5.1.1 Topbar and Statusbar - File menu

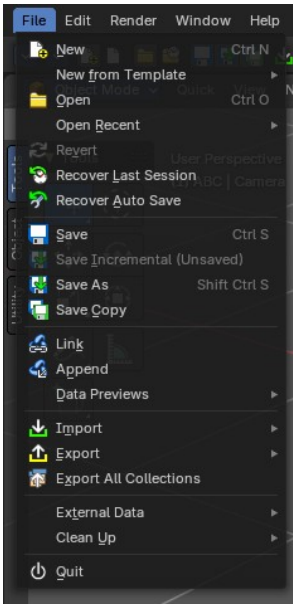
Table of content

Detailed table of content

Detailed table of content

File Menu

The File menu contains file related functionality.



New

Creates a new scene, using the current active template.

New from Template

Choose to create a new file with predefined Application Templates.

Application templates is a collection of workspaces for a predefined purpose.

Standard Application Templates

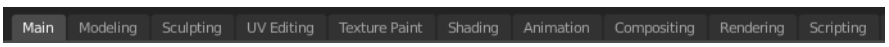
General

The general application template comes with the workspaces to create 3D content.

2D Animation

The 2D Animation application template comes with the workspaces to create 2D animation.

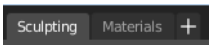
All



The All application template contains all default workspaces.

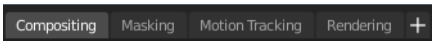
Sculpting

The Sculpting application template comes with the workspaces for sculpting needs.



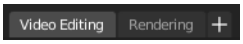
VFX

The VFX application template comes with the workspaces for motion tracking.

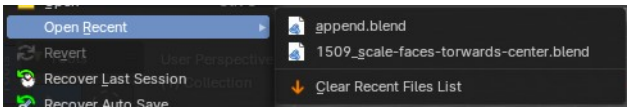


Video Editing

The Video Editing application template comes with the workspaces for video editing.



Open



Open a blend file.

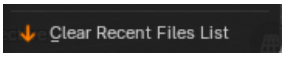
Clear Recent Files List

Clears the recent files list.

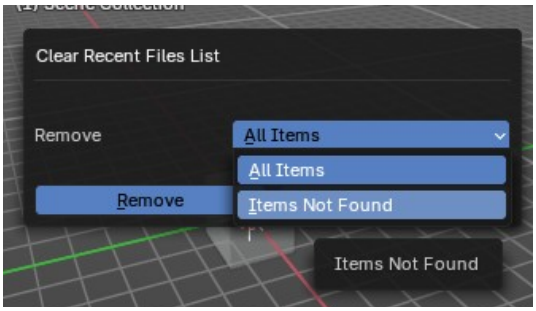
Open Recent

Open last recent blend files.

Clear Recent Files List



This clears the recent files list. When you clear, you will be prompted with which items you would like to remove.



Remove

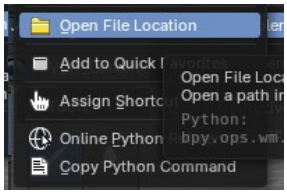
All Items

Removes all the items in the list.

Items Not Found

Removes only the missing files from the list. If a file exists in the list, it won't clear it.

Recent Context Menu - Open File Location



Opens the recent blend file file location in the operating system's file explorer.

Revert

Reload the last saved file.

Recover last Session

Open the last closed blend file. (quit.blend)

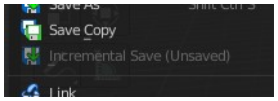
Recover Autosave

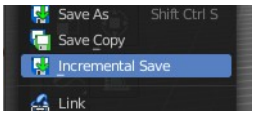
Open the last autosaved blend file.

Save

Save blend file.

Incremental Save





Saves an already saved blend file with incremental file name. myfile.blend gets saved as myfile1.blend, myfile2.blend, myfile3.blend, and so on.

You need to have the blend file saved once to set this save method active.

Save As

Save blend file as.

Save Copy

Saves a copy of the current file.

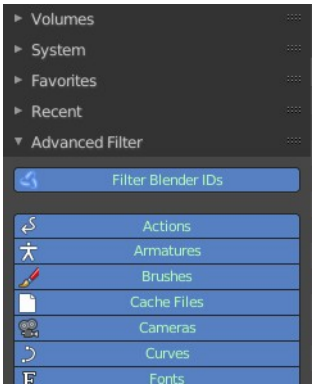
Link

Link allows you to link content from another blend file. The content remains in the other blend file. The linked blend file will be required to work with the linked content.

When you click at Link then a file browser will open. Down left you will see some further options.

Advanced Filter

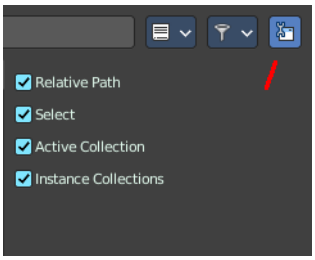
This filter allows you to filter the content of the blend file for specific object types.



Import Settings

At the right you can reveal the import settings.

Relative Path



Available only when linking, see *relative paths*.

Select

Makes the object *Active* after it is loaded.

Active Layer

Enabled by default, the object is assigned to the visible layers in your scene. Otherwise, it is assigned to the same layers it resides on in the source file.

Instance Collections

This option links the collection to an object, adding it to the active scene.

Please Note:

When you select an Object type, it will be placed in your scene at the cursor. Many other data types - cameras, curves, and materials for example - must be linked to an object before they become visible.

You cannot move a linked object. Its position is defined in its source file. If you want to modify the object locally you can either use Dupli Groups or make the object local, in the 3D View, Object / Relations menu.

Appending data you already have linked, will add objects / groups to the scene, but will keep them linked (and un-editable).

Known Limitations

In general dependencies shouldn't go in both directions. Attempting to link or append data which links back to the current file will likely result in missing links.

When linking objects **directly** into a `.blend` file, the *Rigid Body* settings won't be linked in since they're associated with their scenes world. As an alternative you could link in the entire scene and set it as a Background Set Scene.

Append

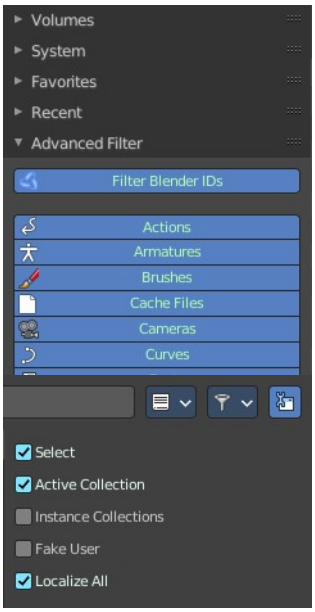
Append allows you to append content from another blend file. The content will be copied over, and become part of the current blend file.

When you click at Link then a file browser will open. Down left you will see some further options.

The difference to Link is that with Append the object becomes part of the current blend file. And it is editable.

Advanced Filter

This filter allows you to filter the content of the blend file for specific object types.



Import Settings

At the right you can reveal the import settings.

Select

Makes the object *Active* after it is loaded.

Active Collection

Put the new objects into the active collection.

Instance Collection

Create instances for collections rather than adding them directly to the scene.

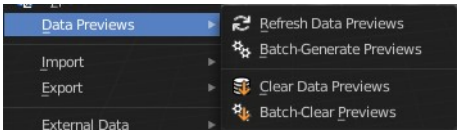
Fake User

Set Fake User for appended objects, except Objects and Groups

Localize All

Localize all appended data, including indirectly linked from other libraries.

Data Previews



Data Previews is a sub menu with functionality around the Data Preview in the Bforartists file browser. The functionality in this menu creates and handles previews of the objects in a blend file.

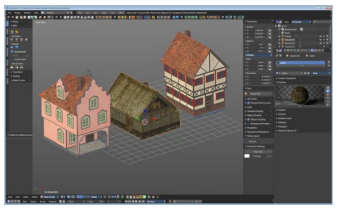
Data Previews are displayed in the file browser when you link or append something from this file and when you use thumbnails as display method. It is meant for the case when you want to turn a blend file into an asset library. Materials, ready textured objects, etc. .

This feature is currently broken. You can't create data previews yet in Bforartists 2. Example images taken from Bforartists 1.

