

# **ULTIMATE IRAY SKIN MANAGER**

Ultimage Iray Skin Manager is a product made to help you to configure, modify, adapt Iray Skin Settings in the most efficient, easy, and comfortable way.

It is not a tutorial about skin shading, meaning that I will not explain the detailed influence of each dial, but : the organisation of the tabs, of the dials inside the tabs, as well as the save and load options allow you to make very fast your own experience of skin shading and to learn easily the relative influence of the parameters.

A tutorial about skin shading is available separately, but in order to help the beginners :

If you want to change the skin Tone, the best for you is to act on Base Color and Diffuse Strength mainly, Translucency settings a bit, and will very low saturated SSS reflectance Tint (you have to set the Base Color Effect to Scatter and Transmit for this last one). The advanced users will adjust the volume settings to help or obtain the change of the skin tone and volume behaviour. You can also play with the gamma of images.

If you want to change the skin Gloss (Glossy look, shiny, wet, rough, dry..), you have to find in the Gloss/Bump Tab or in the additional Settings Tab the active Gloss mode (this is in general the one for which weight is not null). You have to adjust the roughness - or glossiness - mainly, and eventually slightly the reflectivity for this active Mode. Then re-adjust the corresponding weight and the Base Bump to get closer to the result you want.

Here is the content of this documentation (click on the part you want to reach it) :

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## 1. OBJECTIVES

The purpose of this script is to make you able to **modify, adjust or customize the skin of any figure** (from Generation 4 up to Genesis 8) fast, easily and efficiently. The figures you want to work on must be selected, and they must already use an Iray Uber Shader as their base shader. This product is not a converter, meaning that it supposes that you already work on Iray figures. If these criteria are not respected, the script will inform you of the exact issue.

Even if several figures can be processed simultaneously, **it is more clear for the beginners to process one figure after the other** (knowing that settings can be loaded from one figure to another figure via this interface). Please do NOT select the Genitalia parts of the figure when loading the script, they will be treated separately. In case several figures are selected, the values initially displayed in the interface will be the ones of the latest figure loaded in the scene.

Finally feel free to test and be creative, **you can save** everything you want all along the procedure in text files, **reload** any of these files during the procedure or during another session, and of course you can undo what you did after you close the script.

## 2. INTERFACE OF ULTIMATE IRAY SKIN MANAGER

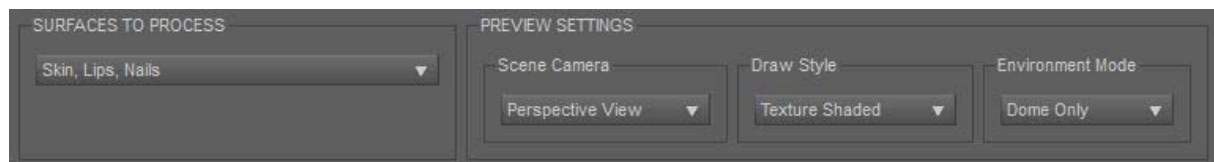
### 2.1 Top of the interface settings

At the top of the interface you will find a push button allowing you to open an information pdf. Your computer must be able to open pdf files.

Just bellow, you can define **on which surfaces you want to work** via a dropdown list "SURFACES TO PROCESS". Each operations you do, except the gamma change which affects image maps themselves and not surfaces, will be processed only on the surfaces you define there. You can choose between the various skin parts (Skin, Lips, Nails, exclude Nails, Skin Only, Nails Only, Lips Only).

Each time you change the destination surfaces via this list, all the values displayed in the interface are updated consequently. For the whole skin ("Skin, Lips Nails", or "Skin, Lips (Excludes Nails)" or "Skin (Exclude Lips And Nails)"), the Torso is taken as the reference surface to display the current values (even if the ones of the Lips and Nails differ). For the Nails only, the Fingernail is taken as the reference surface.

**The Preview Settings**, also on the top of the interface, allow you to change the Camera, Draw Style and Environment mode without leaving the skin management interface.



*Top of the Interface*

The bottom parts of the interface is made of 5 Tabs.



