



 **METTLE  
MANTRA V2**

**MANUAL**

**AR Production Tools + 360/VR VFX**  
for After Effects and Premiere Pro

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## Mettle Mantra V2 Update Manual

Mettle Mantra V2 introduces easy to use AR content creation features and includes a brand new effect, Mantra ObjX, which has. As well as an updated Mantra Spherify and Mantra Graphix effects, updated distribution controls, and the use of Mettle's "3DNA" framework, a 3D engine that enables advanced volumetric workflows.

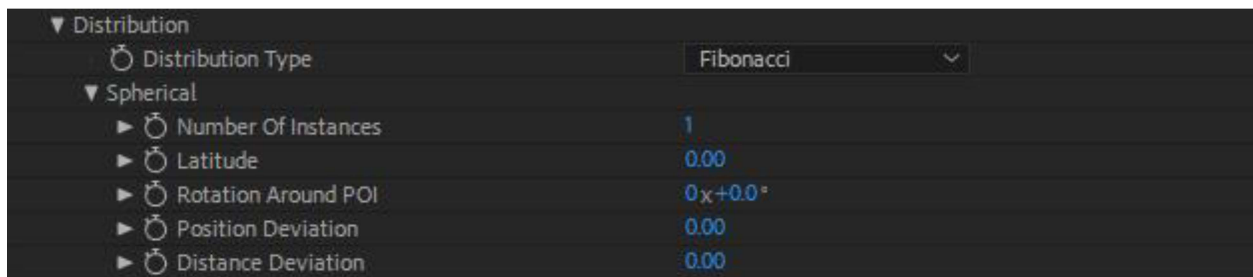
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### Distribution Controls

Numerous Mantra V2 effects feature Distribution controls located at the bottom of the effect settings. The Distribution controls allow you to increase the number of instances of an effect, as well as adjust settings like Distribution Type and Latitude. The Distribution settings are the same for any Mantra V2 effect that features a Distribution tab at the bottom of the effect settings. The Distribution settings options are as follows-

#### Distribution Type:

Distribution Type refers to how the various effect Instances will be distributed on the footage. (The types refer to various mathematical patterns.) Different Distribution Types give different visual results. The Distribution Types are as follows: Fibonacci, Circle, Tetrahedron, Cube, Octahedron, Dodecahedron, Icosahedron, Grid.



#### Spherical-

##### **Number of Instances: (Available for Fibonacci and Circle Distribution types.)**

How many times the effect gets applied to your footage. (Ex. On the Chrome Spheres effect, if Number of Instances is set to 1, you will have 1 Chrome Spheres on screen. If the Number of Instances is set to 3, there will be 3 Chrome Spheres on screen.)

##### **Latitude:**

Where the Instances are located on your footage relative to the Point of Interest. At a value of 100, all of the instances move directly to the Point of Interest. At a value of -100, all of the instances move directly to the polar-opposite of the Point of Interest. The default value is 0.

### Rotation Around POI (Point of Interest):

Control the rotation of the Instances around the Point of Interest.

### Incremental Scale:

Controls the scale of the Instances relative to the Point of Interest. At a value of 100, all of the instances close to the Point of Interest get smaller in scale. At a value of -100, all of the instances close to the Polar-opposite of the Point of Interest get smaller in scale. The default value is 0.

### Scale Deviation:

Allows you to set the amount of Random Scaling on the Instances for the effect.

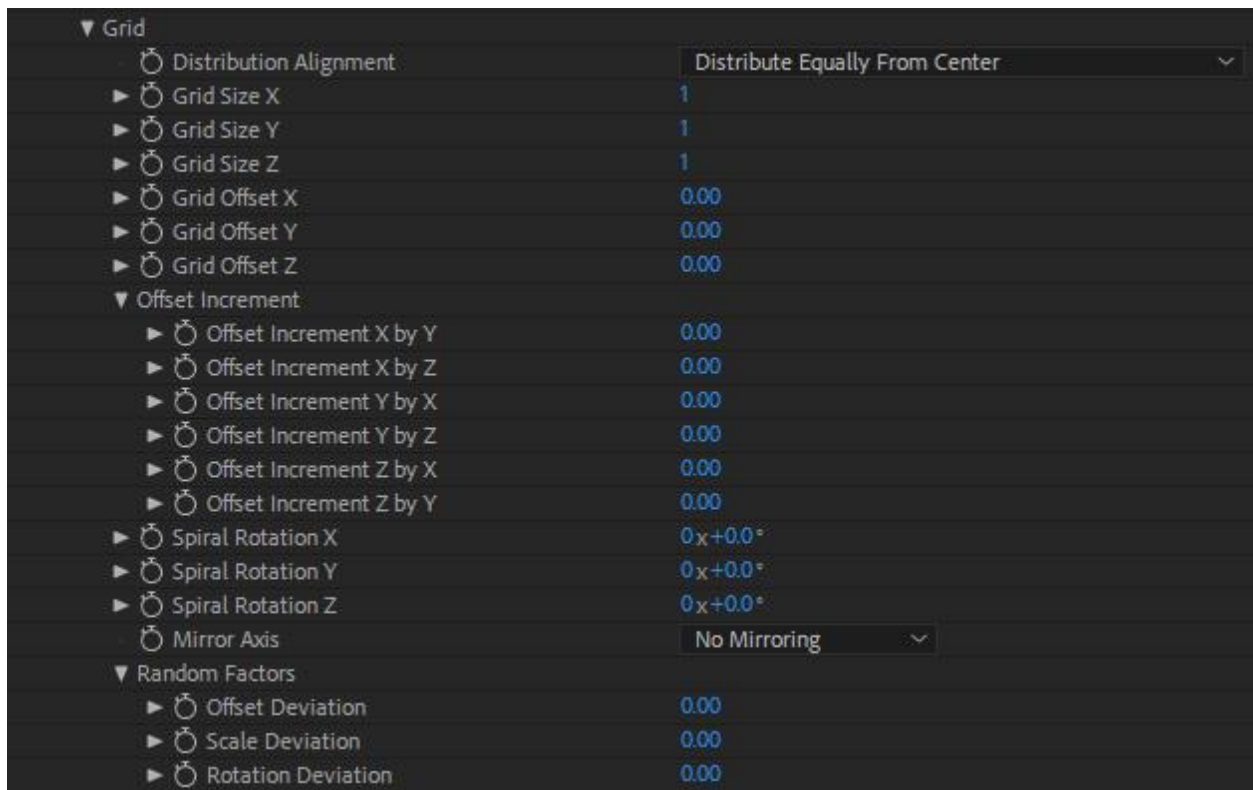
### Position Deviation:

Allows you to set the amount of Random Positioning on the Instances for the effect.

### Distance Deviation:

Allows you to set the amount of Random Distance on the Instances for the effect. (Moves them closer to the virtual camera.)

### Grid- (Available for Grid Distribution type.)



**Distribution Alignment:**

Distribution Alignment refers to how the various effect Instances will be aligned on the footage. Different Alignment Types give different visual results based on where they begin. The Distribution Alignment types are as follows: Distribute Equally from Center, Behind Master, In Front of Master. Distribute Equally from Center is the default.

**Grid Size X:**

Set the number of instances to get added to the X-axis.

**Grid Size Y:**

Set the number of instances to get added to the Y-axis.

**Grid Size Z:**

Set the number of instances to get added to the Z-axis.