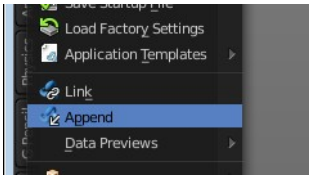
Workflow:

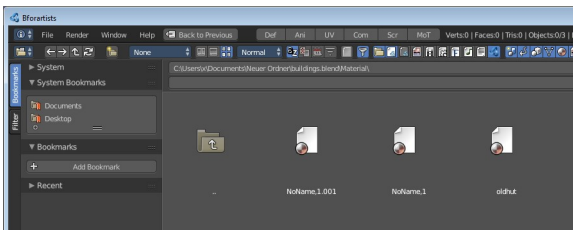
First create a scene with your assets. Make sure to remove the camera from the scene. It can work, but it can also make trouble, and prevent the batch generation to work at the blend file. And an asset library doesn't need a

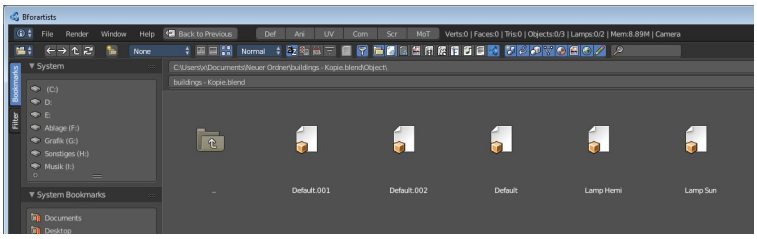
camera anyways. Not so important is lights, it does not make trouble like the camera. But you won't get a data preview icon for lights.



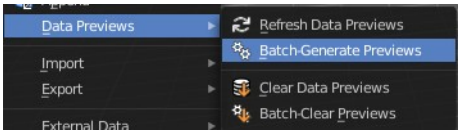
Save the scene. Restart Bforartists or create at least a new scene. We want to have a look what we currently get as preview when we want to link or append from this blend file. Make sure to turn the view in the file browser to thumbnails. It's always just the default icon for the assets. Left Materials, right the Objects.

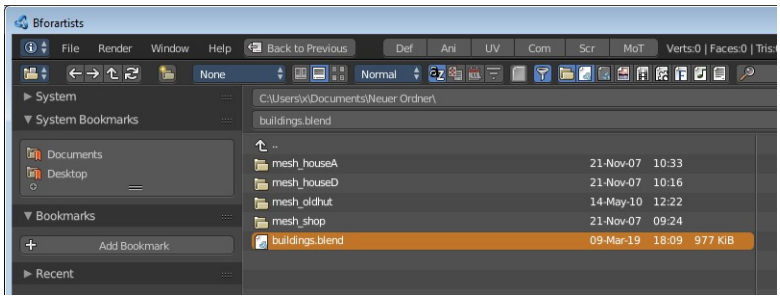




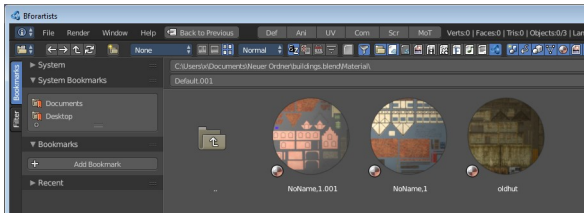


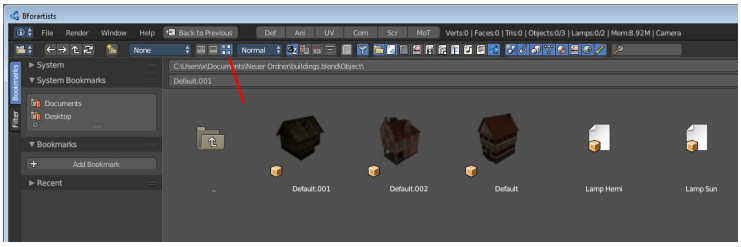
Now let's run Batch Generate Previews at this blend file.





This process takes a while. Now let's try to append from the same file again. You will get proper preview thumbnails now. Left Materials, right the objects. Here you will see again that lamps have no preview icon.





Refresh Data Set Previews

Refreshes the existing data set previews.

Batch Generate Previews

Generates the previews for the data objects in the selected blend file(s). The scene that you want to work at

should not be loaded.

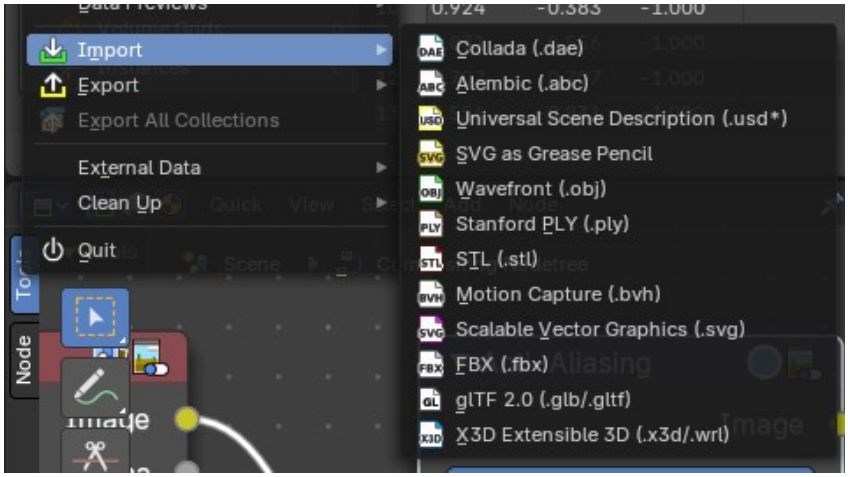
Clear Data Set Previews

Removes existing previews for some types in the target blend file.

Batch Clear Previews

Removes all existing previews in the target blend file.

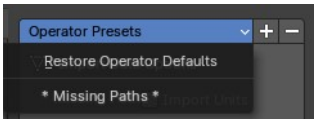
Import

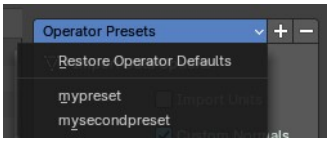


Import is a sub menu with the available 3D import file formats. You will be prompted to the load dialog which provides some further import options down left in the file browser tool shelf.

Note that im- and exporters are partially addons that can be disabled. So some content might miss.

Operator Presets





The operator presets exists on nearly all importers and exporters. Exceptions are for example the *.stl importer. They allow you to reset the importer settings to the defaults. And allow you to store your own presets. The presets are just valid for the importer or exporter with which you have saved the presets.

Operator Presets dropdown

Restore Operator Defaults

Restores the importer or exporter settings to their default values

List of available presets

The list of available presets. The string *Missing Paths* indicates that no custom preset exists yet.

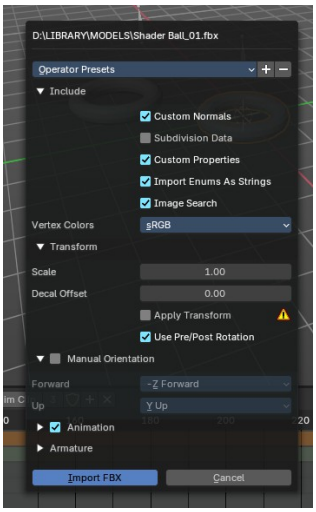
Add Operator Preset

Adds a new operator preset. A popup dialog will appear where you can give the new preset a name.

Remove Operator Preset

Removes the active preset. Note that you cannot display the current active preset. So choose it from the list, and then click at the remove operator.

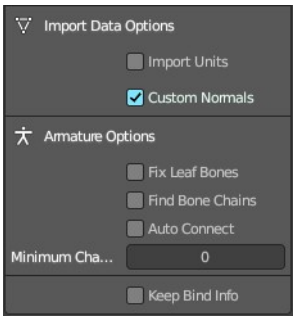
Import Drag and Drop



You can optionally drag and drop multiple files into the 3D Viewport to directly import different file types. This will batch import the selection from the explorer with a floating dialogue from the importer settings.

Note: *You can only drag in a group of multiple files if they are the same file format. If you have multiple selected, it will prompt you if you should import one or the other file type.*

Collada



Imports a file in collada file format. Collada is a general file format that is able to store and load animation.

Import Data Options

Import Units

Imports the units that is used to save the collada file . If unticked Blender Units will be used.

Custom Normals

Import custom normals if available.

Armature Options

Fix Leaf Bones
Fix orientation of Leaf bones. Collada file formats only supports joints, not bones.

Find Bone Chains
Find best matching bone chains and ensure that the bones in the chain are connected.

