



PLANET X GENERATOR
1.0

USER MANUAL

Welcome to the Planet X Generator 1.0 User's Manual. Planet X Generator is a powerful and flexible plugin for Cinema 4D that allows you to create beautiful worlds with a few clicks of the mouse. There are many different features included in the Planet X Generator.

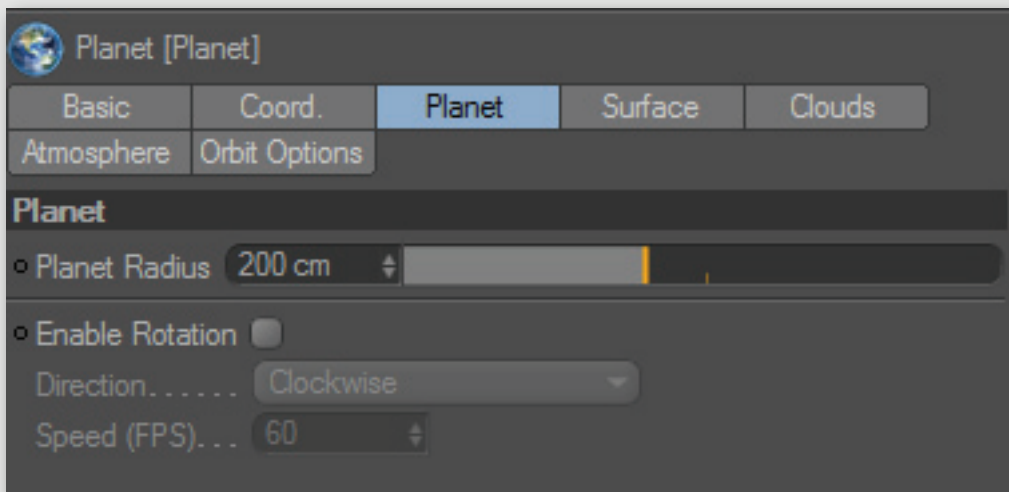
THE INTERFACE



You will find the Planet X Generator Objects in the plugins menu on the main menu bar of Cinema 4D. There are three objects that come with the Planet X Generator. A PLANET object, a SPACE object, and a SUN object.

PLANET OBJECT

Along with the standard BASIC and COORD tabs, the PLANET object also has five other tabs in the attributes manager where users can find all of the settings and controls for this object.



