results look like:

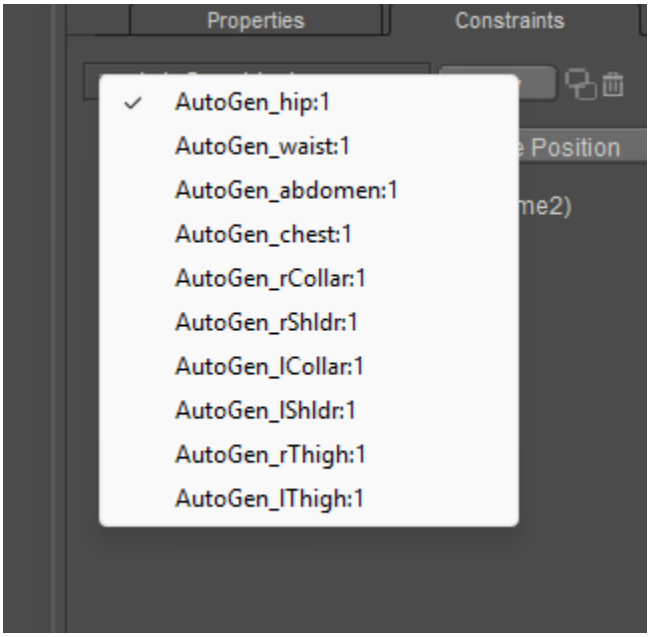
Notice the Tiers are now hanging straight down. That is because there is no weight maps applied and therefore no constraints in place telling them to do something else. Also notice the top Tier has some poking up parts. That is where body parts Auto Glue were applied to the Tier because the Tiers vertexes are very close to the body. See below.



Now we are going to get ready to paint the weight maps.

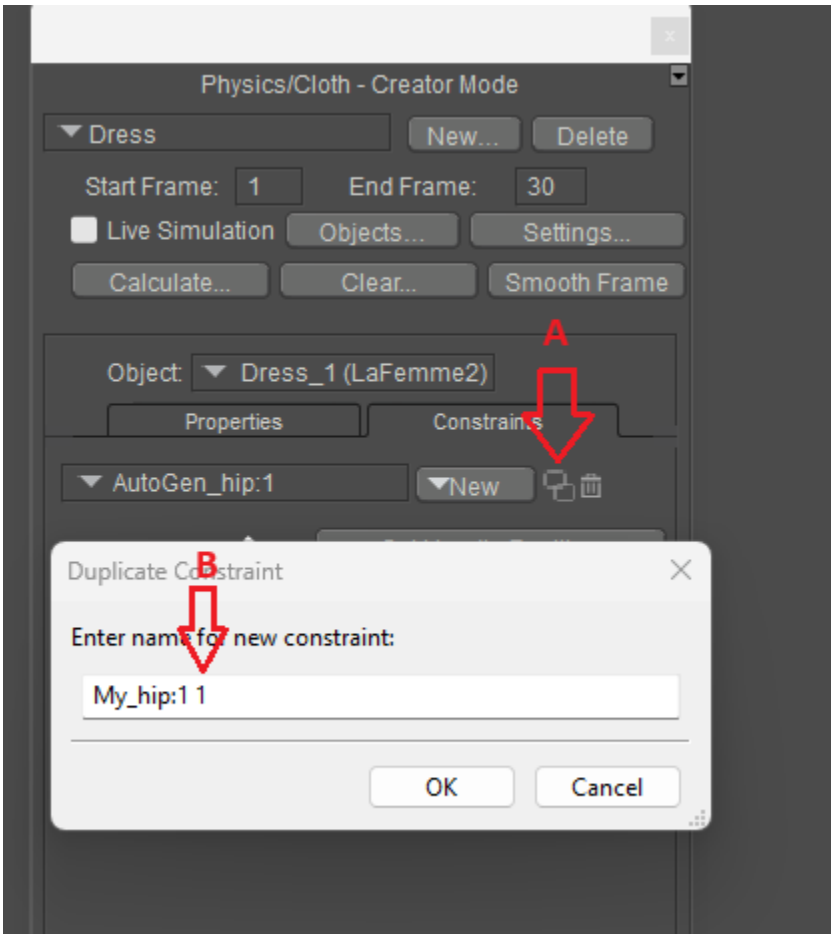


First click on the down carrot by Ground and a picker box will appear. Start to type the name of the item you want to select, and the list will start to get shorter, until either you double click the item or it is the only item left in which case you can press enter.



With the constraints tab selected there will be a selection box with all the Constraints listed. Notice they all start with AutoGen. These are the default weight maps and for the most part is a good starting point. The next steps are meant for creators but should also be done by everyone unless this is just a fun what if and you don't plan to save the results. But if you plan to distribute the results it will be very helpful to your customers if you give the maps understandable names.

