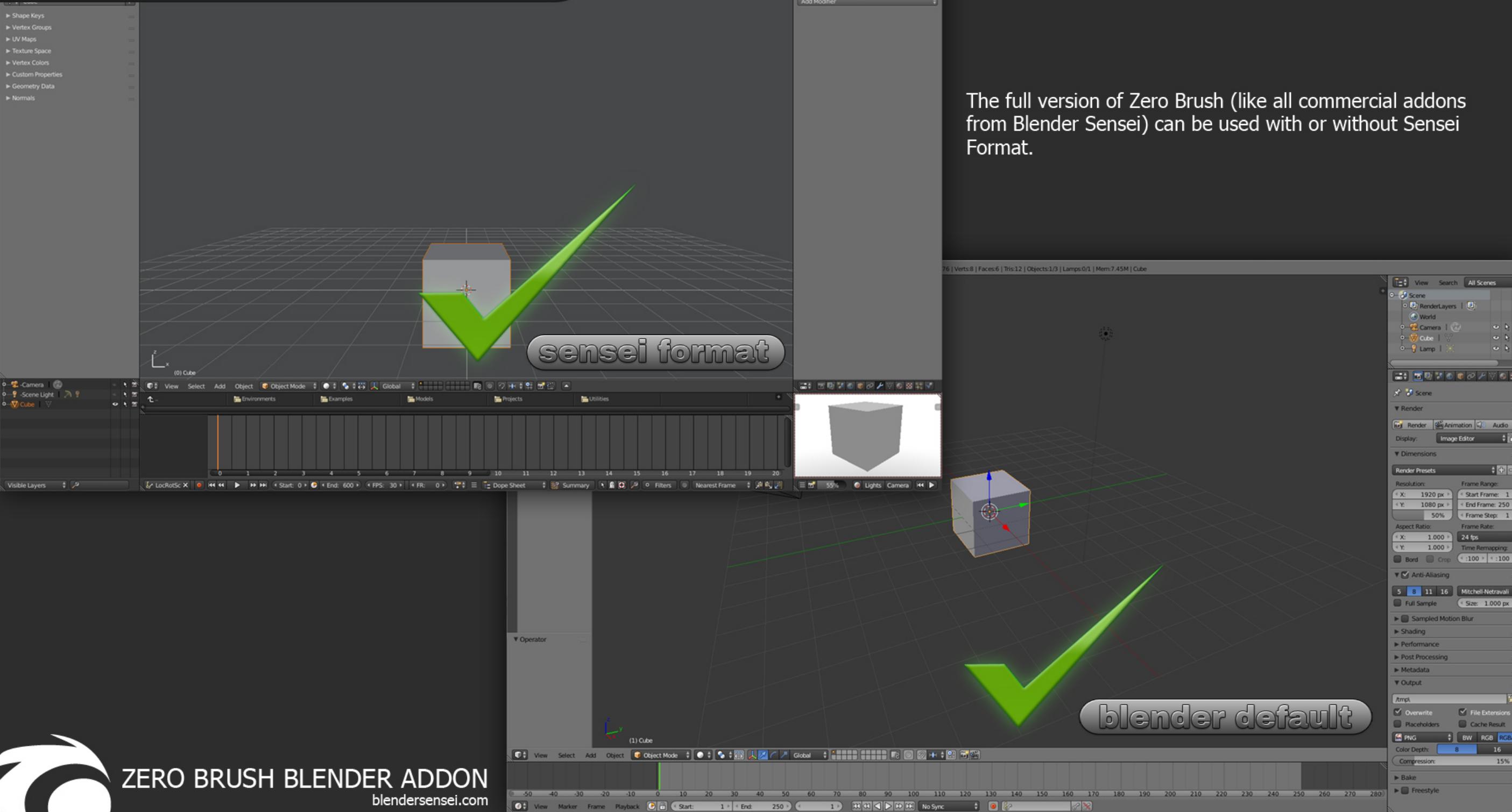


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02. Do I Need Sensei Format?	13. Quick Lights
03. Installing Zero Brush	14. Sculpting
04. Zero Brush Work Space	15. Instant Normal Mapping
05. Zero Brush Basics	16. Merging Normal & Bump Maps
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can i use zb without sensei format?



ZERO BRUSH BLENDER ADDON
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how do i install zero brush?

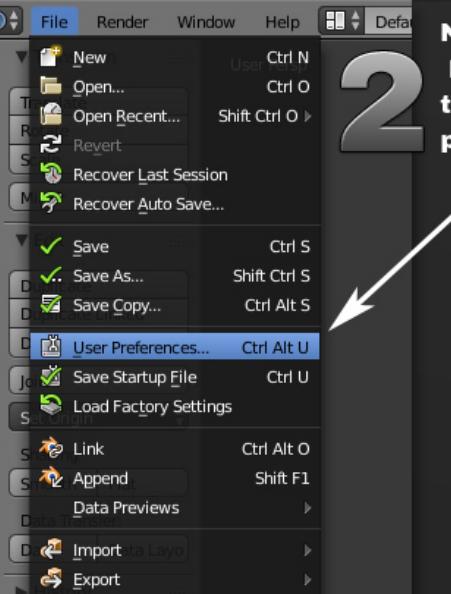


After you purchase Zero Brush you'll be directed to a download page and sent an email with an additional download link.

The download link contains this zip file. Some browsers (such as Safari) might automatically unzip this file for you after downloading.

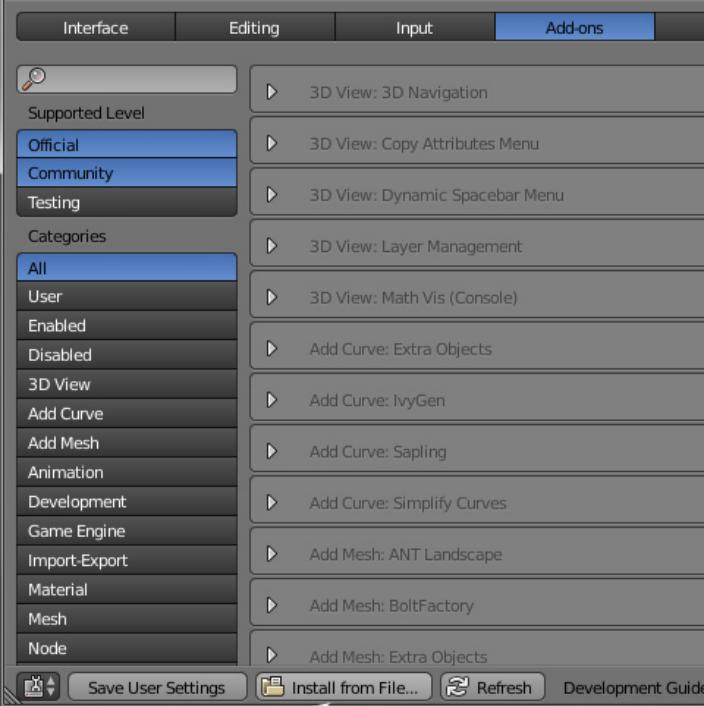
If the file is still zipped after downloading, right click and unzip it. If you don't have any zip software, 7zip or Jzip are freeware you can use.

1

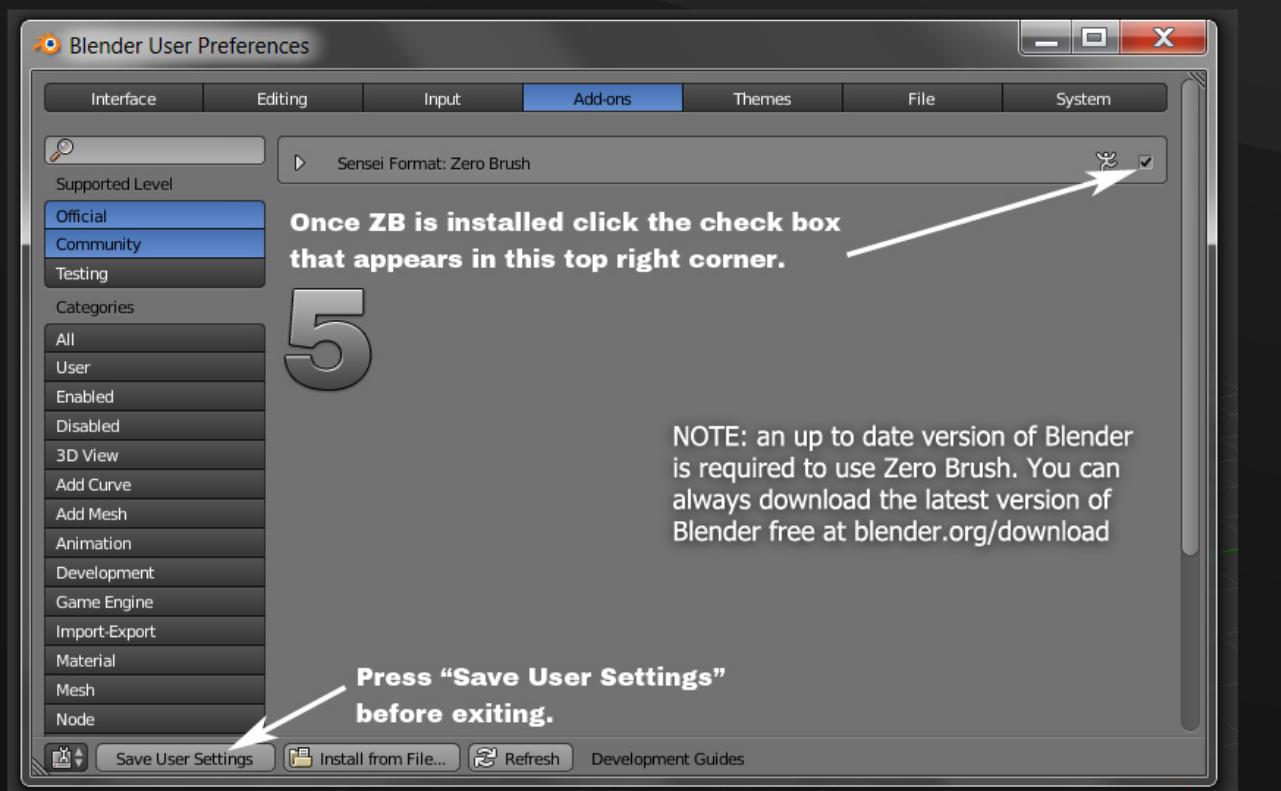


Now open up Blender and go to:
File > User Preferences... and select
the "Add-ons" tab at the top of the user
preferences page.

2



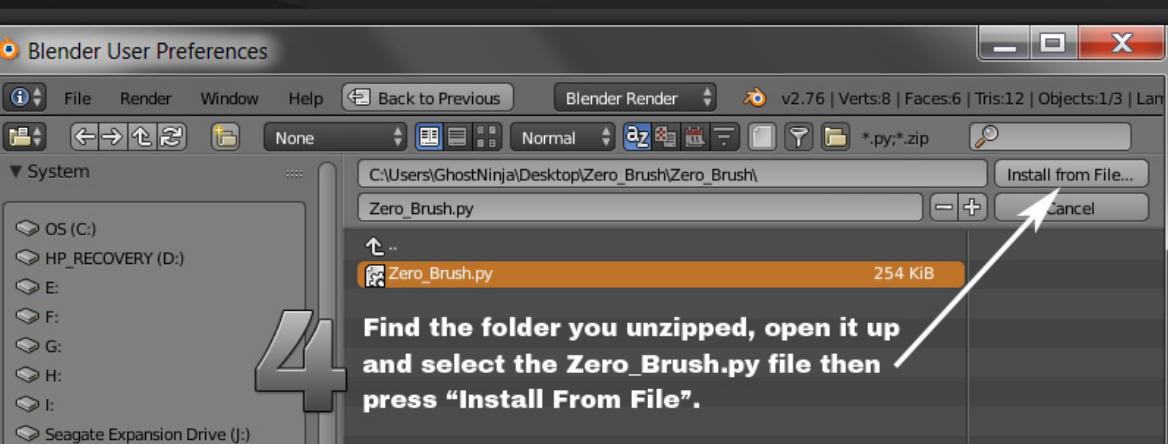
3 Select "Install From File..." and browse
your computer for the location of the
addon folder.



NOTE: an up to date version of Blender
is required to use Zero Brush. You can
always download the latest version of
Blender free at blender.org/download

Press "Save User Settings"
before exiting.

5



4 Find the folder you unzipped, open it up
and select the Zero_Brush.py file then
press "Install From File".

4

Watch the "installing Zero Brush" video at youtube.com/blendersensei for important tips on setting up your workspace. No joke,
you'll be really missing out if you don't.

zb workspace

• Object Mode →

• Sculpt Mode

• Texture Paint

• Particle Hair

• Access options

• Fullscreen togle

No setup is required to paint objects whether in Blender Render or Cycles. Just select any object and press the button to start painting, sculpting, or adding particle hair. ZB will even autoconvert text, skin, meta and other objects instantly so you can paint or sculpt them.

MORE ON AUTOCONVERSION: ZB does its best to fill in necessary items so you are able to instantly paint or sculpt. If ZB detects the object already has a material, uv map or paintable layer, it will use that asset rather than generate a new one.

If ZB finds no uv map it will search for marked seams to construct one, if none are found it will generate a new uv map either through smart uv project or light map pack. You can select a default method in the ZB options menu.

ZB uses the Tool Shelf (left) and the Properties Shelf (right). See the "How To Install Zero Brush" video at youtube.com/blendersensei for more on getting the most out of your ZB workspace.