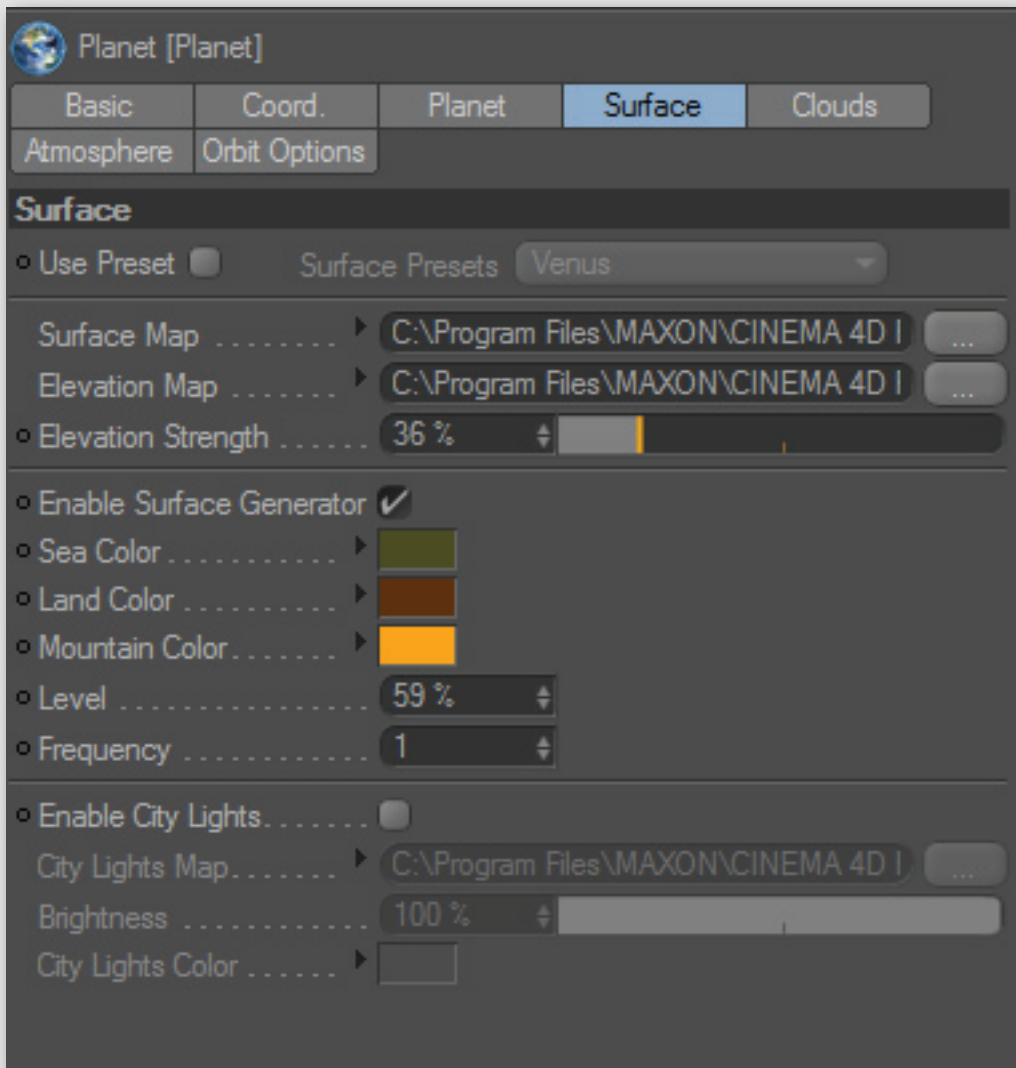
The planet tab contains settings for the general attributes of the whole planet. These settings affect the entire planet.

PLANET RADIUS: Controls the size of the planet. The slider allows for a maximum of 500cm; however, users can manually exceed this amount and may set the radius to any positive value.

ENABLE ROTATION: Allows the user to set the planet to automatically rotate. This eliminates the need to create keyframed animations for rotation.

DIRECTION: Allows the user to determine which direction the planet will rotate. The user may choose between CLOCKWISE and COUNTER CLOCKWISE.

SPEED: Allows the user to determine the speed at which the planet will rotate. This setting is measured in FRAMES PER SECOND (FPS). This means that the lower the number, the fewer frames are being shown in a second. Thus, if the number is lower, the planet will rotate faster. If the number is higher, the planet will rotate slower.



The surface tab contains all of the settings for the surface of the planet. These settings will only effect the surface and will not effect the rest of the planet.

USE PRESET: There are twelve preset surfaces that come with the Planet X Generator. The presets are as follows:

- Mercury
- Venus
- Earth
- Earth (High Resolution)
- Moon
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Pluto
- Planet X

When a preset is selected, no other surface options are available. However, when you have selected a preset, you may alter the preset by deselecting the USE PRESET check box.

SURFACE MAP: This setting allows users to select any image map to use for the surface of their planet. This image can be almost any available image format. The plugin is only limited to the formats that Cinema 4D supports. Check your Cinema 4D documentation to determine if Cinema 4D supports your image format.

ELEVATION MAP: This setting allows users to choose a BUMP map for the surface of their planet. This type of map shows changes in elevation. White areas on the map will be higher elevations and black areas will be lower elevations. Gray areas will be somewhere in between.

