Photo Studio 3 User Guide

Glossary

Key Light: The name given by photographers and cinematographers to the light that they are using as the main or primary light in the scene.

Fill Light: Fill lights represent secondary, lesser sources of light or light reflected (bounced) off of other objects in the scene(walls, buildings etc.)It is used to open up very dark shadows and even out the key light.

Back Light: Originally called a 'Hair Light' it was designed to help the viewer differentiate the edges of a dark subject from a dark background in B&W photography and film, or to separate the subject from the background.

Accent Light: An accent light is secondary source of light that is generally used to add a hint of color to a scene or to soften the overall lighting.

Gel Light: A spotlight that is passed through an object (a piece of colored glass or cut out template, etc.) so that the light takes on the special characteristics of the object it passes through. Due to the nature of the light created by the Uber Area Light the textures used as gels need to be negatives.

Broad Light: An unfocused source of light with a wide beam spread. It adds light to a broad area in your scene. It has softer shadows than the spotlight but not as soft as a soft box.

Soft Box: An area light designed to give soft shadows and little highlights

Beauty Dish: A blended light that that is less intense than the broad light or soft box with softer shadows and smaller highlights

Ring Light: A very soft source of light that creates very diffuse shadows. The shadows this light creates are very diffuse and low intensity. It is typically used as an accent light.

Spotlight: A light focused into a narrow beam allowing you to add light to only a specific area. It has sharper shadows and more intense highlights than any other type of light in the set. The size (small/large) refers to the width of the beam.

Mesh Light: A generic term used in 3D for a light source that is created from a bit of geometry or an object that generates light itself. In Daz Studio 3+ any surface can be turned into source of light by using the built in Uber Area Light shader. Unlike the other default lights in DS, mesh lights are affected by other objects in the scene, and can be blocked by things like walls or floors.

Headlight Blocker: Normally when you add a light to Daz Studio the program automatically turns off the default lighting. DAZ Studio doesn't see a mesh light as a 'light' so it doesn't automatically turn

the default lighting off. A headlight blocker in the scene is used to turn the default lights off. Each light rig and each individual light loads up with a headlamp blocker, but only one is needed in a scene. You can safely delete any redundant headlight blockers if you want to clean up your scene tab.

Light Rig: A generic term used to mean all of the artificial lighting a photographer is using in a scene. In Photo Studio it is a set of mesh lights rigged together into one (mostly invisible) movable, pose-able figure.

Geometry Switching: The ability to switch a part or all of a figure's base geometry with a different shape. In Photo Studio 3 geometry switching allows you to switch the types of lights used in each of the light rigs, for example a spotlight can be changed into a broad light without effecting the light's position or intensity.

Lights in Photo Studio 3

Overview: Photo Studio 3 uses mesh lights rigged together into a pose-able figure. The position of the entire light rig, or individual lights can be moved by using sliders in the parameters tab. Adjusting the settings of the lights (color, light intensity, shadow intensity, and shadow samples etc.) is done in the surfaces tab. Each surface is named to match the name of the light. Presets are included for the most common adjustments and to be used as a starting point.

Each light rig set is a figure just like V4 or Genesis. The biggest difference is that the main body of the figure is actually invisible making it somewhat harder to visualize it as one cohesive figure. The structure of the figure is that each of the four lights in the rig is attached to its own 'arm'. The four arms are all joined together at the center point of the light rig (marked by the 'C' light pointer). Each arm can be moved up/down or side/side moving the light around the center point while the surface of the light remains facing towards the center. There is also a zoom in/out option allowing you to move the light closer or further away from your scene. This can be very helpful if your scenery if interfering with your light's line of sight or if you want to increase/decrease the width of a spotlight's beam. At the far end of each arm is a 'hand' bone that the mesh light is actually attached to. Rotating the 'hand' bone allows you to change the facing of the light while still maintaining the lights physical position relative to the rest of the scene. The arm/hand bones are named to match the name of the light they control. Example: the key light's arm bone is named 'Key Light' while the 'hand' is named 'Key', the back light's 'arm' bone is named 'Back Light' while the 'hand' is named 'Back'

Geometry Switching: Geometry switching gives us the ability to instantly change any of lights into another type of light (broad light, spotlight etc.), thereby changing the overall quality of light in your scene. The geometry switching option is located on the parameters tab when you have one of the light "bones" selected in your scene tab. Geometry switching does not change any previously made adjustments like color or light intensity. DS3 and 4 save figures using geometry switching differently. That is why there are versions for each. If you load up the DS3 version in DS4 it will work just fine but all the lights default to Broad lights instead of being a default set of mixed lights as intended.

Turning Lights On/Off: You can turn a light off by selecting 'default shape' on the Geometry Switching tab. Turn back on by selecting a type of light. Turning a light off will prevent it from casting light into the scene and also make it invisible to the camera. In DS3 the list says the actual name of the bone instead of 'default shape'.

