



**Version: 1.0**

**Plugin and User's guide last update: 10-2015**

**Compatibility: After Effects CS5, CS5.5, CS6, CC 2014, CC 2015**

## **Mask based 3D modeling, right inside After Effects !**

**You can now generate and animate 3D shapes as easily as masks.**

The **GPU accelerated** renderer lets you integrate your 3D shapes with other layers, using composition **cameras and lights**.

You can also **export** the 3D shapes as **.obj** and **.obj sequence**, and use them with your favorite **3D applications** and **plugins** (Cinema 4D, Maya, 3DS max, Blender, Element 3D, Plexus...)

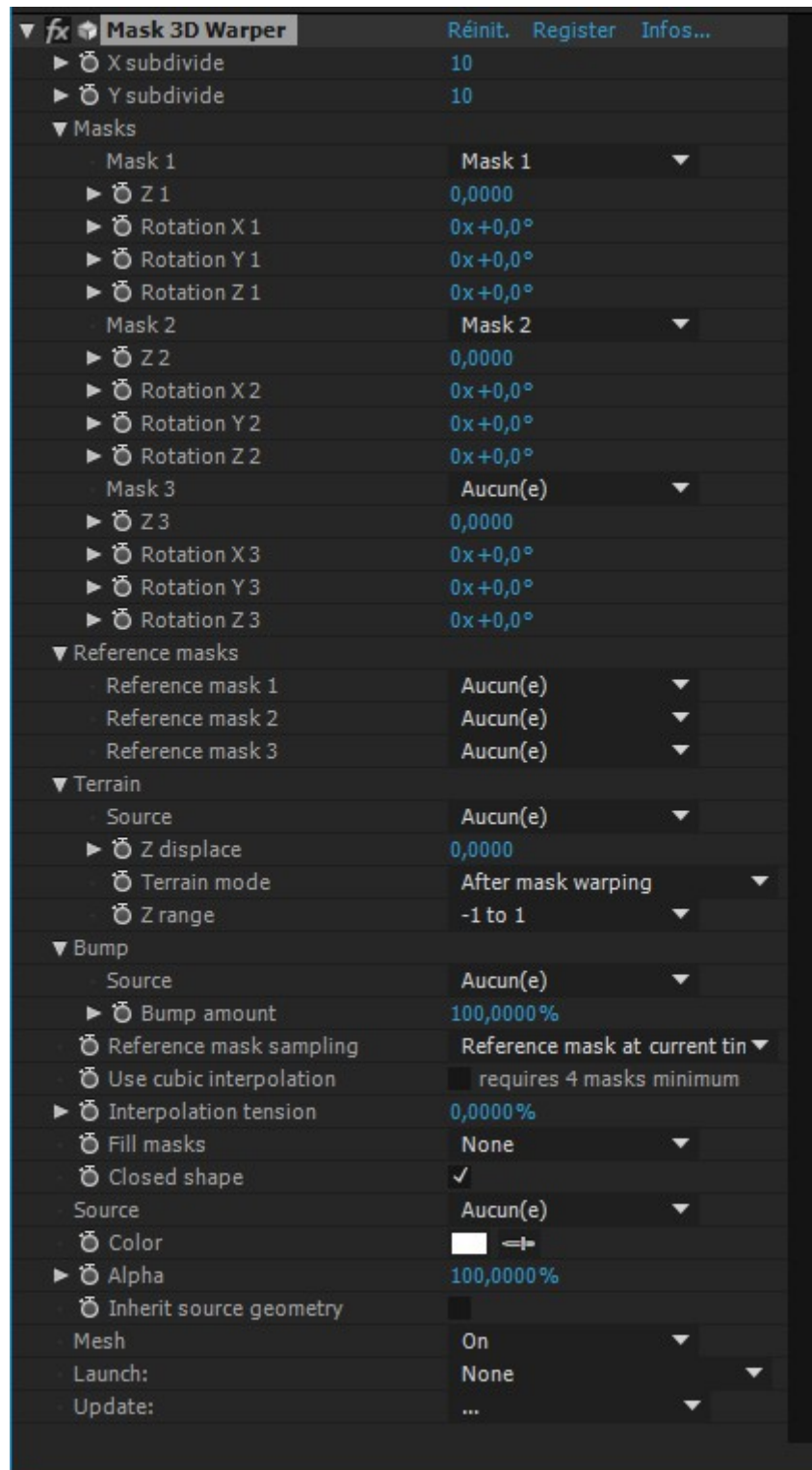
**Mask 3D Warper is divided in 3 plugins communicating with each other :**

**1\_Mask 3D Warper.** This plugin lets you generate 3D shapes from masks (up to 10 per effect instance). You can add up to 10 instances per layer.