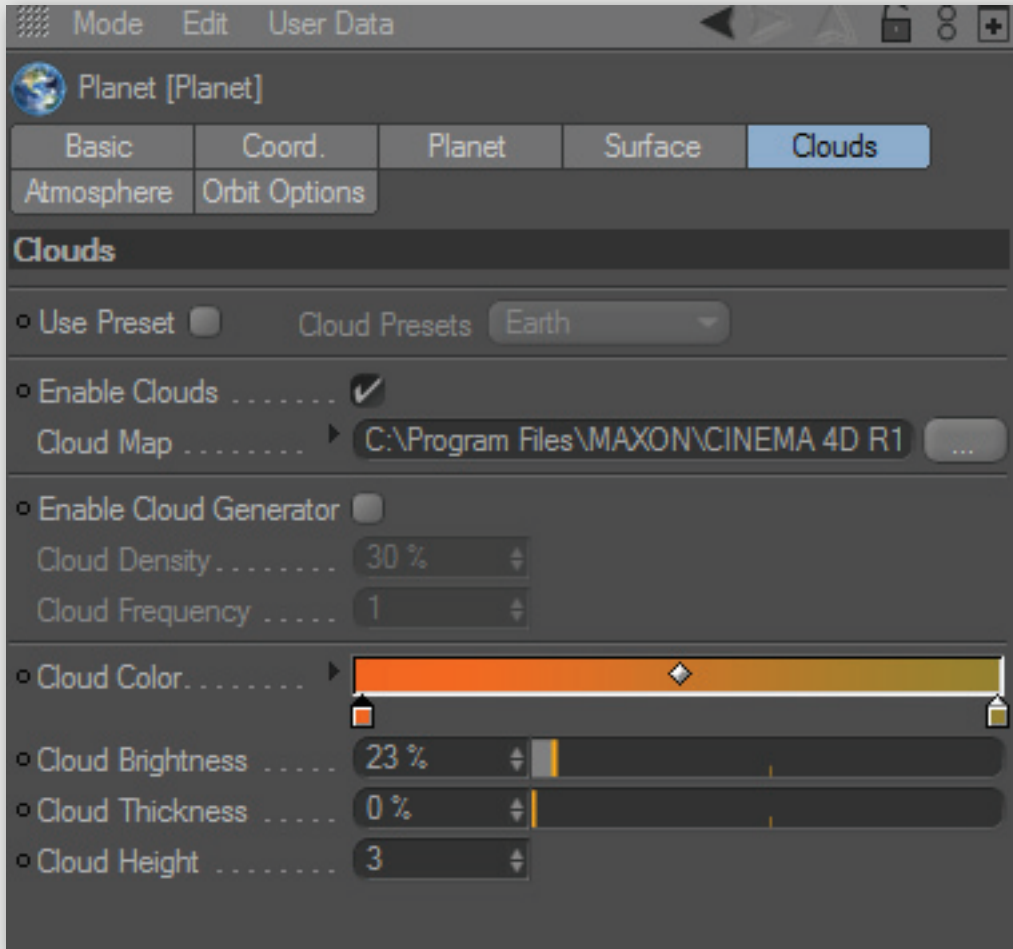
ELEVATION STRENGTH: This setting adjusts the strength of the elevation map. The higher the setting, the more elevated your map will look. The lower the setting, the less elevated your map will look.

ENABLE SURFACE GENERATOR: This feature bypasses the image maps altogether. When you have enabled the surface generator, the maps you have chosen above will no longer be used. Instead, Planet X Generator will create a surface for you.

- SEA COLOR:** Adjusts the color of the oceans on your surface.
- LAND COLOR:** Adjusts the color of the land at lower elevations.
- MOUNTAIN:** Adjusts the color of the land at higher elevations.
- LEVEL:** Adjusts the percentage of land that exists on your planet.
- FREQUENCY:** Adjusts the size of each piece of land. If the number is lower, there are fewer, larger pieces of land. If the number is higher, there are more, smaller pieces of land.

ENABLE CITY LIGHTS: This setting allows the user to show city lights on the dark side of the planet. The lights are only visible on the side of the planet that is not being hit by light. PLEASE NOTE: This effects only works properly if you have 1 light in your scene. If you add a second light, you will see lights on the lit side of your planet.

CITY LIGHTS MAP: Allows the user to choose an image map for their city lights.
BRIGHTNESS: Adjusts the brightness of the city lights.
CITY LIGHTS COLOR: Adjusts the color of the city lights.



The cloud tab contains all of the settings for the cloud cover of the planet. These settings will only affect the clouds and nothing else.

