

EZDOME

User Guide v.1.2

EZDome is an environment tool for Poser. It will create an environment sphere which will add global lighting to your scene. EZDome can import standard sIBL sets as well as standard HDRI and light probes. EZDome is able to synchronize the sun with the hdri, so shadows will be aligned with the shadows in the environment sphere.

With EZDome you can modify colours, intensity, contrast and saturation independently for both the environment and the global light.

What's New in version 1.1?

Version 1.1 adds mass import of sIBL sets and Metatags. It also adds an option in the preset to explicitly tell the script whether the inner and outer dome should use a gamma setting of 1 or not.

Setup and Preparation

EZDome comes in a ZIP file with the script and a user guide. To install the script simply extract it to the Poser Python folder (A good location would be <Poser Install folder>\Runtime\Python\poserScripts\ScriptsMenu\SnarlyGribbly). You may need admin privileges to be able to do so.

EZDome uses presets. You can create these yourself or you can use ready-made sets which use the sIBL (smart Image-Based Lightning) format. The sIBL Archive (<http://hdrlabs.com/sibl/archive.html>) has many free sets available as well as tutorials and guides on how to create sIBL sets.

EZDome can directly import an sIBL set as preset. You can also create your own preset by applying your own maps to a new preset.

This guide will use presets from the sIBL archive.

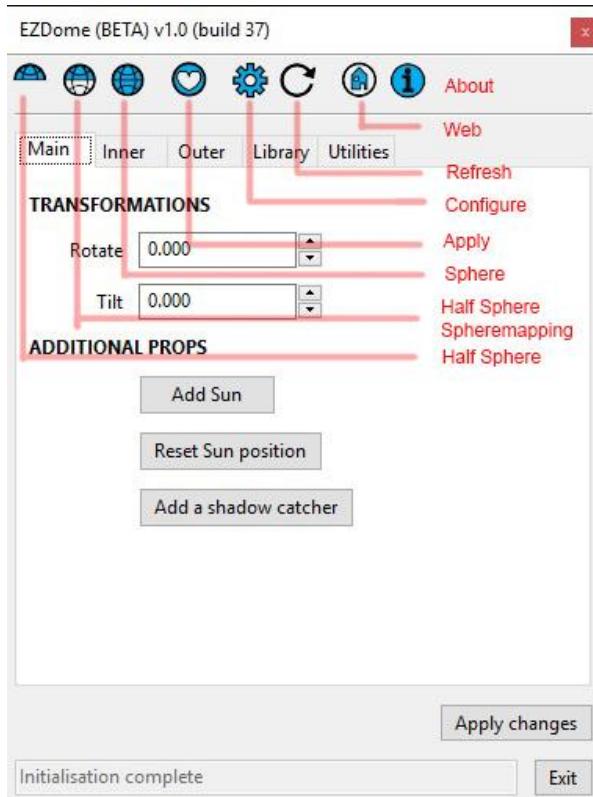
Getting Started

Preparing your scene

EZDome is a replacement for existing sky domes, environment sphere or the Construction set of Poser 11. So hide or delete these if they are present.

Start EZDome from the Python Menu bar.

You are now presented with the EZDome panel like this:



The top row of icons is for creating different type of domes, configuration settings, refresh the scene and for help.

The tabs below go to the different sections of the program. The Main tab is for prop manipulation, the Inner is for the view you will get, the Outer is for the global lighting, Library is for the presets and Utilities is for a set of simple macros to prepare the scene.

EZDome consists of spheres. The inner sphere has a high resolution texture map which is used for the environment. EZDome uses spherical mapping, which is the most common mapping scheme for environments like these. (also known as equirectangular mapping). It is the same mapping as is used for HDRI.

The Outer dome is used for lighting the scene and providing reflections, it is usually an HDR light probe although it can use other maps as well if they use spherical mapping. HDR is more suited since it contains intensity information as well.