**Grid Offset X:**

Set the offset spacing for the X-axis.

**Grid Offset Y:**

Set the offset spacing for the Y-axis.

**Grid Offset Z:**

Set the offset spacing for the Z-axis.

**Offset Increment:**

Make even more fine tune offsets using the Offset Increment control set. These settings allow for offsets on multiple axis, including: X by Y, X by Z, Y by X, Y by Z, Z by X, and Z by Y.

**Spiral Rotation X:**

Create a spiral rotation with the instances on the X-axis.

**Spiral Rotation Y:**

Create a spiral rotation with the instances on the X-axis.

**Spiral Rotation Z:**

Create a spiral rotation with the instances on the X-axis.

**Mirror Axis:**

Mirror the grid on the selected axis. Options include: No Mirroring, Mirror on X, Mirror on Y, Mirror on XY.

**Random Factors-****Offset Deviation:**

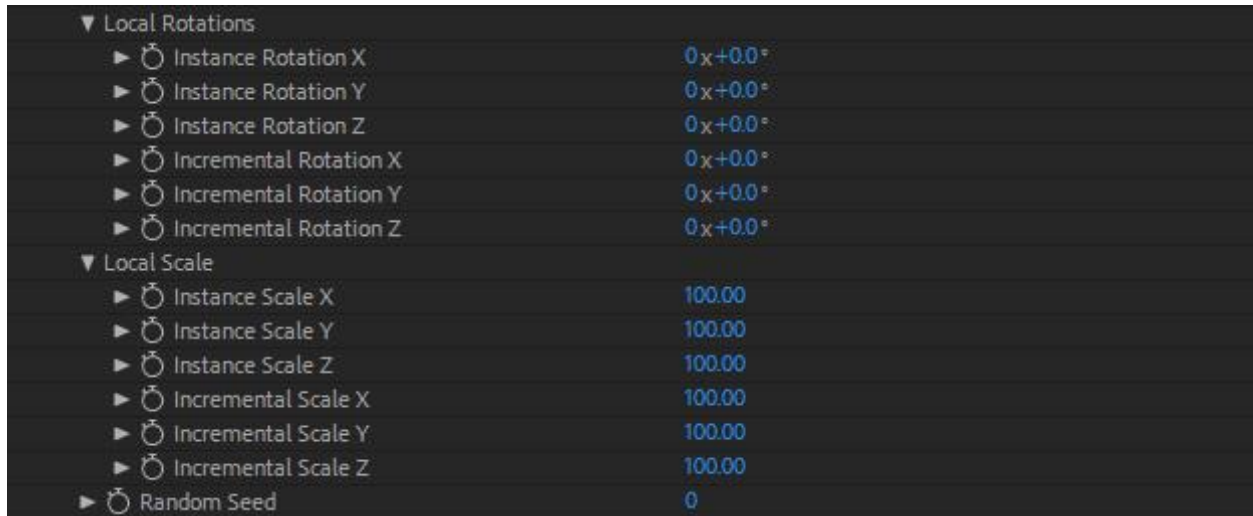
Allows you to set the amount of Random Offset on the Instances for the Grid effect.

**Scale Deviation:**

Allows you to set the amount of Random Scale on the Instances for the Grid effect.

## Rotation Deviation:

Allows you to set the amount of Random Rotation on the Instances for the Grid effect.



▼ Local Rotations	
▶ Instance Rotation X	0x+0.0°
▶ Instance Rotation Y	0x+0.0°
▶ Instance Rotation Z	0x+0.0°
▶ Incremental Rotation X	0x+0.0°
▶ Incremental Rotation Y	0x+0.0°
▶ Incremental Rotation Z	0x+0.0°
▼ Local Scale	
▶ Instance Scale X	100.00
▶ Instance Scale Y	100.00
▶ Instance Scale Z	100.00
▶ Incremental Scale X	100.00
▶ Incremental Scale Y	100.00
▶ Incremental Scale Z	100.00
▶ Random Seed	0

### Local Rotations-

#### Instance Rotation X:

Rotate Instances on the X-axis.

#### Instance Rotation Y:

Rotate Instances on the Y-axis.

#### Instance Rotation Z:

Rotate Instances on the Z-axis.

#### Incremental Rotation X:

Incrementally rotate Instances on the X-axis from the center outwards.

#### Incremental Rotation Y:

Incrementally rotate Instances on the Y-axis from the center outwards.

#### Incremental Rotation Z:

Incrementally rotate Instances on the Z-axis from the center outwards.

### Local Scale-

#### Instance Scale X:

Scale Instances on the X-axis.

#### Instance Scale Y:

Scale Instances on the Y-axis.

**Instance Scale Z:**

Scale Instances on the Z-axis.

**Incremental Scale X:**

Incrementally scale Instances on the X-axis from the center outwards.

**Incremental Scale Y:**

Incrementally scale Instances on the Y-axis from the center outwards.

**Incremental Scale Z:**

Incrementally scale Instances on the Z-axis from the center outwards.

**Random Seed:**

Used to select a pseudorandom application of the Distribution with the same current settings set by the user. (i.e. you will see another version of the effect, with the same Distribution input settings, but with a different appearance on the footage.)

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**Graphix**

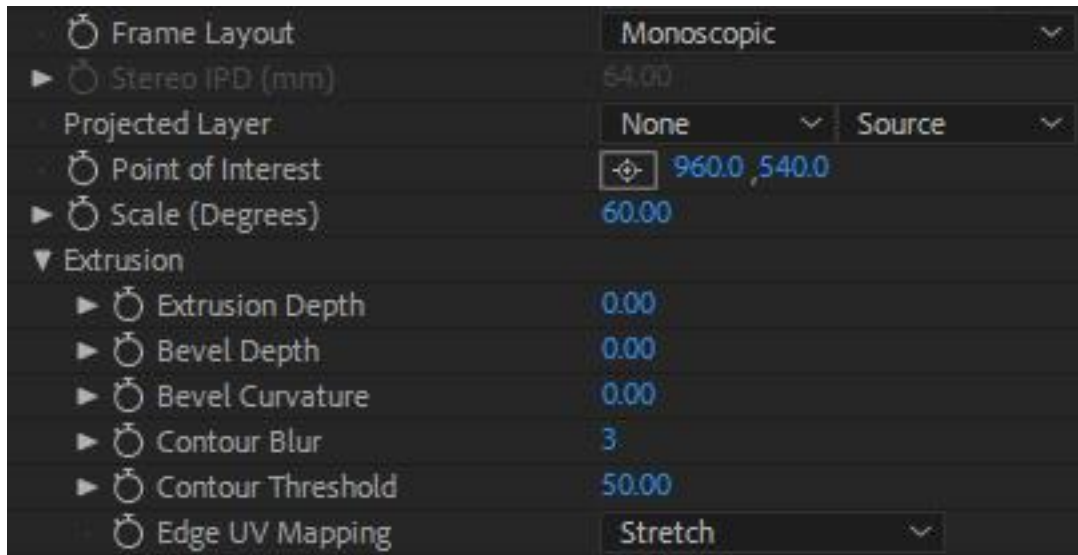
*Create geometry by extruding 2D graphics into 3D shapes, logos and text. Export in USDZ, glTF formats.*

**Frame Layout:**

Select between Monoscopic, Stereoscopic - Over/Under, Stereoscopic - Side by Side, or Rectilinear (Flat). (Use Rectilinear when you are applying the effect to non-360 footage, such as traditional flat footage.)

