HINTS & TIPS PAGES

Presenting 'Longitude & Latitude', a Lighting & Render Settings Package for Daz Studio Iray.

In this package you will find a large selection of Render Setting Presets, Gobo Lights and Emissive Lights. They can be used on their own or together for more complex scenes.

The Render Setting Presets included in this package, use one of the four Environment Modes within DAZ Studio's Iray Render Engine Panel. The Iray Engine has four Environment Modes; Dome and Scene, Dome Only, Sun-Sky Only and Scene Only. In this set it focuses on the 'Sun-Sky Only' setting. How does the Sun-Sky Only setting work? Well, it works by using Longitude and Latitude, the day/month/year, time of day, and offset of time ,depending on which country you're wanting your scene to be based. Using this method adds a more accurate and realistic lighting method.

SUN-SKY ONLY SETTINGS EXPLAINED.

The Earth is split into lines called Longitude and Latitude. Latitude is the measurement in degrees, of a place's distance North or South of the Equator. Longitude is the angular distance of a place East or West of the Greenwich Meridian. The Greenwich Meridian originates in Greenwich, London, UK. So you use this as your central point on the map whenever you calculate your Longitude. To calculate the central point of the Latitude use the position of the Equator. If you ever want the accurate measurements for a locations L&L, you can easily Google it and you'll be given the accurate coordinates for your render settings. The most important thing to remember is if your location is South of the Equator. Input it into DAZ Studio with a negative value and do the same if your location is West of the Meridian.

A useful thing to remember is that the Latitude of the Earth is split into four sections. The 'Artic Circle - 66.5 degrees', 'Tropic of Cancer - 23.5 degrees', 'Tropic of Capricorn - Negative 23.5 degrees', and 'Antartic Circle - Negative 66.5 degrees'. South of the Equator will also negatively mirror the North.

The Longitude of the Earth goes in progressive 15 degree sections from the Central Greenwich Meridian which starts at 0. So, if you wanted your lighting in London, you'd set your Longitude in DAZ Studio at Zero as the UK falls on that central Meridian line. Then you would input your Latitude by working up from the Equator. Londons' Latitude falls at about 50 degrees North. You can easily work it out by the images supplied on google. Simply search for 'longitude and latitude of earth' and it'll bring up an accurate diagram. Please REMEMBER most diagrams will not show the negative values. So if you decide to go West of the Meridian and South of the Equator, remember to turn the value into a negative.

You can study the presets provided to get a better understanding of the settings. It may seem daunting at first, but it is pretty simple once you've done it a few times. Don't worry about remembering the settings for each country or city as they're all there at your disposal online.

LONGITUDE & LATITUDE

IRAY RENDER PRESETS & LIGHTING

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SS UTC Offset (hrs).

The UTC Offset is a very important setting as this will set the timezone of your location. Time zones on the Earth start from GMT which is Greenwich Mean time. UTC and GMT are the same thing really, but UTC doesn't adopt Daylight Savings Time. This hasn't anything to do with how it operates in DAZ Studio. I just thought i'd mention it.

Once you have calculated your chosen locations' L&L, you need to determine how many hours behind or ahead of GMT/UTC it is. For example, if you wanted to pop your location as Central Australia. Australia is 9 and a half hours ahead of the UK. So since you are going East of the Greenwich Meridian, you'd pop your time in as a positive value. So your UTC offset would be 9.30. If you wanted to go West of Greenwich to Mexico, you'd pop your offset time at -7. As Central Mexico is 7 hours behind the UK. A useful website for time zones is ***http://www.timeanddate.com/time/map/***

SS Day

The Date input is rather simple and is in a ***day/month/year*** *format. You can have alot of fun with this, and I really like the idea of being able to change the year to any year in the future or past and the software will try and calculate the light source.*

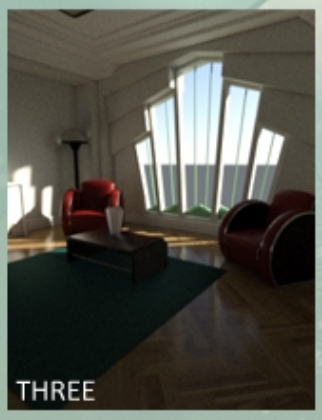
SS Time

The Clock time in DAZ Studio to set the time of day is a 24hr clock (Military Time), with hours, minutes and seconds. So you can be as accurate with your time for the location as you want to be. Here's a table showing the times of day in Military Time for your personal use.