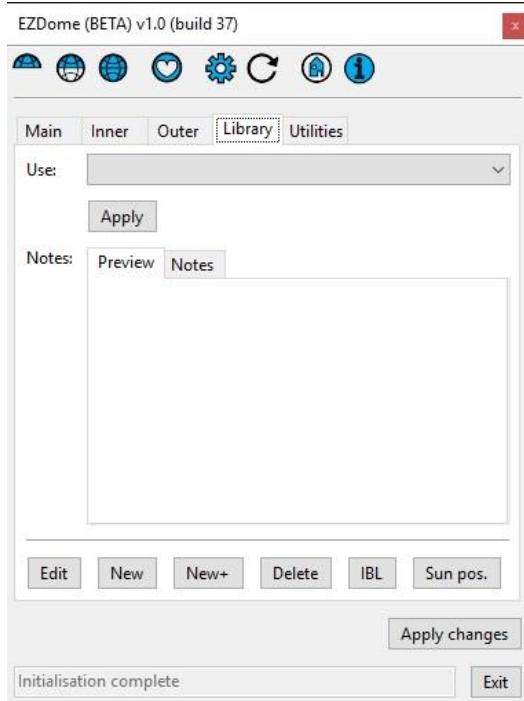
The library tab manages the presets. It is used to load, create and manipulate them.

The Utility tab brings you macros to remove the existing ground, lights and save the material set for the dome.

Before you begin, download and unzip some of the sIBL sets from the sIBL archive.

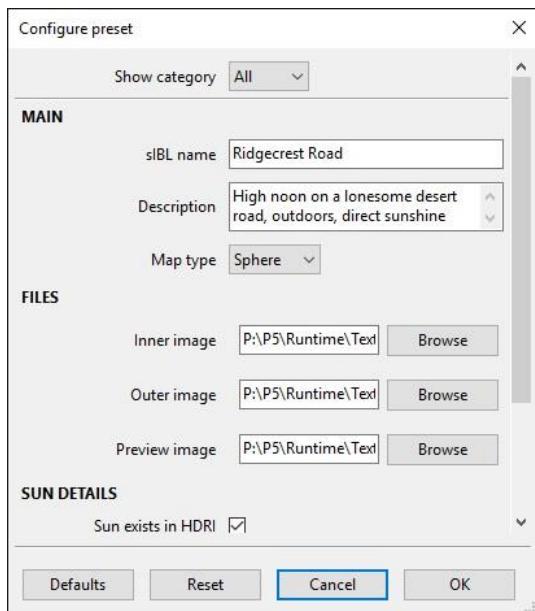
Create your first EZDome scene

Go to the library tab.



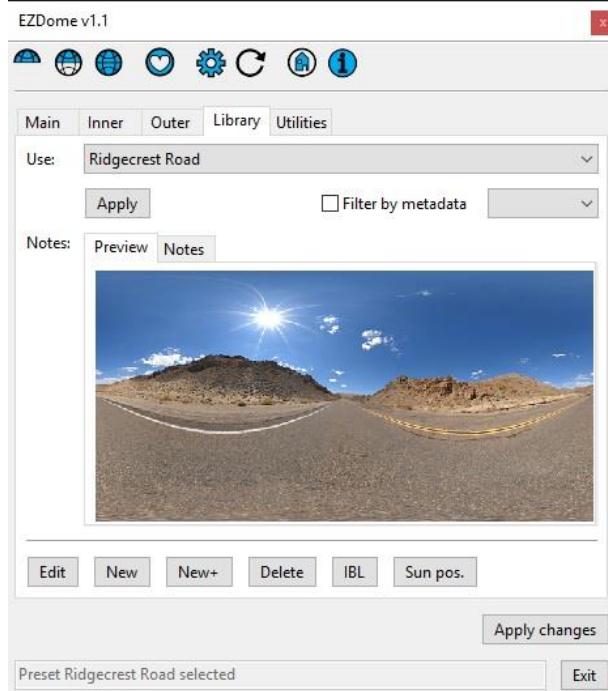
Press the IBL button on the lower right hand side. You are now presented with a browse window. Navigate to the folder where you stored then sIBL sets and then select an .ibl file and press Open.