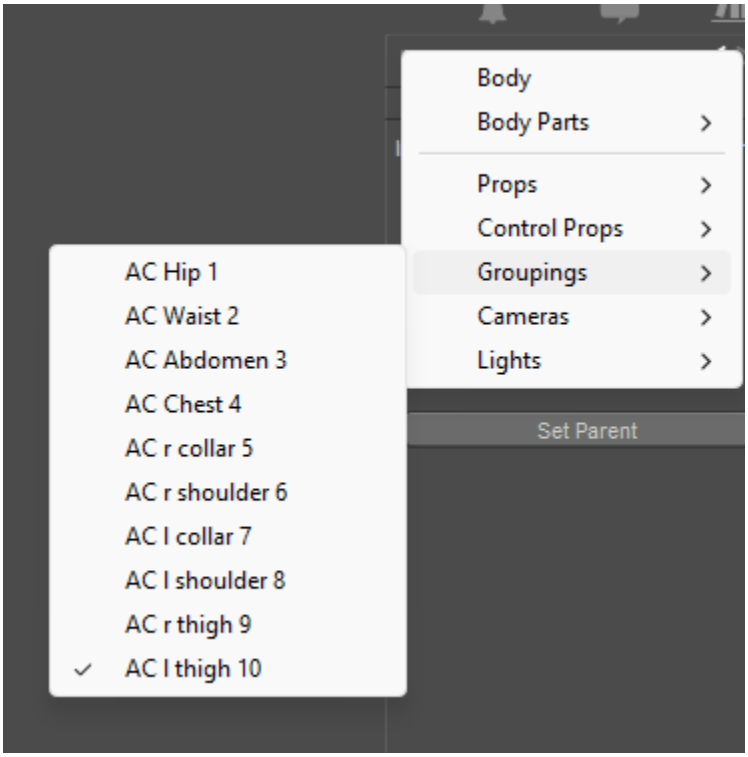
You will want to duplicate the AutoGen maps and give them a new name.



So, in order to duplicate the map, press the icon under the red A arrow. This brings up the duplicate constraint box. I left the name unchanged except to add a number at the end as it is important to remember which Animated Constraint is tied to this map. So, the first constraint you make will be Animated Constraint 1 and they go up from there. This will seem to be a lot of hassle but there is a reason. When you first start out you can skip this but as you get more into it and especially if you want to distribute the end result it is best to make it as end-user friendly as possible. So go through and duplicate all the auto maps for your own.

Once that is done then you go back in and Delete all the AutoGen maps to clean things up.

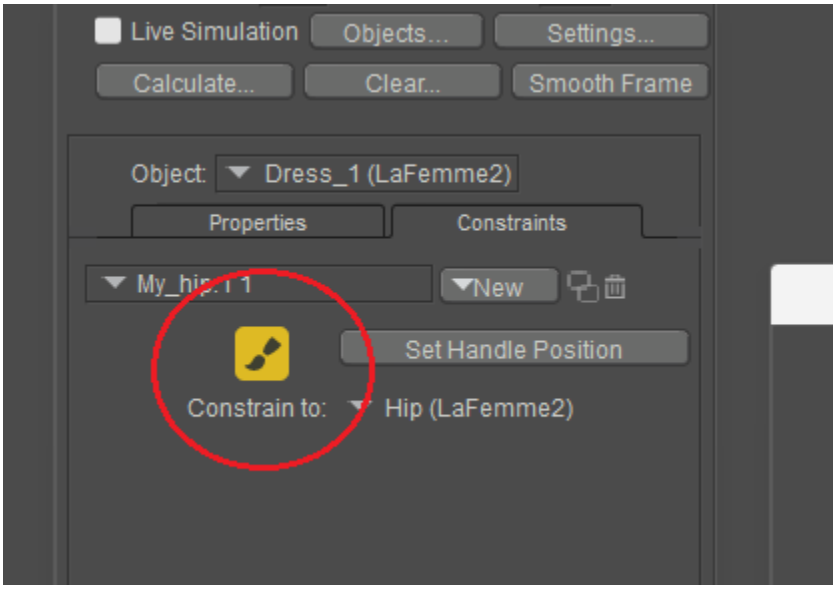
You do this by selecting the name of the constraint to delete and press the trash can icon next to the duplicate icon.



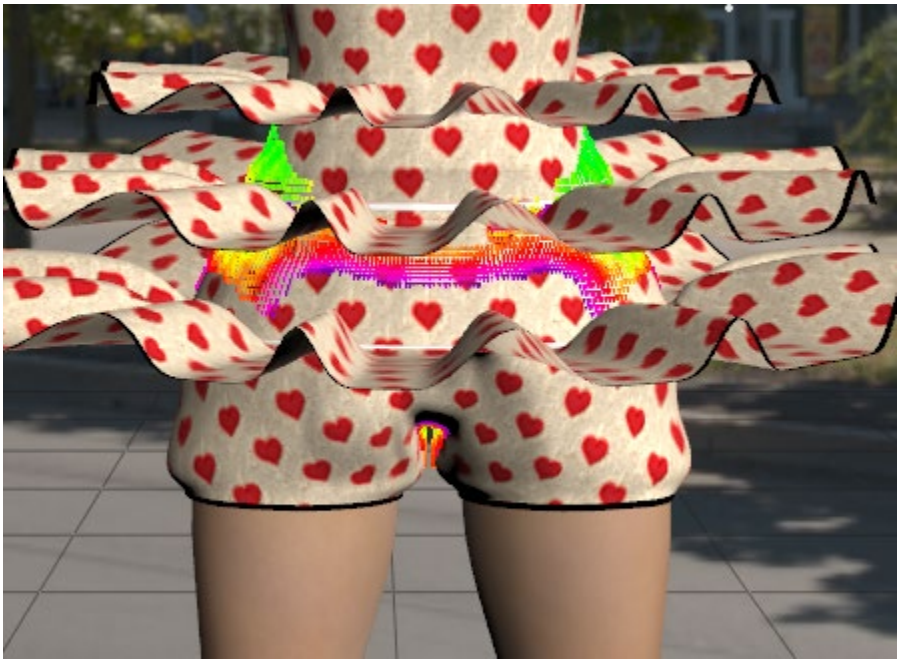
Under the Parameters/Properties change the selected item to work on to the Grouping and it will flyout a selection that starts out listing Animated Constraint 1 through 10. Go in and select each Constraint and then under properties change the name from Animated Constraint X to the name you gave it when you duplicated the weight map. I have a ticket requesting that they make it so that when you rename a constraint map that the grouping name is also changed at the same time. For now, this is how it is done.