Grease Pencil
Slots
Options
To
Radius: 19 px
Strength: 0.700
Hardness: 0.50
Brush Stroke X Y Z
New Palette Color

View Brush Texture Paint

Scene Blender Render v2.76 | Verts:8 | Faces:6 | Tris:12 | Objects:1/3 | Lamps:0/1 | Mem:26.57M | Cube

Zero Brush
Blending Mode: Cycles
Mix Layer Opacity: 1.000 Bumpiness: 0.000

Options CubeColor

Add Color Add Bump Add Specular Add Glow
Add Transparent Add Alpha Mask

New Layer Size: 2048 Save My Layers

Transform Grease Pencil View 3D Cursor Item Display Shading Motion Tracking Background Images Transform Orientations

Resolution: Frame Range:
X: 1920 px Start Frame: 1
Y: 1080 px End Frame: 250
Aspect Ratio: Frame Rate:
X: 1.000 Start: 24 fps
Y: 1.000 Time Remapping:
Bord Crop :100 :100

Anti-Aliasing: 5 8 11 16 Mitchell-Netravali
Full Sample Size: 1.000 px
Sampled Motion Blur
Shading Performance Post Processing
Metadata
Output: /tmp/
Overwrite File Extensions
Placeholders Cache Result
PNG BW RGB RGBA
Color Depth: 8 16
Compression: 15%

Bake Freestyle

Scene RenderLayers World Camera Cube Lamp

Render Animation Audio

Image Editor

Frame Playback Start: 1 End: 250 No Sync

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zb basics

Back to Previous Blender Render v2.76 | Verts:8 | Faces:6 | Tris:12 | Objects:1/3 | Lamps:0/1 | Mem:146.73M | Cube

Sensei Slots Options To
Grease Pencil TexDraw 2 F + X
Load Brush Brushes
Radius: 29 px Strength: 0.709 Hardness: 0.50
Brush Stroke Type [default, curve, line tool, circle tool (anchor)]
Mirror X Y Z
Color palette Mix Gradient
Press here to expand your palette library as well as other brush options.
Radial Control

ZB hardness slider (full version required for this feature)
Brush stroke type [default, curve, line tool, circle tool (anchor)]
Turn on mirror for paint or sculpting.

Depending on what type of layer you have selected (and whether in Cycles or BR) different values you can adjust will display here.

Active brush layer (layer you are painting on)

Move layer up or down

CubeGlow ▲ ▼ X Eye icon

- Paint through object
- Shadeless mode
- Render preview
- Reset UV map (also resets layer if only one)

Delete layer Hide layer (can only hide while in Blender Render)

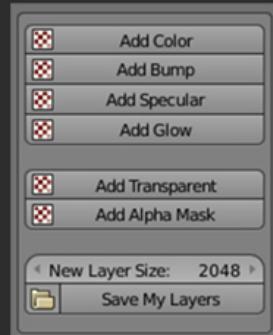
Zero Brush Blending Mode Cycles
Mix Layer Opacity: 1.000 Emiss: 1.000

Options CubeColor.001 CubeColor CubeGlow CubeColor.002 CubeBump
Add Color Add Bump Add Specular Add Glow
Add Transparent Add Alpha Mask
New Layer Size: 2048 Save My Layers

Transform Grease Pencil View 3D Cursor Item Display Shading Motion Tracking Background Images Transform Orientations

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layer types



ZB communicates with nodes, textures & the material to ensure expected results when adding, deleting and replacing layers for Cycles and BR.

The huge advantage of ZB is that it allows you to layer and blend multiple paint layers while in BR, and then merge them with one button for use in Cycles.

After adding these layers you can adjust them like any regular texture, or refine them with further nodes as you would any material.

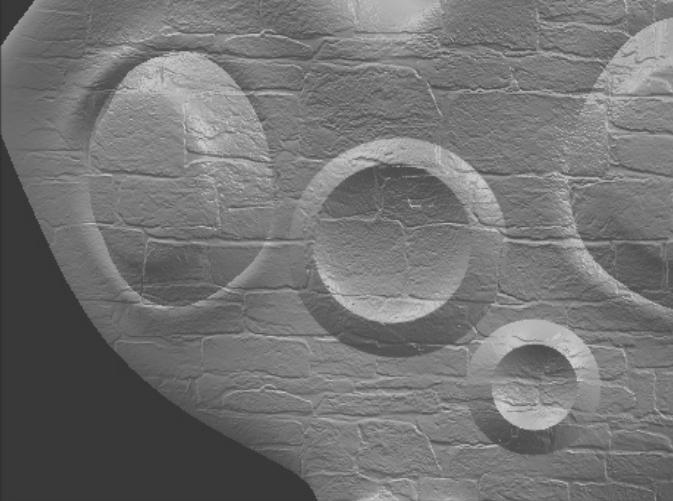
add color

a basic color (diffuse) layer. the bulk of your painting happens on these standard layers. The example image was painted with brushes from the "Seamless Elemental Brush Pack."



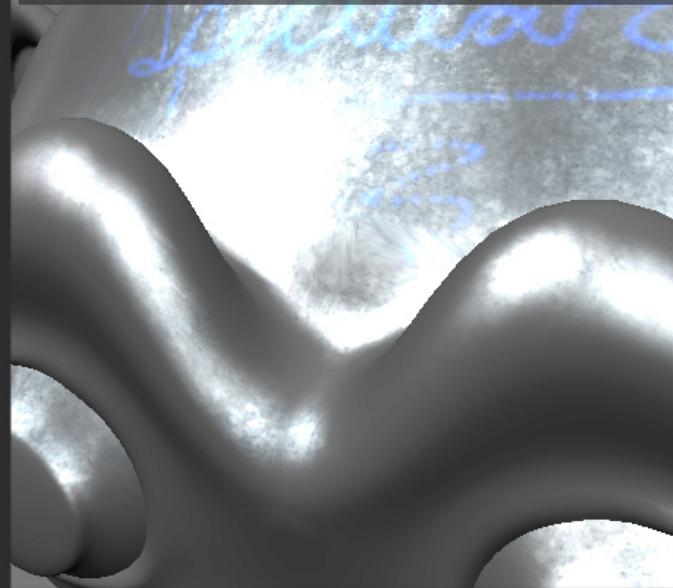
add bump

bump maps (or height maps) are similar to normal maps but not quite as powerful. All bump and normal maps can be easily merged into a single map with one button in Zero Brush.



add specular

specular layers are used to convey shiny areas on your object.



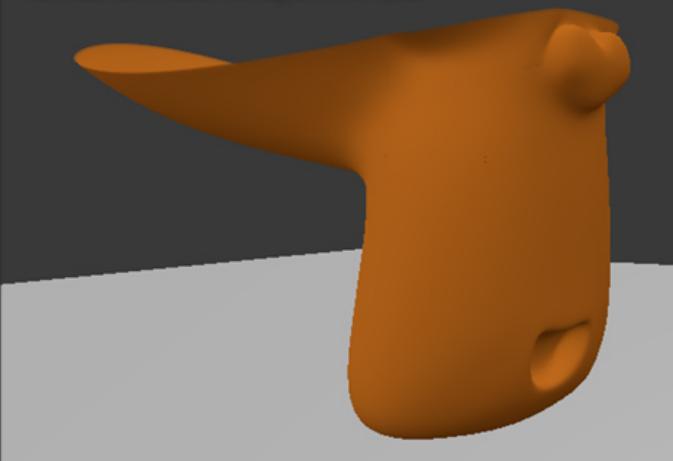
add glow

glow layers emit light from where they've been painted. When rendering, Zero Brush glow layers will reflect onto other objects whether in Cycles or Blender Render.



add transparent

transparent layers make your entire object invisible, then the areas you paint will be made visible. ZB handles the necessary changes to your materials and nodes to make sure this always works whether in Cycles or BR.



add alpha mask

alpha masks are similar to transparent layers, only they won't make your object invisible. Instead wherever you paint after adding the alpha mask, will become invisible.



options & brush menu

v2.76 | Verts:31,658 | Faces:31,488 | Tris:62,976 | Objects:1/4 | Lamps:0/2 | Mem:396.41M | Suzanne

Q: Call options menu
You can get to the options menu by pressing "Q" or by pressing the options button while in texture paint mode. Or press the blank button in the top ZB menu available in all modes.

brush texture scale

brush texture application type (map mode)

SPACE BAR: Call brush menu
The ZB brush menu keeps your default Blender brushes separate from your added texture brushes to keep you organized.

ZB Options

- Autosave Layers
- Use Cycles
- Fast Mode
- Distraction Free
- Use Lightmap UVs
- Texture & Sculpt
- Auto Convert Cycles
- Auto Convert Lamps
- New Layer Width: 4096
- New Layer Height: 4096
- Bake Quality: 5

Material Options

- Make Unique
- Bake Materials
- Bake Shadows
- Bake Ambient

Layer Options

- Save My Layers
- Color New Layers
- Layer From Brush
- Merge Normals
- Merge Layers

Blending Mode Cycles

Mix
Layer Opacity: 1.000
Bumpiness: 0.063

SuzaColor

- Add Color
- Add Bump
- Add Specular
- Add Glow
- Add Transparent
- Add Alpha Mask

New Layer Size: 4096
Save My Layers

Transform
 Grease Pencil

View

3D Cursor

Item

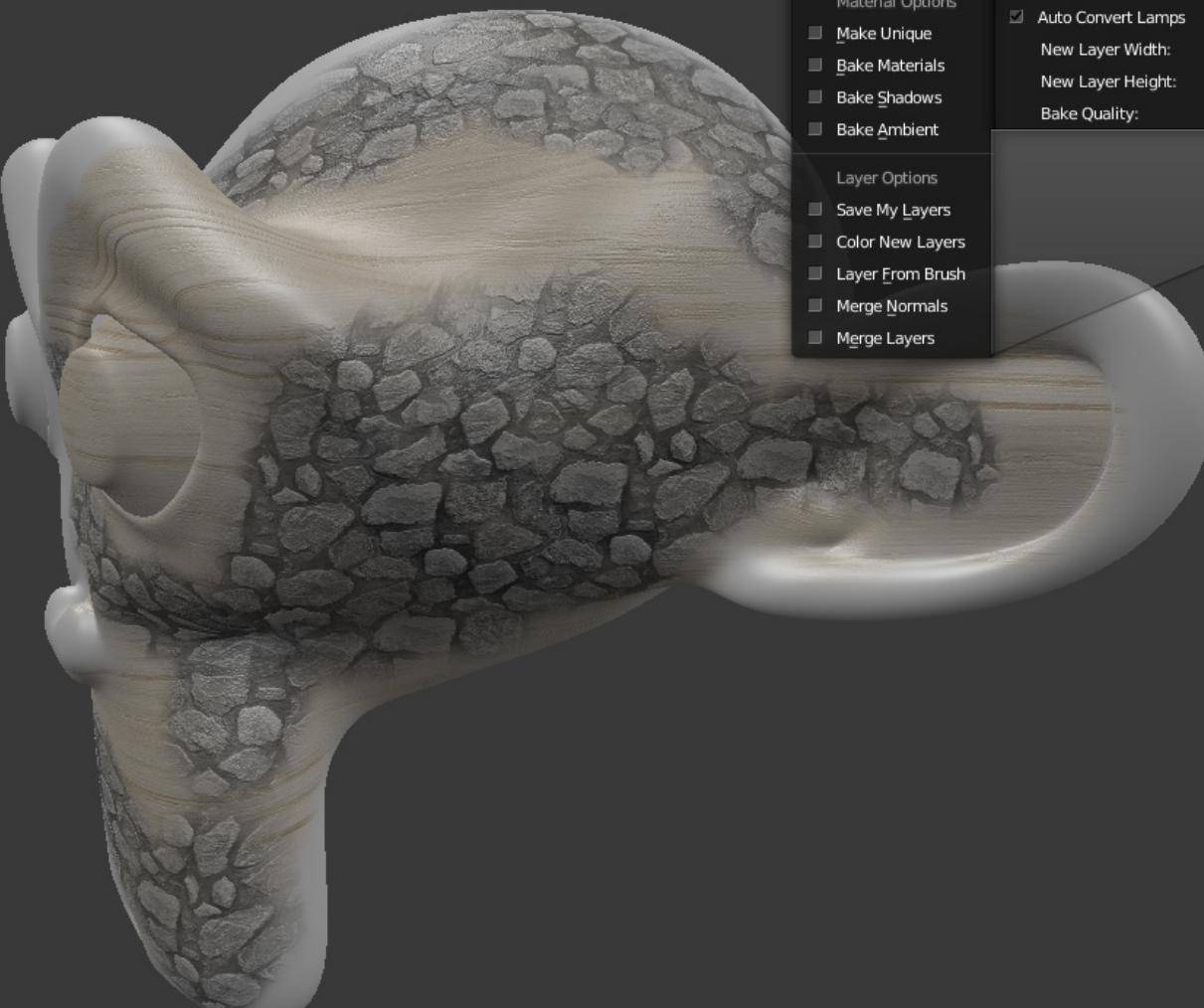
Display

Shading

Motion Tracking

Background Images

Transform Orientations



ZERO BRUSH BLENDER ADDON
blendersensei.com

brush loading options

(full version required
for this feature)

The screenshot shows the Zero Brush add-on interface within Blender's Tools shelf. It includes sections for Tools, Slots, Options, Grease Pencil, and Sensei. A 'Zero Brush' panel contains a preview window showing a stone texture, brush settings (Radius: 18 px, Strength: 0.700, Hardness: 0.56), and a 'Brush Stroke' section with three icons. Below this is a 'Load' dropdown menu with 'Brush' and 'Brushes' options, and a 'Tiled' switch. A small arrow points from the text 'Load an image or a folder of images as one of the selected brush types.' to the 'Brushes' option in the dropdown. A larger callout box highlights the 'Load As Default' option in the 'Brushes' submenu, which is checked. Other options in the submenu are 'Load As Decal', 'Load As Stencil', and 'Load As Hard'. At the bottom, a list of available brushes includes: Clone, Fill, Mask, Smear, Soften, TexDraw, *Decal Biohaz Symbol, *Decal Blendersensei Icon, *Decal Bolt, *Decal Dejunker, *Decal Pwsteel Book Cover, *Decal Py Manor, *Decal Spiderweb, *Decal Zb Screen, *Metal Steel, and *Stencil Earth Mud Flat.