### Stereo Disparity IPD (mm):

On stereoscopic footage, adjust the disparity between the projected graphic on your footage. (Ex. A higher value gives the illusion that the projected layers are closer to the viewer.)



### Projected Layer:

Select the layer in your composition you would like to project on your footage. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected layer will also be projected.

### Point of Interest:

Control the center-point position of the effect.

### Scale:

Control the field of view (the size) of the projected layer. (Bigger value = bigger layer.)

### Extrusion-

#### Extrusion Depth:

Increase this to extrude the depth your projected layer. This will turn 2D graphics in to 3D on your footage. This 3D extrusion will also be retained if you choose to export your projected layer for AR within the Graphix effect. The maximum Extrusion Depth value is 10,000.

#### Bevel Depth:

Increase this to add a bevel to your projected layer's extrusion area.

#### Bevel Curvature:

Increase this to curve the bevel on the projected layer's extrusion area. Value range is from -100 to 100. A negative value will make the Bevel Curvature appear recessed and a positive value will make the Bevel Curvature appear outward and more rounded.

### Contour Blur:

Increase this selectively blur contoured areas of your projected layer, smoothing out any potential artifacting that may occur. Default value is 3 and the maximum value is 100.

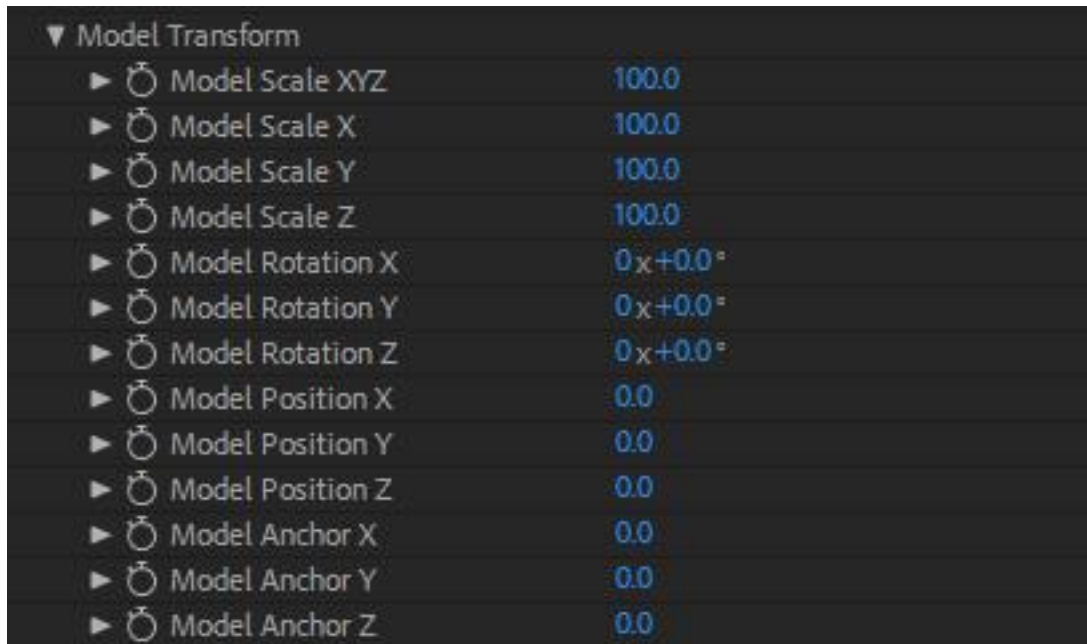
### Contour Threshold

Use this to adjust the overall threshold of the contour blur effect on your projected layer. Contour Threshold can also be used to fine-tune and fix any artifacts on your projected layer. Default value is 50 and the maximum value is 100.

### Edge UV Mapping:

Control how your selected projection layer will wrap around the 3D geometry. You can choose from Stretch and Wrap. Stretch is the default.

### Model Transformation-



### Model Scale XYZ:

Scale your model on the X, Y, and Z axis simultaneously.

### Model Scale X:

Scale your model on the X-axis.

### Model Scale Y:

Scale your model on the Y-axis.

### Model Scale Z:

Scale your model on the Z-axis.



**Model Rotation X:**

Rotate your model on the X-axis.

**Model Rotation Y:**

Rotate your model on the Y-axis.

**Model Rotation Z:**

Rotate your model on the Z-axis.

**Model Position X:**

Adjust the model position in 3D space on the X-axis. Value range is -10,000 and 10,000.

**Model Position Y:**

Adjust the model position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Position Z:**

Adjust the model position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Model Anchor X:**

Adjust the model's anchor point position in 3D space on the X-axis. Value range is -10,000 and 10,000.

**Model Anchor Y:**

Adjust the model's anchor point position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Anchor Z:**

Adjust the model's anchor point position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Light-****Enable Point Light:**

Check on or off to enable point lighting on your model.

**Light Color:**

Select the color for the point light. You can also use the color picker to select a color value in your scene. The default is white.

**Light Intensity:**

Adjust the intensity of the point light. Maximum value is 1,000. Default value is 100.

**Light Azimuth:**

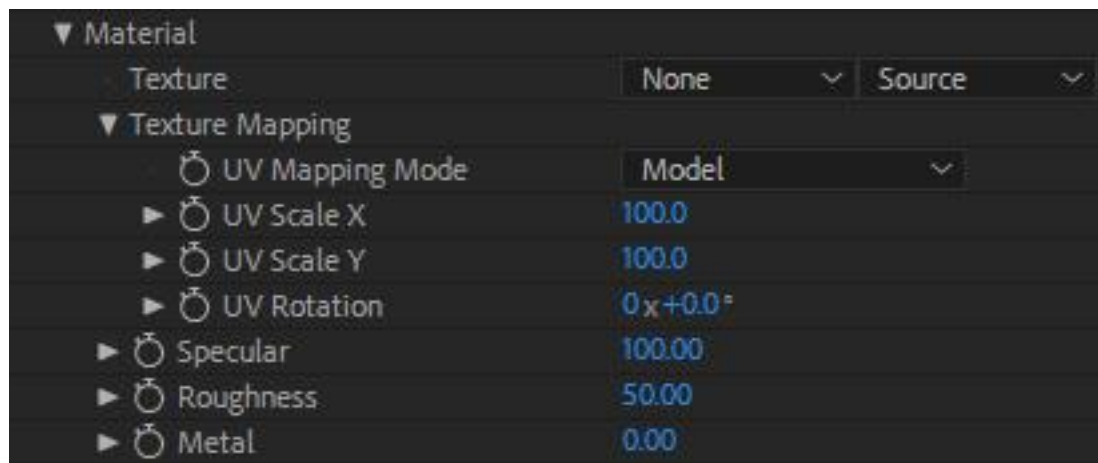
Adjust the point light position on the azimuth angle around your model. (Think of this as rotating around the horizon of your model.)

**Light Elevation:**

Adjust the point light elevation around your model. (Think of this as rotating around your model from the north to the south poles.)

**Light Distance:**

Adjust how near or far the point light is to your model's position. Maximum value is 65,535. Default is 100.

**Material-****Texture:**

Select a layer in your composition you would like to use as a texture on your model. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected texture will also be shown.