Once all the above is done and a copy saved now, we can get to work on mapping the weights. And for the first couple of times, you can skip a lot of the above since it is practice and you are not looking to sell the product. The above is about good practices to make a good product.

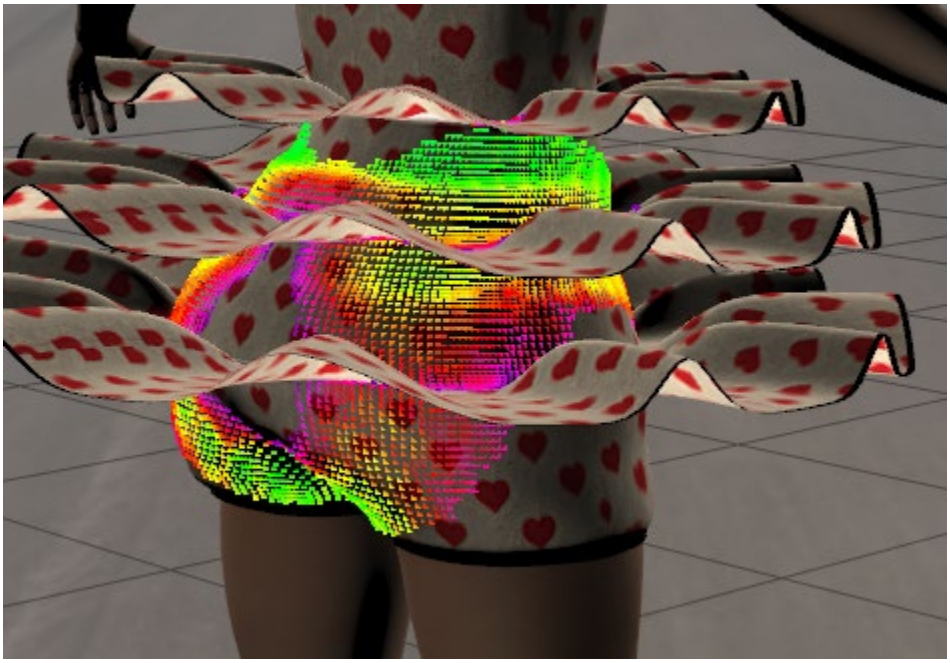
OK so now we will get in and look at the weight maps and try to fix the issues such as the top tier having those peaks.



Select a constraint to work with and you are going to want to look at all of them to make sure there are no hidden surprises. After you select the press the paint brush. This will show the weights that are assigned to map and where they are on the cloth item.