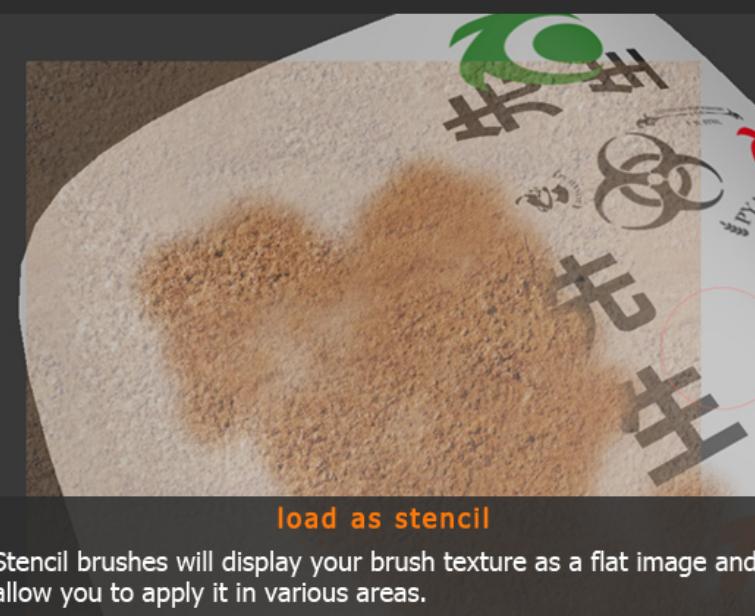
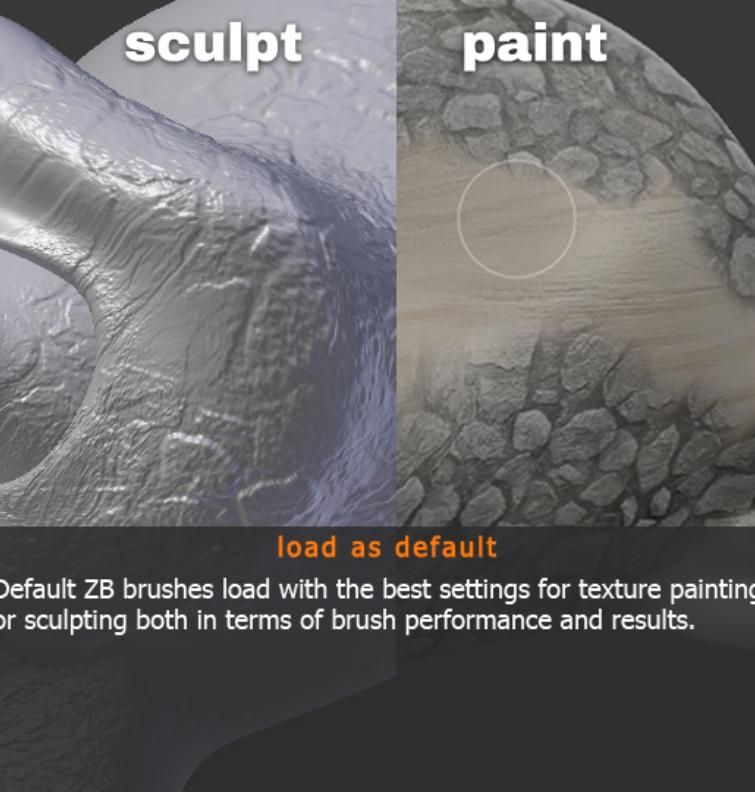
You can choose to load your brushes for sculpt and texture paint modes simultaneously in the ZB options menu.

Load an image or a folder of images as one of the selected brush types.

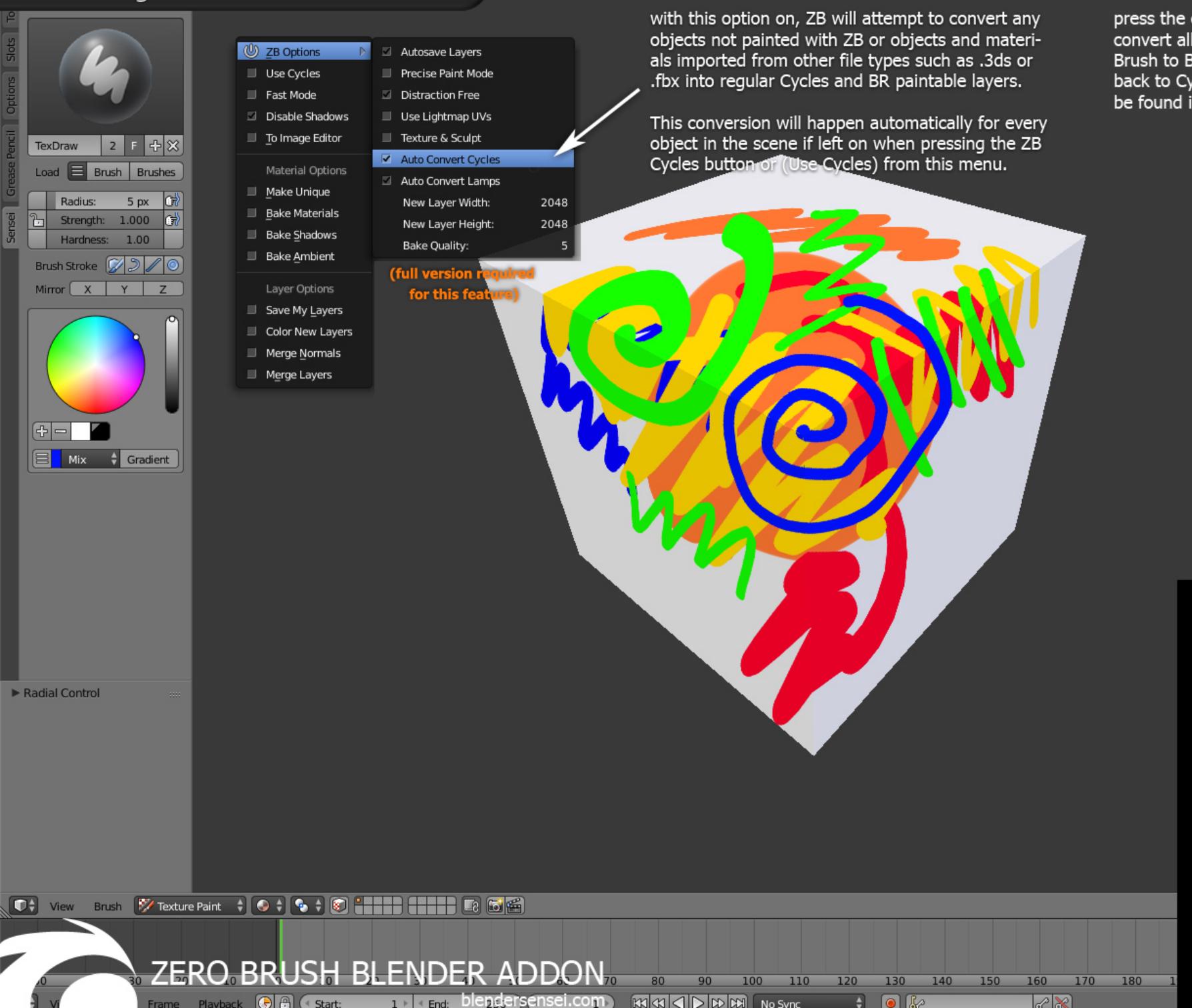
Load As Default

- Load As Decal
- Load As Stencil
- Load As Hard

ZB takes liberties to ensure the texture brushes you load deliver expected results both while texture painting and in sculpt mode by adjusting settings for each brush type.



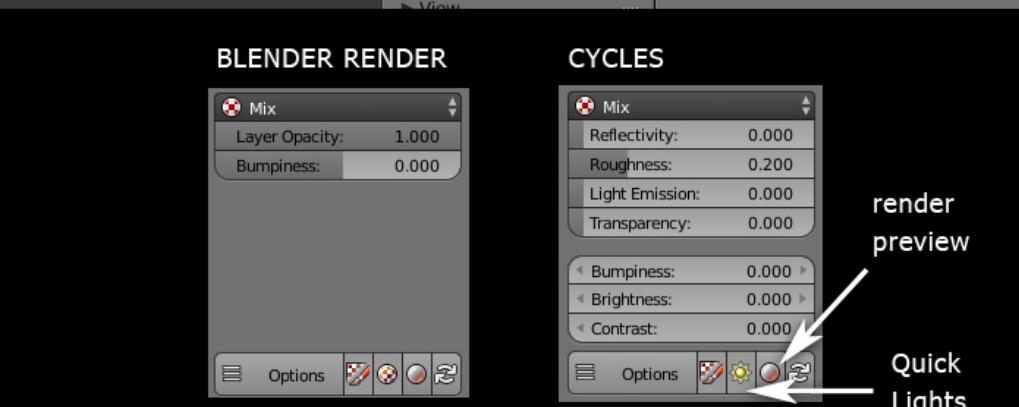
auto cycles conversion



with this option on, ZB will attempt to convert any objects not painted with ZB or objects and materials imported from other file types such as .3ds or .fbx into regular Cycles and BR paintable layers.

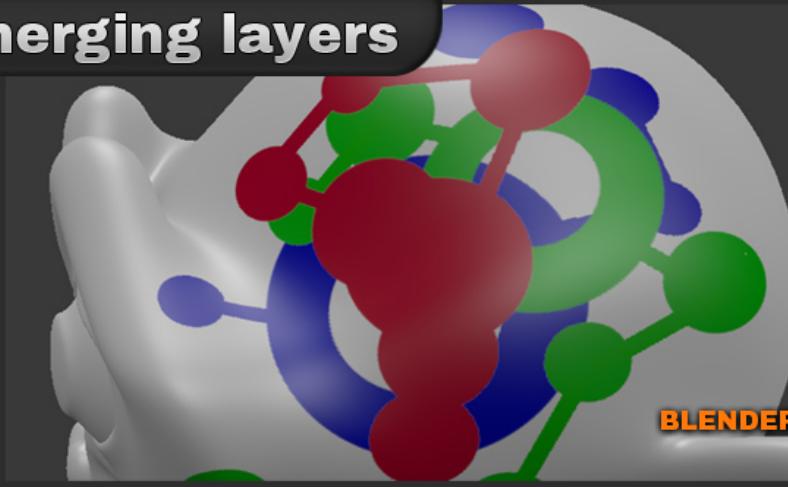
This conversion will happen automatically for every object in the scene if left on when pressing the ZB Cycles button or (Use Cycles) from this menu.

press the cycles button at any time to convert all items painted with Zero Brush to Blender Render mode or back to Cycles. This button can also be found in the ZB options menu.

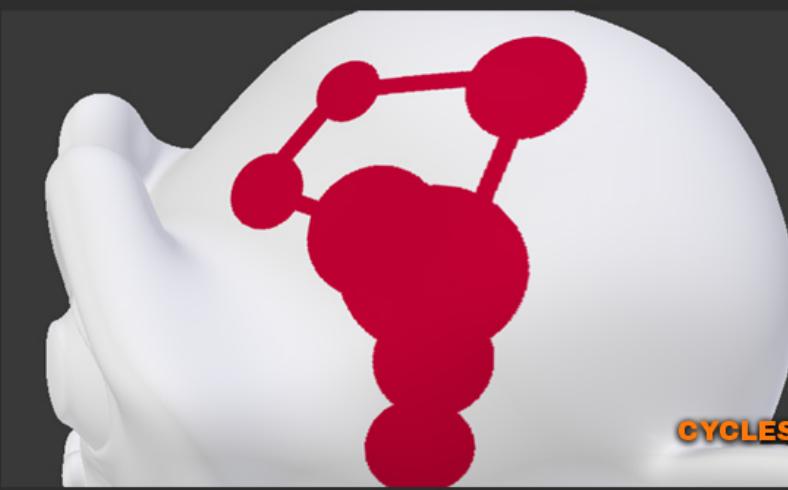


There are several more options available for layers when in Cycles mode. These options come from the nodes generated for each layer by Zero Brush. These values are kept separate for each render engine. Above is the difference between a basic color layer in BR & Cycles. To see the effects of the layer options in Cycles, you'll need to press the render preview button.

merging layers



BLENDER RENDER



CYCLES



With the exception of transparent and alpha layers, you can use multiple layers of the same type per object while in Blender Render. However, Cycles can only display or render one of each layer type per object. For instance, you could have a color layer, a bump layer, a specular layer, a glow layer and an alpha layer display all at once in Cycles, but as soon as you add a second color layer, only the selected color layer will display with the other layers.