Poses: Each light rig has a folder of positioning poses which moves multiple lights at once. Because of the differences in bone names each light set has its own unique set of poses. The poses are meant to be initial starting points, not hard & fast settings. Depending on your scene, each light's position may need to be tweaked to get the best possible results.

Intensities: Poses to adjust the overall intensity of each set. Key-Fill Ratios: 2 to 1 means the key light is twice as strong as the fill light, 8 to 1 key is 8 times stronger than fill etc. There are also presets that allow you to adjust the overall intensity in 10% increments while maintaining the overall key-fill ratio. The presets adjust all of the lights in the scene at once but you can also adjust each light individually in the surfaces tab.

Colors: The colors folder has presets to change all of the lights in a scene at once, or each light individually. The default mat resets back to the original set up of white lights with an orange tint on the accent light.

Visibility: The visibility settings make the mesh of the lights invisible to the camera so they will not show up in renders, but they will still project light into the scene.

NOTE ABOUT SPOTLIGHTS AND GEL LIGHTS: The shape and focus of the light emitted from the spotlights is determined by the shape of the shell. Turning the shell invisible on the spotlights will un-focus and scatter the light making it behave more like a broad light. Gel lights are completely dependent upon their shell being visible in order to project the light through the gel image. Make sure spotlights or gel lights are not in the camera view or they will show up in the final render.

Gel Light: The basic gel light uses a simple white light. The tri-color gel light uses a blending of three primary colored (RBG) lights to create a beautifully blended full spectrum light in the center of the light's beam. Along the edge of the gel light's beam the tri-colored light starts to separate into its component colors as the light fades away.

Quality Settings: The quality settings change the number of shadow samples each light uses. Lower numbers give a grainier look to the edges of your shadows but renders faster. Higher samples give you a better gradient between light & shadow but will increase your render times. The default setting is a compromise between quality & render times. The presets adjust all of the lights in the scene but you can also adjust each light individually in the surfaces tab.

Shadow Intensity: Shadow intensity adjusts how dark your shadows are in a scene. Default setting is 100%. Lowering the shadow intensity lightens the shadows and, in effect, lightens the overall lighting in your scene. The presets adjust all of the lights together but you can also adjust each light individually. Adjusting the shadow intensity on a gel light can greatly impact how much the gel affects your scene.

X1 Light Set: Set X1 contains a standard 3 point lighting set up (key, fill and back) with the addition of an accent light. In its default setting the accent light is colored orange. Default lights are a large spotlight as the key light, a ring light as the accent, a soft box as the fill and a broad light for the back light. This set is fully compatible with all the presets from the original Photo studio and all of the presets for this set will also work on all of the original Photo Studio light rigs (#1-3).

X2 Light Set: This set contains two key lights, plus a fill and back light. Generally adds a bit of a more dramatic flair than X1. Default lights are large spotlights for the 2 key lights, a soft box and broad light as the fill and back lights. This set is fully compatible with all the presets from Twin Key light rigs in Photo Studio 2 and all of the presets for this set will also work on all of the Twin Key Photo Studio light rigs (#4-6).

X3 Light Set: This set contains one key light, two fills and a back light. Default lights are a Large Spotlights for the Key, two Soft boxes for the Fills and Broad light as the Back light. This set is fully compatible with all the presets from Twin Fill light rigs in Photo Studio 2 and all of the presets for this set will also work on all of the Twin Fill Photo Studio light rigs (#7-9).

X4 Light Set: This set has one Gel Light, two fill lights and a back light. Built off set X3 this set is fully compatible with all the presets for X3 and from Twin Fill light rigs in Photo Studio 2 and all of the presets for this set will also work on all of the Twin Fill Photo Studio light rigs (#7-9).

Individual Lights: You can use the individual lights in combination with the other light rigs or you can try building your own setups. You have access to: broad light, beauty dish, ring light, soft box, small spotlight and large spotlights.

Render Notes: Generally, when using any of the Photo Studio lights your render times are going to be longer than when using the standard default DS lighting. Ultimately, getting high quality renders takes time. In building these lights we've done everything possible to get you the best possible results in the least amount of time. Obviously, I think the results are well worth the extra time it takes to get them.

The whole idea behind the whole Photo Studio project has always been to give people a set or sets of lights that they can customize into the lighting solution you need it to be in the scene you're designing. All the poses and presets are meant to be starting points. Simply moving a light by as little as one or two degrees can make a dramatic difference.

Test render. The best advice I can give you to maximize your render times is to run lots of test renders to see if you're lights and shadows are where and how you want them. First, turn off anything that is heavily trans-mapped (like hair). Trans-mapped objects are the biggest drain on your render times. Set your render size to something small like 400x400 and set the light rig's quality setting to draft. When you are happy with where the light and shadows are falling on your figure, then increase the render size and quality settings.