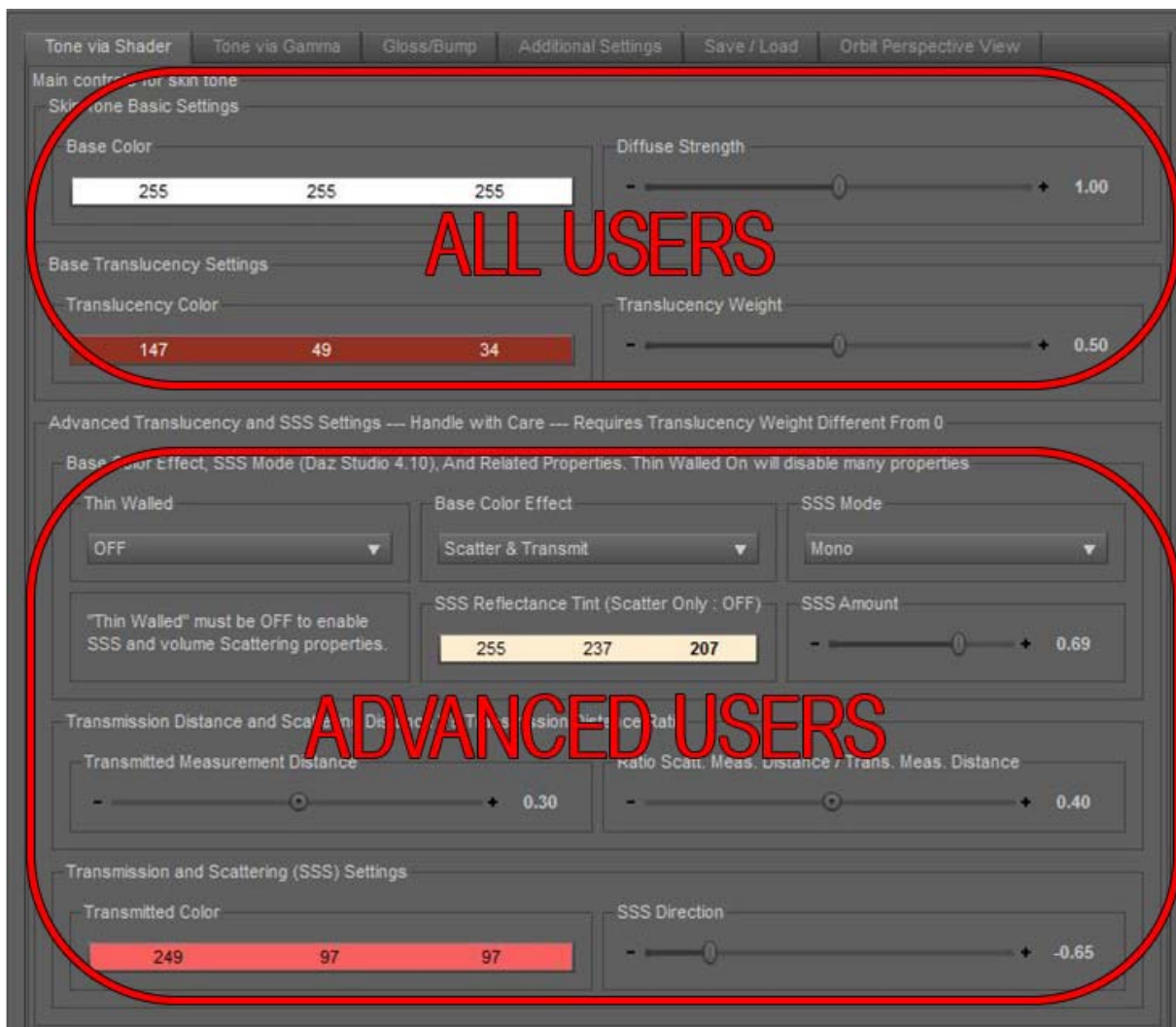
*The five Tabs of the Interface*

## 2.2 Skin Tone Management via Shader and Gamma (two first tabs)

**The two first tabs allow you to work on the skin tone of the figure.**

First via the shader in the first tab (Tone via Shader), where The "Skin Tone Basic Settings" top part of it is recommended to anybody, and the "Advanced Translucency and SSS Settings --- Handle with Care" bottom part of it is more dedicated to advanced users - and even very advanced if you use the Chromatic Mode of the SSS.

The top part roughly defines which proportion of light is reflected by the skin (and with which color - combined with the color maps), and which proportion will enter inside the skin (translucency), as well as this Translucency color.



*The bottom of the Tone via Shader Tab is recommended to advanced users only*

This part of the interface changes with your choices, meaning that as a function of your choices for "Base Color effect", and "SSS Mode", the relevant controls will appear or disappear (the useless drivers are hidden).

Please note that the whole bottom part (the one for advanced users) does not disappear if the Translucency Weight is set to 0, but remember that in this case, all scattering phenomena are disabled. The ratio "Ratio Scat. Meas. Distance / Trans. Meas. Distance" represents the value of the Scattering Measurement distance divided by the transmitted measurement distance. I preferred using this instead of using directly the Scattering Measurement Distance property, because in general it avoids "accidents" when using SSS chromatic Mode.

The interface is very intuitive, and if you are not comfortable with the settings, simply play with the dials, the results are displayed directly in the viewport. You'll sort out the influence of each parameter very fast.

What you have to know is that all the parameters included in the bottom part for advanced users tries to simulate what happens to the light which is transmitted inside the skin. How it scatters more or less back or front (SSS Direction), how it the transmitted light is absorbed when propagating in the material (Transmitted Color and Transmitted Measurement Distance), how the scattered light is absorbed by the material before it goes out, or finishes totally absorbed, mainly via SSS Color, or SSS amount if the SSS Mode is Mono, via the ratio "Ratio Scat. Meas. Distance / Trans. Meas. Distance". This is not the easiest part to set up because all these parameters are closely interlaced.