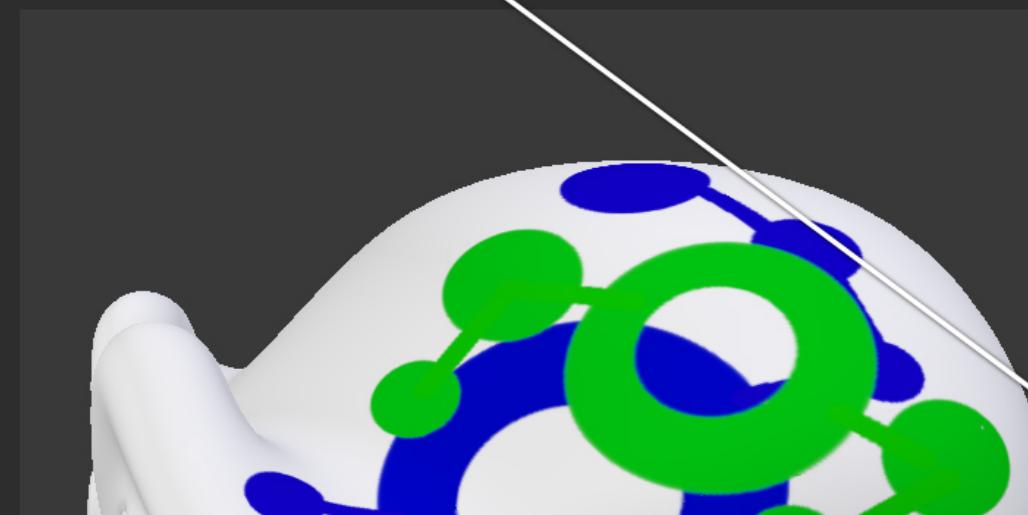
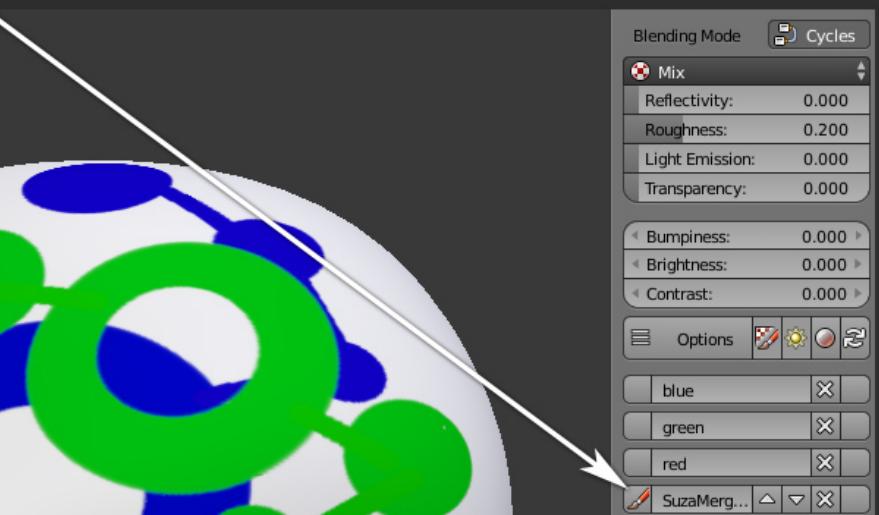
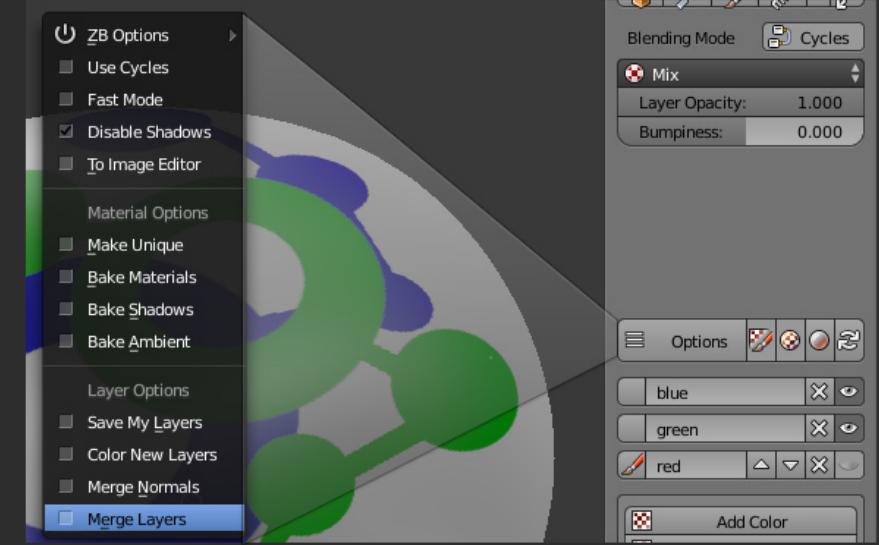
ZB's awesome ability to quickly switch back and forth between render engines combined with ZB's one button layer merging provides a simple solution to this problem. You can paint, blend and adjust multiple layers while in Blender Render, then just press the options button and select "Merge Layers".

If you don't want a layer included in the new merged layer, just shut closed the eye icon next to the layer you don't want included.

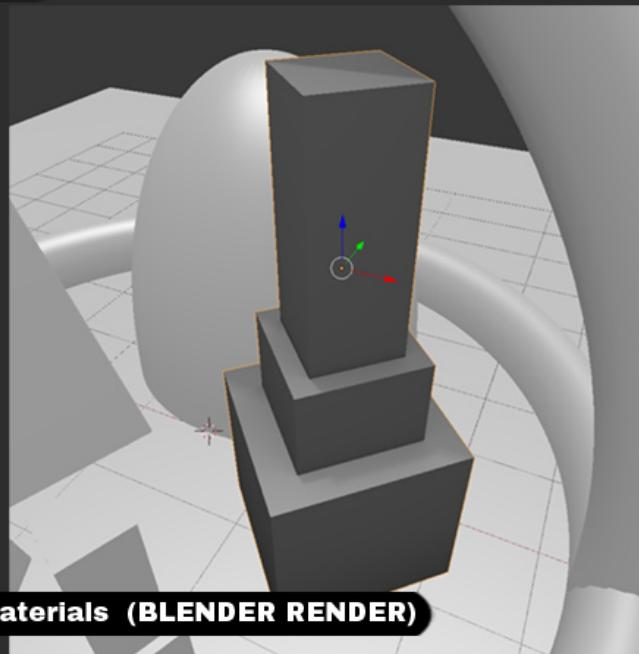
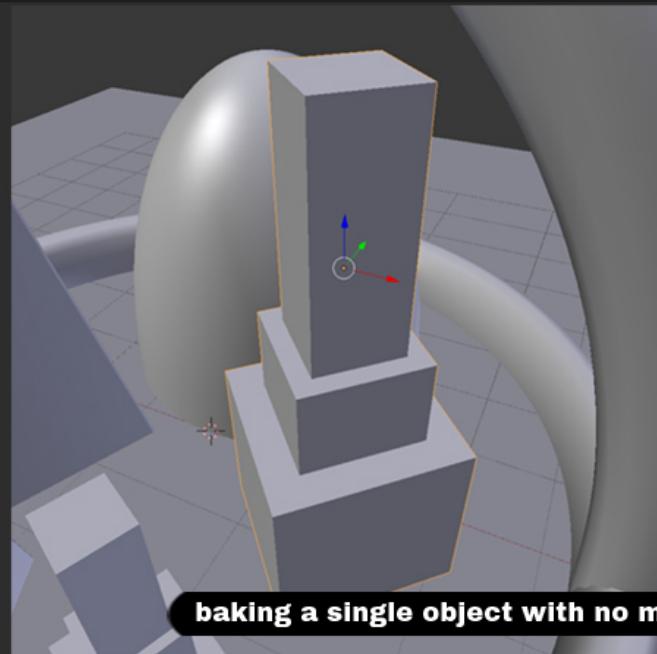
(full version required
for this feature)

For instance, if we just wanted to create a new merged layer from the two color layers labeled "blue" and "green", then we would shut closed the eye icon of the "red" layer to hide it so it would not be included in the creation of the new merged layer.

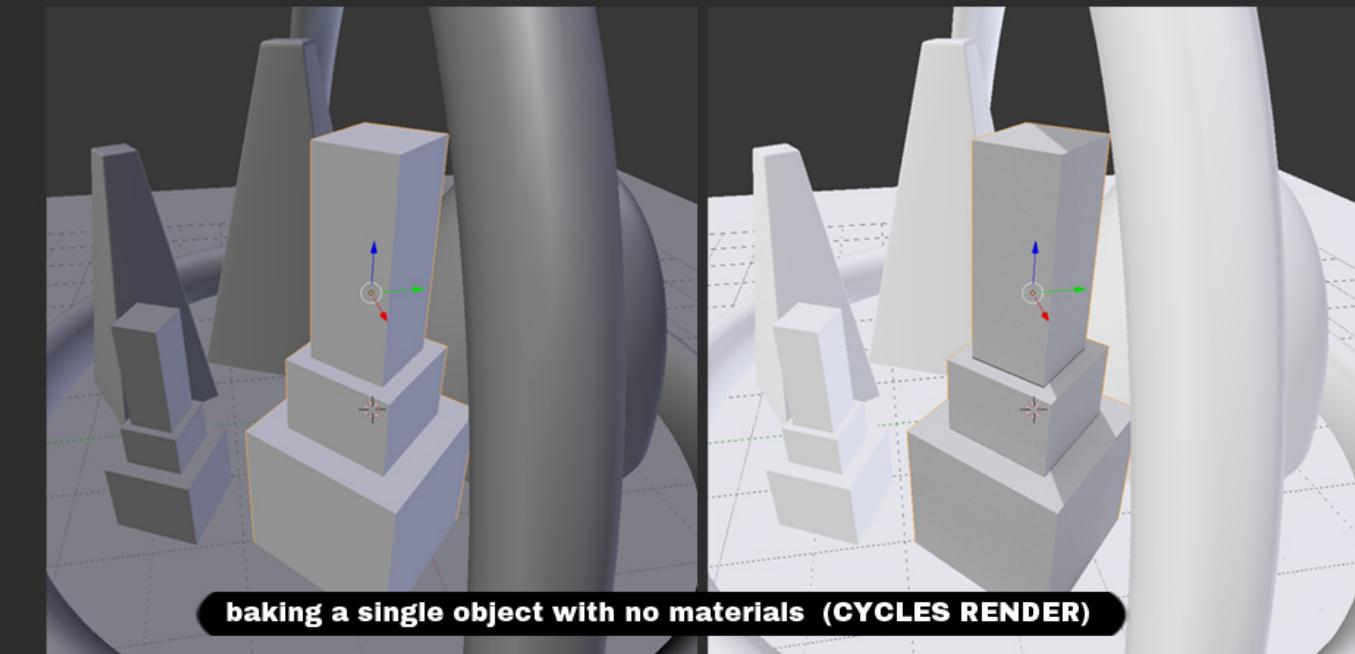
If we wanted to create a new merged layer with a smaller resolution (for say a game asset) then we could adjust the "New Layer Size" value to whatever size we wanted the new merged layer to be. Likewise, if we wanted it to be higher res for some reason, we could increase the value...



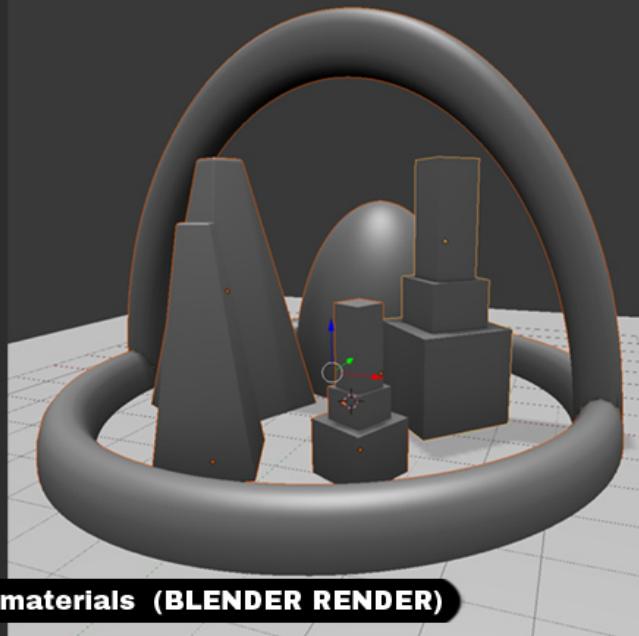
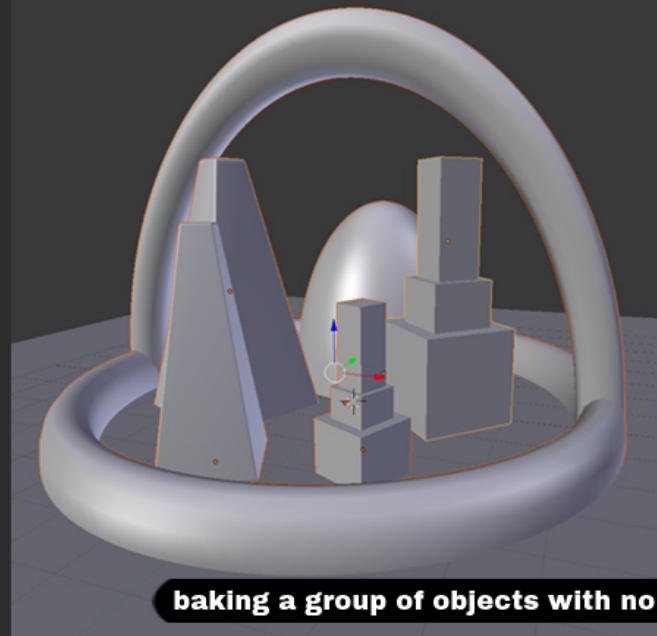
baking with no materials



baking a single object with no materials (BLENDER RENDER)



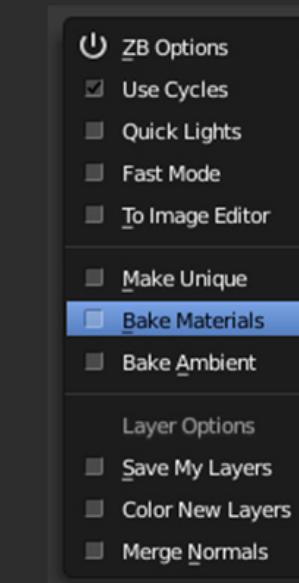
baking a single object with no materials (CYCLES RENDER)



baking a group of objects with no materials (BLENDER RENDER)

(full version required
for this feature)

baking multiple objects at once will bake them to the same map (which means there will be lower resolution depending on how big you set up the "New Layer Size")



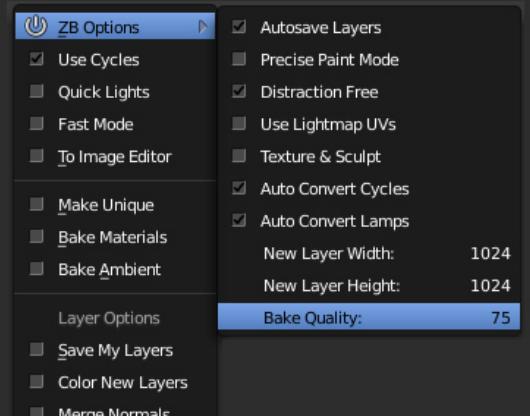
one or more objects can be baked in Zero Brush in both Cycles or Blender Render with the press of one button. The objects do not need materials, UV maps, or anything. Simply select the objects you want baked and press "Bake Materials".