You are now presented with the preset in EZDome which looks something like this:



Everything has been filled in, so press OK to accept.

Now we have a preset which EZDome can use.



Now before we can apply the preset, we have to add the EZDome itself.

To do that, press the sphere icon on the top (third one from the left).

If you have prepared your scene properly (removed the ground), you will now see a black background. Now we can apply new preset to it. Do this by pressing the Apply button just below the preset selector.

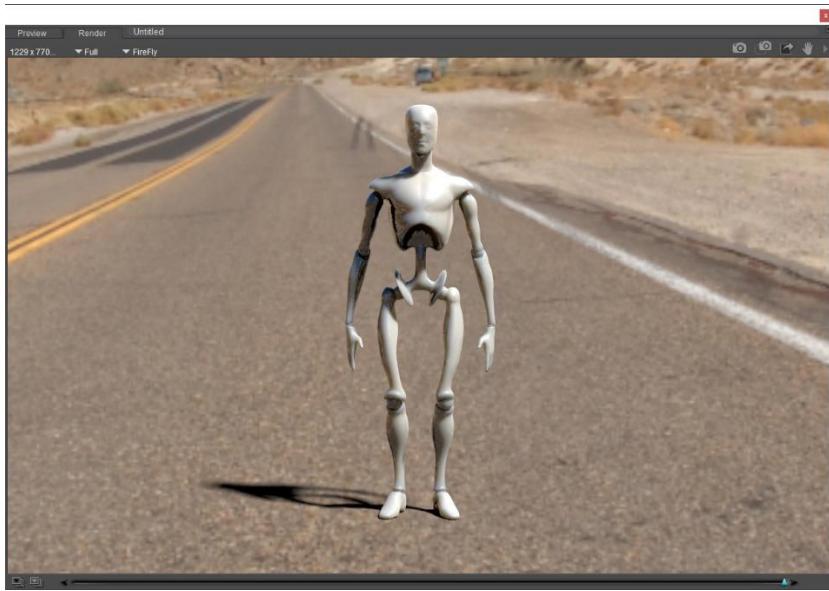
Now you will see the environment you have chosen in the background.

The last thing we have to do is to add the sun to the scene. For best result turn off the existing lights in the Utilities tab – Press Lights > off.

Now switch to the main tab and Press Add Sun.

The Sun will now be added and have the exact direction it has in the environment section. The IBL set had that information and the script has set the sun to that position.

Now render the scene and you will have something similar to this render.



Caveat here: I used firefly to render and set the ground to be a shadow catcher. This way I can show the direction of the shadows more clearly. Superfly does not have the shadow catcher option. So in Superfly you have to add a ground plane to see the shadows.

This is a straight forward application of the sIBL sets in EZDome.

The next chapters will describe on how to manipulate all the settings to get the results you want.

Manipulating the Dome

General

Mouse clicks

There are some mouse click modifiers which apply to dials. A single mouse click is usually an acceptable default, the shift key doubles the increments and the control key is 10 times the default. You can also keep the mouse keys depressed to have a rapid succession.