Finally a little word here for people with an old computer. **In order to preview the result faster**, what you can do during the skin customization process is to set the figure to its lower (Base) resolution (Parameters pane), and to hide everything slowing the rendering (environment, outfit, hair, etc).

**Then you can the skin tone via the Gamma of image maps**, which is a very efficient controller for skin tone and global diffuse (base) aspect via the gamma of the image maps used for the "Base Color" (you can eventually also play with the one for Translucency Color, if they are not the same maps used).

**Please Remember that the Gamma Of images work on Images, not on surfaces**, this is why for a safe use, in the "SURFACES TO PROCESS" dropdown list, you should choose "Skin, Lips, Nails". If, for instance, you wanted to choose "Lips Only", then the gamma of the image map used for the lips would change, but since it is the same image as for the face and the ears, then this change would be visible also on the face and ears. The comment is true if an image is used on different properties. The same way, if different mapped properties used the same image maps (this could be the case for Base Color and Translucency Color), then when you change the gamma of the image for the Base Color images, then, since they are the same ones as the ones used for the Translucency Color, the gamma is changed too for the Translucency Color Image Maps... Normal, since they are the same images.

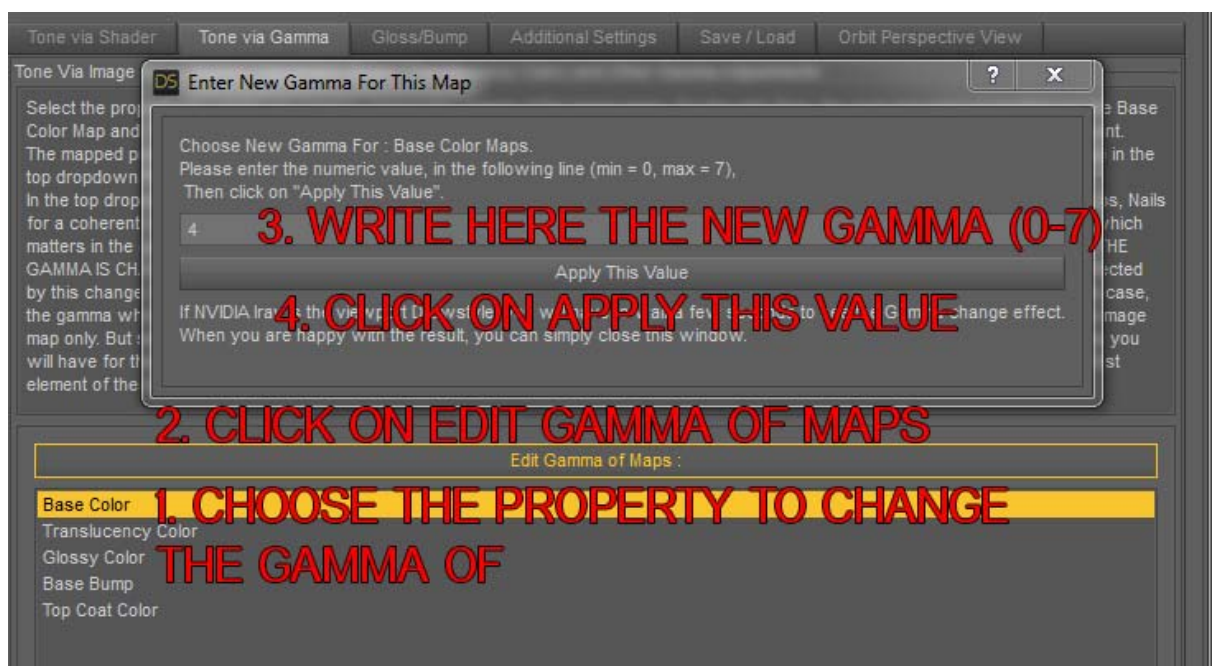
**Changing the gamma of images is a four step procedure :**

- First you have to select the property on which you want to change the gamma (Base Color, Translucency Color, etc)... All the mapped properties for the Torso surface are represented in the list.
- Second you have to click on the "Edit Gamma of Maps" button

- Third, in the pop up window which appears, you have to write in the line dedicated for that the new value you want for the gamma.
- Finally you have to click on "Apply this value". At this stage, this is done and you can close the window.

*Previewing the result in Iray preview mode can take a few seconds (it is more slow than the other modifications you make with the script) because the gamma change seems to trigger a background process (probably to "process" and reload the maps with the new gamma).*

**TAKE CARE :** if, after you close the script, you do "UNDO" in Daz Studio, the gamma change operations will not be taken into account by the "UNDO". This is an undoable operation for Daz Studio. You can still use the script again to change the gamma again, most of the time initial gamma are 0 or 1.