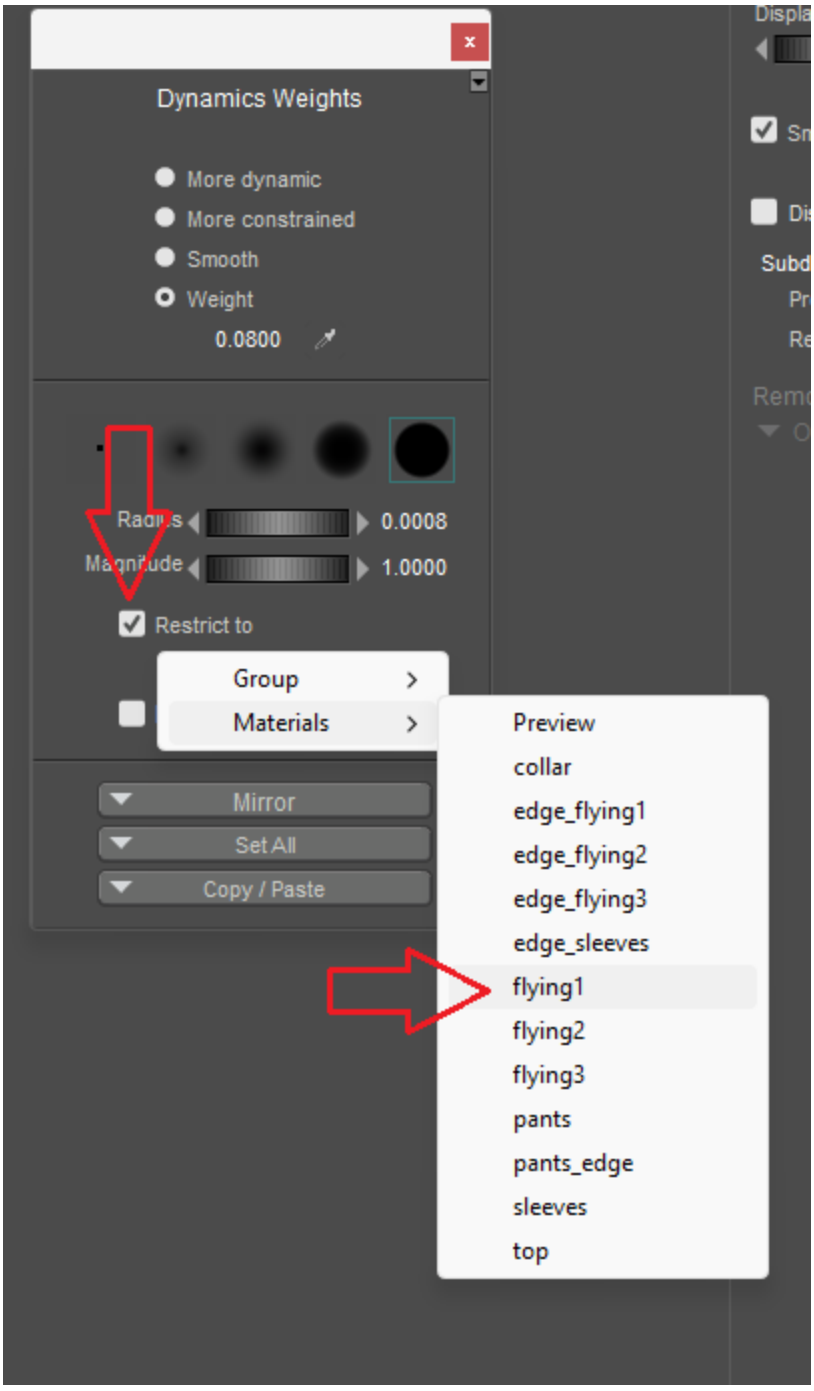


This is where the hip weight map is applied to the dress. Front

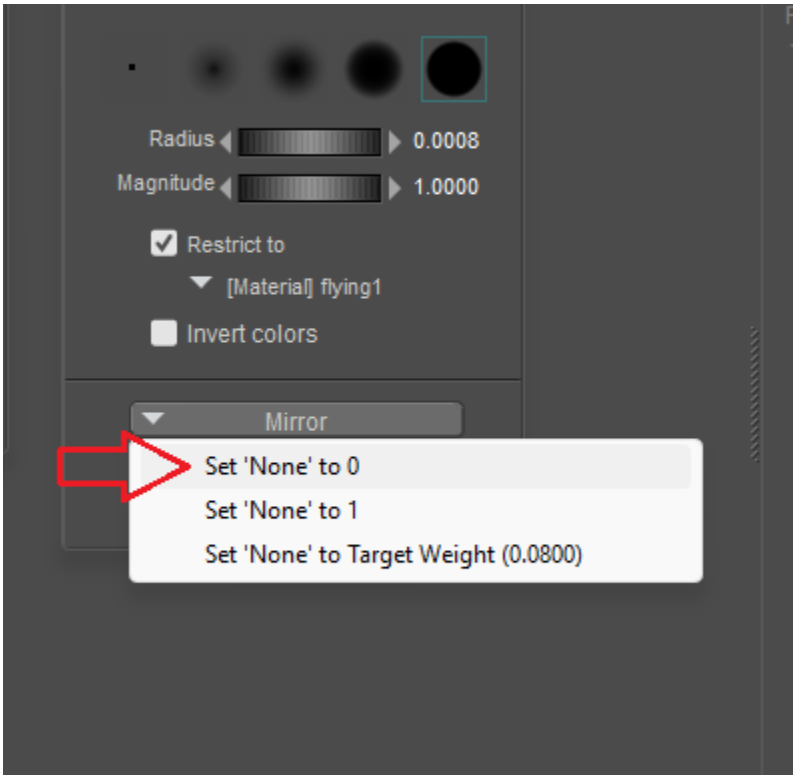


Rear.

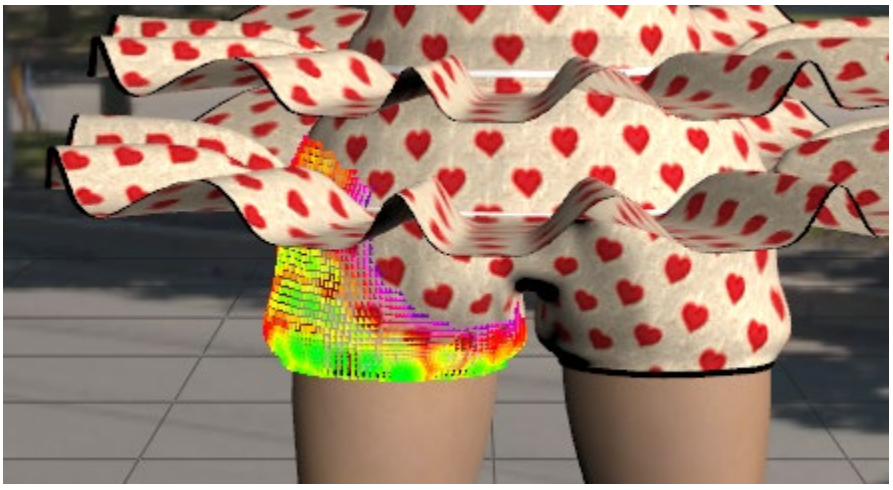
Notice that the map is really close to several of the Tiers and probably has some bleed over. You can see the Top Tier has a bright Gren dot showing on the body next to the Tier. Now what we want to do is Remove the weight mapping from the tiers without touching what is on the body of the dress. The way to do that is to select the material to unpaint.



With the Paint brush selected the dynamic weights pops up and you want to check Restrict to, and then find the Group or Material to restrict the painting to. In this case I choose Flying 1 as that is the material name of the Top Tier. This dress is nice because it has a lot of named areas that make this a lot easier to do. Now that you have selected the material you press the Set All button.