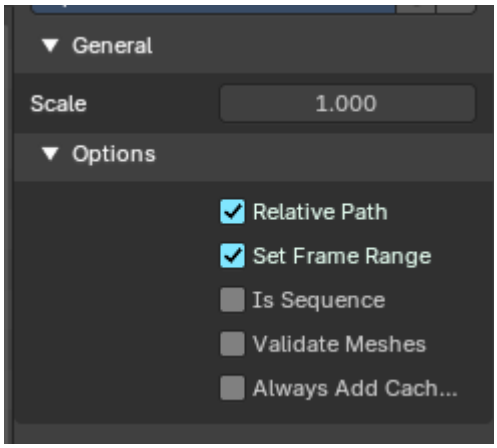
Auto Connect
Auto connect parent bones that have exactly one child bone.

Minimum Chain Length
When searching bone chains disregard chains of length below this value.

Keep Bind Info

Store Bindpose Information in custom bone properties for later use in later collada export.

Alembic



The alembic file format is for static geometry. It does not support armatures, hair or particles.

General

Scale
Set the import scale factor.

Options

Relative Path
Select the file relative to the blend file.

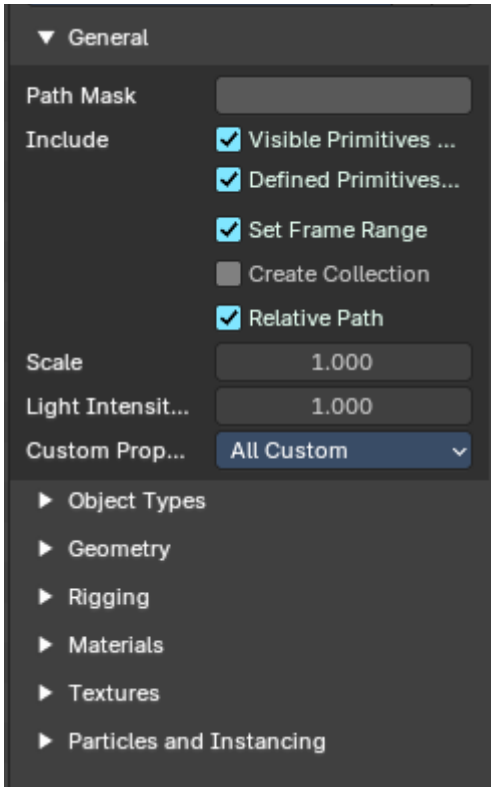
Set Frame Range
Sets the Frame range start and end point in Bforartists to match the one in the alembic file.

Is Sequence
Import sequenced files that are split in cache parts.

Validate Meshes
Check for invalid mesh data in the file. Note that this operation may take some time.

Always add Cache Reader
Add cache modifiers and constraints to imported objects even when they are not animated. This allows updating the alembic archive when reloading.

USD



Imports a Universal Scene Description (USD) file. It reads *.usd, *.usdc and *.usda files.

General

Path Mask

Import only the subset of the USD scene rooted at the given primitive.

Include

What to include

Visible Primitives Only

Do not import invisible USD primitives. Only applies to primitives with a non-animated visibility attribute. Primitives with animated visibility will always be imported.

Defined Primitives Only

Import only defined USD primities. When this is disabled, this allows importing USD primitives which are not defined, such as those with an override specifier.

Set Frame Range

Update the scene's start and end frame to match those of the USD stage.

Create Collection

Add all imported objects to a new collection.

Relative Path

Select the file relative to the blend file.

Scale

The scale size at import.

Light Intensity Scale

Scale for the intensity of imported lights.

Custom Properties

Behaviour when importing USD attributes as custom properties.

All Custom

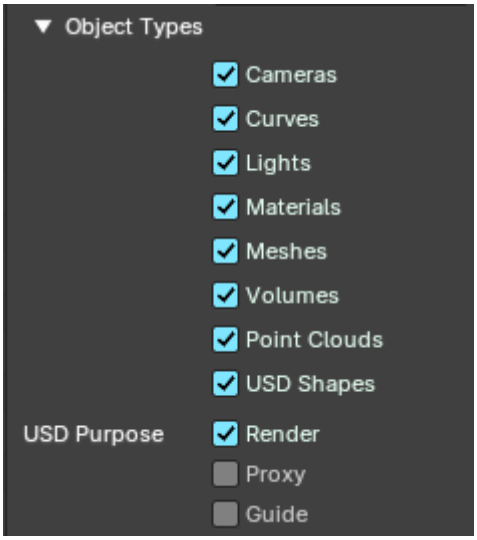
Import all USD custom attributes as custom properties. Namespaces will be retained in the property names.

User

Import all USD user defined attributes as custom properties. Namespaces will be retained in the property names.

User
Import not custom attributes as custom properties.

Object Types



Cameras
Import cameras (perspective and orthographic).

Curves
Import curve primitives, including USD basis and NURBS curves. (Note that support for Bézier basis is not yet fully implemented.)

Lights
Import lights. Does not currently include USD dome, cylinder or geometry lights.

Materials
Import materials. See also the experimental Import USD Preview option.

Meshes
Import meshes.

Volumes
Import USD OpenVDB field assets.

Point Clouds
Import pointcloud data.

USD Shapes
Import USD Shapes.

USD Purpose

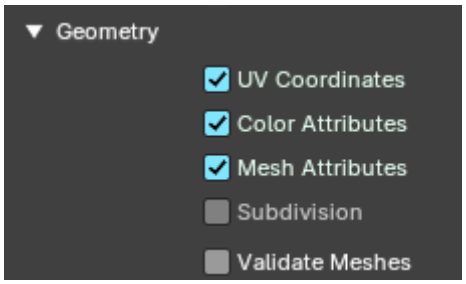
Proxy
Include primitives with purpose proxy.

Render
Include primitives with purpose render.

Guide
Include primitives with purpose guide.

Geometry

UV Coordinates
Load mesh UV coordinates.



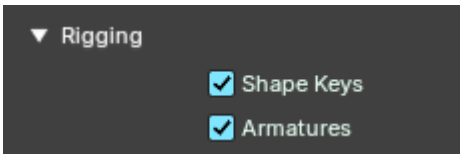
Color Attributes
Import the USD mesh display Color values as Blender mesh vertex colors.

Mesh Attributes
Read USD PrimVars as mesh attributes.

Subdivision
Import Subdivision.

Validate Meshes
Ensure the data is valid on import (when disabled, data may be imported which causes crashes displaying or editing)

Rigging



Shape Keys
Import all shape keys.

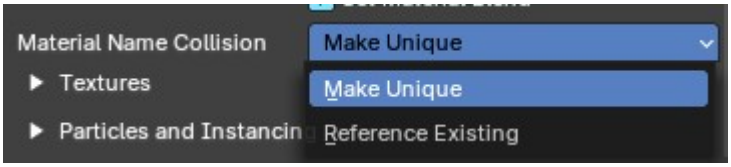
Animation
Import all animation keyframes.

Materials

Import all Materials
Import all materials. Also materials that are not used by the geometry.

Import USD Preview
Convert USD Preview Surface shaders to Principled BSDF shader networks.

Create World Material
Convert the first discovered USD dome light to a world background shader.



Material Name
How to import the material name when it conflicts with an existing material in the scene.

Make Unique
Import each USD material as a unique material.

Reference Existing
If the material with the same name exists, replace the USD material with existing material.

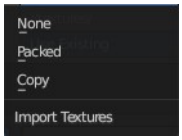
Textures

Set Material Blend

If the Import USD Preview option is enabled, the material blend method will automatically be set based on the opacity and opacityThreshold shader inputs, allowing for visualization of transparent objects.

Import Textures

How to import textures.



None

Don't import textures.

Packed

Import Texture as packed data.

Copy

Copy files to texture directory.

Textures Directory

The textures directory.

File Name Collision

What to do if a texture name already exists.

Particles and Instancing

Scene Instancing

Import USD scene graph instances as collection instances.

SVG as Grease Pencil

Imports a svg file as a grease pencil object.

Resolution

The resolution of the svg import.

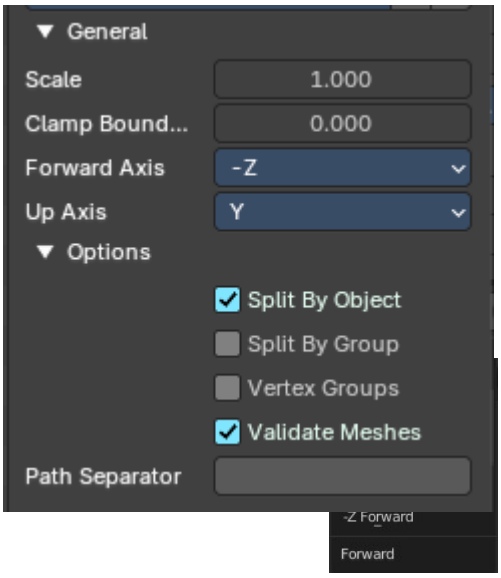
Scale

The scale of the svg import.