**Texture Mapping-****UV Mapping Mode:**

Control how the texture will wrap around the 3D geometry of your model. You can choose from Model, Local Equi, and Global Equi. Model is the default.

**UV Scale X:**

Scale your UV material on the X-axis.

**UV Scale Y:**

Scale your UV material on the Y-axis.

**UV Rotation:**

Rotate the UV material on the model.

**Specular:**

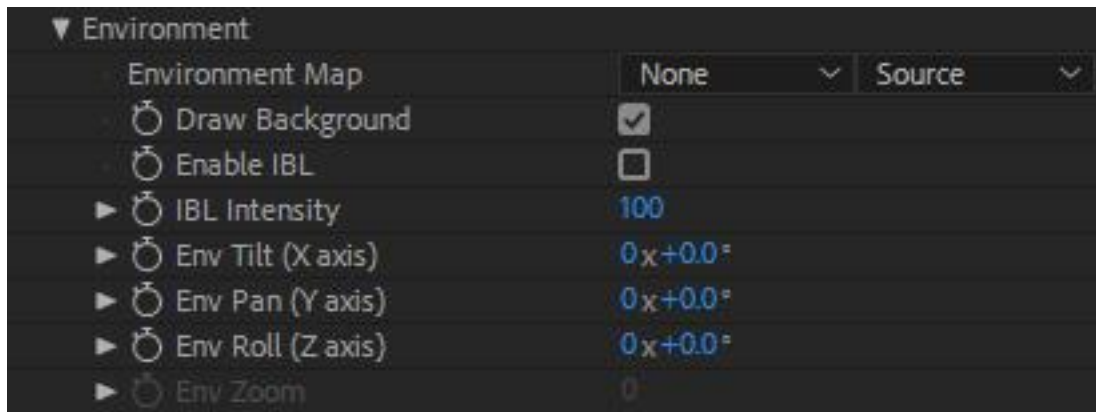
Control the specular lighting on the model. Maximum value is 1,000. Default value is 100.

**Roughness:**

Control the amount of “roughness” on the model. This gives the objects more of a matte texture. Maximum value is 100 and 50 is the default.

**Metal:**

Control the metallic and reflective properties on the model. Maximum value is 100. Default value is 0.

**Environment-****Environment Map:**

Select the layer in your composition you would like to use as an environment map with your model. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected environment map will also be projected.

**Draw Background:**

Turn on or off the environment map for your model. If no environment map is set, this will turn on or off your original footage layer, but leave the model on screen with an alpha channel.

**Enable IBL:**

Check this on or off to enable Image Based Lighting. Allows for more organic integration of the projected layer with your footage, for quick compositing.

**IBL Intensity:**

Adjust the intensity of the Image Based Lighting on your projected layer. Maximum value is 1,000. Default value is 100.

**Env Tilt (X axis):**

Rotate your environment map on the X-axis.

**Env Tilt (Y axis):**

Rotate your environment map on the Y-axis.

**Env Tilt (Z axis):**

Rotate your environment map on the Z-axis.

**Env Zoom: (Only available in Rectilinear (Flat) Frame Layout)**

Control the field of view for viewing the environment map. (Allowing you to zoom in or out of the environment map.)

**Distribution:** – See Distribution Controls section in the Manual.

**Opacity:**

Adjust the overall opacity of the effect on your footage. At 100% the effect is completely opaque. At 0% the effect is completely transparent.

**Blending mode:**

Select from various blending modes to determine how the effect will blend with the original footage layer. Normal is the default.

**Export USDZ:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .usdz AR format. When you click Export USDZ, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can import the .usdz AR file in other supported applications.

**Export glTF:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .glTF AR format. When you click Export glTF, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can import the .glTF AR file in other supported applications.

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## ObjX

Import popular 3D formats (alembic, fbx, obj, glTF, USDZ), modify the materials and export them in AR-supported formats USDZ and glTF, supported by AR Players – such as Adobe Aero, and Apple Reality Composer.

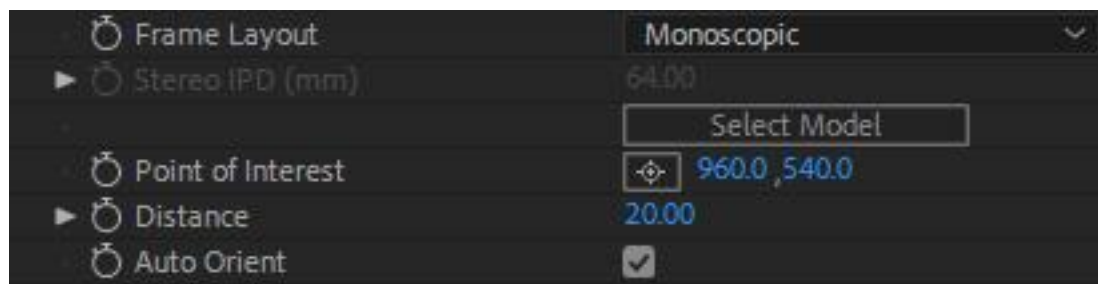


### Frame Layout:

Select between Monoscopic, Stereoscopic - Over/Under, Stereoscopic - Side by Side, or Rectilinear (Flat). (Use Rectilinear when you are applying the effect to non-360 footage, such as traditional flat footage.)

### Stereo Disparity IPD (mm):

On stereoscopic footage, adjust the disparity between the projected graphic on your footage. (Ex. A higher value gives the illusion that the projected layers are closer to the viewer.)



### Select Model:

Click this to select your model from the file explorer. Supported 3D model formats include: alembic, fbx, obj, glTF, USDZ.

### Point of Interest:

Control the center-point position of the effect.

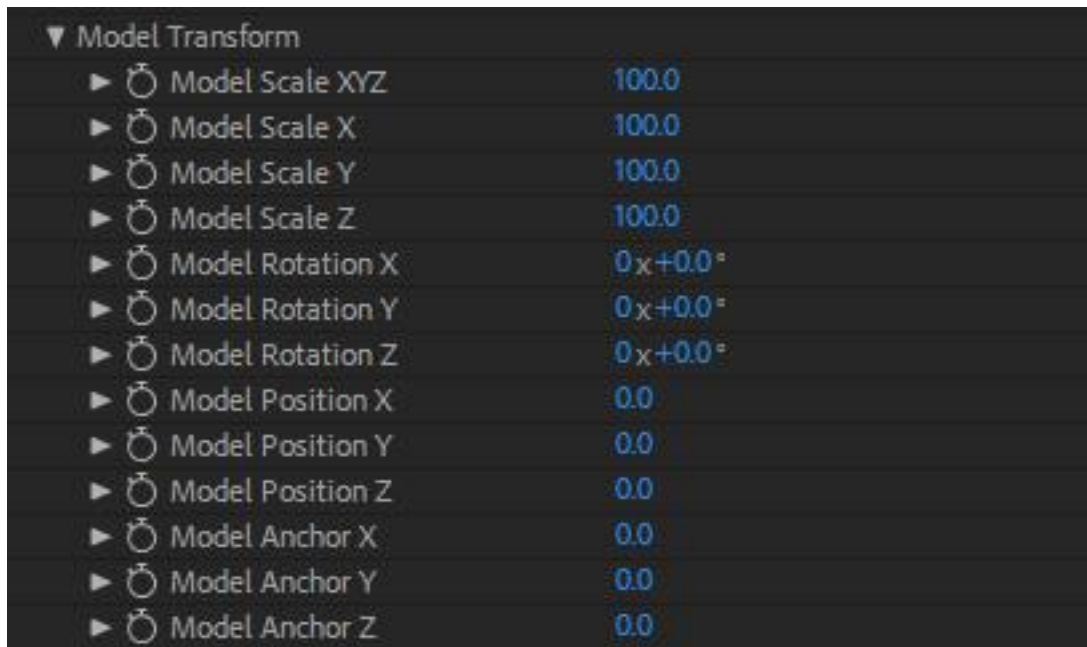
### Distance:

Control the distance of the model from the "virtual center camera". (Bigger value = farther away from the virtual camera.) You can also pass directly through the virtual camera. If you are in a 360° Frame Layout, the model will continue through to the other side. Select from a value between -100 and 100. Default is 5.