And you press the Set ‘None’ to 0. What this does is clear all the weights for that constraint map off the material part you are working on. Now just go back and select Flying 2 and Flying 3 and repeat. Do this with all constraints and parts of the cloth that might be affected. I did not do the Flying Trim as that part of the dress is so far from the body parts that are auto painted it is not necessary to do. You can verify if you want. It is good to use judgement as some areas are just too far to have an effect. See Below.

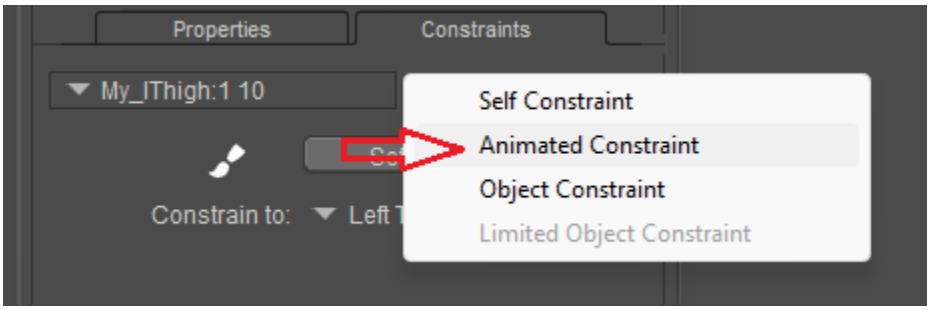


Here is the right Thigh and it is unlikely to have affected the Top Tier or even the Middle Tier.

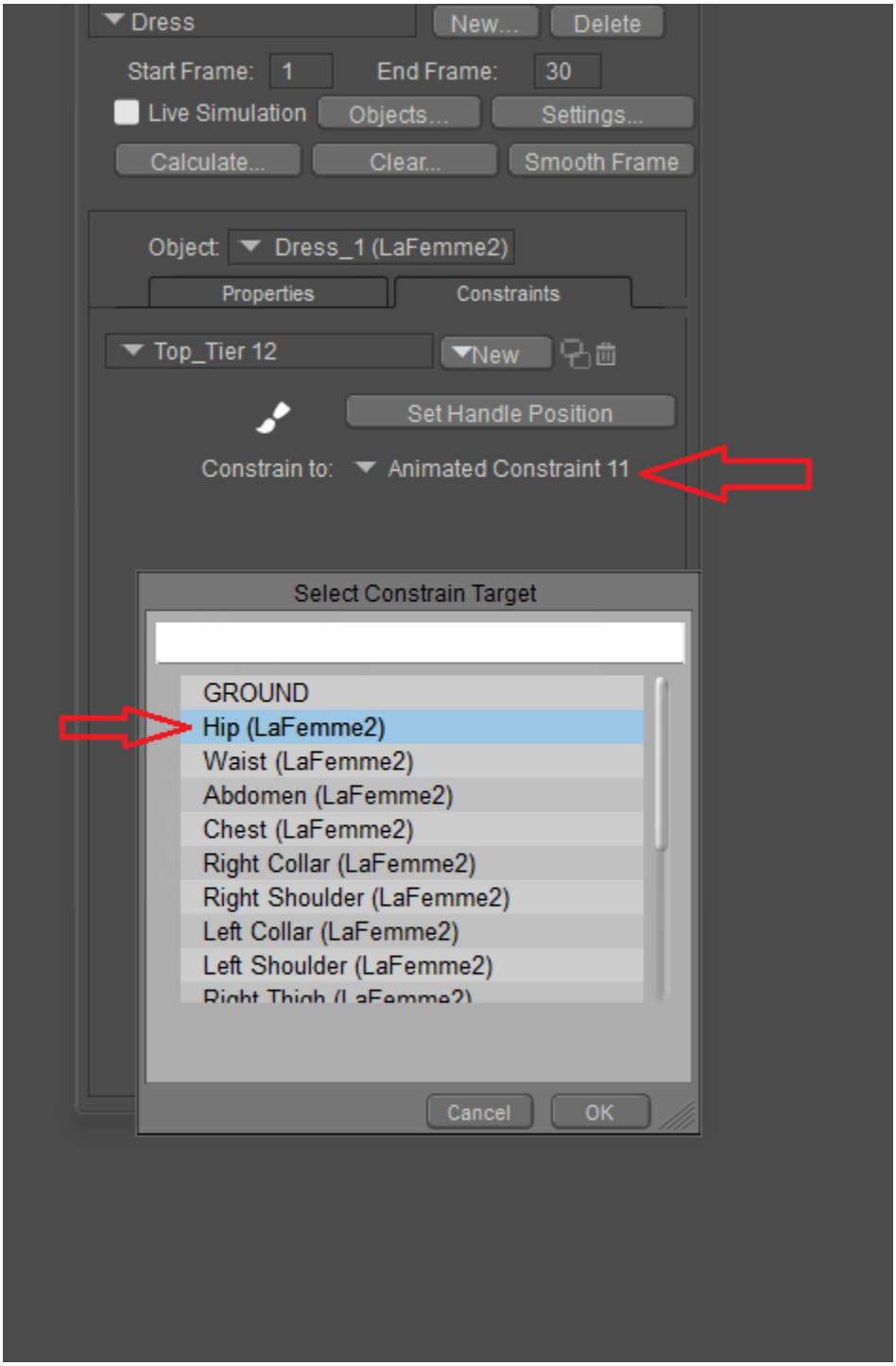
Once all the maps are cleared of the unwanted areas you could run a Live Simulation to see if it worked. Again, save just in case.