Wavefront(OBJ)

Imports a wavefront obj file.

General

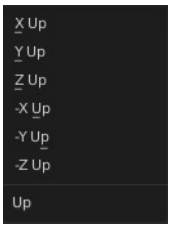


Scale
Scale factor for the obj import.

Clamp Bounding Box
Clamp bounds under this value. A value of zero disables this feature.

Forward Axis
The Forward orientation at import.

Up
The Up orientation at import.



Options

Split by Object
Import loose mesh parts as single objects.

Split by Group
Import Obj Groups as meshes.

Vertex Groups
Import Obj groups as vertex groups.

Validate Meshes
Check at import for invalid data.

Path Separator
Import option to create collection hierarchy by splitting names with a separator.

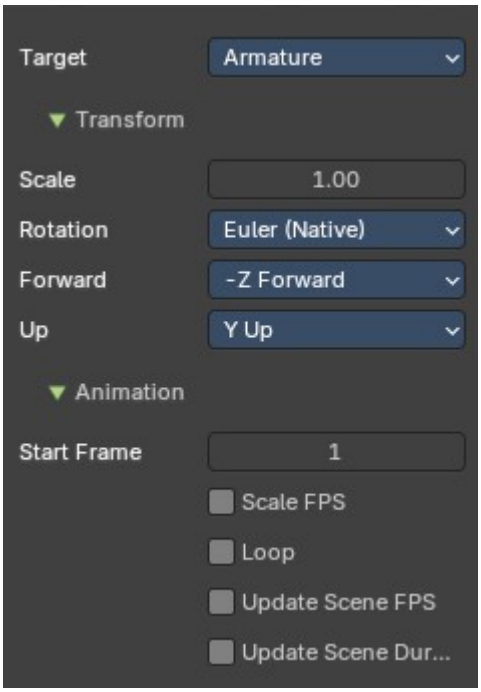
Names found in the OBJ file are split by that, and a Collection hierarchy is made, so you can have e.g. "o House/Roof/Tile" in the OBJ file.

Motion Capture (BVH)

The Biovision Hierarchy (BVH) character animation file format is a file format to carry motion capture data.

Target

You can either target an armature or an object.



Transform

Scale

The import scale.

Rotation

The rotation type.

Forward

The forward orientation.

Up

The Up orientation.

Animation

Start Frame

The start frame for the animation.

Scale FPS

Scale the frame rate of the BVH file to the current scenes. With off every frame of the BVH is one frame in Bforartists.

Loop

Loop the animation playback.

Update Scene FPS

Sets the scene frame rate to that of the BVH file. Note that this nullifies the Scale FPS feature since the scale will be 1:1.

Update Scene Duration

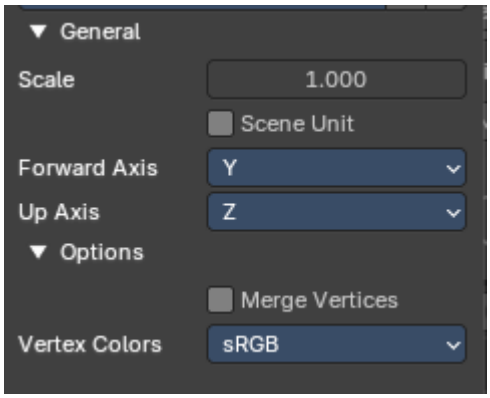
Extend the scene duration to be the one of the BVH file duration.

Scalable Vector Graphics (SVG)

Scalable Vector Graphics is usually a 2D file format to describe vector graphics. But Vector graphics are also curves. Which can be used in a 3 dimensional space.

SVG has no import properties.

Stanford (PLY)



The Stanford Triangle Format was designed to store three-dimensional data from 3D scanners. It is a static file format for mesh data, and cannot carry animation data.

General

Scale
The scale factor for the imported geometry.

Scene Unit
Apply current scene units at importing the geometry.

Forward Axis
The forward axis for the imported geometry.

Up Axis
The up axis for the imported geometry.

Options

Merge Vertices
Merges vertices by distance.

Vertex Colors
Import vertex colors if they exist. These are Color attributes.

sRGB
8bit colors

Linear
32bit float colors

STL

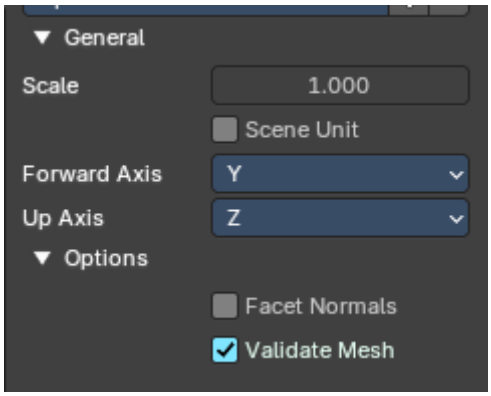
STL (Standard Triangulation/Tessellation Language) is a standard format for many cad software. It is a format for static geometry, it cannot handle animation. The format is popular for 3d printing purposes.

General

Scale
The import scale.

Scene Unit

Apply the scene unit at the geometry at import.

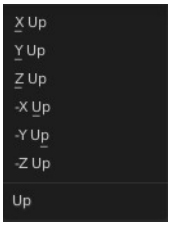


Forward

The Forward orientation at import.

Up

The Up orientation at import.



Options

Facet Normals

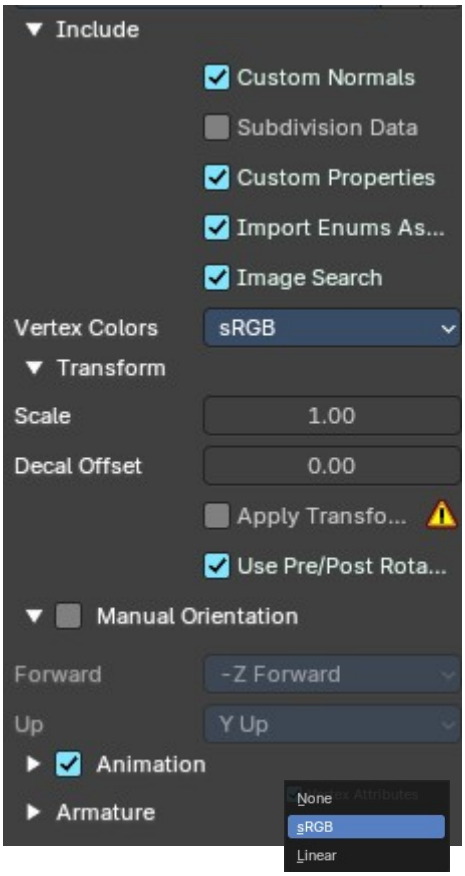
Import the geometry with faceted faces.

Validate Meshes

Check at import for invalid data.

FBX

FBX is a proprietary file format from Autodesk. FBX is a general file format that is able to store and load animation.



Include

What data to import.

Custom Normals

Import custom normals.

Subdivision Data

Import Subdivision.

Custom Properties

Import User properties as Custom properties

Import Enums as Strings

Store enumeration values as strings.

Image Search

Search the sub directions for associated images.

Vertex Colors

Import vertex colors if they exist. These are Color attributes.

sRGB

8bit colors

Linear

32bit float colors

Transform

Scale

Adjust the scale factor at import.

Decal Offset

Displace geometry of alpha meshes.

!Experimental! Apply Transform

Bake space transform into object data. This avoids unwanted rotations when the target space is not aligned with the Bforartists space. Warning! This feature is experimental. Use at own risk.

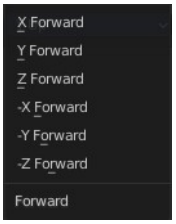
Use Pre/ Post Rotation

Use Pre or Post Rotation from FBX transform. This feature may not work in all cases.

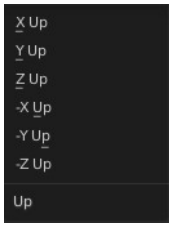
Manual Orientation

Enables custom orientation instead of using the orientation from the fbx file.

Forward
The Forward orientation at import.



Up
The Up orientation at import.



Animation

Animation Offset
Adjust an offset in frames for the imported animation.

Armature

Ignore Leaf Bones
Ignore the last bone at the end of the chain.