### Auto Orient:

Turn this off if you do not want the primitive to auto orient towards the center when the position changes.

### Model Transformation-



The image shows a dark-themed software interface with a list of model transformation parameters. Each parameter is preceded by a right-pointing triangle and a small circular icon with a crosshair. The values are displayed in blue text.

▼ Model Transform	
▶  Model Scale XYZ	100.0
▶  Model Scale X	100.0
▶  Model Scale Y	100.0
▶  Model Scale Z	100.0
▶  Model Rotation X	0x+0.0°
▶  Model Rotation Y	0x+0.0°
▶  Model Rotation Z	0x+0.0°
▶  Model Position X	0.0
▶  Model Position Y	0.0
▶  Model Position Z	0.0
▶  Model Anchor X	0.0
▶  Model Anchor Y	0.0
▶  Model Anchor Z	0.0

### Model Scale XYZ:

Scale your model on the X, Y, and Z axis simultaneously.

### Model Scale X:

Scale your model on the X-axis.

### Model Scale Y:

Scale your model on the Y-axis.

**Model Scale Z:**

Scale your model on the Z-axis.

**Model Rotation X:**

Rotate your model on the X-axis.

**Model Rotation Y:**

Rotate your model on the Y-axis.

**Model Rotation Z:**

Rotate your model on the Z-axis.

**Model Position X:**

Adjust the model position in 3D space on the X-axis. Value range is -10,000 and 10,000.

**Model Position Y:**

Adjust the model position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Position Z:**

Adjust the model position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Model Anchor X:**

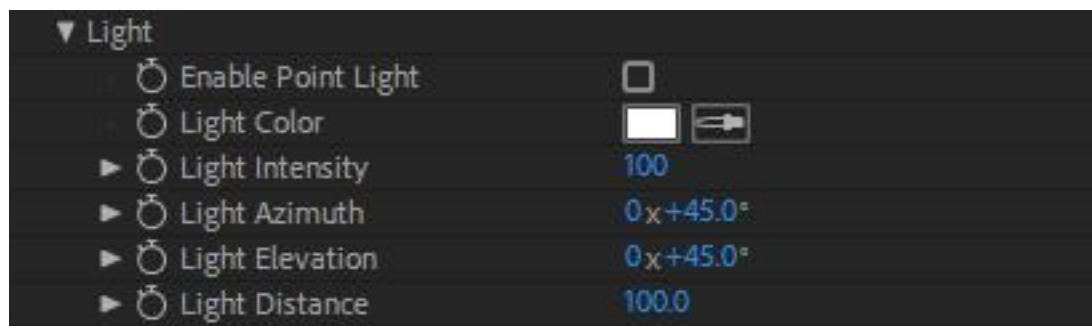
Adjust the model's anchor point position in 3D space on the X-axis. Value range is -10,000 and 10,000.

**Model Anchor Y:**

Adjust the model's anchor point position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Anchor Z:**

Adjust the model's anchor point position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Light-****Enable Point Light:**

Check on or off to enable point lighting on your model.

### Light Color:

Select the color for the point light. You can also use the color picker to select a color value in your scene. The default is white.

### Light Intensity:

Adjust the intensity of the point light. Maximum value is 1,000. Default value is 100.

### Light Azimuth:

Adjust the point light position on the azimuth angle around your model. (Think of this as rotating around the horizon of your model.)

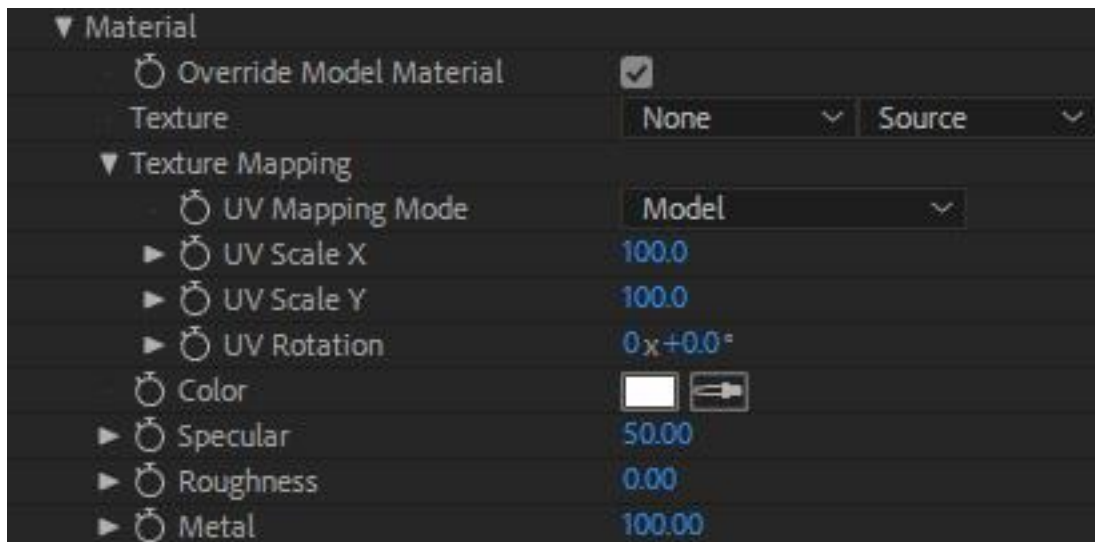
### Light Elevation:

Adjust the point light elevation around your model. (Think of this as rotating around your model from the north to the south poles.)

### Light Distance:

Adjust how near or far the point light is to your model's position. Maximum value is 65,535. Default is 100.

### Material-



### Override Model Material:

Enable this to override the 3D model's original material (if it imported with one), to then apply your own material with the Material settings.

### Texture:

Select a layer in your composition you would like to use as a texture on your model. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected texture will also be shown.

### Texture Mapping-



### UV Mapping Mode:

Control how the texture will wrap around the 3D geometry of your model. You can choose from Model, Local Equi, and Global Equi. Model is the default.

### UV Scale X:

Scale your UV material on the X-axis.

### UV Scale Y:

Scale your UV material on the Y-axis.

### UV Rotation:

Rotate the UV material on the model.

### Specular:

Control the specular lighting on the model. Maximum value is 1,000. Default value is 100.