**2\_M3DW Distorter.** This plugin lets you animate geometry and distortions for generated 3D shapes. You can add as many instances as you want. For each instance, you can choose which 3D shape or group of 3D shapes will be affected.

**3\_M3DW Renderer.** This plugin will render all the generated 3D shapes together. This means you can intersect shapes together, intersect them with native 3D layers, use lights and cameras...

## A\_Mask 3D Warper



## **Masks :**

Select the Masks you want to base your shape on. Note that masks don't need to be closed.

You can set (and animate) the X and Y subdivide parameters to define accuracy of the generated mesh.

For each mask (up to 10), you can set and animate a Z value and X, Y and Z rotations.

## **Mask sampling :**

You can define 3 different mask sampling modes. Each one defines how the texture is mapped on the shape (UV mapping).

1\_Current mask at zero time.

The texture is set at first frame, then distorted to follow mask's animation. This makes the texture attached to the shape.

2\_Current mask at current time.

The texture is re-set for each frame. This makes the texture look attached to the layer.

3\_Reference mask at current time.

The texture is re-set for each frame, according to one reference mask per shape mask.

This function gives you the most accurate control over UV mapping.

## **Reference masks :**

If 'Reference mask sampling' is set to 'Reference mask at current time', you can select a reference mask for each shape mask.

If no reference mask is selected, original shape mask is used.

## **Terrain :**

**Source.** Select a layer as a terrain mapping source. Only Luminance value (greyscale) of the source will be used.

**Z displace.** Set and animate the amount of distortion generated by the terrain source.

### **Terrain mode.**

Choose '**After mask warping**' to displace the mesh perpendicularly to mesh face.

Choose '**Before mask warping**' to displace the mesh in Z direction, independently from face orientation.

### **Z range.**

Choose '**-1 to 1**' to distort both forward and backward.

Choose '**0 to 1**' to distort only forward.

## **Bump :**

**Source.** Select a layer as a bump mapping source. Only Luminance value (greyscale) of the source will be used.

**Bump amount.** Set and animate the amount of light distortion generated by the bump source.

Note that Bump mapping only affects the way the shape is lit, while Terrain mapping affects the mesh itself.

**Use cubic interpolation.** Check to get a smooth interpolated shape. Requires 4 masks minimum.

**Interpolation tension.** Only if cubic interpolation is set.

### **Fill masks.**

You can choose to fill First and / or Last mask. 'First mask' is the mask selected with 'Mask 1', Last mask is the mask selected with 'Mask' parameters.

**Closed shape.** Set to get seamless closed shape.

**Source.**

Select a layer as a texture. If set to 'None', Source layer after effects are applied will be used.

**Color.**

Define a color to colorize or replace your texture (see M3DW Renderer for details).

**Alpha.**

Set the transparency of the texture and / or color (see M3DW Renderer for details).

**Inherit source geometry.**

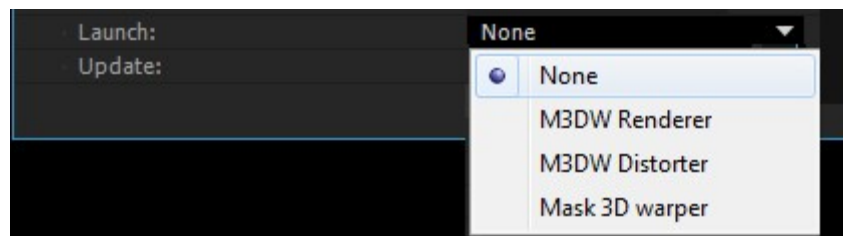
Only valid if a source is selected. Computes shape geometry according to source layer 3D geometry in composition space. Specially usefull to make 3D layers intersect with 3D shapes, or to directly distort 3D layers.

**Mesh.**

Set On or Off to define of the shape should be used or not.

**Launch.**

This popup parameter lets you launch a new Mask 3D warper instance, a new M3DW Distorter instance or a new M3DW Renderer instance. Note that M3DW Distorter and M3DW Renderer are not visible in the effect menu.

**Update.**

Force After Effects caching system to re-render. Specially useful with CC 2015.

**Mask 3D Warper workflow.**

In order to have the 3D shape rendered or exported, you'll need to launch M3DW Renderer (included).

All the parameters can be animated (except source layers for texture, terrain and bump mapping).

Each layer can have up to 10 instances of Mask 3D Warper.

This means you can create 10 different 3D shapes and make them intersect.