Baking objects with no materials creates a basic baked layer of lighting, shadows and ambience. You can also bake full materials as well as UV mapped materials. Baking is a rendering process which can take anywhere from 30 seconds to several minutes.

Whether in Blender Render or Cycles, the new baked layer will be fed into the ZB system and becomes like any regular color layer which can be blended, positioned or adjusted. So things you bake in BR can be used in Cycles and vice versa.

The quality of the bake can be adjusted in the ZB Options menu (Q), by controlling the bake quality and deciding what size you want the baked map to be.

If you're just wanting to test things out, you should lower these values a lot, as baking can sometimes take a very long time.

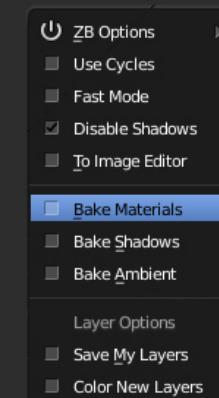


baking materials



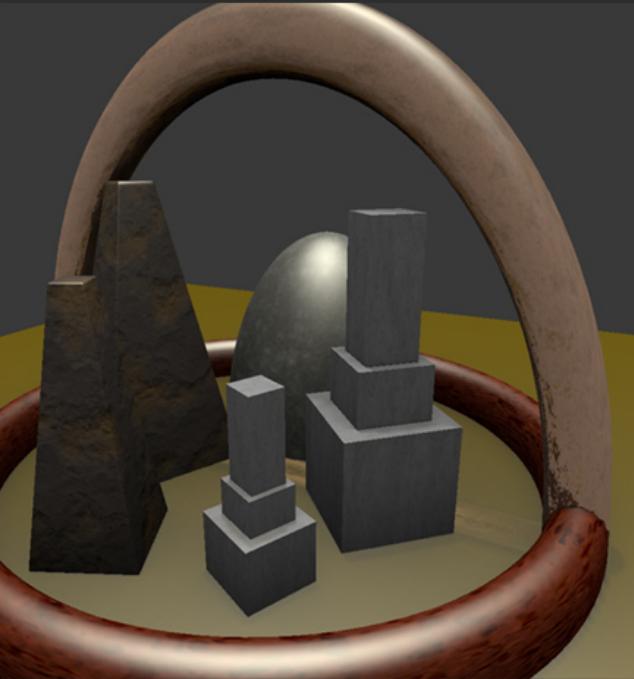
You can Blender Render or Cycles bake one or multiple objects all at once. Just select all the objects you want baked and press "Bake Materials" in the ZB options menu.

You can press "Q" to bring up the menu when not in texture paint mode or press the blank button in the top right ZB mode menu.



Baking is a very technical process, which is why without ZB it's such a cumbersome process in Blender. ZB makes baking easy and intuitive but it's still a good idea to save your file often before and after baking.

(full version required for this feature)



SOME IMPORTANT NOTES:

- Baking multiple objects at once will cause all materials to be baked to a single material and map, so keep this in mind if you'd prefer each object to use its own material and map. ZB automatically distributes materials for you after baking.
- Objects with multiple materials can be baked in Blender Render, but objects using Cycles materials can only be baked one at a time.
- Baking is a rendering process which can take a few seconds to more than an hour depending on the size of the map you're baking to (control this by changing "New Layer Size". This shouldn't be surprising considering some renders can take hours depending on complexity and resolution.
- UV mapped materials can only be baked one object at a time, whether using Cycles or BR.

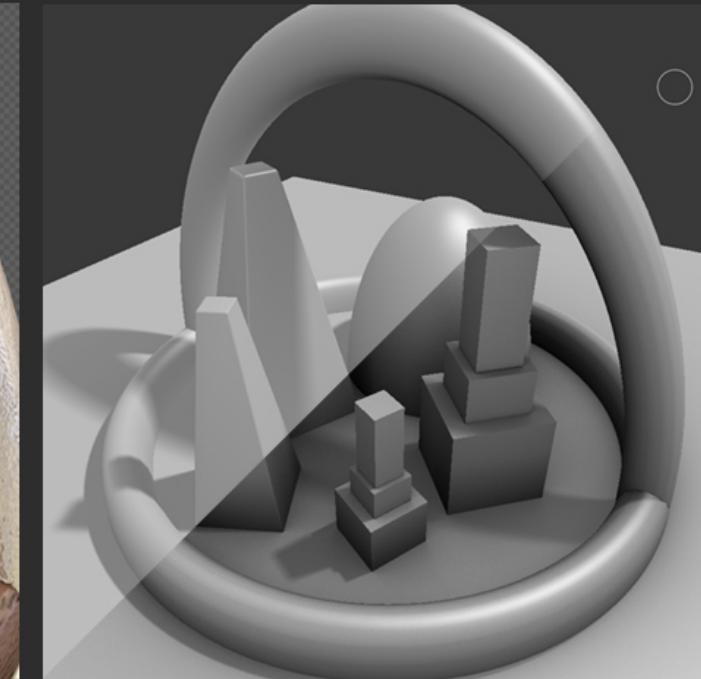


Any layer you add, merge or bake in ZB will be fed into the layer system and treated like any regular layer you can mix, blend and paint on in both Cycles and BR.

This means you can bake Cycles materials and display them in Blender Render or bake Blender Render materials then use them in Cycles.

The image above displays baked Blender Render materials being rendered in Cycles with only a few adjustments to the ZB layer slider controls.

(you can always add additional nodes to your baked materials using traditional Blender methods to further enhance your materials)



BLENDER RENDER BAKE OPTIONS:

- Bake Materials
- Bake Shadows
- Bake Ambient

CYCLES RENDER BAKE OPTIONS:

- Bake Materials
- Bake Ambient

In addition to ambient and material baking, there is the option to bake shadows in Blender Render. There is no option to bake shadows in Cycles because the Cycles engine necessarily does this by default.

Mix, blend and add as many baked layers to an object as you want. If objects were baked in a group, additional baked layers can not be added via Zero Brush (they can but it starts to get buggy). Be sure to save often when experimenting.

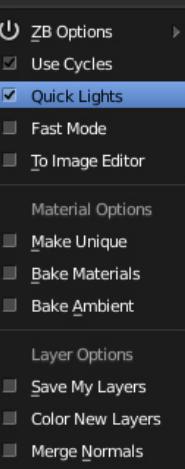
quick lights



The effect of Quick Lights is visible when render preview is active (or press "Shift-Z") or when you render your scene.

The Quick Lights option generates a physical based lighting rig while in Cycles. It also creates a black world background so only the light from the rig is present.

This is useful for getting better feedback while painting or adjusting materials. It's also useful for render tests. The light rig stays hidden when not rendering or render previewing. The rig and generated Quick Lights world are entirely removed from your scene when you shut off Quick Lights, and your previous world environment is restored.



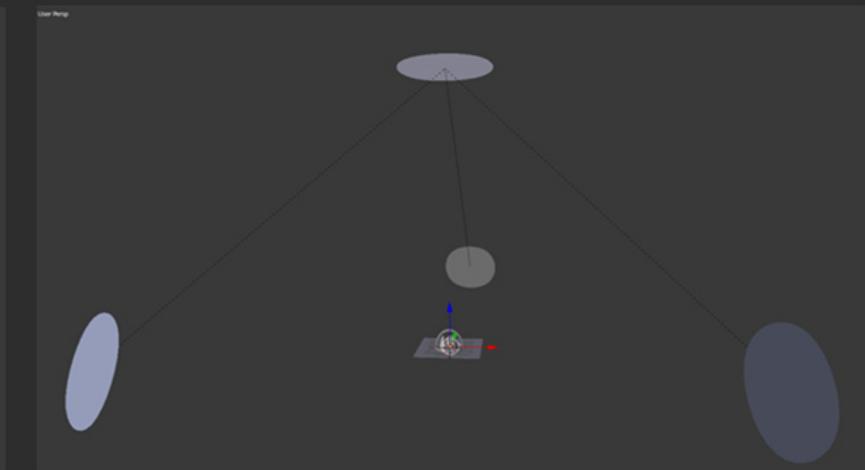
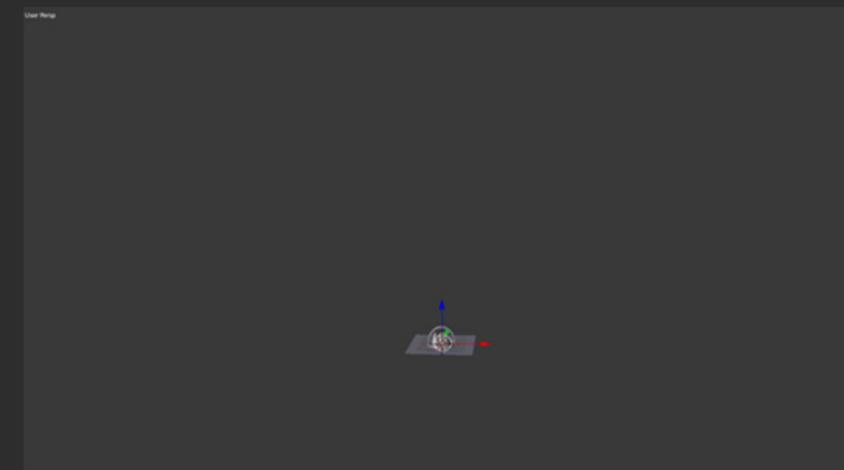
quick lights can be accessed by pressing the quick lights button (sun icon) while in texture paint mode or by selecting "Quick Lights" from the ZB Options menu "Q" while in any mode.



without quick lights



with quick lights



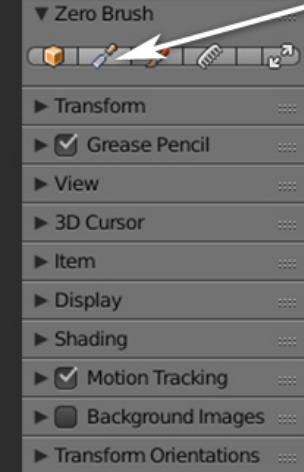
the quick lights rig stays hidden until rendering or render previewing



ZERO BRUSH BLENDER ADDON

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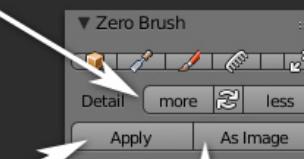
sculpting



Select an object and press the sculpt button to begin sculpting.

Any object that can be converted into a mesh such as text, surface or meta objects, will be automatically converted if needed.

- MORE: Increase detail (increase multires subdivision)
- Reset detail
- LESS: Decrease detail (decrease multires subdivision)

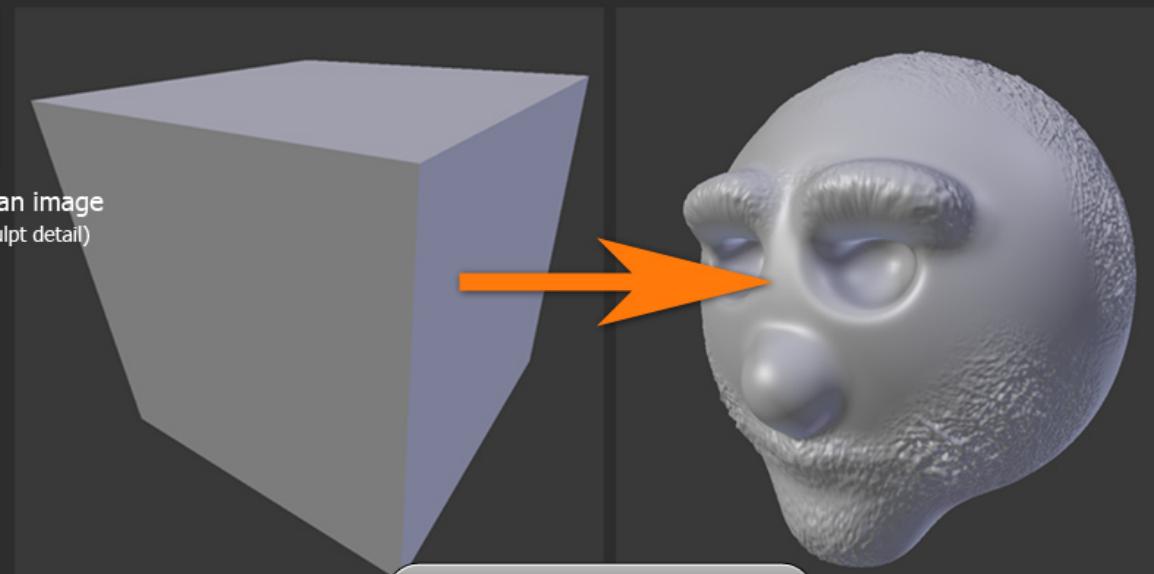


apply detail
(apply multires modifier to mesh)

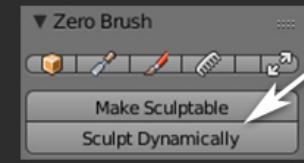
apply sculpted detail as an image
(generate normal map from sculpt detail)

"Make Sculptable" allows you to increase and decrease the overall amount of geometry (detail) used in your object for sculpting (uses multires modifier). This is awesome because no retopology is required and this allows you to control how much resources a given object is using at any time.