USE PRESET: There are fourteen preset clouds that come with the Planet X Generator. The presets are as follows:

- Mercury
- Venus
- Earth
- Moon
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Pluto
- Planet X
- Hurricane
- Global Storm
- Tranquil

When a preset is selected, no other cloud options are available. However, when you have selected a preset, you may alter the preset by deselecting the USE PRESET check box.

ENABLE CLOUDS: This setting enables clouds on your planet. If you uncheck this box, there will be noie clouds on your planet at all. This is useful if you are creating a planet such as mercury that is completely dead and does not have an atmosphere.

CLOUD MAP: This setting allows the user to select an image map for their clouds. Users can create their own cloud maps or find them online. This allows for greater flexibility in designing your planet.

ENABLE CLOUD GENERATOR: This setting bypasses the cloud map. With the cloud generator enabled, Planet X Generator creates clouds for you.

CLOUD DENSITY: Adjusts the percentage of clouds that are on your planet.
CLOUD FREQUENCY: Adjusts the size and frequency of the clouds. If this number is smaller, you will have fewer larger clouds. If the number is greater, you will have more smaller clouds.

CLOUD COLOR: Adjusts the color of the clouds.
CLOUD BRIGHTNESS: Adjusts the brightness of the clouds.
CLOUD THICKNESS: Adjusts the thickness of the clouds.
CLOUD HEIGHT: Adjusts the distance from clouds to the surface of the earth.



The atmosphere tab contains the settings for the atmosphere and the planetary rings.

USE PRESET: There are twelve preset atmospheres that come with the Planet X Generator. The presets are as follows:

- Mercury
- Venus
- Earth
- Moon
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Pluto
- Planet X
- Thick
- Thin

When a preset is selected, no other atmosphere options are available. However, when you have selected a preset, you may alter the preset by deselecting the USE PRESET check box.

ATMOSPHERIC COLOR: Adjusts the color of your atmosphere.
ATMOSPHERIC BRIGHTNESS: Adjusts the brightness of your atmosphere.
ATMOSPHERIC GLOW: Adjusts the intensity of the glow that shows around your atmosphere.
ATMOSPHERE RADIUS: Adjusts the radius of the atmosphere.
RANDOM: Adjusts the randomness of the glow.

ENABLE RINGS: This setting allows the user to add rings their planet. The ring settings are not available unless this box is checked.

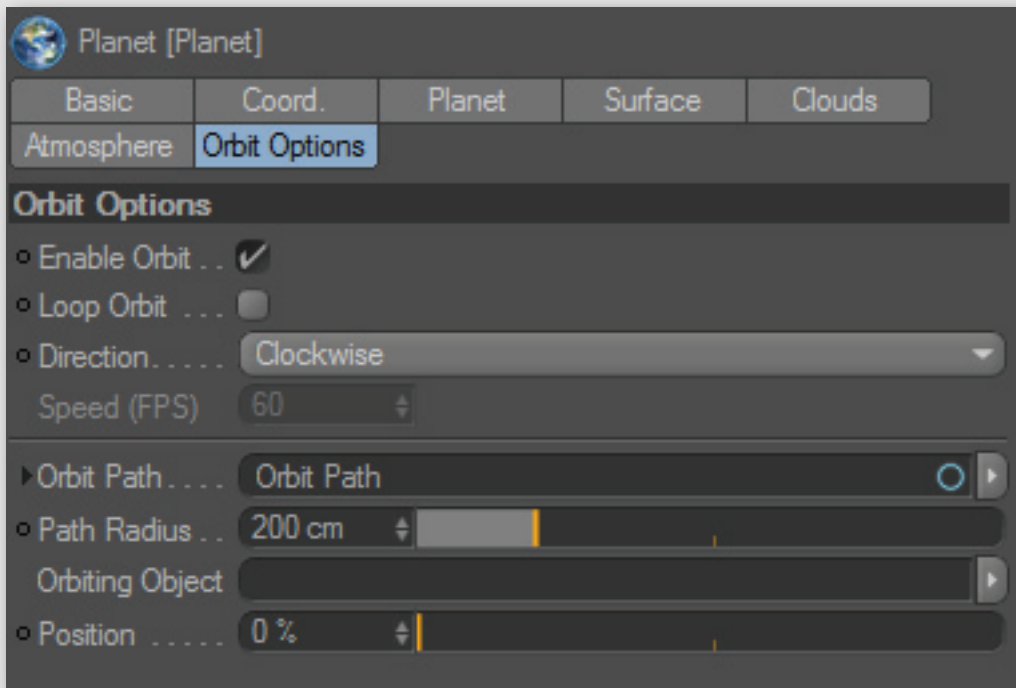
RING COLOR: This adjusts the color of the rings. A gradient is used to help the colors blend more naturally.