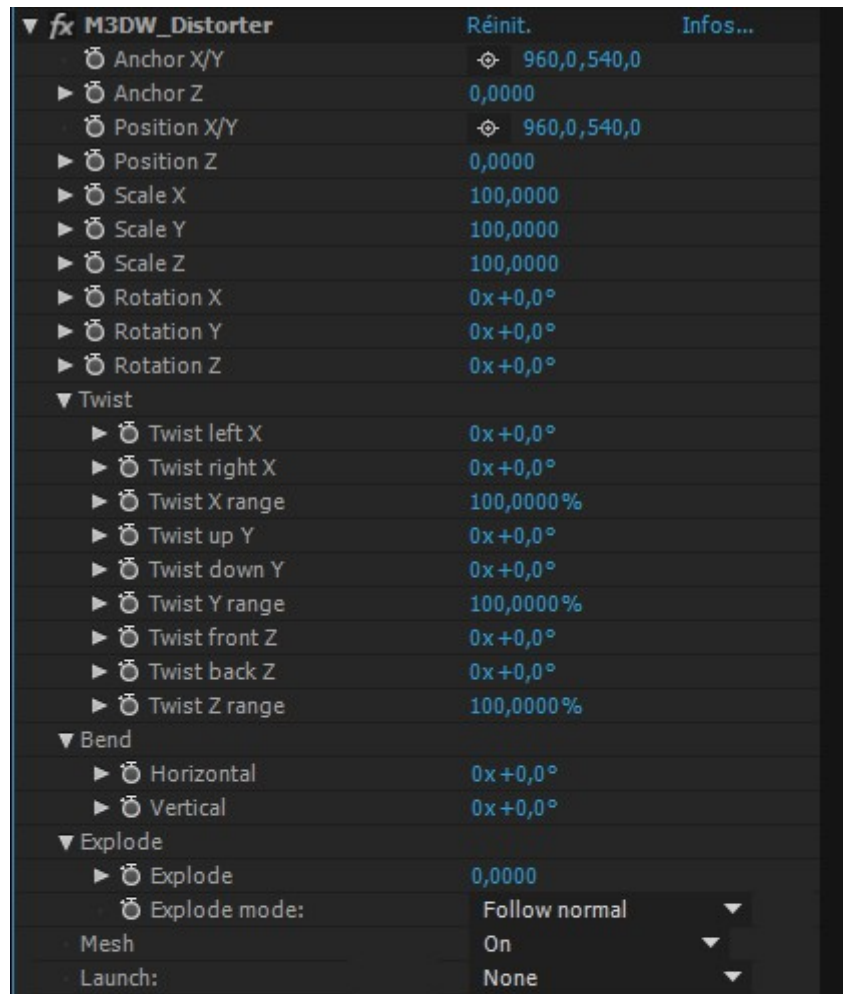
You can also use Mask 3D Warper to integrate and intersect other composition 3D layers.

To do so, add a new instance of Mask 3D Warper, select the layer as a source

and set 'Inherit source geometry'. Then disable the layer in the composition (otherwise you'll get 2 instances of the layer, one rendered by M3DW Renderer, the other by After Effects).

The layer will be treated as any other 3D shape, intersect with the others, use all the Mask 3D Warper functions like Terrain mapping, Bump mapping and so on...

## A\_M3DW Distorter



**M3DW Distorter** gives you all the 3D controls you get for 3D layers in After Effects (except orientation, replaced by rotations only).

You can define **AnchorPoint**, **Position**, **Scale**, **Rotations**, plus 3 types of distortion :

**\_Twist.** Works on the X, Y and Z axis. You can also define the range to apply each twist to.

**\_Bend.** Can be Horizontal and / or Vertical.

**\_Explode.** Shatters the mesh triangles apart. Explode mode can be 'Follow normal' (triangles will be displaced along their relative Z axis) and 'Center' (triangles will be displaced from the mesh center).