Force Connect Children
Force connection of the children bones to their parent.

Automatic Bone Orientation
Try to align the mayor bone axis with the bone children.

Primary and secondary Bone Axis
Manually adjust the bone orientation per axis. Note that this features are greyed out when Automatic Bone Orientation is ticked.

---

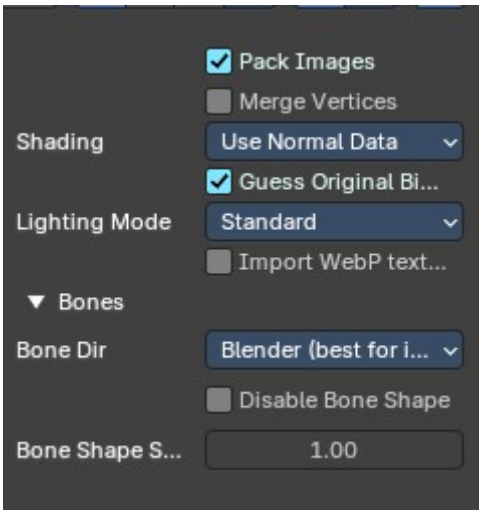
glTF 2.0 (glb, gltf)

The GL Transmission Format from the Khronos Group is a file format for 3D scenes and models, and is based at the JSON standard.

Pack Images

Pack all images into the Blend file at loading the glTF file.

Merge Vertices



glTF stores every vertice of faces as an extra vertice. There is no shared vertice between two faces. Merge vertices merges the vertices of neighbor faces together.

Attiention! It currently cannot combine vertices with different normals.

Shading

Define the shading of the imported geometry.

Use Normal Data

Use the existing Normals.

Flat shading

Shades the whole mesh flat and faceted.

Smooth shading

Shades the whole mesh smooth.

Guess original bind pose

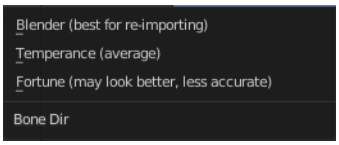
Tries to guess the original bind pose for skinned meshes. Off means the rest pose is used as the bind pose.

Import WebP textures

If a texture exists in WebP format, loads the WebP texture instead of the fallback PNG/JPEG one.

Bones

Bone Direction



Heuristic method for placing bones.

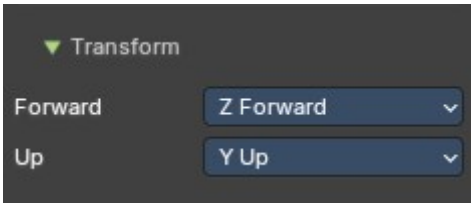
Disable Bone Shapes

Do not create bone shapes.

Bone Shape Scale

The scale factor of the bone shapes for viewport display.

X3D Extensible 3D



Extensible 3D (X3D) is a family of co-ordinated royalty-free open standards for file formats that can store representations of interactive 3D objects and scenes.

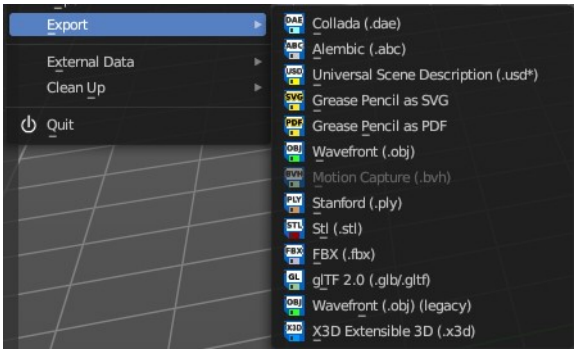
Transform Panel

The scale factor.

Forward
The forward orientation.

Up
The up orientation.

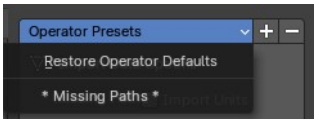
Export

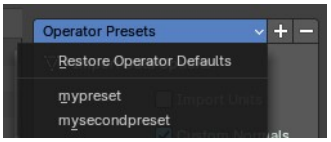


Export is a sub menu with the available export formats.

Note that im- and exporters are partially addons that can be disabled. So some content might miss.

Operator Presets





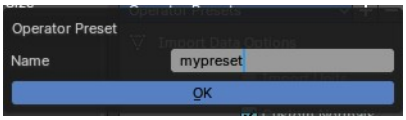
The operator presets exists on nearly all im- and exporters. Exceptions are for example the stl importer. They allow you to reset the importer settings to the defaults. And allow you to store your own presets. The presets are just valid for the im- or exporter with which you have saved the presets.

Operator Presets dropdown

Restore Operator Defaults
Restores the im or exporter settings to their default values

List of available presets
The list of available presets. The string *Missing Paths* indicates that no custom preset exists yet.

Add Operator Preset



Adds a new operator preset. A popup dialog will appear where you can give the new preset a name.

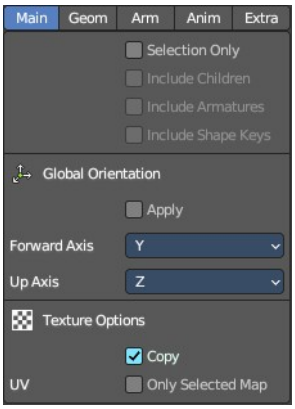
Remove Operator Preset

Removes the active preset. Note that you cannot display the current active preset. So choose it from the list, and then click at the remove operator.

Collada

Exports a file in collada file format. Collada is a general file format that is able to store and load animation.

The Collada exporter is divided into several sub tabs since it would be too much to display all settings at once.



Main

Selection Only

Only export selected elements, not the whole scene.

Include Children

Export all children of selected objects, even if not selected.

Include Armatures

Export related armatures, even if not selected.

Include Shape Keys

Export all shape keys from Mesh Objects.

Global Orientation

Apply

Rotate all root objects to match the global orientation. With this option off the global settings are used by a collada object basis.

Forward Axis

The forward axis orientation.

Up Axis

The up axis orientation.

Texture Options

Copy

Copy the textures to the same folder where the .dae file is exported.

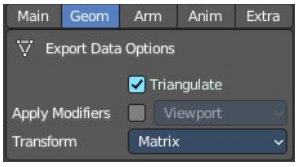
UV

Only Selected Map

Export only the selected UV map.

Geom

The geometry export section.



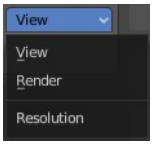
Export Data Options

Triangulate

Triangulates the mesh at export.

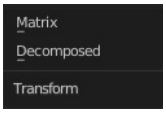
Apply Modifiers

Applies the modifiers for export. The resolution can be adjusted in the drop down box behind the Apply Modifiers checkbox. You can choose between View and Render.



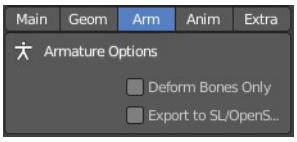
Transform

The transform type. Either transform the whole matrix. Or decomposed into the single components.



Arm

The armature export section.



Armature Options

Deform Bones only

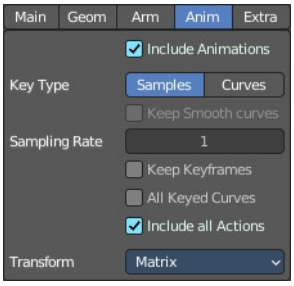
Only export deforming bones with armatures.

Export to SL/OpenSim

Compatibility mode for SL, OpenSim and other compatible online worlds.

Anim

The Animation export section.



Include Animations

Export Animation if available.

Key Type

Samples/Curves

Export sample keys or curves keys.

Keep Smooth Curve

Just available with TransRotLoc transformation type. Export also the curve handles if available.

Sampling Rate

The distance between two key frames.

Keep Key frames

Use existing key frames. as sample points.

All Keyed Curves

Export also curves that has just one key or are completely flat.

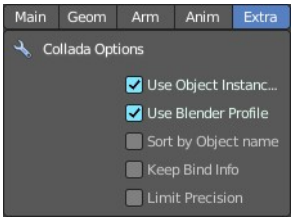
Include all Actions

Export also unassigned actions.

Transform Type

The transform type for translation, scale and rotation. Matrix or TransRotLoc.

Extra



Some extra export settings.

Collada Options

Use Object Instances

Instantiate multiple objects from same data.

Use Blender Profile

Export Blender specific settings for shader, bones, materials, etc.

Sort by Object Name

Sort exported data by name.