You can also easily produce high quality CG models or scale the detail down to spit out low poly models from the same mesh. Finally, with this option you can generate a normal map from a single button.



"Make Sculptable"



after pressing the sculpt button you'll be given the option to "Make Sculptable" or "Sculpt Dynamically".

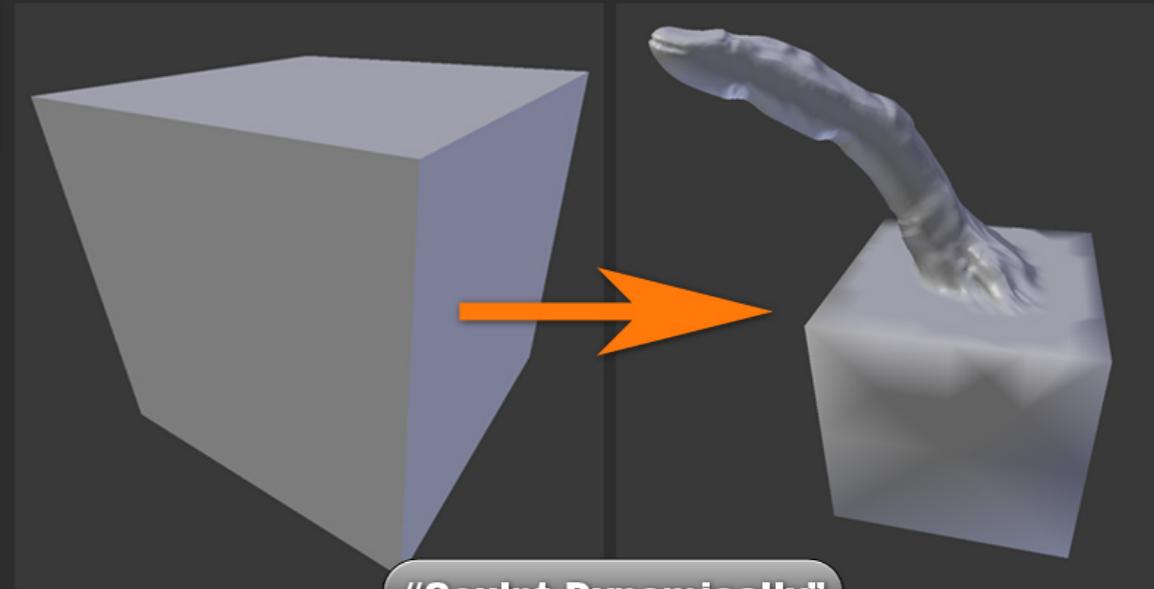
finishes dynamic sculpting session
(this will also attempt to decrease mesh complexity
results may vary, so be sure and save before using
or you can exit sculpt mode without using, up to you)



sample detail size
set detail size
(lower = more brush detail)

Where as "Make Sculptable" uses a multires modifier to control over all complexity (detail), the "Sculpt Dynamically" option will generate mesh dynamically as you sculpt. Zero Brush will adjust your brushes and the sculpt settings to give you expected results using the least amount of resources as is possible.

In the example to the right, a complex finger was sculpted out of a simple 6 sided cube. All that mesh for the finger was generated dynamically as it was sculpted. This method gives you huge artistic freedom but may consume a lot of resources and requires clean up when you're done (retopology).



"Sculpt Dynamically"



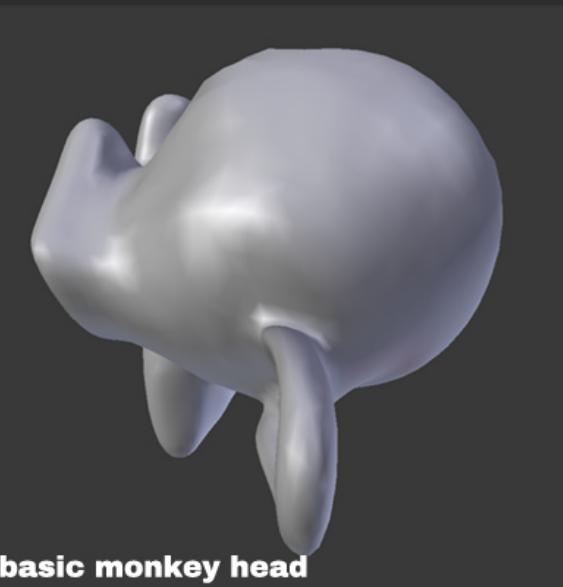
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instant normal mapping



To use instant normal mapping use "Make Sculptable" when sculpting. Instant normal mapping will also be available for any object using a multires modifier.



basic monkey head



No material, UV map, or any other asset is required to convert your sculpt detail into a normal mapped image which will display immediately after clicking "As Image".

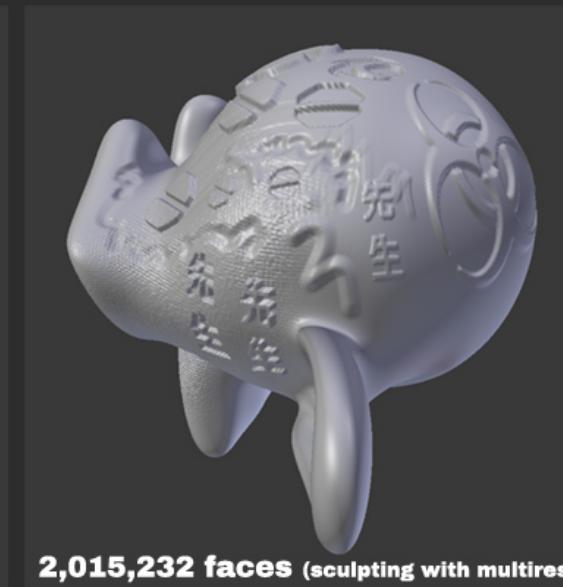
(full version required
for this feature)

Pressing "As Image" will apply your sculpt detail as a normal mapped image. This normal map will be visible in the 3D view while in material viewport shading (which ZB automatically switches for you) when in Blender Render mode.

The normal map can be easily merged with bump effects from color layers or other bump maps using ZB's "Merge Normals" option located in the ZB options menu.

Normal maps are not visible in the 3D View while in Cycles but will show up when you render your scene.

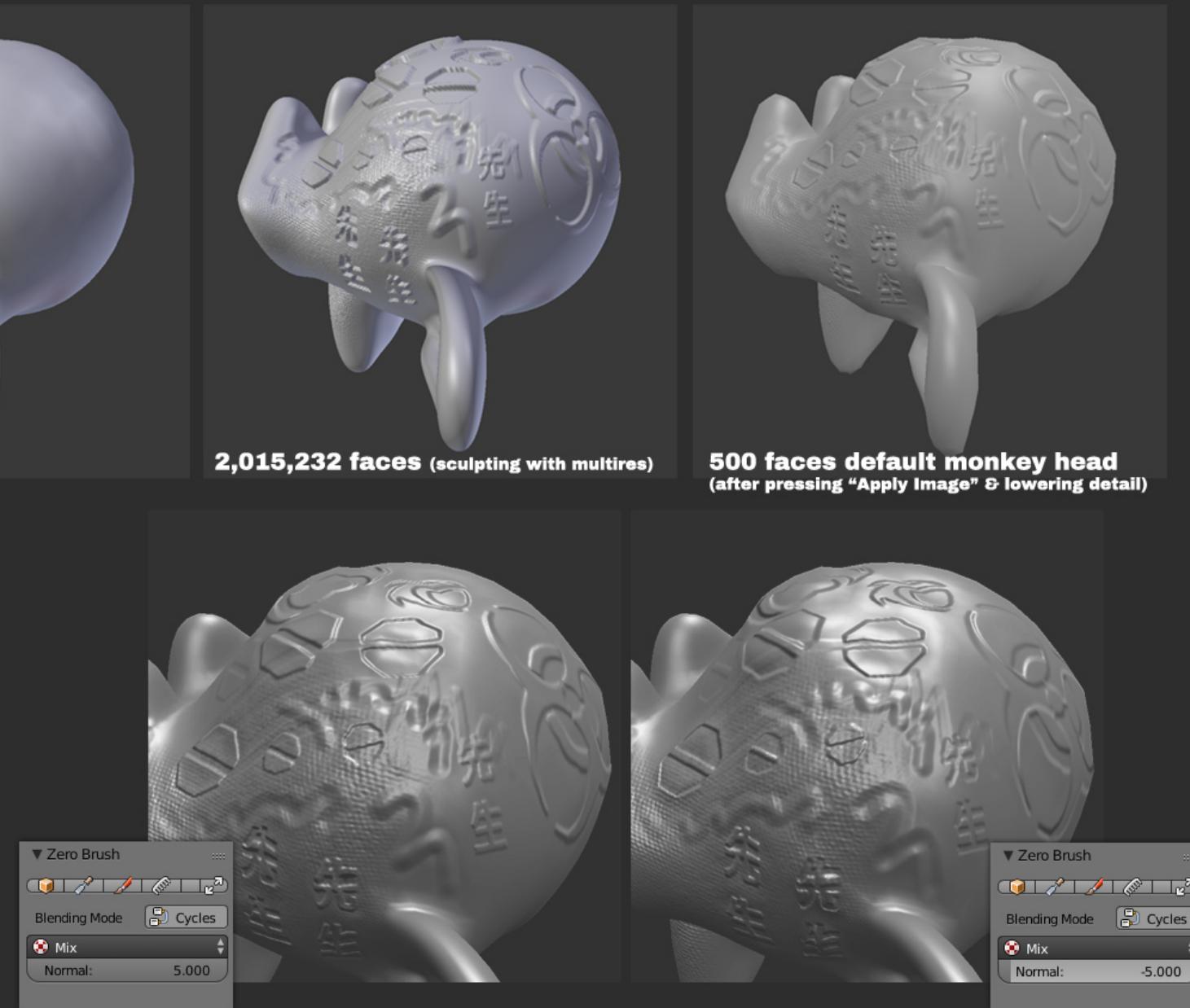
Your model will still have the same sculpt detail after you press "As Image" as before, so to see the results, click "less" to lower the amount of sculpt detail.



2,015,232 faces (sculpting with multires)



**500 faces default monkey head
(after pressing "Apply Image" & lowering detail)**



Creating a normal map is a rendering process which may take a few seconds to over a minute depending on the size of your map (set this up by adjusting the "New Layer Size" value before pressing "As Image" located in the ZB options menu).

Once the normal map has been created, you can enter texture paint mode in the Zero Brush menu and adjust the normal value. Normal maps do not display live in the 3D View while in Cycles mode, but normal maps generated with ZB will render out in both Blender render and Cycles modes.



merging normal & bump layers

(full version required
for this feature)



You can merge multiple normal maps, bump maps or any combination of the two, into a single normal map by pressing "Merge Normals" in the ZB Options menu. Any bump effects from color layers will also be included in the new merged normal map as well.

Up above is the normal map created in the last page and a bump map with a brick texture painted on it. There's also a color layer with nothing on it.

- Make Unique
- Bake Materials
- Bake Shadows
- Bake Ambient
- Layer Options
- Save My Layers
- Color New Layers
- Layer From Brush
- Merge Normals
- Merge Layers

After pressing "Merge Normals" ZB will hide all layers using bump effects so you can see the results of your new, single normal map layer.

The previous layers are kept in case you need to make adjustments in the future and produce a new merged layer, but you can erase them as is the case in the image to the right.

Normal layers produce more realistic results than bump layers. Being able to merge all these effects into one map can help drastically reduce the usage of resources for game models and characters and increase the overall effect of generic bump maps.

Here we have deleted the previous normal layer and bump layer and kept only the new merged normal layer and one empty color layer.

You can adjust the new merged layer the same way you would any regular normal layer in ZB.



