

V-Ray Decal

This page provides information on the V-Ray VRayDecal SOP.

Overview

V-Ray Decal provides an easy way to project one material on top of another regardless of the target UV set. The projection is masked based on the mask texture specified under the V-Ray Decal settings. All scene geometry is affected by default, only if it intersects the bounding box of the V-Ray Decal. The bounding box is the same as the viewport preview gizmo for the decal.

The Decal Material and the Decal Mask are stored as attributes that can be previewed under the Geometry Spreadsheet those are **shop_materialpath** and **vray_decad_mask**, respectively. You can instance/copy the Decal and change the shop_materialpath and vray_decad_mask on a per-instance basis.

Multiple V-Ray Decals can be stacked on top of each other and their overlapping is controlled by the parameters in each V-Ray Decal object.

The V-Ray Decal's effect is visible at render time only.

The material is projected only on the surfaces within the gizmo.

To only affect specific nodes, use the Affected objects settings under the V-Ray Decal.



[Download Example Files](#)

Workflow

1. Create a V-Ray Decal inside a Geometry node in [obj] network.
2. Create and specify a Material for the decal.
3. Create and specify a Mask Texture for the decal.
4. Add a Grid in [obj] network.
5. Render the decal material should be projected over the Grid geometry where it intersects it. The Mask should also be affecting the projection.

Parameters

Main

Z Order – Specifies a layering order when multiple V-Ray Decal gizmos are present. The decal with the larger Z Order value is set on top of the other ones. In case of equal Z Order values, the bounding boxes of the decals are taken into account for positioning.

Size – Size multiplier for the V-Ray Decal box.

Projection Offset (%) – Specifies the offset of the V-Ray Decal gizmo in percentages. This parameter can take values below 0 and above 100.

Normal Angle – Specifies the angle to which the decal is applied onto the surface below.

Enable Fading by Normal Angle – Enables the use of a fade out angle.

Fade Angle – Specifies the angle which creates a fadeout gradient starting from the **Normal Angle**. Values closer to the Normal Angle produce a sharper gradient. The maximum fade out angle is 180 and it can't take values less than the Normal Angle. See the [Fade Angle example](#) for more information.

Bend – Specifies the bend angle for the V-Ray Decal in degrees when placed on a curved surface.

Shading

Project on Back Side – Enables the visibility of the projected image on the back side of the face. This option is useful for objects without an actual thickness where the back side of the polygons is exposed to the viewer.

Material – Specifies a material to project over the geometry in the scene.

No Material Color – Specifies the color of the decal when no material is assigned to it.

Mask Texture – Masks the projected material based on a texture. The material must be applied to the V-Ray Decal.

Resize for Mask Texture – Sets aspect ratio from mask file.

Bump

Use Only Decal Bump – When enabled, the original surface bump isn't taken into account.

Surface Bump Amount – Specifies the percentage of the surface bump that affects the V-Ray Decal.

Displacement

Displacement Texture – Specifies a texture to evaluate for the displacement. See the [Decal Displacement example](#) for more information.

Displacement Amount – Specifies the amount of displacement applied. A value of 0.0 means the object appears unchanged. Higher values produce a greater displacement effect. A negative value can also be entered, in which case the displacement pushes geometry inside the object.

Displacement Shift – Specifies a constant which is added to the displacement map values, shifting the displaced surface up and down along the normals. This can either be a positive or negative value.

Use Only Decal Displacement – When enabled, the original surface displacement is not taken into account. See the [Use Only Decal Displacement example](#) for more information.

Affected Objects

Exclude Mode – Specifies the effect of the Exclude list.

Exclude – Objects in the Exclude list are not affected by the decal.

Include – Only objects in the list are affected by the decal.

Exclude – Specifies an include/exclude list that allows you to select which scene objects to be affected by the V-Ray Decal.

Main

Z Order

1

Size

1

1

Projection Offset (%)

0

Normal Angle

90



Enable Fading by Normal Angle

Fade Angle

90

Bend

0

Shading



Project on Back Side

Material

No Material Color



1

0

Mask Texture

Resize for Mask Texture

Bump



Use Only Decal Bump

Surface Bump Amount

100

Displacement

Displacement Texture

Displacement Amount

1

Displacement Shift

0

☐ Use Only Decal Displacement

Affected Objects

Exclude Mode

Exclude

Exclude

Example: Decal

The example shows the decal effect applied onto a motorcycle.

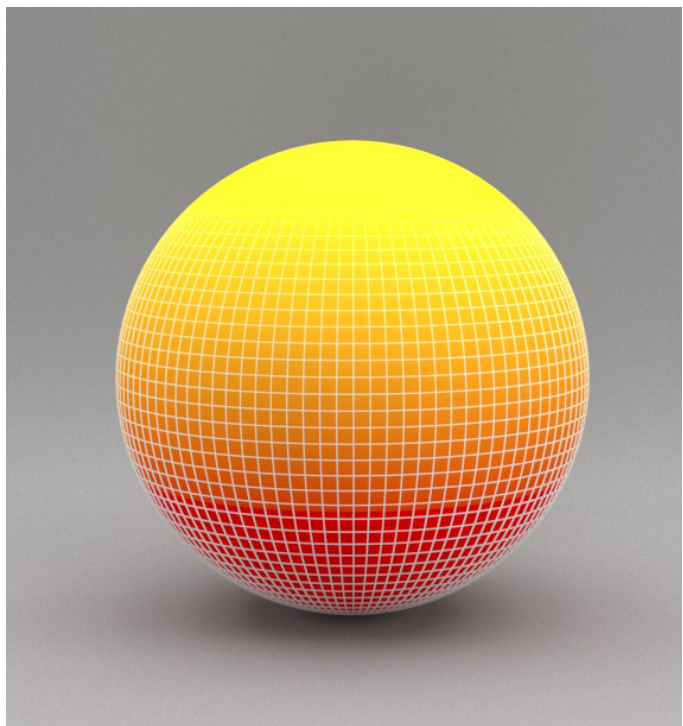
off
on



Example: Fade Angle

The Normal Angle is set to 40 degrees. The first image shows the decal effect without a Fade Angle. The second render has Fade Angle enabled and set to 120 degrees. Note how the effect is enclosed between the Normal and Fade Angles.

off
on



Example: Decal Displacement

This example shows the effect of decal displacement.

off
on





Example: Use Only Decal Displacement

This example shows the effect of decal displacement. Use Only Decal Displacement is turned on in the second image.

off
on





Notes

- Use the **Resize for Mask Texture** button to resize the decal so that it fits the aspect ratio of the image.
- All transforms applied to the V-Ray Decal in the node chain (e.g. with a Transform SOP) are considered on export.
- V-Ray Decal can also be applied on geometry in the SOP level, by merging it inside the node chain. Please check the example scene above.
- V-Ray Decal can be instanced/copied to points.