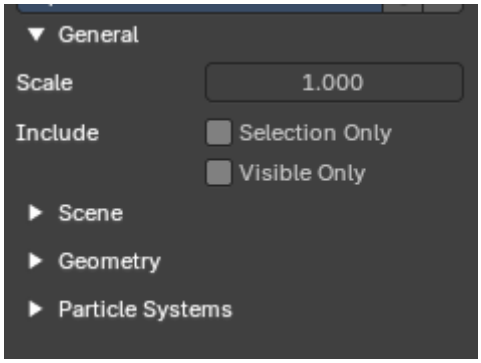
Keep Bind Info

Store Bind Pose Information in custom bone properties for later use during Collada export.

Limit Precision

Reduce the precision of the exported data to 6 digits.

Alembic



The alembic file format is for static geometry. It does not support armatures, hair or particles. However, there are some options to export at least some data of it.

The alembic export options are divided into four sections.

General

Scale

The export scale factor.

Include

Selection Only

Export just the selected object(s), and not the whole scene.

Visible Only

Export visible geometry only.

Scene

Frame Start
The start frame of the export.

End
The end frame of the export.

Samples Transform
Number of times per frame at which animated transformations are sampled.

Geometry Samples
Number of times per frame at which geometry transformations are sampled.

Shutter Open
The start frame to sample transform and geometry samples. Valid range is -1 to 1. -1 indicates the previous frame, 0 indicates the current frame, and 1 indicates the next frame.

Shutter Closed
The end frame to sample transform and geometry samples. Valid range is -1 to 1. -1 indicates the previous frame, 0 indicates the current frame, and 1 indicates the next frame.

Use Instancing
Export data duplicated objects as alembic instances.

Custom Properties
Export custom properties to Alembic . userProperties

Flatten Hierarchy
Remove parent / children relationship.

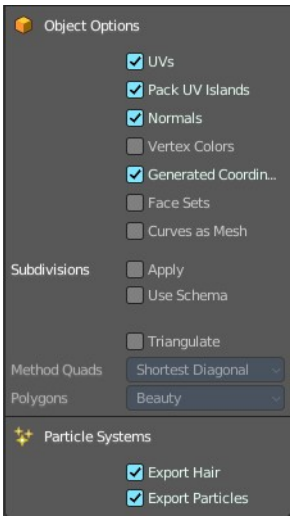
Settings
Determines visibility of objects, modifier settings, and other areas where there are different settings for viewport and rendering.

Render
User render settings for object visibility, modifier settings, etc

Visibility
User visibility settings for object visibility, modifier settings, etc

Geometry

UV's
Export UV's. Note that Alembic just supports a single UV map.



Pack UV Islands

Export UV's with packed islands.

Normals

Export Normals.

Vertex Colors

Export Vertex Colors. These are Color attributes.

Generate Coordinates

Export undeformed mesh vertex coordinates.

Face Sets

Export per Face shading group assignments.

Curves as Mesh

Export Curves and Nurbs surfaces as meshes.

Subdivisions

Apply

Export subdivision surfaces as meshes. Means apply subdivision modifier before export.

Use Schema

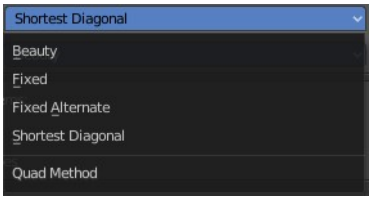
Export meshes using Alembic's subdivision schema.

Triangulate

Triangulate meshes before export.

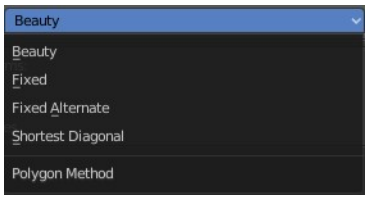
Method Quad

The quad method that gets used to triangulate the meshes. You need to activate Triangulate.



Polygons

The polygon method that gets used to triangulate the meshes. You need to activate Triangulate.



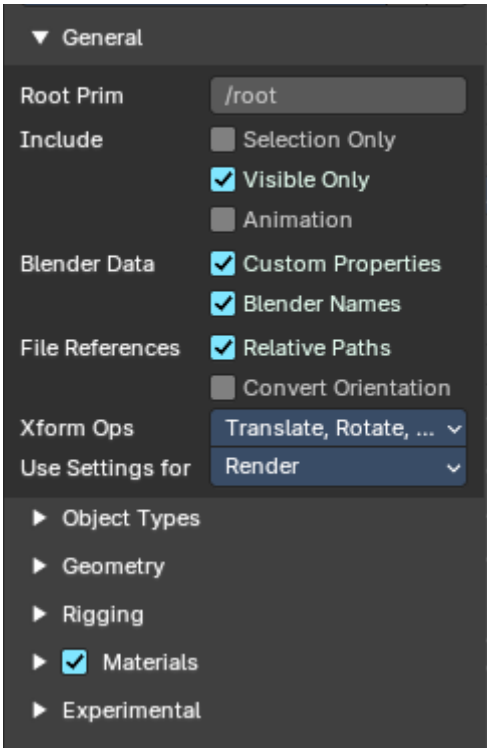
Particle Systems

Alembic does not support hair or particles. However, here you can find some options to export at least some data of it.

Export Hair
Export hair particle systems as animated curves.

Export Particles
Export non-hair particles.

Universal Scene Description (USD)



USD is a system for authoring, composing and reading hierarchically organized scene description. It is developed by Pixar.

General

Root Prim
If set, add a transform primitive as the parent of exported rig with the given path name for all exported data. Default is “/root”

Include

Selection Only
Export just the selected object(s), and not the whole scene.

Visible Only
Export visible geometry only.

Animation
Export animation.

Blender Data

Custom Properties
Export custom properties if available.

Blender Names
Author USD custom attributes containing the original Blender object and object data names. Uses the Bforartists standard of naming conventions and nomeclature.

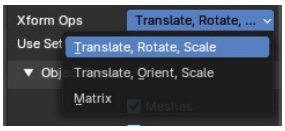
File References

Relative Paths
The path will be shortened to just the file name. For example, C:\myfolder\mysubfolder\mytexture.jpg turns into texture.jpg . Relative paths allows you to move the whole project folder to another location. The file paths will still be valid.

Convert Paths
Author USD custom attributes containing the original Blender object and object data names. Uses the Bforartists standard of naming conventions and nomeclature.

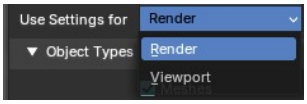
Xform Ops

The type of transform operarators to write.

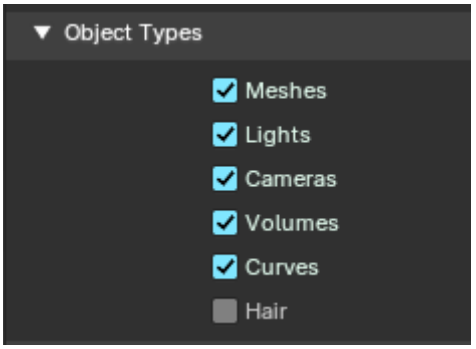


User Settings for

Use Render settings for object visibility, modifier settings, etc



Object Types



Meshes

Import meshes.

Lights

Export lights.

Cameras

Export cameras (perspective and orthographic).

Volumes

Export USD OpenVDB field assets.

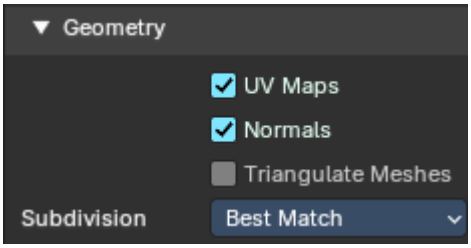
Curves

Export curve primitives, including USD basis and NURBS curves.

Hair

Export hair/fur curves.

Geometry



UV Maps

Export UV Maps.

Normals

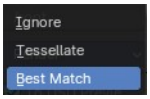
Export Normals.

Triangulated Mesh

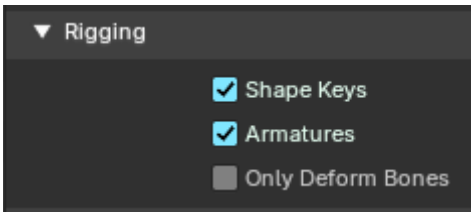
Export the geometry triangulated.

Subdivision

How Subdivision will be mapped to USD.