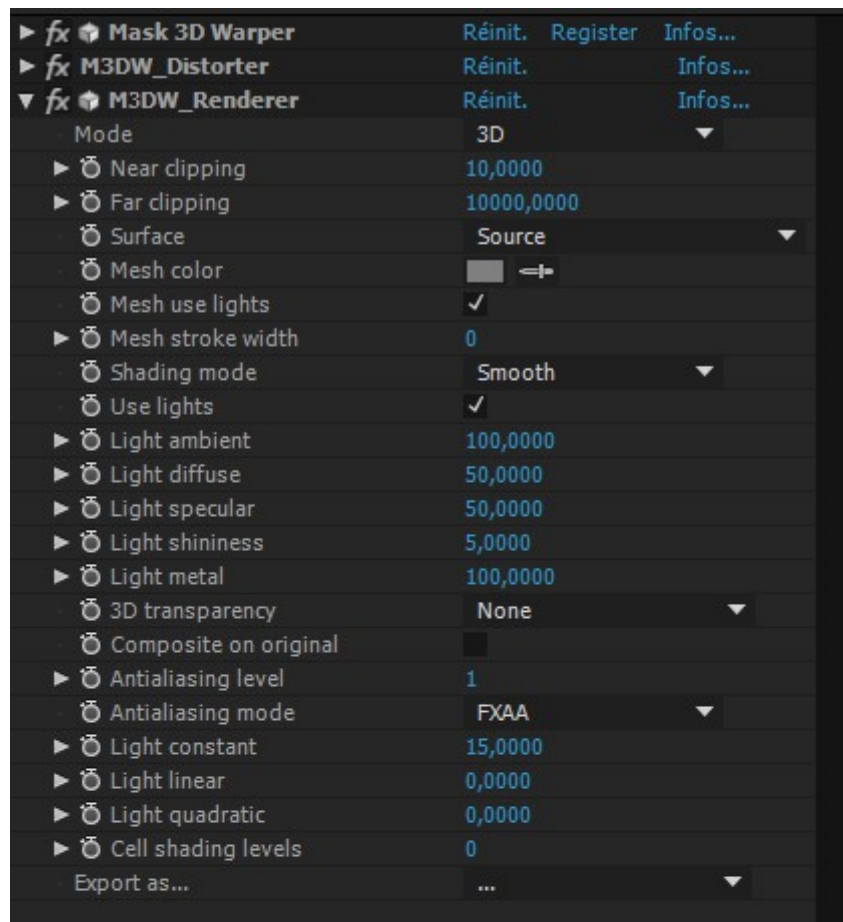
You can set 'Mesh parameter' to '**On**' or '**Off**' to apply or not the distortion.

You can also set '**Exclude mesh n°...**' to exclude one or more meshes from being distorted.

Note that the 'Exclude...' parameters will appear according to the number of meshes.

The number of **M3DW Distorter** instances is not limited.

## A\_M3DW Renderer



This plugin is the **OpenGL render engine**. It will render all the instances of **Mask 3D Warper** and **M3DW Distorter** enabled before it in the effect's stack. Only one instance per layer is allowed.

Though it is mainly a 3D render engine, it also allows you to work in 2D. Very useful to perform Mask based distortion of an image.

### Parameters description :

**Near clipping.** Defines the minimum distance from camera where shapes appear.

**Far clipping.** Defines the maximum distance from camera where shapes disappear.

Note that setting Near clipping with a small value makes you loose precision in the **Z-Depth buffer**.

Try to set the biggest value as possible to get the best results.

**Surface.** Choose between **Source**, **Color** and **Colorized source**. For each 3D shape, the color is defined in each **Mask 3D Warper** effect.

**Mesh color.** Defines the color of the Mesh (if visible, see below).

**Mesh use lights.** Defines if Mesh is lit (if Mesh is visible, and lights enabled, see below).

**Mesh stroke width.** Defines the width of Mesh strokes. Setting to 0 makes the Mesh invisible.

**Shading mode.** Can be Flat or Smooth. Flat is a per-face lighting, Smooth uses Gouraud lighting.

**Use lights.** Check to use composition lights.

**Light Ambient, Diffuse, Specular, Shininess and Metal.** Same as After Effects parameters.

A slight difference in Shininess can appear between After Effects and M3DW Renderer.

**3D Transparency.** M3DW Renderer offers 2 different types of transparency algorithms.

**Z sort.** Mesh triangles are sorted by distance from camera.

**Depth peeling.** A 2 passes render algorithm.

You can switch from one to the other. Some shapes look better with Z sort, others with Depth peeling.

You can also switch it off if you don't need it (render gets faster).

**Composite on original.** Composites the 3D (or 2D) render on original image.

**Antialiasing level.** From 0 to 3. Depends on antialiasing mode (see below).

**Antialiasing mode.** Can be SSAA or FXAA.

SSAA is a Super Sampling algorithm. Image is rendered at bigger size then shrunked.

FXAA is a post-processing algorithm. It is lighter to compute.

**Light Constant, Linear and Quadratic.** Set to adjust light attenuation.

**Cell shading level.** Range from 0 to 256.

If set to 0, the plugin uses interpolated light shading. Otherwise, defines the number of shading levels to render with a cartoon effect. Works with 3D transparency too.

**Export as...**

M3DW Renderer can export the generated 3D shapes as .obj or .obj sequence.

This allows you to use the shapes in almost any 3D software (Cinema 4D, Blender, Maya...) and in some 3D plugins inside After Effects (Plexus, Element 3D...).

**Known issue :** on some Mac OS and AE version, '**Adaptive resolution**' will return empty pixels.

Prefer '**Fast draft**' mode to accelerate previews.