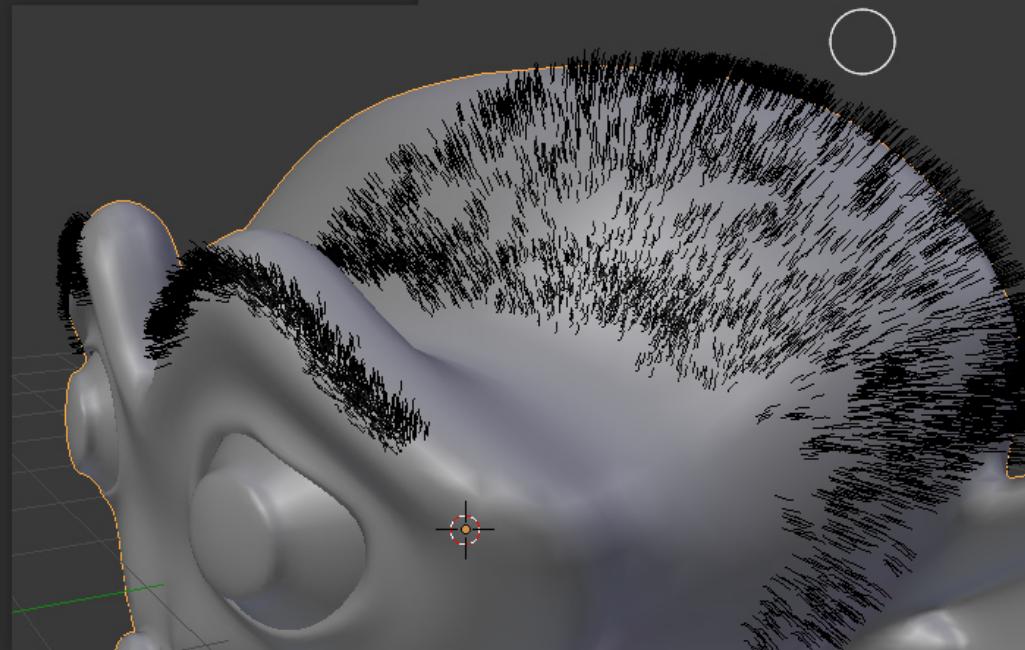
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particle hair

Clicking on the ZB comb icon will instantly allow you to begin painting hair onto your object.

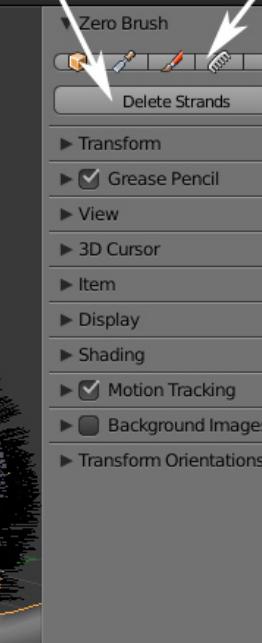
More than 20 settings are adjusted so you don't have to set this up yourself and so the hair will render for both BR and Cycles.



"Spacebar" to call brush menu
(as in all ZB paint or sculpt modes)

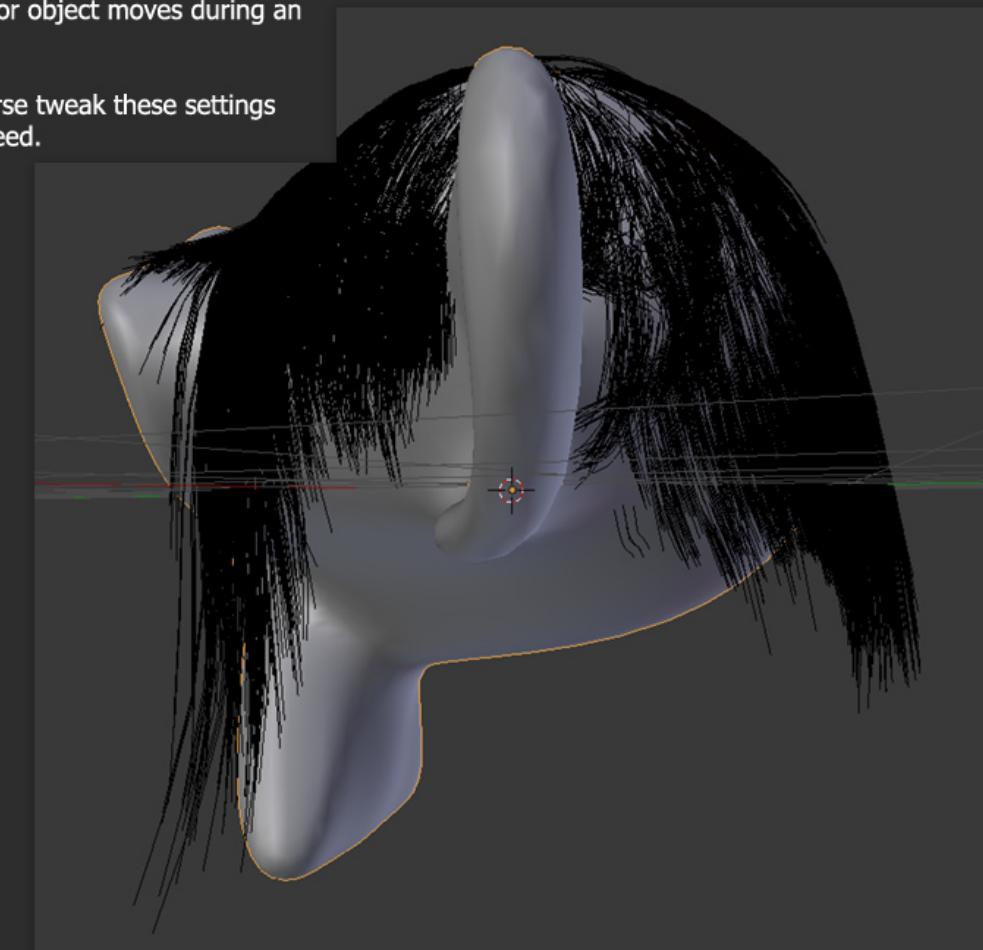
delete hair system
(click back on the comb icon to start again)

particle
brush mode



Particle hair added with ZB is automatically set up with collision physics to move when your character or object moves during an animation.

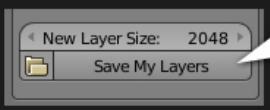
You can of course tweak these settings however you need.



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saving & reloading



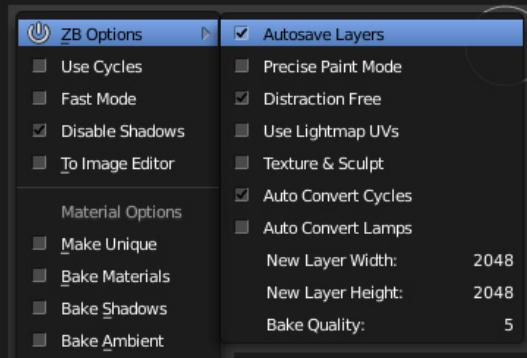
Press this after adding new layers or baking things to ensure Blender doesn't accidentally lose them.

ZB uses generated images to allow you to paint and bake on the fly. Without generated images, you would have to manually name and create each image every time you needed one for a material, bake, or to create a new texture layer.

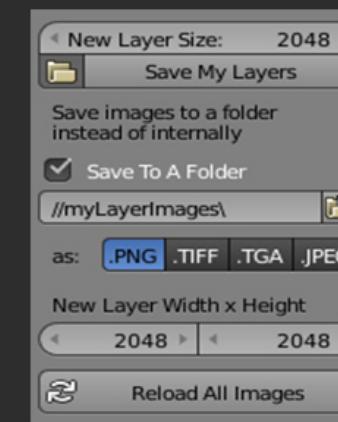
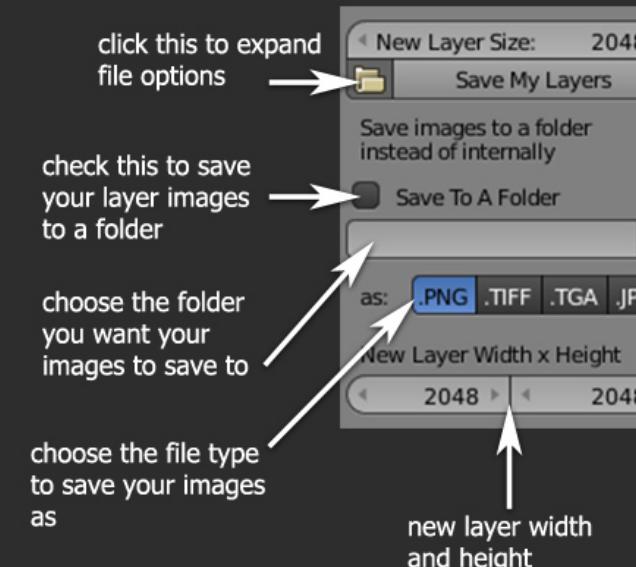
If an image is not saved to your file (also known as being packed into the file), then there's a good chance Blender might corrupt or lose the image while you're working in Blender, and the image won't be there the next time you open your file.

ZB does its best to work around this problem by autosaving your layers whenever it can, however it can't do it to often or else your workflow would come to a halt. If the autosave feature becomes too cumbersome, you can disable this feature in the ZB options menu.

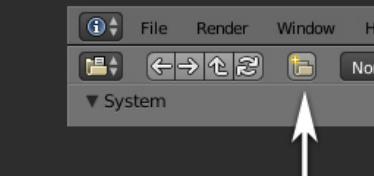
Saving your layers only protects the images while you're painting, to save your changes permanently, just save your blender file as you always would by going to File/ Save.



You can also save your layers externally to your computer or a cloud service so they can be edited in other software or exported.



(full version required
for some of these features)



You can press this button to create a new directory (folder) to save your images to



Once you've navigated to the folder you want to save to, just press accept. Then press "Save My Layers" to save your images to that location.

Once you've selected a location to save to, pressing "Save My Layers" will save and export all the layer images belonging to the object you are painting to the folder location you chose.

A new option "Reload All Images" will also appear. Press this after editing & saving your layers in another program such as PS, Gimp or Krita, to reload them back into Blender without having to restart Blender.

NOTE: be sure when you save an image in another program you save it as the same name and file type as it was exported as in Blender. So if you saved it as myLayer.JPG don't save it as myLayer.PSD or it won't reload.



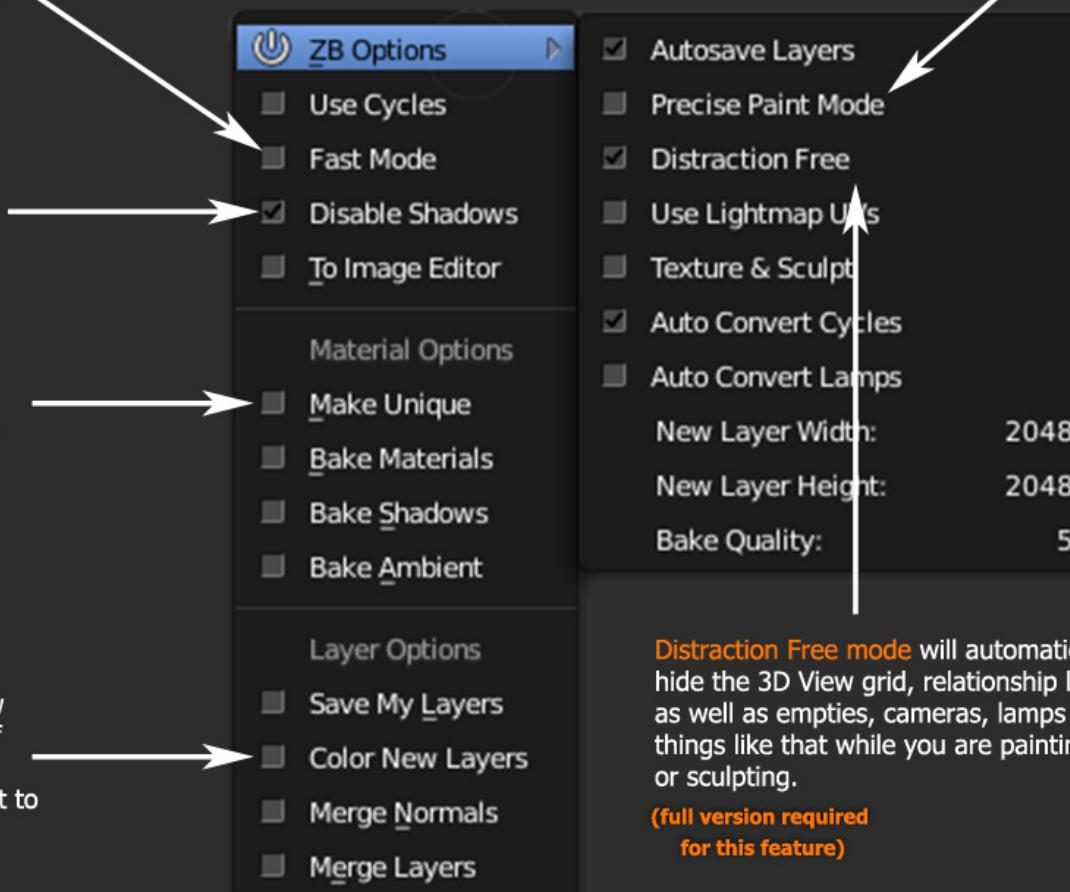
special features

Fast mode enables Blender's "Simplify Scene" option and adjust its settings. It also makes other smart decisions about reducing resources while you're painting or sculpting when it is activated.

This will automatically shut off lamps using buffer shadows when painting or sculpting to help improve performance.

If the object you are painting was duplicated from another object you had already been painting on, you can press this to make the object unique, so what you paint or bake to the new object won't also show up on the original object.

If this option is checked, every new layer you create will be the color of whatever brush you happen to be using. This is useful when you want to start out a layer as a solid color.