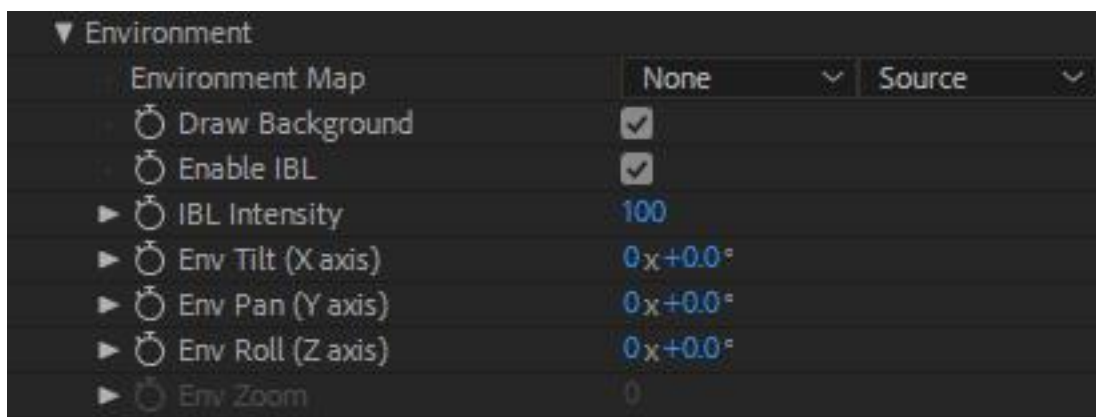
### Roughness:

Control the amount of "roughness" on the model. This gives the objects more of a matte texture. Maximum value is 100 and 50 is the default.

### Metal:

Control the metallic and reflective properties on the model. Maximum value is 100. Default value is 0.

### Environment-



### Environment Map:

Select the layer in your composition you would like to use as an environment map with your model. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected environment map will also be projected.

### Draw Background:

Turn on or off the environment map for your model. If no environment map is set, this will turn on or off your original footage layer, but leave the model on screen with an alpha channel.

**Enable IBL:**

Check this on or off to enable Image Based Lighting. Allows for more organic integration of the projected layer with your footage, for quick compositing.

**IBL Intensity:**

Adjust the intensity of the Image Based Lighting on your projected layer. Maximum value is 1,000. Default value is 100.

**Env Tilt (X axis):**

Rotate your environment map on the X-axis.

**Env Tilt (Y axis):**

Rotate your environment map on the Y-axis.

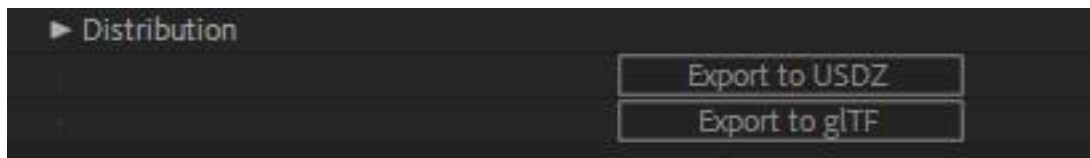
**Env Tilt (Z axis):**

Rotate your environment map on the Z-axis.

**Env Zoom: (Only available in Rectilinear (Flat) Frame Layout)**

Control the field of view for viewing the environment map. (Allowing you to zoom in or out of the environment map.)

**Distribution:** – See Distribution Controls section in the Manual.

**Export USDZ:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .usdz AR format. When you click Export USDZ, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can import the .usdz AR file in other supported applications.

**Export glTF:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .glTF AR format. When you click Export glTF, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can import the .glTF AR file in other supported applications.

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## Spherify

Convert 360° stills or footage into 3D spheres (portals) for use in AR. Use a different image for front and back side of the spheres. Includes full RGBA support.




### Frame Layout:

Select between Monoscopic, Stereoscopic - Over/Under, Stereoscopic - Side by Side, or Rectilinear (Flat). (Use Rectilinear when you are applying the effect to non-360 footage, such as traditional flat footage.)

### Stereo Disparity IPD (mm):

On stereoscopic footage, adjust the disparity between the projected graphic on your footage. (Ex. A higher value gives the illusion that the projected layers are closer to the viewer.)

○ Frame Layout	Monoscopic	▼
▶ ○ Stereo IPD (mm)	64.00	
○ Wrap Layer	None	▼ Source ▼
○ Backside Layer	None	▼ Source ▼
○ Point of Interest	 960.0, 540.0	
▶ ○ Progress	0.00	
▶ ○ Distance	10.000	
▶ ○ Anchor Point	0	

**Wrap Layer:**

Select the layer in your composition you would like to project on your footage and be the front layer for the effect. (This layer will need to be in your composition or edit timeline.) In no Backside Layer is set, the Wrap Layer will be projected on the front and the back. You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected layer will also be projected.

**Backside Layer:**

Select the layer in your composition you would like to project on your footage and be the backside layer for the effect. (This layer will need to be in your composition or edit timeline.) In no Backside Layer is set, the Wrap Layer will be projected on the front and the back. You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected layer will also be projected.

**Point of Interest:**

Control the center-point position of the effect.

**Progress:**

Control the spherical amount of the projected layer shown. The maximum and minimum values are 100 and -100. The default value is 0. At the default, the layer will be completely flat. At a value of 100, the projected layer will morph into a completed sphere. At a value of -100, the projected layer will inverse into a completed sphere.

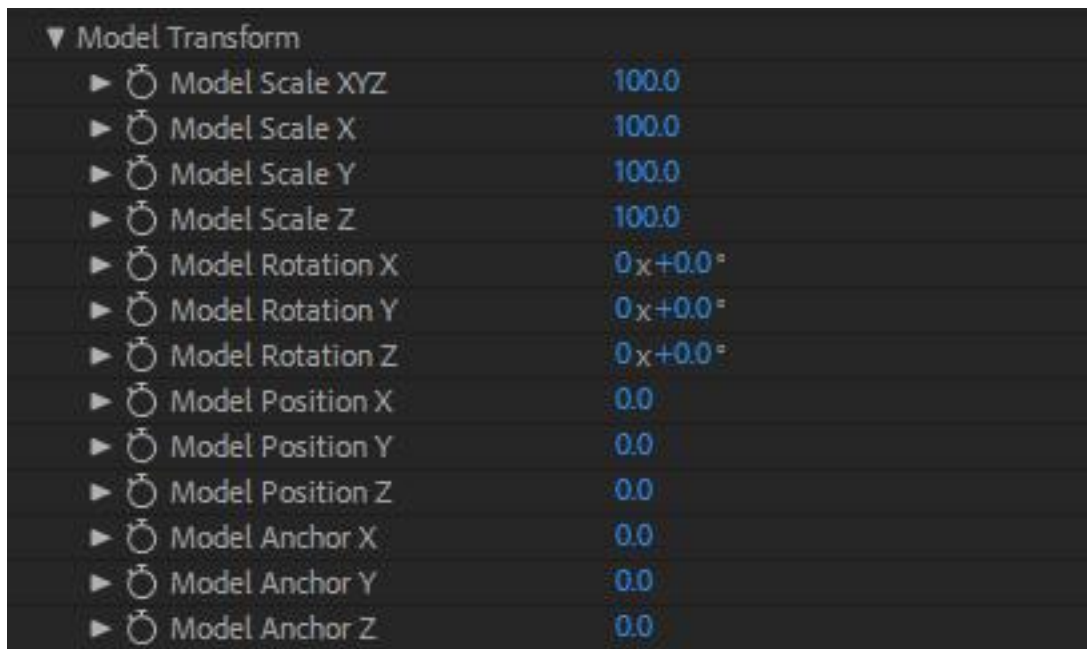
**Distance:**

Control the distance of the model from the “virtual center camera”. (Bigger value = farther away from the virtual camera.) You can also pass directly through the virtual camera. If you are in a 360° Frame Layout, the model will continue through to the other side. Select from a value between -100 and 100. Default is 5.