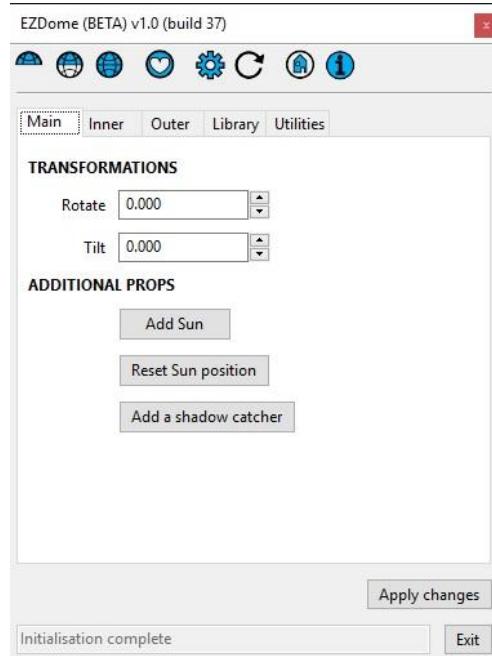
Apply Changes Button

The Apply changes button turns red when you made changes which have not been applied yet. Press the button and the changes will be applied.

Status Bar

Please keep an eye on the status bar at the bottom. It will tell you if there are any errors or will give you a warning if something is missing. It will also tell you if EZDome expects some input from the user.

Main Tab



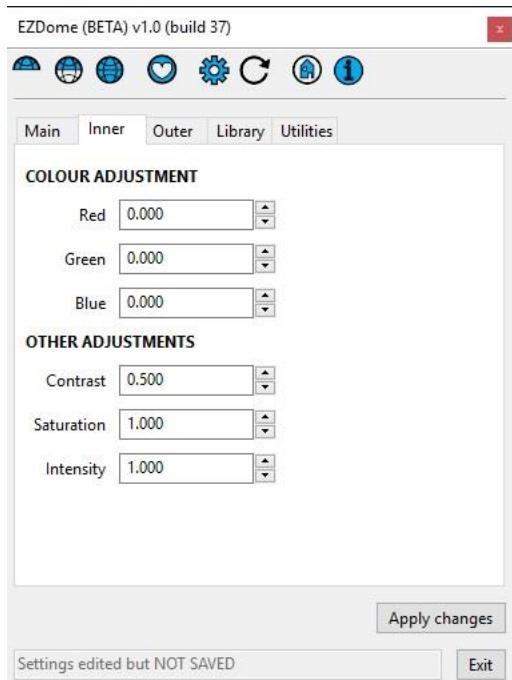
From the main menu you can rotate and tilt the dome. Both inner, outer dome and sun will rotate. The rotation and tilt can be viewed directly in the poser viewport. If your system is acting too slow, turn off Auto rotate and tilt in the Configuration settings.

The Add Sun button will add a sun to the scene. This will be an Infinite light in Poser. The direction and position of this light is taken from the preset. The Configuration menu has an option to have the Sun replace the old one or to add a new sun. Even with replace on you can get an additional sun by simple renaming the first one.

The Reset Sun position will take the position of the sun from the preset and reapply it to the current sun. This in case you have changed it on Poser manually, or if you have changed it in the preset.

Inner Tab

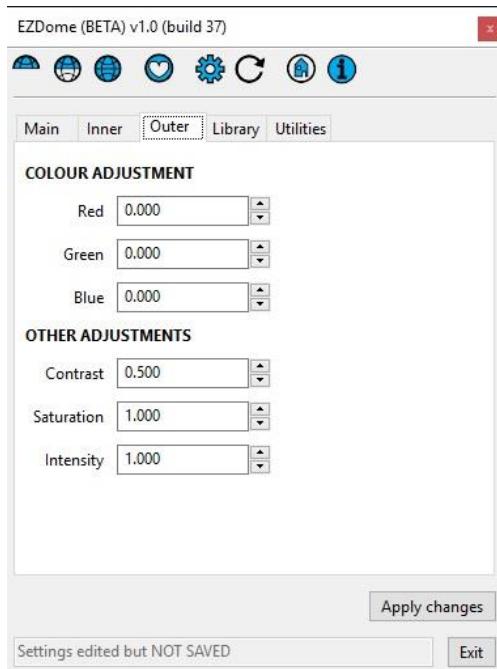
The inner tab is the section where you can manipulate the visible environment. You can change colour, contrast of the texture, saturation and the intensity. This does not influence the lighting of the scene. It is purely for artistic purposes.