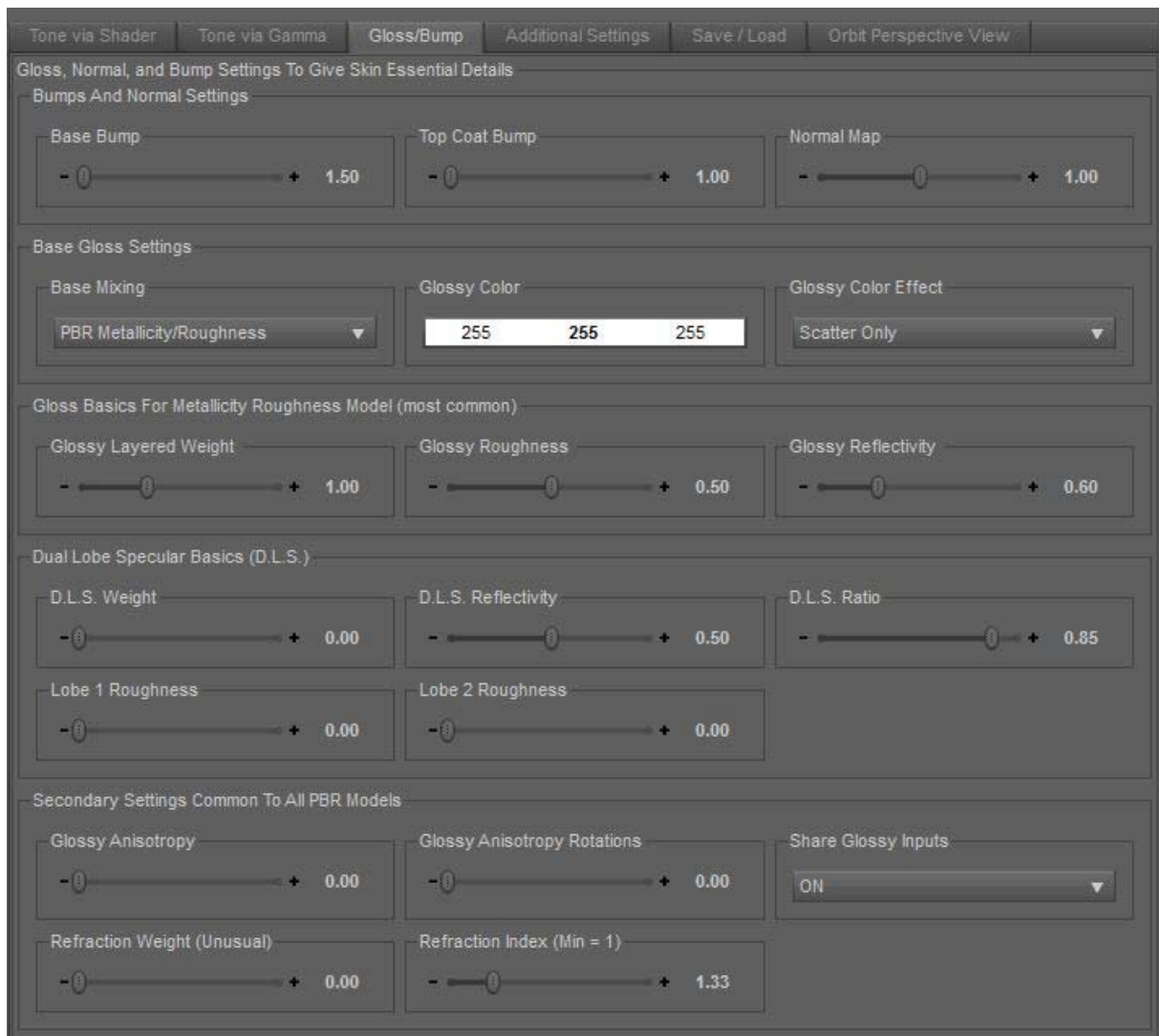
*The 4 steps procedure to change the Gamma*

### 2.3 Gloss and details Management via "Gloss/Bump" and "Additional Settings" Tabs

In the Gloss / Bump Tab you will find the main key drivers to handle the aspect of skin "Glossiness", "Shininess", etc..

In the Gloss/Bump Tab, Bump (Base Bump, Normal, Top Coat Bump) have been placed in the same tab as the Gloss settings because they are closely related in term of gloss details visual perception, which is important in skin realism. Gloss settings will give a different aspect if you have almost no bump and normal details, or if your bump and normal details are very visible. This is why it was more logical to place them in the same tab, at the top of this Gloss/Bump Tab.

In the "Base Gloss Settings" you can change the Base Mixing, which is the PBR model used for rendering. If you are not comfortable with the models, let the Base Mixing as it is. If you want to change it anyway, then the parameters to which you can access in the interface will be updated consequently, meaning that only the parameters available for your choice of PBR mode (Base Mixing) will be displayed. Once again the interface is very intuitive, re-using the parameters already present in the surfaces editor tab, but organizing to optimize your workflow, and the speed with which you can reach the result you want. Glossy Color, except for fantasy or alien skins, or special effects should be left white.