RING SPACING: This setting adjusts the spacing of the ring. Black means space, white means ring.

RING TRANSPARENCY: Adjusts the transparency of the rings.

INNER RADIUS: Adjusts the radius of the inner area of the rings.

OUTER RADIUS: Adjusts the radius of the outer area of the rings.



The orbit options tab contains the settings for controlling orbiting objects.

Currently, your planet can have only one orbiting object. I plan to change this for version 2.0 .

ENABLE OORBIT: This option allows the user to add an orbiting object to their planet.

LOOP ORBIT: This option automates the orbiting planet so that it orbits around the planet without having to adjust the position or set keyframes.

DIRECTION: This option allows you to change the direction that the orbiting object is traveling. You may choose between CLOCKWISE or COUNTER CLOCKWISE.

SPEED (FPS): Allows the user to determine the speed at which the object will orbit. This setting is measured in FRAMES PER SECOND (FPS). This means that the lower the number, the fewer frames are being shown in a second. Thus, if the number is lower, the object will orbit faster. If the number is higher, the object will orbit slower.

ORBIT PATH: When ENABLE ORBIT is activated, the Planet X Generator creates a spline object that is used as the path that the orbiting object will follow. This can be switched with a different spline object if you wish.

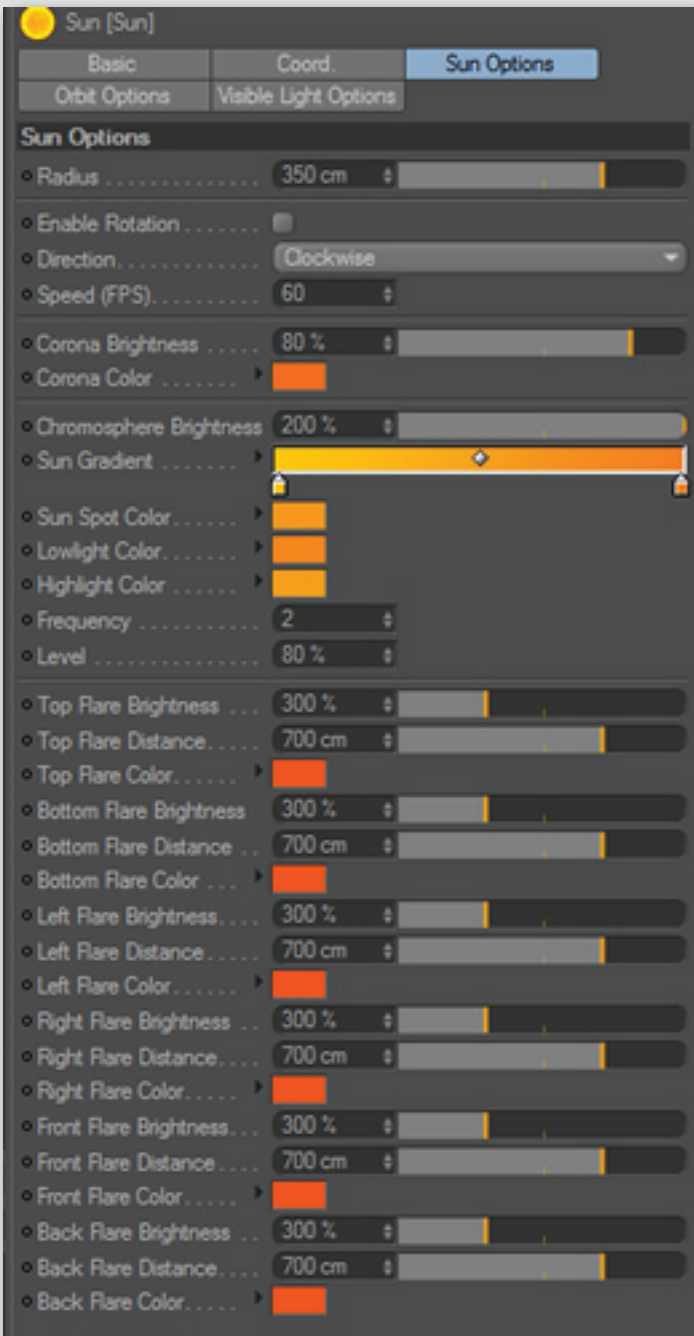
PATH RADIUS: This option allows the user to adjust the radius of the orbit path. This can be adjusted to any positive number. The slider has a maximum setting of 1000.