And now notice the peaks that were on the Top Tier are now removed and the tier fully hangs down. We have fixed the issues now need to work on making the Tiers stand up like they are supposed to. At least as far as we can within the limits of Poser Cloth.

Now we get to apply our own maps to the dress and make all the areas that did not get an Auto Gen weight map have a weight so it can act in a more defined matter instead of simply hanging loose like a wet noodle.

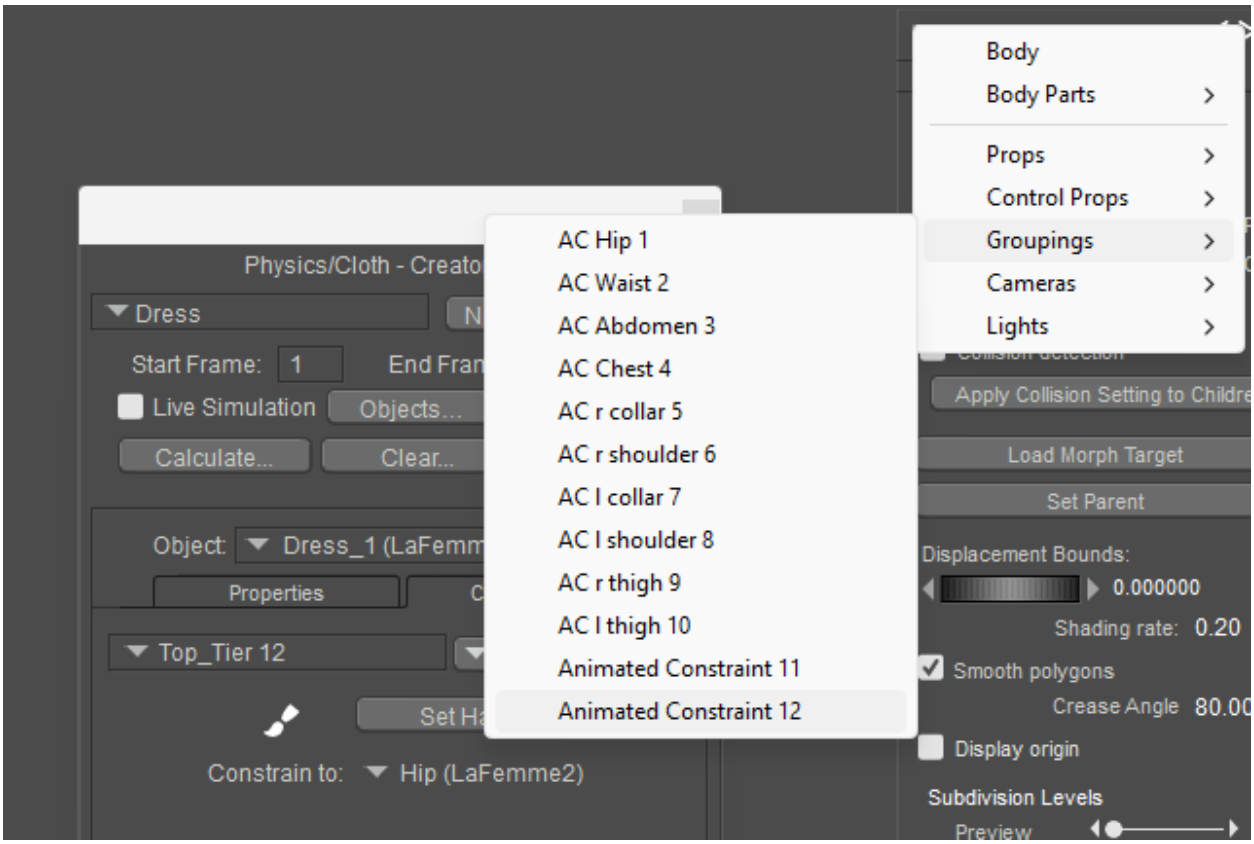


Click on the New button and choose Animated Constraint. This will make and new constraint called Animated Constraint 11. This is the 11th constraint we have made.