*The Bump And Gloss Setting Tab*

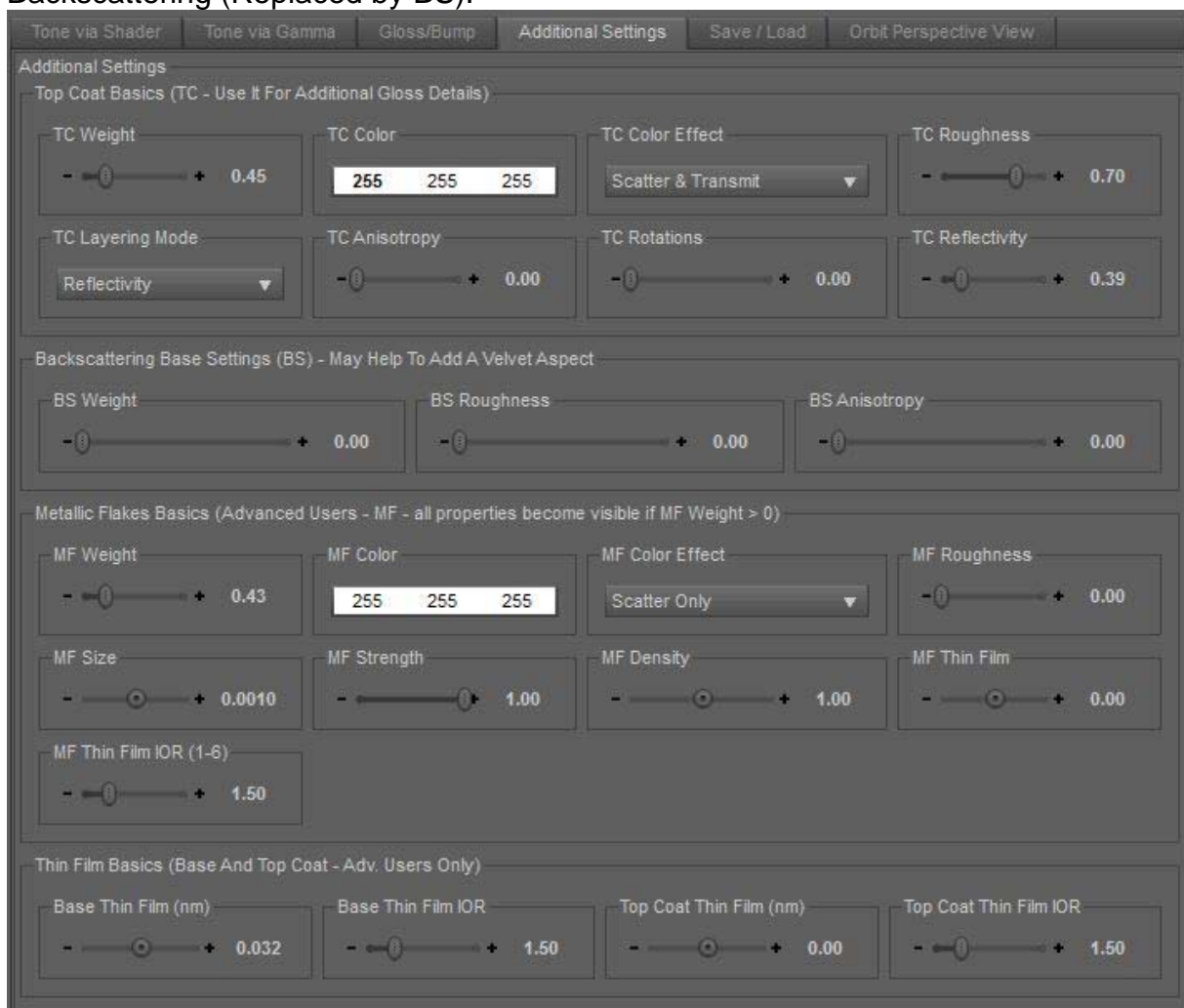
A button to remove the limits of the Glossy Layered Weight, the Top Coat Weight, the Dual Lobe Specular Weight and the Metallic Flakes Weight has been added at the bottom of the Gloss/Bump Tab.

As soon as you change one of the settings, the result is displayed immediately in the viewport.

At the bottom of this Gloss/Bump Tab, you will find secondary settings common to all PBR models : Glossy anisotropy and rotations, Share Glossy Inputs (OFF opens a few more properties - Refraction Color and Roughness/Glossiness in the Gloss / Bump Tab and Backscattering Color in the "Additional Settings" Tab - but is not especially required or usual), and refraction Weight. Refraction Weight and Index have been made available, even if it is not recommended to change them, unless you know what you are doing.

In the **Additional Settings Tab**, you will find the main key drivers to the eventual **Top Coat and Backscattering** effects you would like to add to the skin (at the exception of the Top Coat Bump being in the Gloss/Bump Tab). The top coat, well named, can be used to add a "Top Coat" above the skin, very efficient for special effects or for the skin "oil layer". The backscattering settings - on the contrary - can be used to add some "velvet effect" to the skin.