Outer Tab

The Outer dome is where you manipulate the global lighting.

You can change the colour of the light (make it more blue, red, green), increase the contrast of the light, soften the colours with saturation or increase the overall intensity of the light.



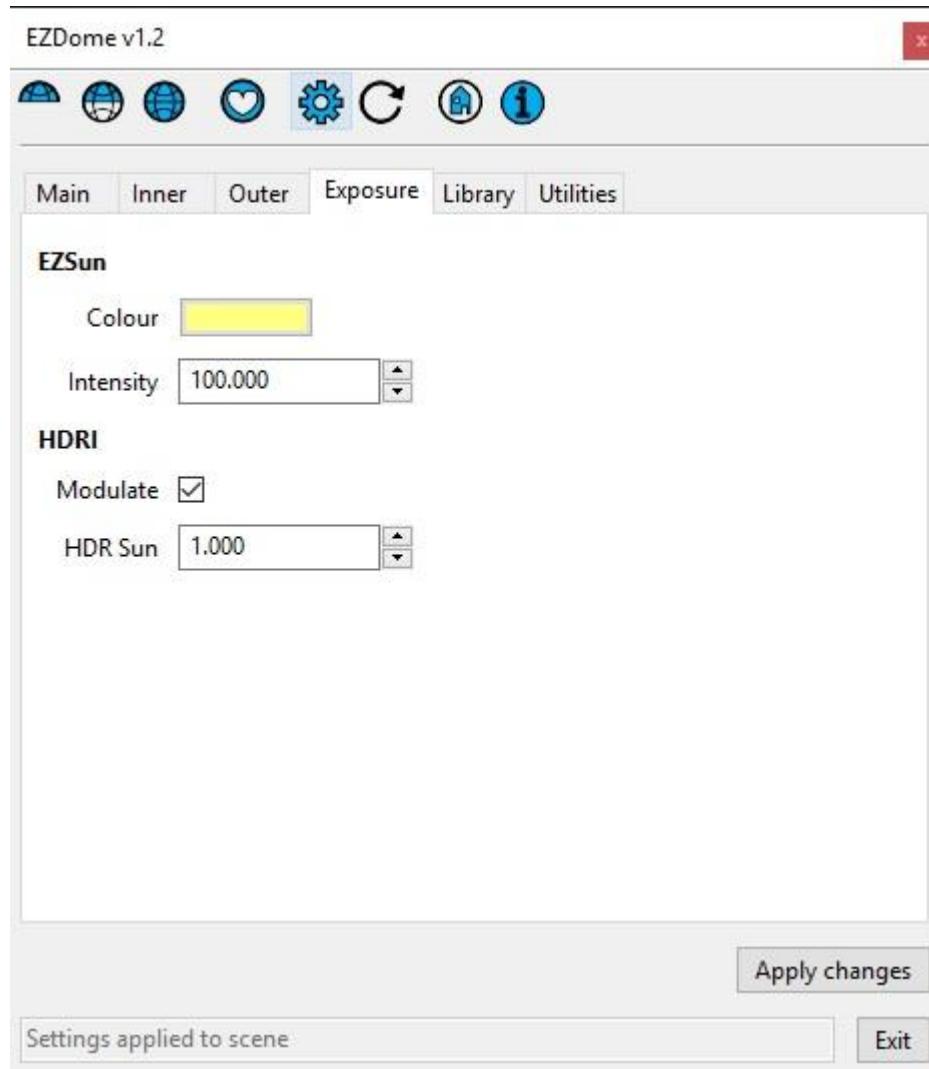
In the following images you can see what effect the colour settings have. I decreased the blue channel, increased the intensity a bit. As you can see the figure and the road have changed colour, but the background has stayed the same.

The road is a one-sided plane to which I applied a concrete material.