**Anchor Point:**

With this setting you can reposition the anchor point from the sphere model. The default position is directly in the center of the sphere. The default value is 0. Select from a value between -100 and 100.

**Model Transformation-**



The image shows a dark-themed software interface with a list of model transform properties. Each property is preceded by a right-pointing triangle and a small circular icon with a crosshair. The values are displayed in blue text.

Property	Value
Model Transform	
Model Scale XYZ	100.0
Model Scale X	100.0
Model Scale Y	100.0
Model Scale Z	100.0
Model Rotation X	0x+0.0°
Model Rotation Y	0x+0.0°
Model Rotation Z	0x+0.0°
Model Position X	0.0
Model Position Y	0.0
Model Position Z	0.0
Model Anchor X	0.0
Model Anchor Y	0.0
Model Anchor Z	0.0

### **Model Scale XYZ:**

Scale your model on the X, Y, and Z axis simultaneously.

### **Model Scale X:**

Scale your model on the X-axis.

### **Model Scale Y:**

Scale your model on the Y-axis.

### **Model Scale Z:**

Scale your model on the Z-axis.

### **Model Rotation X:**

Rotate your model on the X-axis.

### **Model Rotation Y:**

Rotate your model on the Y-axis.

### **Model Rotation Z:**

Rotate your model on the Z-axis.

### **Model Position X:**

Adjust the model position in 3D space on the X-axis. Value range is -10,000 and 10,000.

### **Model Position Y:**

Adjust the model position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Position Z:**

Adjust the model position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Model Anchor X:**

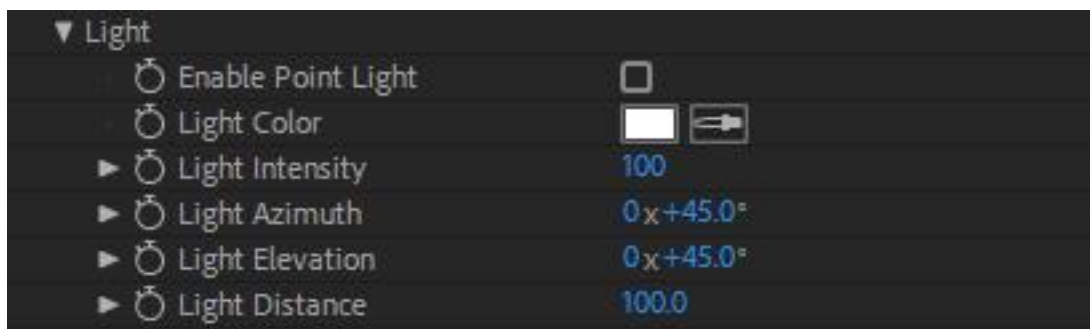
Adjust the model's anchor point position in 3D space on the X-axis. Value range is -10,000 and 10,000.

**Model Anchor Y:**

Adjust the model's anchor point position in 3D space on the Y-axis. Value range is -10,000 and 10,000.

**Model Anchor Z:**

Adjust the model's anchor point position in 3D space on the Z-axis. Value range is -10,000 and 10,000.

**Light-****Enable Point Light:**

Check on or off to enable point lighting on your model.

**Light Color:**

Select the color for the point light. You can also use the color picker to select a color value in your scene. The default is white.

**Light Intensity:**

Adjust the intensity of the point light. Maximum value is 1,000. Default value is 100.

**Light Azimuth:**

Adjust the point light position on the azimuth angle around your model. (Think of this as rotating around the horizon of your model.)

**Light Elevation:**

Adjust the point light elevation around your model. (Think of this as rotating around your model from the north to the south poles.)

**Light Distance:**

Adjust how near or far the point light is to your model's position. Maximum value is 65,535. Default is 100.

## Material-



### Specular:

Control the specular lighting on the model. Maximum value is 1,000. Default value is 100.

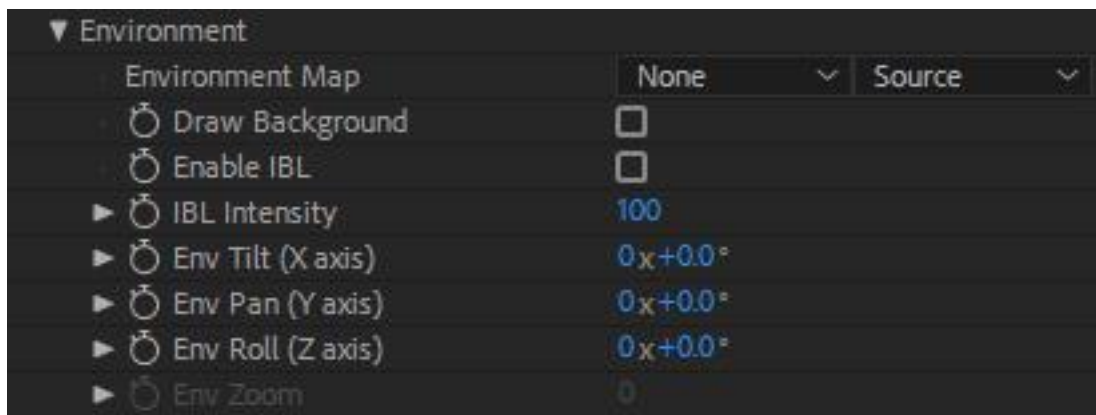
### Roughness:

Control the amount of "roughness" on the model. This gives the objects more of a matte texture. Maximum value is 100 and 50 is the default.

### Metal:

Control the metallic and reflective properties on the model. Maximum value is 100. Default value is 0.

## Environment-



### Environment Map:

Select the layer in your composition you would like to use as an environment map with your model. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected environment map will also be projected.

### Draw Background:

Turn on or off the environment map for your model. If no environment map is set, this will turn on or off your original footage layer, but leave the model on screen with an alpha channel.

### Enable IBL:

Check this on or off to enable Image Based Lighting. Allows for more organic integration of the projected layer with your footage, for quick compositing.

### IBL Intensity:

Adjust the intensity of the Image Based Lighting on your projected layer. Maximum value is 1,000. Default value is 100.

### Env Tilt (X axis):

Rotate your environment map on the X-axis.

### Env Tilt (Y axis):

Rotate your environment map on the Y-axis.