ORBITING OBJECT: This is the object that is orbiting your planet. Choose any object in the object manager and drop it in to this field.

POSITION: If the user has chosen not to loop the orbit, he or she may set the position of the orbit using this slider. Key frames can then be set to animate the orbit manually.

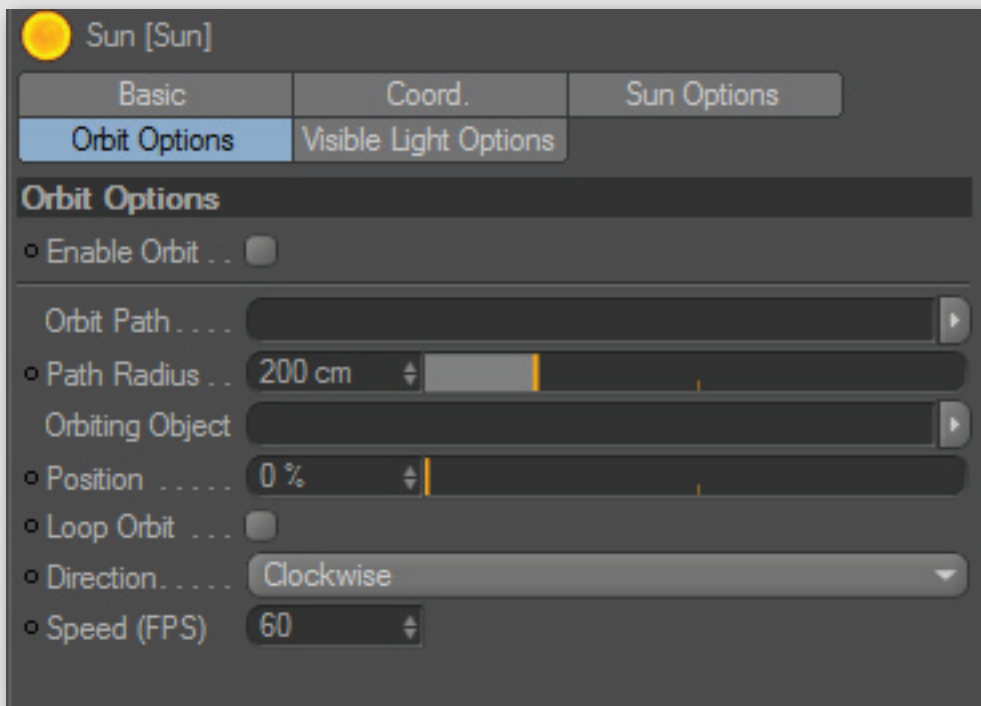
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THE SUN OBJECT



The sun object is a light source. If you have placed a sun object in to your scene you do not need another light source. If you do place another light source in your scene to highlight aspects of your scene, please remember that this may affect the city lights setting of the planet surface.