The Top Coat controls are at the top of this Tab and adapt to the choices you make in term of PBR model (Gloss/Bump Tab) and of Top Coat Layering Mode. All parameters for the Top Coat are the same as the ones you know in the surfaces pane, except that the name "Top Coat" has been replaced by "TC". It is the same for Backscattering (Replaced by BS).



*The Additional Settings Tab*



Bellow Top Coat and Backscattering you will find two additional possible controls for skin shading. They are not often used, but sometimes they are.

The first one is the **Metallic Flakes**. If the Metallic Flakes weight is properly mapped and/or set up, it can be an interesting - even if non physical - feature to add a kind of noisy glossy specular effect above the skin. Since it is a pretty unusually used property, all the secondary properties of Metallic Flakes will appear only if its Weight is positive.

The second one includes **the Base and Top Coat Thin Films**. *It is not recommended to set up a skin using them, yet you may need to use them if you edit some existing skin using these features.*

**Unless you know exactly what you are doing, avoid touching Metallic Flakes and Thin Film settings.**

## 2.4 The Save/Load Tab and advantages of the Save and Load function

This Tab allows you to save and reload skin configurations, partially or totally thanks to checklists grouping and identifying the properties you want to save and to reload. The configurations are saved in text files where you want on your computer (the latest path used is remembered from one session to another), and can be loaded (once again the latest path is proposed as the default one to gain a maximum of time) partially or totally thanks to the same checklist.

**When you save such a skin configuration text file**, the properties are saved for Lips, Nails and Body whatever the choice you make in the dropdown list "SURFACES TO PROCESS" (top left of the interface), except for the gamma for images which is save by property (Base Color, etc, etc). You are not forced to modify a figure to save them. If you want to transfer the property settings included in this script to another figure, simply select the first figure, run this save part of the script, and close the script, then select the second figure, run the load part of the script (load the file you just saved).

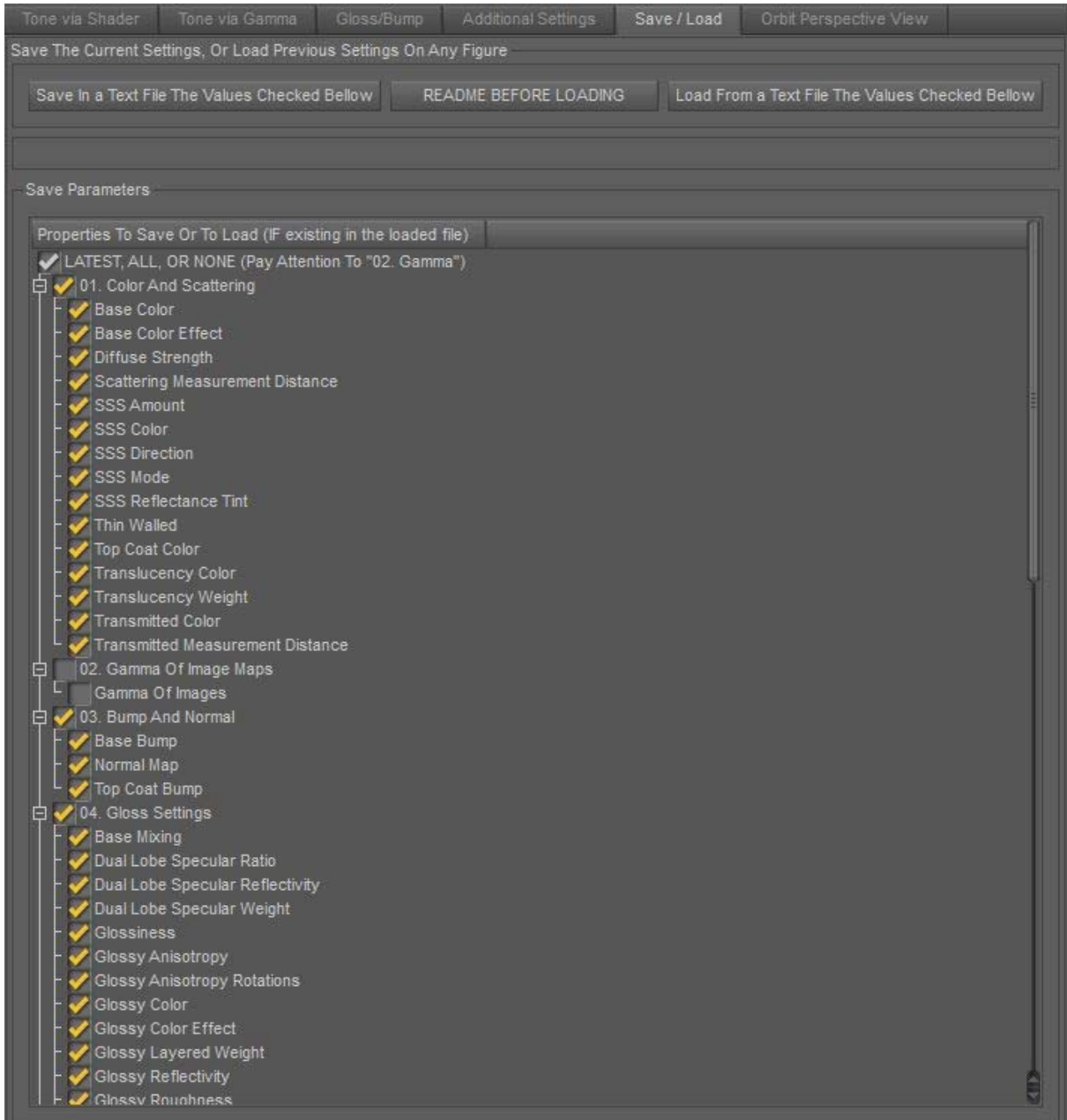
**When you load such a skin configuration text file**, the properties are loaded only for the surfaces you choose in the "SURFACES TO PROCESS", meaning that if you choose Lips Only, only the lips properties will be loaded, and if you choose for instance Skin, Lips, Nails, everything will be loaded from the text file. Of course, if one or several of the properties you select for the load operation were not saved in the text file (do not exist in the text file because you chose not to save it), nothing will be loaded.