Exposure

The Exposure tab give you the option of changing the intensity and the colour of the sun independent from Poser without changing the presets. It also allows you to change the intensity of the HDRI sun.



EZSun Colour changes the color of the sun EZDome uses, it will bring up the colour picker where you can choose it.

EZSun Intensity allows you to change the brightness/strength of the sun

Check Modulate if you want to modify the HDRI sun. The difference between the intensity here and in the Outer dome is that here the HDR Sun is isolated and modified. The rest of the HDR map remains the same.

Although both EZSun and HDR Sun can be used together, the HDR Sun modulation is most useful if it is not used in combination with EZSun

Creating New Presets

The Library tab has several buttons which may look similar, but are different.



Edit

The Edit button is to change or update an existing preset. Here you can set new sun locations, change maps, add notes, metadata, previews, etc. Just press edit, change it and save the settings. See New for details

New

The New creates a new preset. All fields are empty and need to be filled. sIBL is the name of the original preset (if any) and can be changed as you like it. The description is what appears in Notes when a preview is selected. Fill it in with explanation of what the preset is.

Metadata gives you the option to apply a metadata tag. You can use this to filter presets in the library

The Inner image is the large environment texture you would like to see in the scene. The Is HDRI option can be used to override the gamma setting. HDRI means a gamma of 1, so unchecking this box will make the image have a gamma of 2.2.

The Outer image is the light probe or an HDR containing the light info. The Outer and Inner image can be the same (like HDRI). The preview image is a small picture of what the preset looks like.

The Sun Exists option is whether the preset should control the sun. Check it when it should. For HDR files you need to give the location of the sun, either by entering it manually or by using the Sun position button. (See later in this chapter). The last option is to set the sun colour.

New+

This button is identical to the New button except that it will keep all values of the previous preset. This is useful if you want to make small changes to the preset, like a different sun position or colour.

Delete

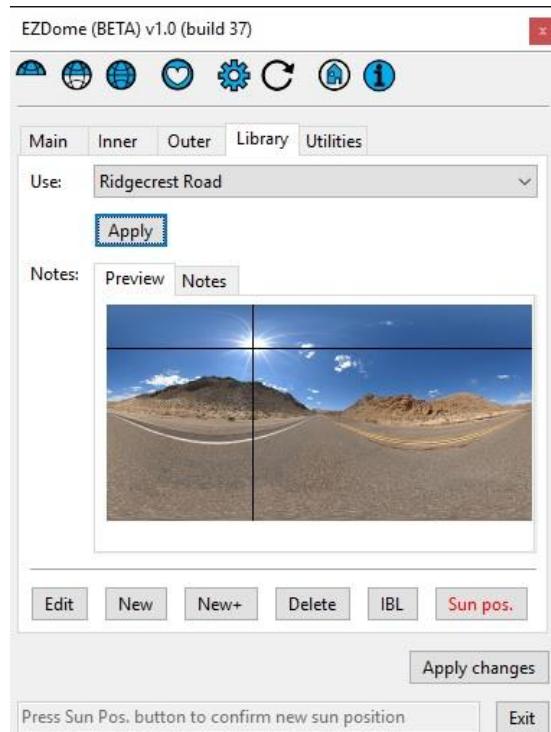
The Delete button is what it says, it will delete the current selected preset.

IBL

IBL is the sIBL import button as shown in the first chapter of the manual. It allows you to import sIBL sets.

Sun Pos.