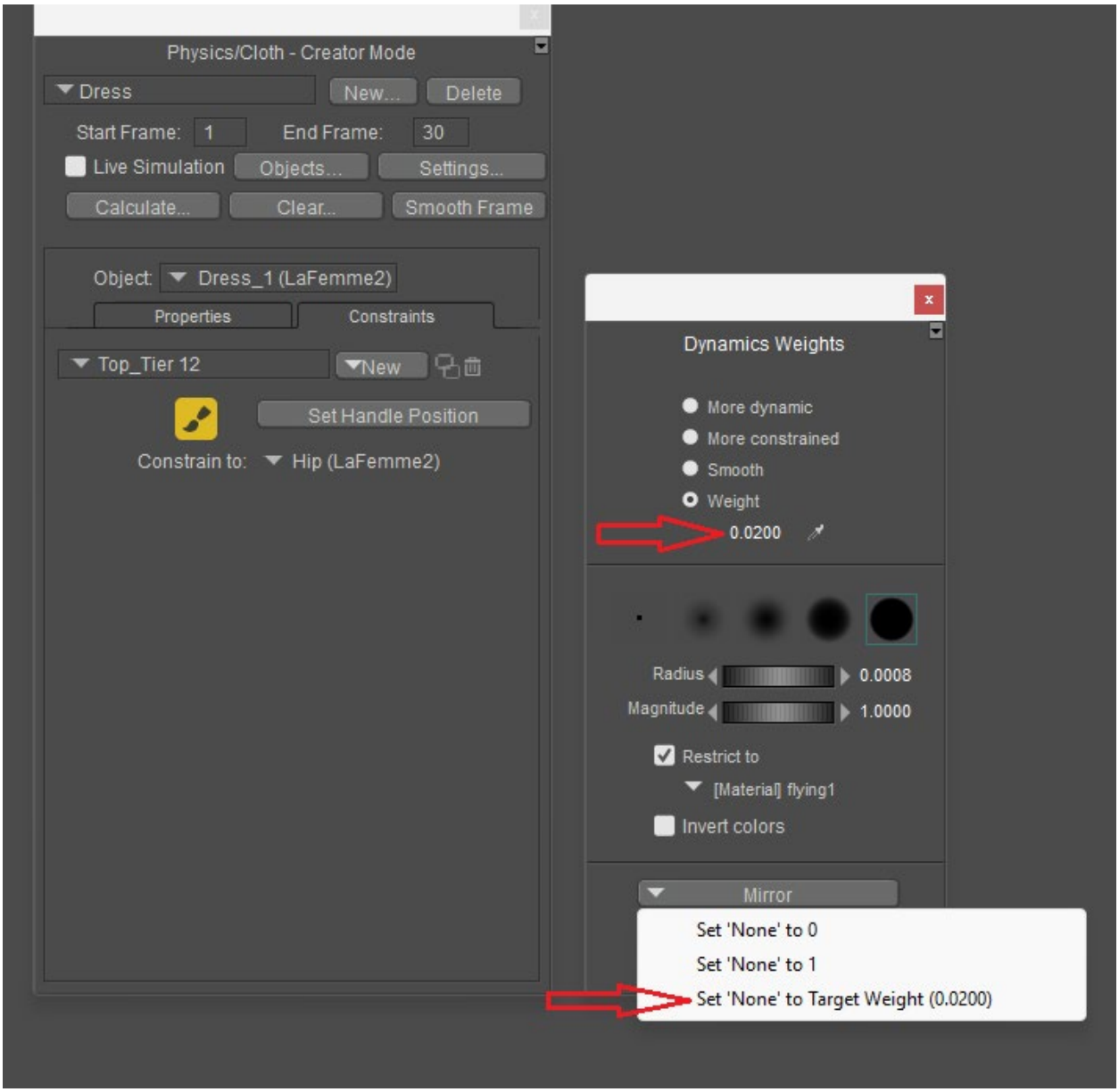
I selected Animated Constraint 11 and did the Copy Constraint and gave it a meaningful name. The constraints we make are important to give good names to as they will be the ones most likely used by the end-user to fine tune the movements. Also, when you make

the Animated Constraint and cannot give it a meaningful name just beware that it defaults to constraining to itself. When you go and duplicate that constraint in order to give it a good name the duplicate will constrain itself to the original and if you delete the original it will also delete the duplicate as they are tied together. Most of the time I will constrain my constraints to the Hip since that is the origin of the model and everything follows the Hip. Leave the Auto Gen constraints constrained to the part they started with. That goes for the duplicates you also made.

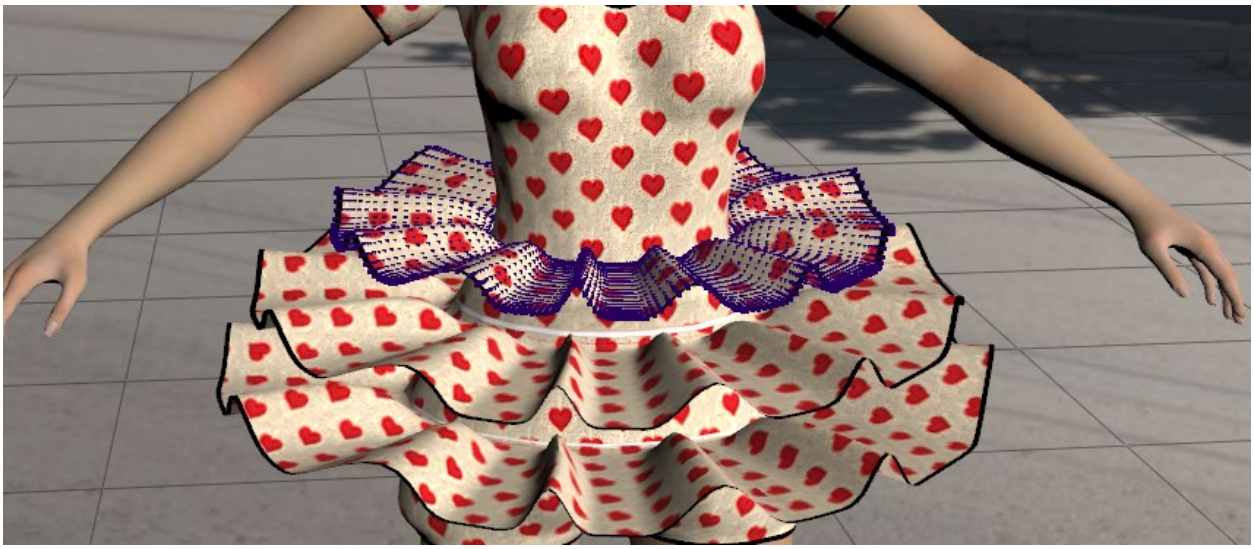


Go into the Grouping and change the properties of the group to match the weight map it is associated with. In the above case it would be #12.

