

Transcript for video "USING IBL Part 1"

This is a two-part video. The first part explains the controls of the IBL Tab, the second part shows four scenes, how the IB Light was set up — and why. Those already comfortable with the IBL Tab may want to skip this first part.

Let's go through all controls in this lab. To load an HDRI, select Use HDRI Image and click on Load and select the HDRI from your collection. We can also use the Sky instead, but that option has stuff for another video.

The Preview shows the light probe and above it, the name of the probe loaded. To the right, we select Render in Scene to see how the scene is lit.

Quality is the number of lights created from the HDRI and the more there are, the longer the render will take — approximately for each step, render time will double. The preview always shows it with the lowest Quality, no matter how the Quality is set.

Intensity controls the brightness of the background, if Use HDRI as backdrop is enabled (as it is here). Unfortunately, it also affects the light emitted by the HDRI.

The main control for the light intensity of the HDRI is controlled with HDRI-Effect. Its effect can only be seen on an object receiving light from the HDRI. We can set how the light falls off with distance like we can do this for conventional Bryce light sources in the Light Lab. No Falloff means that the light has the same brightness near the source as it has very far away from it. Linear makes the light becoming darker the farther away it is from the source, and Square makes the light intensity exhaust even faster. The Radius control sets the virtual distance of the light source. Obviously, if the Radius is small, the light has less time to fall off until it hits an object than if the Radius is larger.

Saturation controls the colour saturation of the light emitted by the HDRI. The effect can only be seen on an object lit by the HDRI.

We also have controls to position the HDRI so it suits the scene and gives the light desired. This is very practical. The HDRI can be positioned by dragging the roller ball. It will move Yaw and Pitch only. Holding down the ctrl and alt key restricts motion to Yaw. Roll can only be adjusted using the numerical field.

Then, the light from the HDRI can also cast shadows, if we wish. Keep in mind that Sun/Moon Shadows is a master control that should be set to 100 to have the full range for the Intensity control here. Softness makes the transitions between light and shadow soft and if set higher than 0, you are in for a long render. For scene development, set Quality to 16 and Shadow Softness to 0.

Backdrop DOF — depth of field — has only an effect if the HDRI is rendered as backdrop and DOF is engaged in the Premium render options. The blurriness of the backdrop can be adjusted to fit the blurriness of the objects.

Then, there are two fancy things. One is The Light from Inside. If Light from Inside is enabled, the HDRI is on a tiny, invisible sphere at world centre and casts the light outwards into the scene. The HDRI can still be rendered as backdrop, but that one does not emit any light. All light comes from the inside. The controls for the brightness and saturation work the same way, so there is nothing additional to learn. To make light penetrate an object without making it transparent, Self Shadows in the Materials Lab must be disabled.

The other fancy thing is Specular Map. It makes the HDRI very blurred indeed so it can be used as a reflection map. IBL can not make a dull object appear glossy under its light. The object has to be set for reflection — and then it becomes a mirror. If a Specular Map is used to reflect in that mirror, only a blurred HDRI is seen and this makes the object appear glossy. The Exponent setting controls the blurriness. The lower the value, the more blurred it will become.

Objects with volume materials that are additionally partly transparent like — for example — those beautiful cloud slabs we know from David Brinnen, render extremely slow. Besides, they do not profit

from Image Based Light. Such objects can be excluded. An object excluded won't receive light from the HDRI — and the render speeds up dramatically. If you have a long list of objects you want to have excluded, you might enable Include objects and tick the ones you want to receive light.

The cool thing is, you can export the HDRI loaded or created from the Sky into different file formats and projections. Why would you want to do this? Well, you could use it in another 3D program, when exporting it in the projection and file type that application accepts. You can also export it as a panorama and create a (QTVR) QuickTime Virtual Reality.

To round off this Introduction, let's have a look at the Sky Library. You can save your Skies with an HDRI to the library and can retrieve it for another project. A warning is due. HDRIs can be quite large and fill up a library quite soon. If it reaches 2 GB, it becomes useless and everything saved in it will be lost. But you can always create a new library and add the sky to it.

This concludes the first part.