Normal Time	Military Time	Normal Time	Military Time
12:00 AM	0000	12:00 PM	1200
1:00 AM	0100	1:00 PM	1300
2:00 AM	0200	2:00 PM	1400
3:00 AM	0300	3:00 PM	1500
4:00 AM	0400	4:00 PM	1600
5:00 AM	0500	5:00 PM	1700
6:00 AM	0600	6:00 PM	1800
7:00 AM	0700	7:00 PM	1900
8:00 AM	0800	8:00 PM	2000
9:00 AM	0900	9:00 PM	2100
10:00 AM	1000	10:00 PM	2200
11:00 AM	1100	11:00 PM	2300

SS Sun Disk Intensity

This is pretty simple. It controls the intensity/exposure of the sunlight in a false way. In its default state it is always set to an intensity of 1. Below you can see a render in its default set, and another with the setting to 3, and 10. A subtle number change can yield drastic results.



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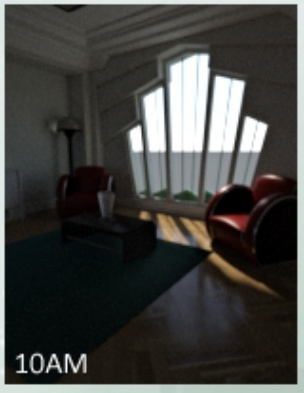
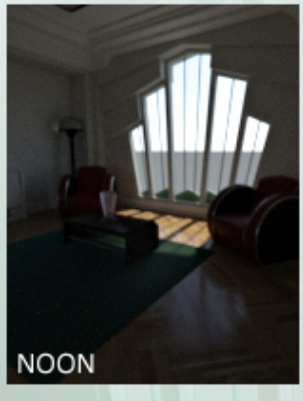
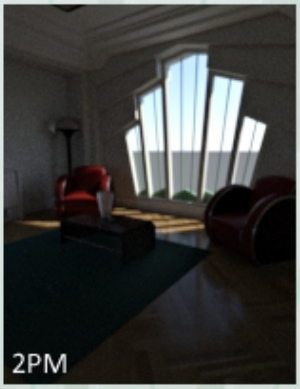
Lighting can be changed by several factors: Date, Month (Season), Time and position on the planet. Below are a few examples and how they can transform lighting.

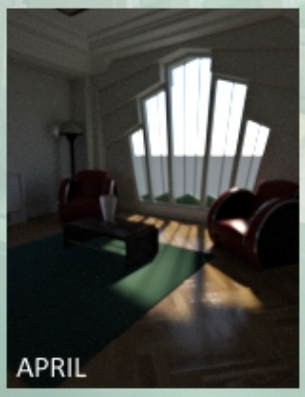
TIME of DAY - Latitude 51.50, Longitude 0.10, North East England. 24/08/2015.