- RADIUS:** Adjusts the radius of the sun.
- ENABLE ROTATION:** Enables automated rotation of the sun object.
- DIRECTION:** The direction of the sun's rotation. CLOCKWISE or COUNTER CLOCKWISE.
- SPEED:** The speed at which the sun rotates. Measured in frames per second. Lower numbers mean faster rotation.
- CORONA BRIGHTNESS:** The brightness of the outer rim of the sun.
- CORONA COLOR:** The color of the outer rim of the sun.
- CHROMOSPHERE BRIGHTNESS:** Overall brightness of the sun.
- SUN GRADIENT:** The spectrum of color that crosses the sun.
- SUN SPOT COLOR:** The color of the sun spots.
- LOWLIGHT COLOR:** The color of the lowlights in the sun.
- HIGHLIGHT COLOR:** The color of the highlights in the sun.
- FREQUENCY:** The number and size of various shapes in the sun's appearance.
- LEVEL:** The percentage of lighter areas of the sun.
- SUNFLARES:** These settings adjust the flares that come out from the sun.
- FLARE BRIGHTNESS:** The intensity of the flare.
- FLARE DISTANCE:** The distance that the flare reaches outward.
- FLARE COLOR:** The color of the flare.



The orbit options tab contains the settings for controlling orbiting objects.

Currently, your sun can have only one orbiting object. I plan to change this for version 2.0 .

ENABLE OORBIT: This option allows the user to add an orbiting object to their planet.

LOOP ORBIT: This option automates the orbiting object so that it orbits around the sun without having to adjust the position or set keyframes.

DIRECTION: This option allows you to change the direction that the orbiting object is traveling. You may choose between CLOCKWISE or COUNTER CLOCKWISE.

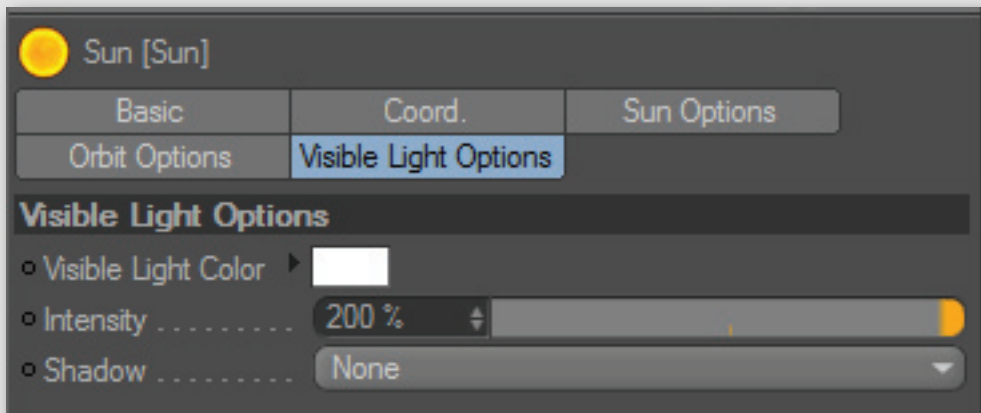
SPEED (FPS): Allows the user to determine the speed at which the object will orbit. This setting is measured in FRAMES PER SECOND (FPS). This means that the lower the number, the fewer frames are being shown in a second. Thus, if the number is lower, the object will orbit faster. If the number is higher, the object will orbit slower.

ORBIT PATH: When ENABLE ORBIT is activated, the Planet X Generator creates a spline object that is used as the path that the orbiting object will follow. This can be switched with a different spline object if you wish.

PATH RADIUS: This option allows the user to adjust the radius of the orbit path. This can be adjusted to any positive number. The slider has a maximum setting of 1000.

ORBITING OBJECT: This is the object that is orbiting your sun. Choose any object in the object manager and drop it in to this field.

POSITION: If the user has chosen not to loop the orbit, he or she may set the position of the orbit using this slider. Key frames can then be set to animate the orbit manually.