The only difference is for the gamma of images, for which every gamma for every mapped property saved is automatically reloaded, there is no specific options for you, you save and load it all, or you don't do it at all. Take also care with the gamma reload, if for instance, you saved the gamma settings on a figure which had different image maps, and different gamma values for these images on two properties (for instance Base Color and Translucency Color). If you reload it on a figure which, on the contrary, uses the same image maps for the Base Color and the Translucency Color, then the gamma loaded will be the gamma saved for the image maps of the last mapped property (in the order of appearance in the Surfaces Editor). In this example the gamma would be the one saved for the Translucency Color (indeed the script would first apply on the image the gamma saved for the Base Color, then, for

this same image, since this image is also used for the Translucency Color, the gamma saved for the Translucency Color).

In brief, *the gamma applied to an image is the same for all the surfaces and mapped properties sharing this image.*

Saving and reloading a gamma has to be handled with care this is why a button displaying a pdf (README BEFORE LOADING) is available and that the Gamma of Images option is not checked by default.



*The Save / Load Tab*

The options provided by the Save Load Tab of the interface are particularly interesting for several reasons :

- At any moment when you customize a skin, you can save a configuration that you like without leaving the interface.
- You can save by group : only the color settings if you like them, but you don't like the gloss, or inversely.
- You can load what you saved on any figure, meaning that if you worked with a Genesis 8 figure, you can save the settings in a text file, close the script, select a Genesis 2 figure, and load the same settings. This is a great help to transfer the skin properties from one figure to another figure. Yet you have to take care of what are the mapped properties. For instance : if your Genesis 8 figure uses the Dual Lobe Specular properties for the Gloss, then the Dual Lobe Specular Weight will probably be mapped. But it will not necessarily be the case for your Genesis 2 figure, which might result in a really to high and uniform gloss.  
In this case for the Genesis 2 figure you will probably have to copy the Glossy Layered Weight maps to the Dual Lobe Specular Weight. The product "Map Manager" I created can help to do this very rapidly, but of course you can also do it manually, or if you prefer to keep the initial gloss settings of the Genesis 2 figure, you can load only the Color and Gamma settings on your new figure.
- You can use the load to make more "uniform" the shaders used between various figures in your scene. If the figures use the same type of PBR and of gloss, you can load all. Otherwise you can either load only the color, bump, and gamma settings (beginners) or you can transfer the gloss maps to the right properties, and load all parameters.

Warning 1 : if you transfer the properties between different figures take care that the since the image maps used for the figures may be very different, the visual result may be very different.

Warning 2 : there is a limit issue. If you saved the values for a figure which has no or very high limits on some of its properties and that you reload it on a figure which has initially lower limits for a property, then the limits applied for this property will be the limits used by the script interface.

## 2.5 Orbit perspective view

When you set up a shader, it is interesting to be able to see your model with different angle of view. This is why the "Orbit Perspective View" Tab has been added to the interface, this way you can change the angle of view directly in the script.

If you were using another camera in the viewport, clicking on any control on this area will swap the viewport from "camera" to perspective view. Selecting an item in the list will then aim the perspective view on this item.

Changing the selection area will make the camera "jump and aim" at the new node, keeping the same latitude, longitude, and radius as the ones used for the previous selected Node.

When you open the script, if you had one or several nodes selected in your scene : only one of the selected nodes will be set as the current selection.

Remark : the selection Area is a bit "sticky" : once you click on it, to select a new node or not, it will close only if you move the mouse out of its area.

The figures in the Select Orbit Node list can be expanded (manually), so that for instance you reach the face of the model you want to see (or any specific area of the body you want to see).