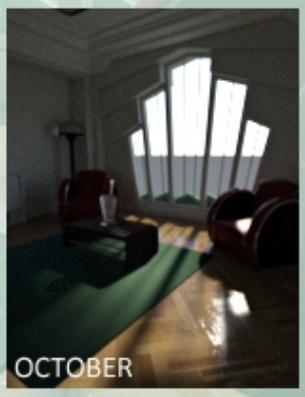


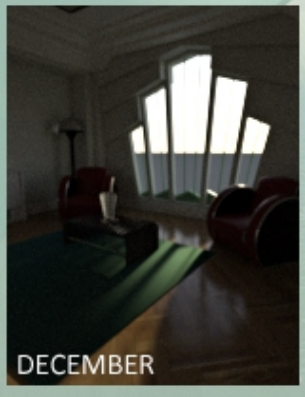




MONTH/SEASON - Latitude 51.50, Longitude 0.10, North East England. 11AM







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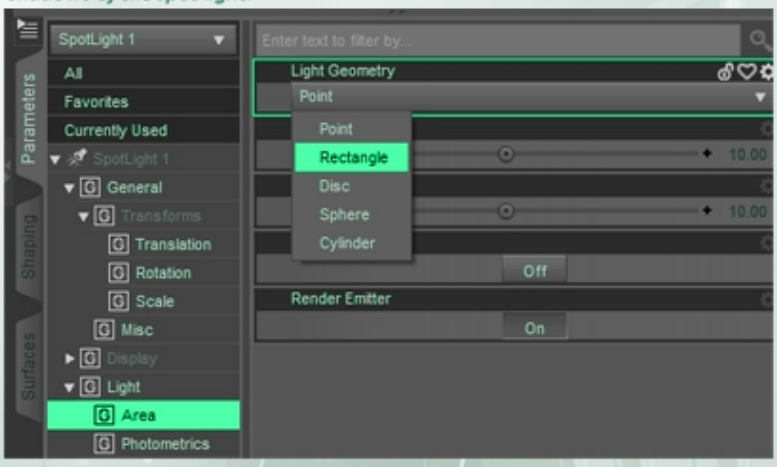
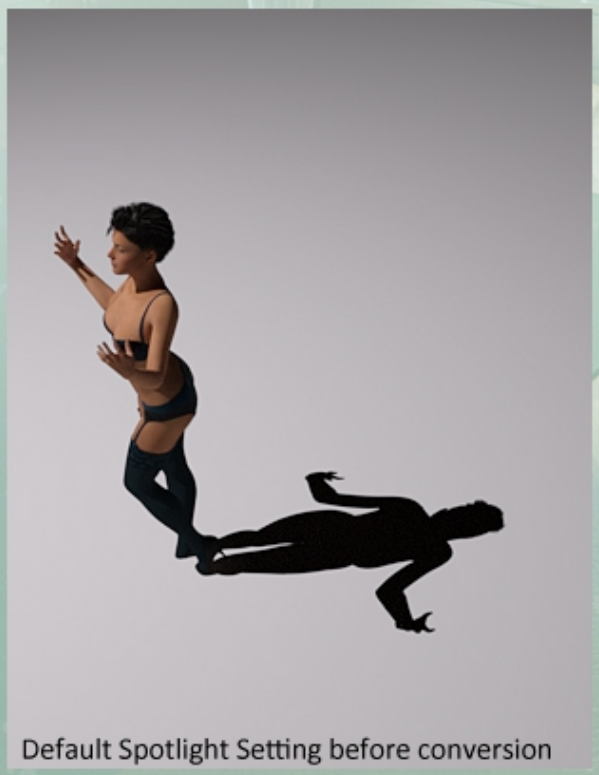
Spot Lights Explained.... (for when you use the tree gobo lights)

In Iray, you cannot just use a normal spot light as you will have very very harsh shadows. What you need to do is to go into the Spot Light settings, area light and change the lighting geometry from 'point' to 'rectangle' as shown below. This will allow you to control the shadows of the spot light.



To control the strength of the shadows use the two sliders below called 'height diameter' and 'width'. The smaller the number the more refined/strong the shadows will be.

Examples



Default Spotlight Setting before conversion

35 height & width

100 height & width

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Spot Lights Explained.... (for when you use the tree gobo lights)

So naturally when you are using your tree gobo lights the settings of the spot light will also change the shadows of the projected gobo. The sharpeness of the shadows and strength also determs on their distance away from the object you are pointing them at. So please be aware.

See the examples below....

Both Dials set to 5

Both Dials set to 25

Both Dials set to 50

You can also control the scale of the gobo image and shadows sharpness of the tree branches by moving the gel plane closer to the object you want to project the shadows onto. Do this by using the Z axis dial in the parameters. Remember to only move the gel plane, and not the lightsource.

Another way to change the scale of the gobo image is to change how many times it tiles on the plane, under the surfaces tab. Doing this will repeat the pattern and make it smaller. It's not always the best way for large scenes but works a treat for portraits.

Close

Far

Please remember that the closer the plane the more light will bounce around so the shadows wont be as dark, but will be more refined.

Alot of factors can change the way lighting & shadows behave. I hope this small hints/tips page has been helpful. Any other questions, don't hesitate to contact me on the DAZ Forum via Private Message.