Rigging

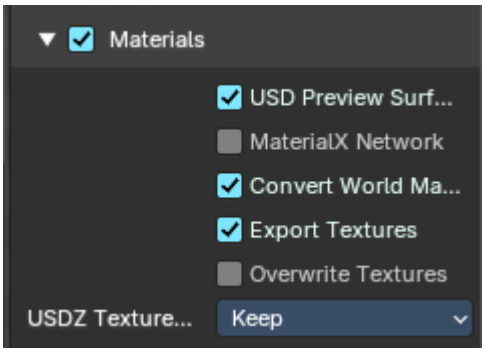


Shape Keys
Export Shape Keys.

Armatures
Export Armatures

Only Deform Bones
Only export deform bones and their parents.

Materials



USD Preview Surface Network
Generate an approxcimate USD Preview Surface shader representation of a Principled BSDF.

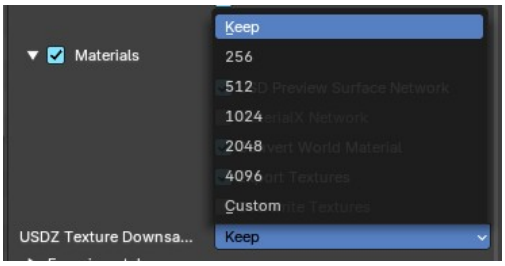
MaterialX Network
Generate a MaterailX network representation of the material.

Export Textures
Export referenced textures to a "textures" directory.

Convert World Material
Convert the world background shader discovered as a USD dome light.

Overwrite Textures
Overwrite existing textures.

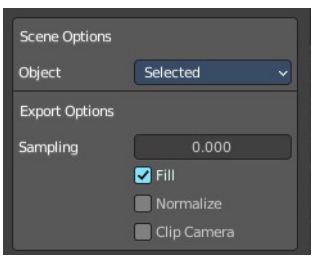
USDZ Texture Downsample
Choose a maximum size for all exported textures.



Experimental

Instancing
Istanced objects are exported as references in USD. Else they are exported as real objects.

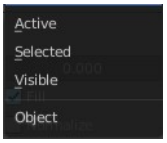
Grease Pencil as SVG



Exports the grease pencil object as a svg file.

Scene Options

Object



What kind of objects to export from the scene.

Export Options

Sampling

Precision of Stroke sampling. Low values gives high precision. Zero disables the feature.

Fill

Export strokes with fill enabled.

Normalize

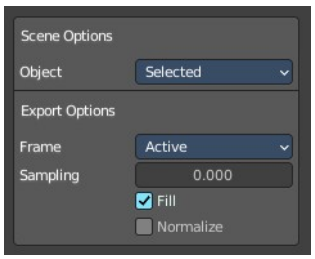
Export strokes with constant thickness.

Clip Camera

Clip drawings to camera size when exporting.

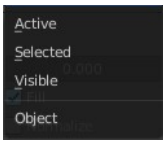
Grease Pencil as PDF

Exports the grease pencil object as a pdf file.



Scene Options

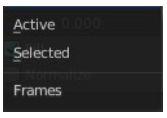
Object



What kind of objects to export from the scene.

Export Options

Frame



Which frames to include in the export. The active frame or the selected frames. The active frame must not be the selected frames since you can select more than one.

Sampling

Precision of Stroke sampling. Low values gives high precision. Zero disables the feature.

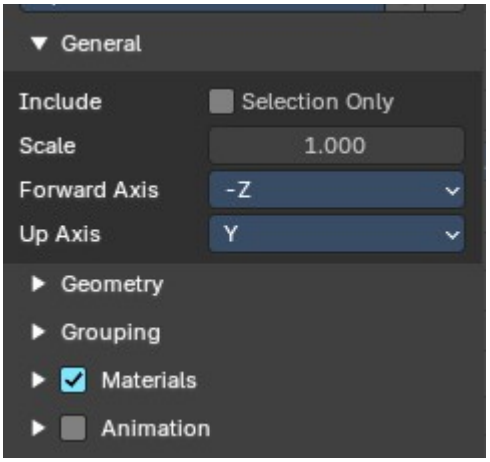
Fill

Export strokes with fill enabled.

Normalize

Export strokes with constant thickness.

Wavefront(OBJ)



Wavefront Obj is a file format for static geometry. And while you can still create a sequence of meshes for animation with it (some software stores shape keys that way for example), you cannot store animation in the file. It is also unique since it is usually made of two files. A OBJ part that contains the mesh data. And a MTL part that contains the material including the connected textures.

General

Include Selection Only

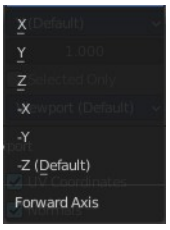
Just export the selected geometry.

Scale

The export scale factor.

Forward Axis

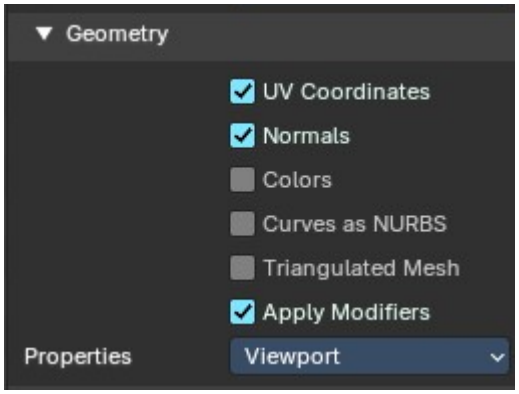
Which axis points foward.



Up Axis

Which axis points upwards.

Geometry



What kind of data to export. The labels should be self explaining.

Note that the OBJ file format cannot carry the Blender material settings. The Obj file format uses a primitive Phong shader.

UV Coordinates
Export UV's.

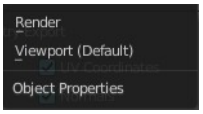
Normals
Export Normals.

Vertex Colors
Export Vertex Colors. These are Color attributes.

Curves as NURBS
Export Curves and Nurbs surfaces as meshes.

Triangulated Mesh
Triangulate meshes before export.

Apply Modifiers
Apply modifiers before exporting the geometry.

Properties


Where to grab the object properties from. They can differ between viewport settings and render settings.

Grouping

What kind of relationship data to export. The labels should be self explaining.

Note that the OBJ file format cannot carry the Blender material settings. The Obj file format uses a primitive Phong shader.

Object Groups
Append mesh name to object name by a ‘_’

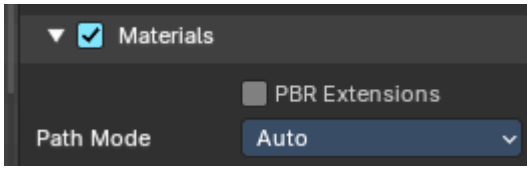
Material Groups
Generate an OBJ group for each part of a geometry user a different material.

Vertex Groups
Export the name of the vertex group of a face. It is approximated by choosing the vertex group with the most members among the vertices of a face.

Smooth Groups
Every smooth-shaded face is assigned group “1” and every flat-shaded face “off”

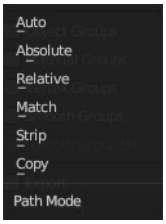
Smooth Groups Bitflags
Only available when Smooth Groups is enabled.

Materials



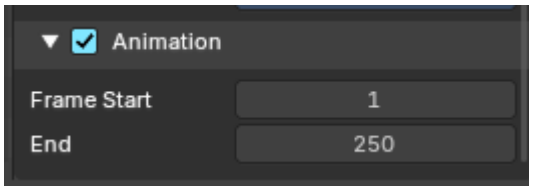
Export Materials Checkbox
Export MTL Library. You need a Principled Node with a texture node connected.

PBR Extensions
Export MTL Library using PBR extensions. Roughness, Metallic, Sheen, Clearcoat, Anisotropic and Transmission.



Path Mode
The method to use reference paths.

Animation

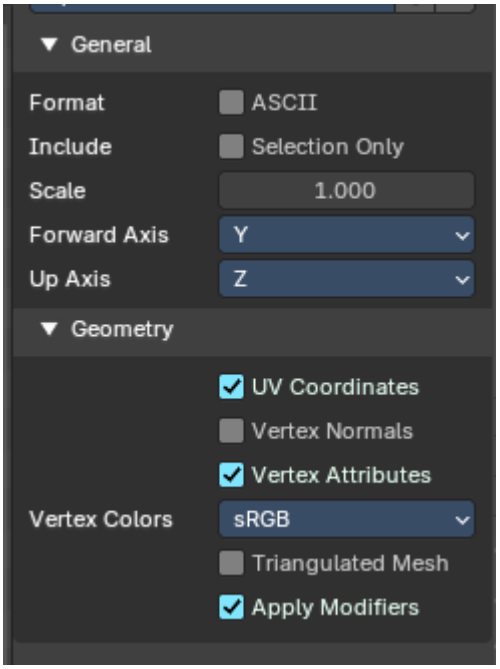


Export Animation Checkbox
Export the animation. Note that Obj is no file format that can store animations. What gets exported is a sequence of single meshes.