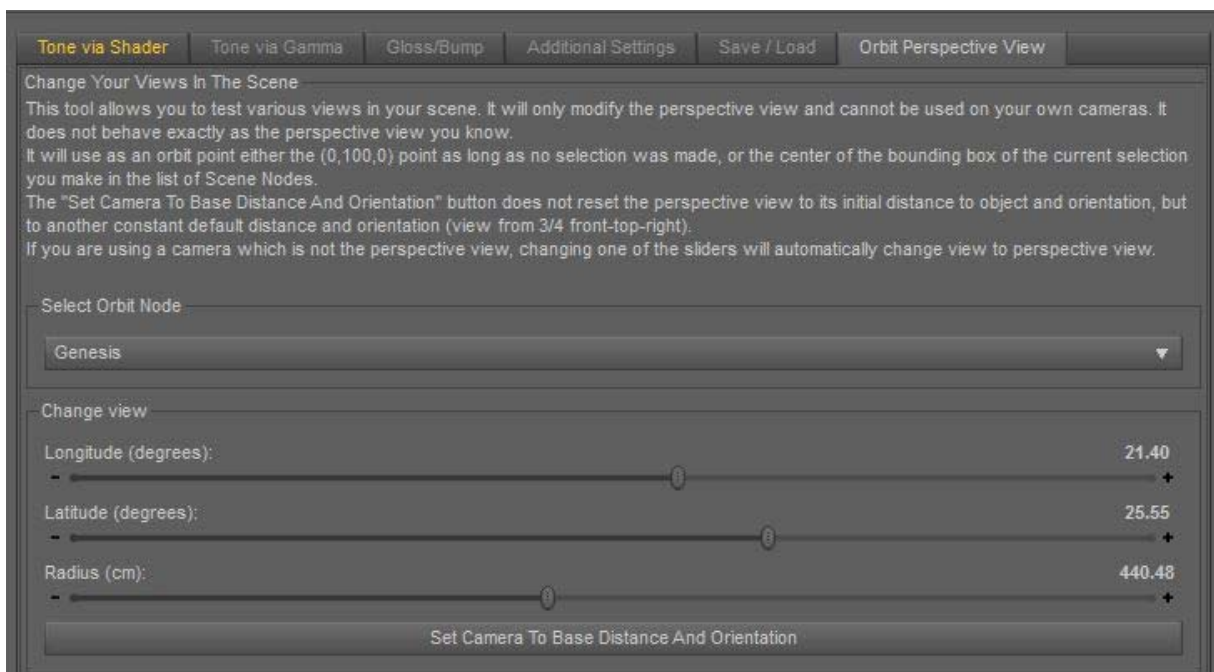
**The controls you will find for the perspective view are :**

*Longitude* : you can rotate the perspective view front-right-back-left around the selected Node.

*Latitude* : you can rotate the perspective view front-top-back-bottom around the selected Node

*Radius* : you can move the perspective view closer or further from the selected Node.

*Set Camera to Base Distance and Orientation* : Set the perspective view to the settings Longitude : 25.55, Latitude : 21.40, Radius : 440.48, still framing the selected Node. This is simply here to help you to reach "secure settings" in case you get lost, or to initialize the dials.



### *The Orbit Perspective View Tab*

Once done, remember that at the top of the interface, you can come back to any other user camera you have created.

### 3. LOAD SAVED SETTINGS ON GENITALIA SCRIPT

Once you have finished to set up a skin, you can transfer the new parameters to the genitalia part of the figure very easily.

For this :

1. save all the settings of the skin properties using the Save utility of the Ultimate Iray Skin Manager script (the figure must be selected when you do that, which is the case if you do it while you configure the base skin of it), and close this script.
2. Then select the genitalia in the scene tab, and only the Genitalia, and run the standalone script "Load Saved Settings On Genitalia".

This way, all the modifications you made to the base skin using "Ultimate Iray Skin Manager", all the properties available in this script, will be transferred from the main figure to its Genitalia surfaces.

Once the base settings are the same, what is important to have a nice harmony between the figure and its Genitalia parts is that the mapped slots must be the same. If the figure is well made, it will be the case.

Please note that this script does not identifies if the element you select is a Genitalia or not, and is basically made to support a given list of surfaces : "2\_SkinGenitalia", "2\_SkinHip", "Genitalia", "Gen\_Skin", "Glans", "Invis", "Pubic\_Hair", "Hips", which are the surfaces used by the traditional Genitalia provided by Daz. If you are using another Genitalia or Geograft product, you can rename its surfaces so that each of them match one element of the list. You can do this in the Tool settings Tab / Geometry editor / Surfaces / double click on the name you want to change and replace the previous name by a new name for the surface which you will pick up in the list I just mention. You can then Load the saved settings, even if it is not on classical Genitalia surfaces.

### 4. CONCLUSION

This tool will not only help you to gain time when you set up or adjust a skin, it will also give to you a clear overview of all the important parameters, so that you can think the skin "Globally", instead of searching parameters in the Surfaces Editor Tab. Seeing things more cleanly and in a more compact way, you will probably make progress in setting up a skin shader very rapidly. In case you need help, you can contact me directly on Daz Forum in the commercial section, on the thread dedicated to this product.

If you need more inputs about how to shade a skin, a tutorial on the subject is also available.

So, have fun, be creative and... Render!