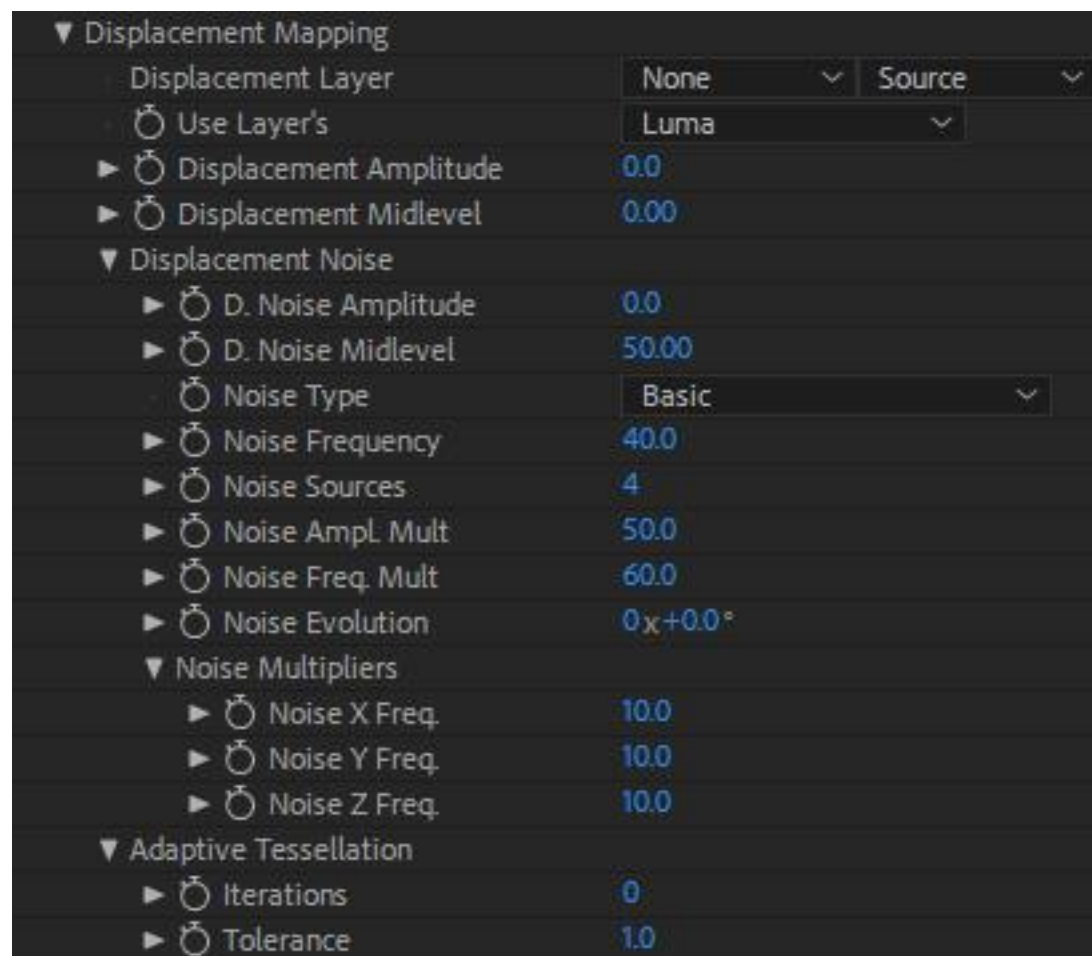
### Env Tilt (Z axis):

Rotate your environment map on the Z-axis.

### Env Zoom: (Only available in Rectilinear (Flat) Frame Layout)

Control the field of view for viewing the environment map. (Allowing you to zoom in or out of the environment map.)

### Displacement Mapping-





**Displacement Layer:**

Select the layer in your composition you would like to use as a displacement map with the sphere. (This layer will need to be in your composition or edit timeline.) You also have the option to select from Source, Masks, and Effects & Masks to determine if any masks or effects on your selected environment map will also be used.

**Use Layer's:**

Select the property from the Displacement Layer that you would like to be used for the displacement. Select from: Red, Green, Blue, Alpha and Luma. Luma is the default.

**Displacement Amplitude:**

Set the amplitude of the displacement on your sphere. The maximum value is 1,000 and the minimum value is -1,000. The default value is 0.

**Displacement Midlevel:**

Set the mid-level of displacement on your sphere. The maximum value is 100 and the minimum value is -100. The default value is 0.

**Displacement Noise-****D. Noise Amplitude:**

Set the amplitude of noise displacement on your sphere. The maximum value is 1,000 and the minimum value is -1,000. The default value is 0.

**D. Noise Midlevel:**

Set the mid-level of noise displacement on your sphere. The maximum value is 100 and the minimum value is -100. The default value is 50.

**Noise Type:**

Select from four noise types for displacement noise. Choose from: Basic, Turbulent Sharp, Max, and Strings. The default is Basic.

**Noise Frequency:**

Adjust the Displacement Noise frequency on the sphere. The maximum value is 1,000 and the minimum value is 0. The default value is 40.

**Noise Sources:**

Adjust the number of sources for the Displacement Noise. The maximum value is 20 and the minimum value is 1. The default value is 4.

**Noise Ampl. Mult:**

Adjust the Displacement Noise amplitude multiplier. The maximum value is 100 and the minimum value is 0. The default value is 50.

**Noise Freq. Mult:**

Adjust the Displacement Noise frequency multiplier. The maximum value is 100 and the minimum value is 0. The default value is 60.

**Noise Evolution:**

Adjust the evolution of the Displacement Noise on the sphere. This setting is loopable.

**Noise Multipliers-****Noise X Freq.**

Adjust the frequency of the Displacement Noise for the sphere on the x-axis. The maximum value is 1,000 and the minimum value is -1,000. The default value is 10.

**Noise Y Freq.**

Adjust the frequency of the Displacement Noise for the sphere on the Y-axis. The maximum value is 1,000 and the minimum value is -1,000. The default value is 10.

**Noise Z Freq.**

Adjust the frequency of the Displacement Noise for the sphere on the Z-axis. The maximum value is 1,000 and the minimum value is -1,000. The default value is 10.

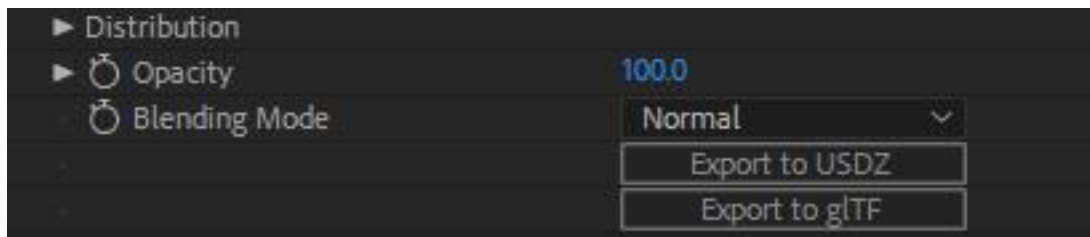
**Adaptive Tessellation****Iterations:**

Adjust the iterations of Adaptive Tessellation for displacement mapping for the sphere. The maximum number of iterations is 10. The default value is 0.

**Tolerance:**

Adjust the Tolerance of Adaptive Tessellation for displacement mapping for the sphere. The maximum value is 100. The default value is 0.

**Distribution:** – See Distribution Controls section in the Manual.

**Opacity:**

Adjust the overall opacity of the effect on your footage. At 100% the effect is completely opaque. At 0% the effect is completely transparent.

**Blending mode:**

Select from various blending modes to determine how the effect will blend with the original footage layer. Normal is the default.

**Export USDZ:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .usdz AR format. When you click Export USDZ, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can in import the .usdz AR file in other supported applications.

**Export glTF:**

Select this to export and save your Mantra VR projected layer or 3D model out to the .glTF AR format. When you click Export glTF, this will launch the file explorer, allowing you to select a save location and name the file. Once you click save, your AR file will be exported. Model sizes will vary depending on the size and texture details of your projected layer or 3D model. You can in import the .glTF AR file in other supported applications.

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