Now that we have the new constraint created and named it is time to paint it.



Press the paint icon and then when the Dynamic Weights pops up put in a weight you want to work with. Above I have .02, but after testing I dropped that value down to .005. Select the part that needs to be painted in this case Flying 1 and press Set 'None' to Target Weight (.0050). And just like that the whole of the flying material has been painted. You also need to go in and paint the Flying 1 Trim or else it will just droop and be like the tubes that extend forever.



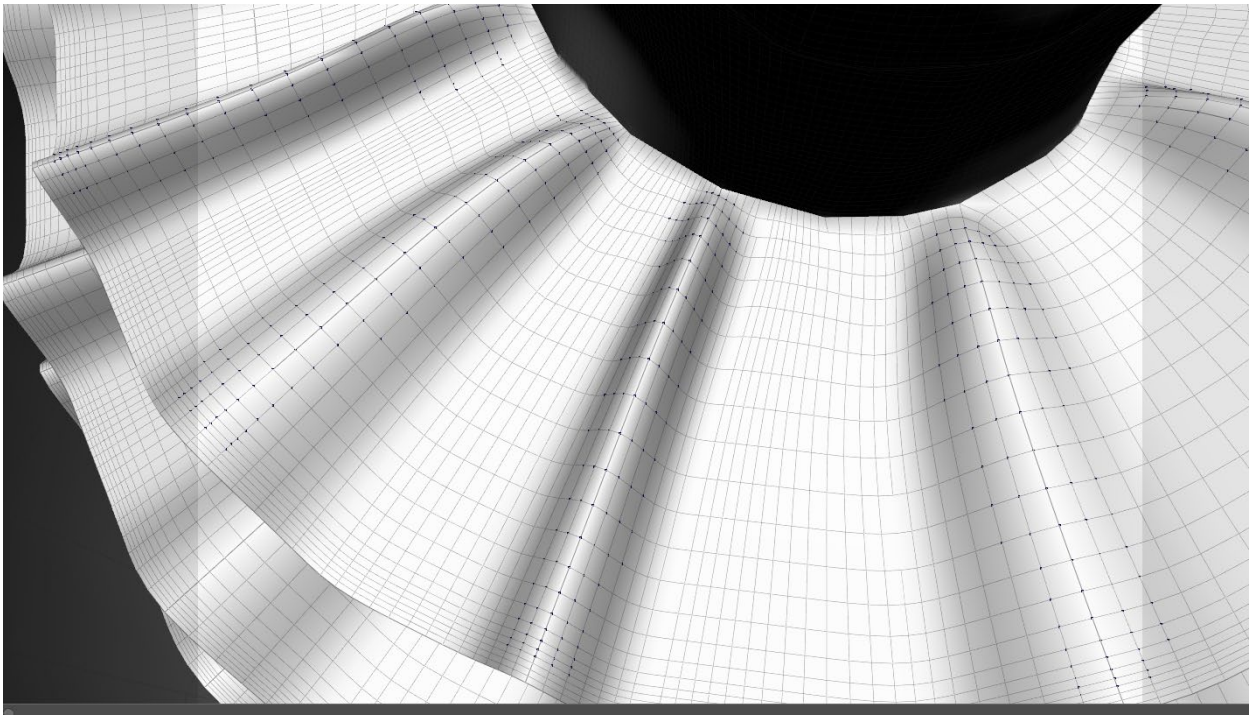
Here is the weight after being painted on. And below is Live Simulation of the Tier with the Default constraint dial set at 1.000.

The other two tiers have not been painted yet.

This is live sim Weight .0050 and constraint dial at .244.

Live sim W .0050 and Dial at .244.

Live Sim W .005 Dials at .464 .452 and .388. This gives a bit of separation between the layers.



This is creating a New Animated Constraint for the Top Tier and using a wide brush Painted a line of weights along the top of the ridges. And below is what that looks like.

The nice thing about Poser Cloth is that the weight maps are stackable. So, you can have one map that is the complete weight of the material area and then make another map to put in highlights to affect only certain parts of the material such as the ridges.

One thing to keep in mind is that the mapping weights need to be in a very low range to allow the dials to have an effect and to allow the cloth to move. Where the old cloth room used friction to try and keep things in place Poser Cloth uses constraints.

Now you may be wondering why I put such meaning on the name of the constraints. One of the things you can do is move the Constraint Target and the cloth part that is attached to that constraint will also move. So, you could move the Target down and that will pull down the overall layer. Or you can move it up and it will rise. After doing most of the pictures I had the thought that in order to keep the Wavey Curve that Tipol likes in the Dress above and which Poser's OLD cloth room creates from the mesh based on how it works and the

fact that Poser 14 works in a different manner which does not flow the cloth in the same way. The best way to get that curve is to create a morph of the dress in Poser 13 after it has been simulated and leaving all the parts at their defaults and bring that morph into Poser 14 and dial the curvy wave prior to the start of the simulation. With the curve in place the Poser Cloth will move with the curve, but it will start a bit lower so by moving the constraint target up the cloth can be pushed back where it should.