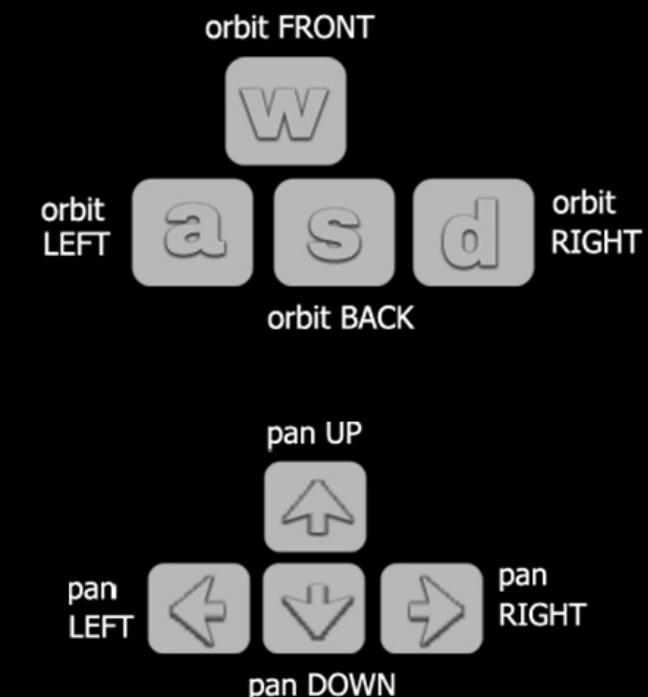
Precise Paint Mode is very useful when working with stencil brushes. The idea is to be able to line up the brush perfectly from all sides and angles of the object.

If this option is checkmarked, then precise paint mode can be activated by pressing W,S,A, or D and deactivated by pressing the escape key or middle mouse button.

Precise Paint Mode begins by centring your view and taking you out of perspective mode, then it arranges hotkeys to the first person shooter familiar W,S,A,D and arrow keys.

When you leave this mode your view is returned to normal. Holding Ctrl and pressing the arrow keys will move your stencil brush by an extremely low value to help precisely line up your stencil brush.

(full version required for this feature)



hold CTRL while pressing an arrow key to move your stencil by a tiny increment



layer from brush

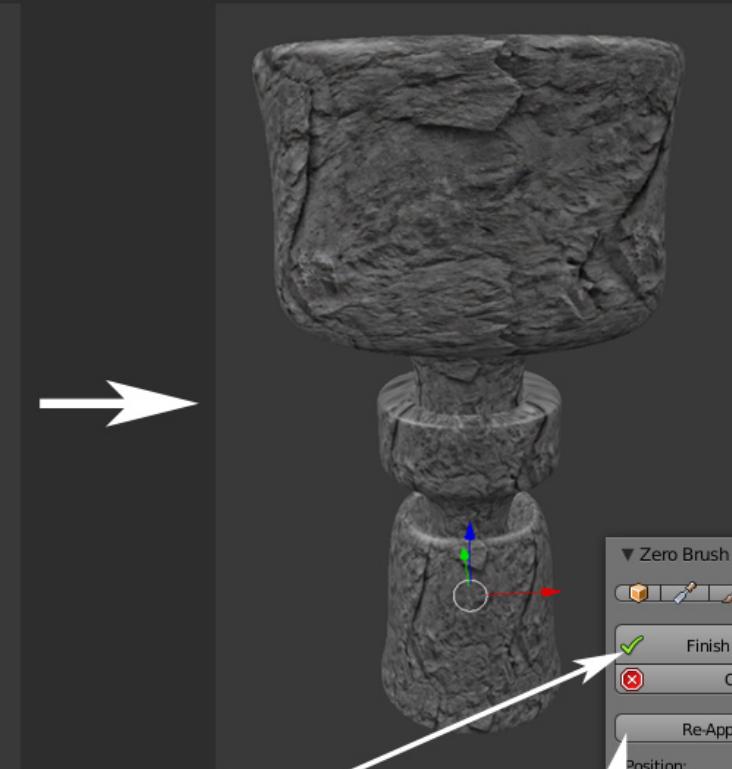
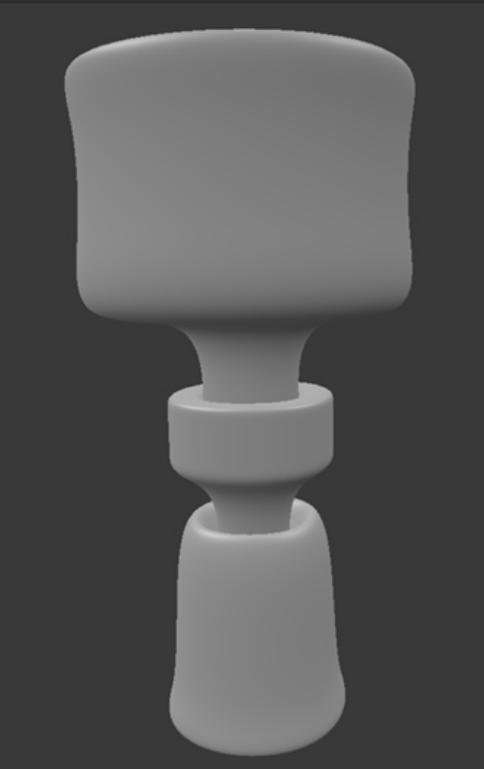
(full version required
for this feature)

The "Layer From Brush" option is available in the ZB options menu if at least one texture brush is loaded in texture paint mode.

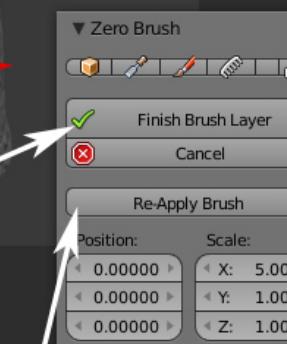


Here we have a rock texture brush loaded. The "Layer From Brush" option uses cylindrical UV mapping to bake a layer filled with your brush pattern onto your object.

This is especially useful when trying to create a seamless border around an object. This option is a baking process so it may take a while to complete depending on the size of the layer it's baking to (set by the "New Size Layer" value).



Once you press "Layer From Brush", your object will be wrapped around by the brush texture, but it won't become a regular layer until you press "Finish Brush Layer".



When you're finished adjusting the texture, press "Finish Brush Layer" and the layer will be baked to the object.

Once it's baked, it becomes like any regular layer you can paint, use in Cycles or blend.

You can change the overall orientation of the texture wrapping by changing your view to say, Front, Back, Left or Right, then press "Re-Apply Brush".

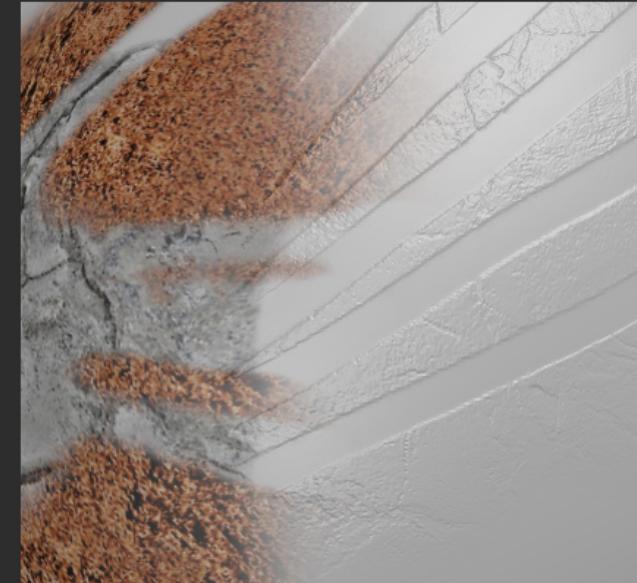
This will re-apply the texture from whatever angle you happen to be viewing the object in the 3D View.



Here you can adjust the position (offset) of the texture and the scale (how many times it's repeated and in what direction)

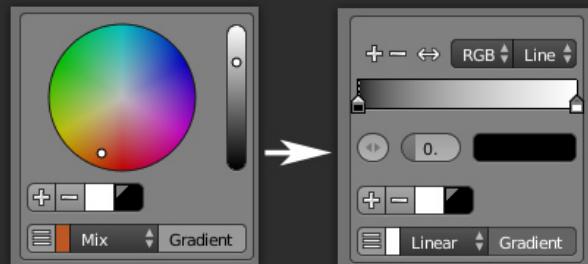


brush enhancements



Holding Shift while painting will erase in Zero
Brush. ZB changes the brush mode contextually to make sure that holding shift erases properly on a bump layer verses a color layer verses a mask.
Holding shift while sculpting or weight painting will also perform the inverse action of whatever brush you happen to be using. **This makes weight painting way more intuitive in ZB for example.**

For color layers the shift eraser only works while in BR due to the fact only one of each layer type can be displayed at a time in Cycles. Layer and blend as many layers as you want while in BR, then use ZB's merge function to display those layers in Cycles.



When you press the ZB gradient button, ZB will automatically switch your brush to a "Fill" brush to produce expected results.

While gradient mode is activated, selecting different brush stroke types will contextually change the gradient type to help make the **gradient tools more useful**.



ZB cleans up the mask tools for sculpting and texture painting as well. Shift is used to erase for sculpting and painting while in mask mode.

ZB also makes smart decisions about stroke methods and input samples when you load or select various brush types to help **speed up performance** when say, using a texture brush verses a clone brush.



hotkey reference & assigning

ZB OPTIONS: Q

BRUSH MENU: SPACEBAR

INCREASE/DECREASE BRUSH SIZE: X (or Blender default key)

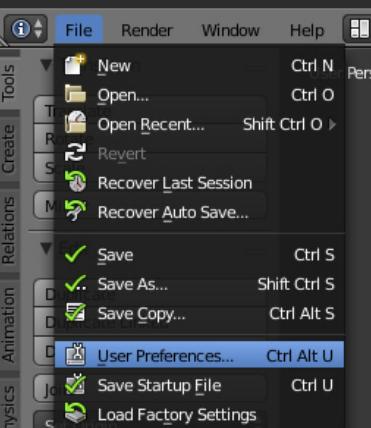
INCREASE/DECREASE BRUSH STRENGTH: Shift-X (or Blender default key)

ROTATE TEXTURE BRUSH: Ctrl-X to activate (or Blender default key),
continue holding Ctrl to restrain angle

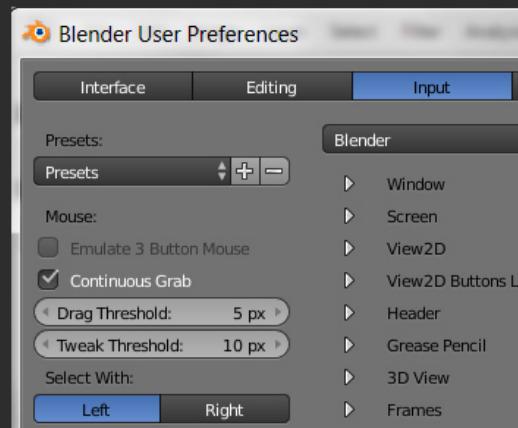
ERASE (OR PERFORM INVERSE DEPENDING ON MODE): Hold Shift

RENDER PREVIEW: Shift-Z

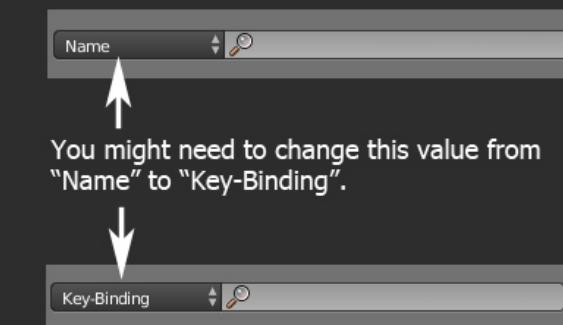
FOLLOW THESE STEPS IF YOU NEED TO ADJUST YOUR HOTKEYS:



Open File/User Preferences

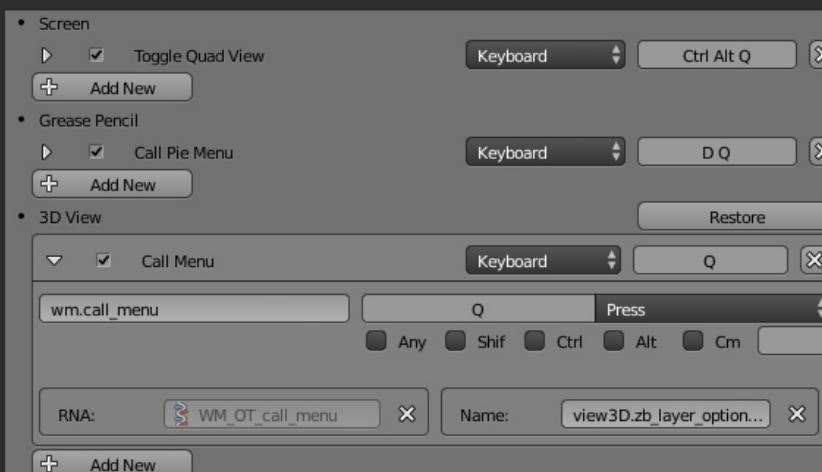


Select the Input tab at the top



You might need to change this value from
"Name" to "Key-Binding".

You can search for most ZB commands by name by entering "zb" into the search menu while it is set to "Name". Some ZB features aren't listed by name so you'll have to search for them by key-binding to change them, as is explained above. For instance if we wanted to change the hotkey for ZB Options from Q to Alt-Shift-X we would type in Q into the search bar:



After entering Q, a list of categories and keys belonging to those categories will show up. Under "3D View" click the arrow to expand "Call Menu" and adjust the settings to the desired key, in this case Alt-Shift-X.

Make sure the letter part "X" you enter last, because the list is displaying only items whose hotkey is "Q" and thus will disappear as soon as we change it from Q. So enter "X" last. Then press "Save User Settings" before exiting the user preferences.

Blender is loaded with hotkeys, if you choose a hotkey already in use, you may not be able to change the key to the one you want. Also, other addons may be using keys, so you'll want to check with that as well.



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