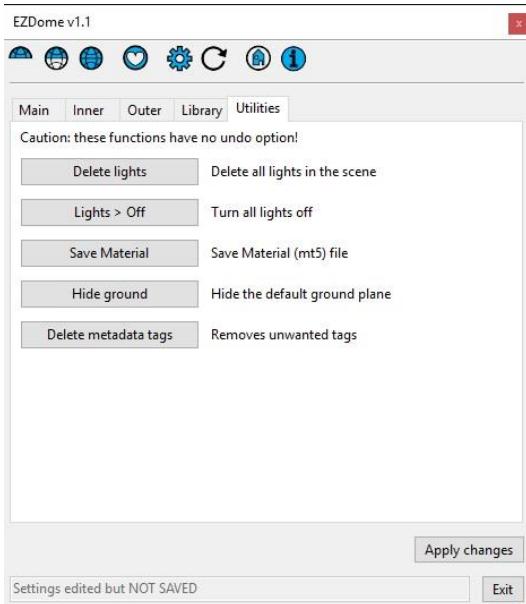
Sun Position is how you set a sun position for use in your scene or in a preset.



Operation is very easy: Click on a location in the preview window where the sun is, a cross hair will appear and then press Sun Pos to set the Sun location. The sun will now be set at that location if you press Apply. Alternatively, you can select Edit and then OK to save that new sun position in the current preset.

If the preset does not have a preview image, load the original environment map into the preview box in the preset settings. The image will scale accordingly in the preview tab.

Utilities Tab



The utilities tab contains a set of scripts to help you manage EZdome and your scene

Delete lights will delete all lights from the scene. This makes sure that if you add a sun, it will be the only sun in the scene

Lights > Off will just turn off all lights, so you can turn them on if needed

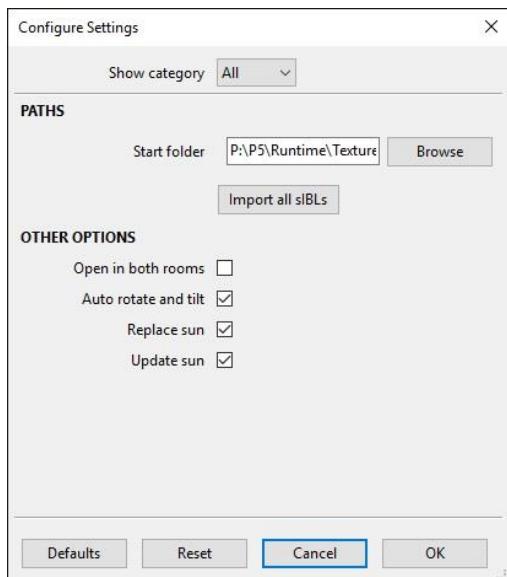
Save Material – this will open up a drop down list where you can save the inner or the outer dome. You can use this later to save a particular setup

Hide Ground – this will hide the default Poser ground

Delete metadata tags. This will open up a list box where you can remove tags you no longer want.

Configuration Settings

The Configuration settings panel allows you to change the behaviour of the script. They are pretty much self-explanatory.



The Start folder is where you have stored all the sIBL presets. EZDome keeps its own storage location for its presets, but it will link to the map files you have stored here when you import the sIBL sets.

The Import all sIBLs button will allow you to import a complete folder with sIBL presets at once. Select the folder which contains all unzipped sIBL presets. Make sure it does not contain any other folders such as MacOS (which contains an unsupported IDL format). If you do get an error at import, just click OK and the script will continue importing the other presets. The error is most likely caused by an incorrectly formatted IBL file.

The Open in both rooms option is when you want EZDome to be open in both the Poser Room and the Mat Room.

Auto rotate and tile is the option to synchronise the rotation of the dome in EZDome and the preview in the Poser preview window. Some systems might not be fast enough to handle the rotation.

Replace Sun. This option is whether you want to replace the existing sun or you want to add a new one each time you press Add Sun.

Update Sun is in conjunction with the Set Sun position option in the library tab. If set to On, it will update the sun to that new location. If it is not set, you need to press the Reset Sun position button or the Add Sun in the Main tab.

Acknowledgments

Thank you to Bagginsbill for his EnvDome and EnvSphere props, upon which this project is based, and for giving permission for them to be used.

Thank you to Biscuits for the icon designs.

Thank you to Wlmvdb for testing the script and making invaluable suggestions. Also, for writing this user guide 😊