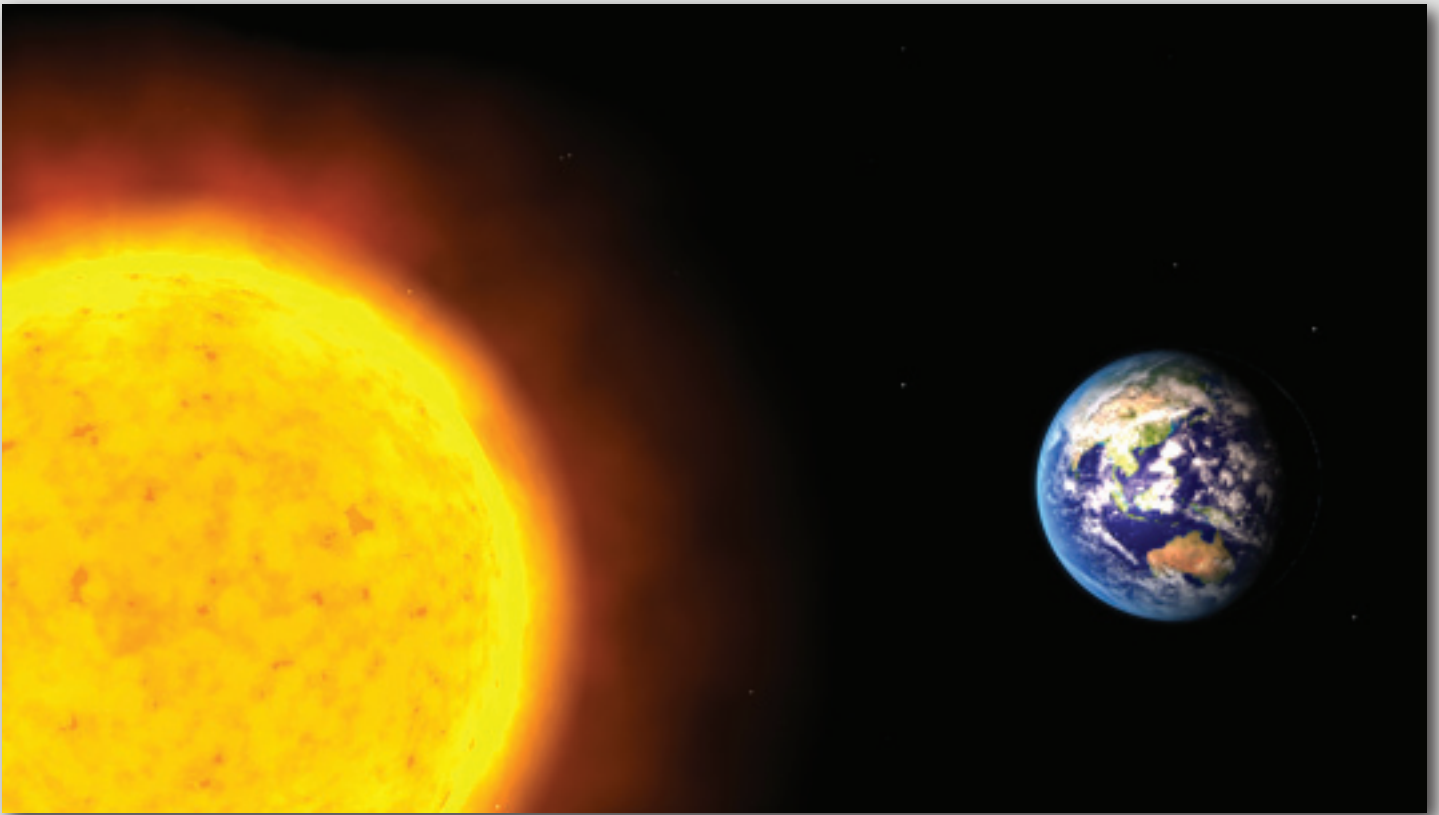


The Visible Light Options tab contains settings for the light that is emitted from the sun object. Use these options to determine how the sun will emit light.

VISIBLE LIGHT COLOR: The color of the light that is emitted from the sun.

INTENSITY: The intensity of the light that is emitted from the sun.

SHADOW: The style of shadows that are cast from the light that is emitted from the sun.



THE SPACE OBJECT:

The space object serves only one purpose. It's role is to create an outer space environment. It does not currently have any adjustable attributes; however, this is likely to change for future releases.

THANK YOU!

Thank you for purchasing the Planet X Generator. If you have any questions or need support of any kind, please visit our support forums at:

www.emberintherain.com/community