Frame Start / End
The frame start and frame end of the animation.

Stanford (PLY)

The Stanford Triangle Format was designed to store three-dimensional data from 3D scanners. It is a static file format for mesh data, and cannot carry animation data.



General

Format

Ascii
Ascii format when ticked, else binary format.

Include

Selected only
Limit the export to the selected geometry only. Else it exports the whole scene.

Scale
The scale factor for the export.

Forward Axis
The forward orientation of the geometry.

Up Axis
The up orientation of the geometry.

Geometry

UV Coordinates
Export UV Coordinates

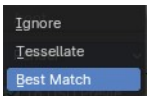
Vertex Normals
Export Normals.

Vertex Attributes
Export vertex attributes.

Vertex Colors
Vertex Color settings if available. These are Color attributes.

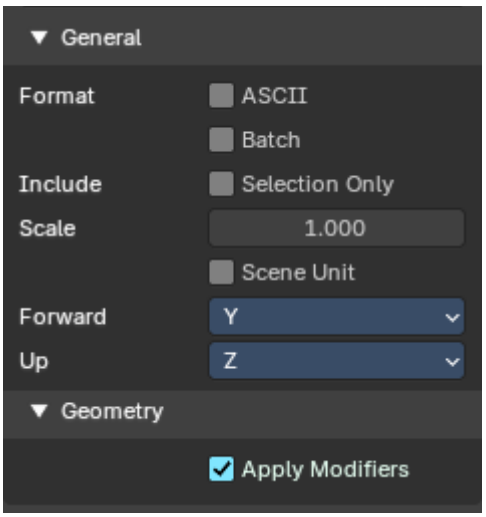
Triangulated Meshes
Export the geometry triangulated.

Subdivision Scheme
How Subdivision will be mapped to USD.



STL

STL (**S**tandard **T**riangulation/Tessellation **L**anguage) is a standard format for many cad software. It is a format for static geometry, it cannot handle animation. The format is popular for 3d printing purposes.

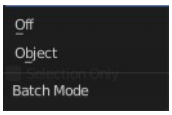


General

Format

ASCII

You can either export the file as binary format or as ASCII format.



Batch

Export all geometry to one file or create a file for every object.

Include

Selected Only

Export only the selected object(s).

Scale

The import scale.

Scene Unit

Apply the scene unit at the geometry at export.

Forward

The Forward orientation at export.

Up

The Up orientation at export.

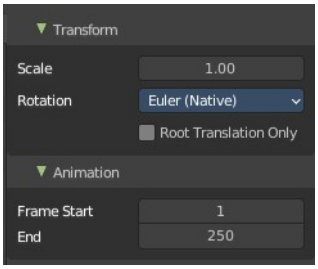
Geometry

Apply Modifiers

Apply all modifiers before export.

Motion Capture BVH

The Biovision Hierarchy (BVH) character animation file format is a file format to carry motion capture data.



Note: *To export BVH you need to have an armature with animation selected.*

Transform

Scale

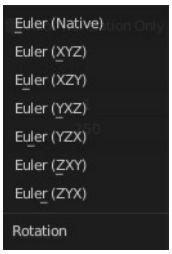
The scale factor for the export.

Rotation

The rotation order that is defined in the BVH file.

Root Translation Only

Only write out translation values for the root bone.



Animation

Start Frame

The start frame of the animation.

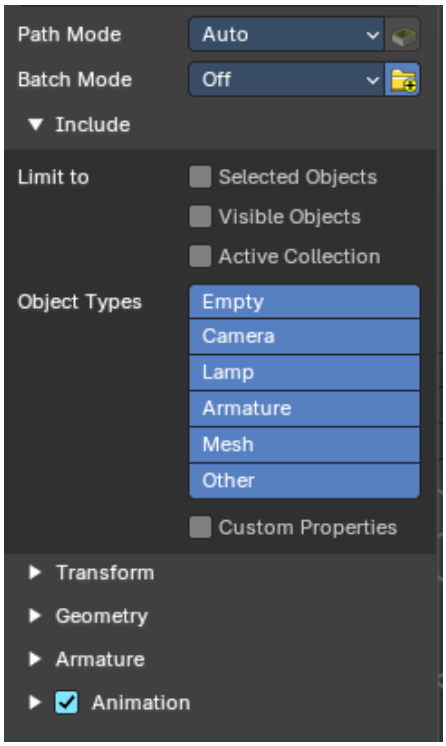
End Frame

The end frame of the animation.

FBX

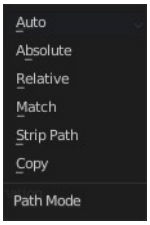
FBX is a proprietary file format from Autodesk. FBX is a general file format that is able to store and load animation.

The FBX exporter is divided into several panels since it would be too much to display all settings at once.



Path Mode

Method used to reference paths. Methods are Auto, Absolute, Relative, Match, Strip Path and Copy.



Embed Textures

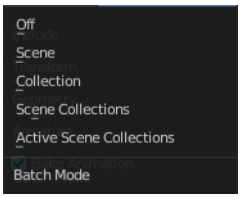
Embed textures in the FBX Binary. Enabled only with the method **Copy.**

Batch Mode

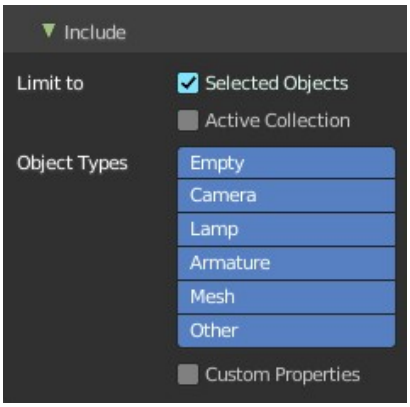
Gives the opportunity to batch export independent parts. Like one file for each scene. Or one file for each collection. Methods are Scene, Collection, Scene Collections and Active Scene Collections.

Batch Own Dir

Setup the export directory for batch export.



Include



Limit to

Selected Objects

Export just selected objects.

Active Collection

Export just the active collection.

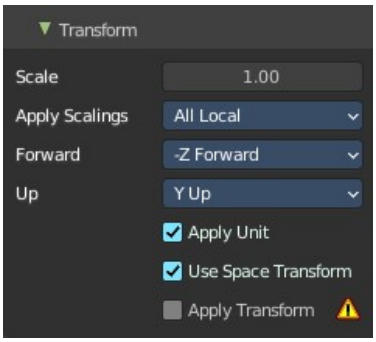
Object Types

What object types in the scene to export. Holding shift key adds to the current selection.

Custom Properties

Export custom properties if available.

Transform



Scale

The scale factor for export.

Apply Scaling

How to apply custom and unit scaling in the generated FBX file.

Forward

The forward orientation.

Up

The up orientation.

Apply Unit

Take the current Blender Units into account.

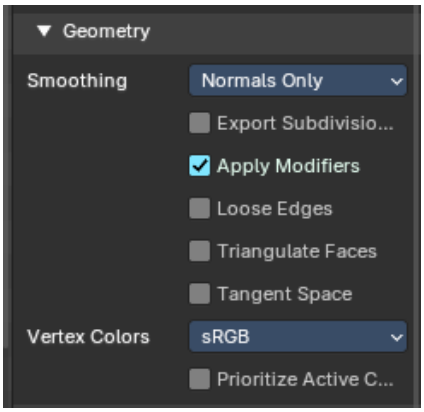
Use Space Transform

Apply global space transforms to the object rotations.

!Experimental! Apply Transform

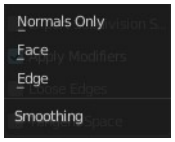
Bake space transform into object data.

Geometry



Smoothing

Define what smoothing information gets exported.



Export Subdivision Surface

Export the last catmull rom subdivision modifier as FBX subdivision. This does not apply the modifier, even if apply modifiers is enabled.

Apply Modifiers

Apply existing modifiers before exporting.

Loose Edges

Export loose edges. Loose edges are polygons with just two vertices.

Triangulated Meshes

Export the geometry triangulated.

Vertex Color

Export vertex color attribute if available. You can export as sRGB 8bit and Linear 32 bit float color bit depths.

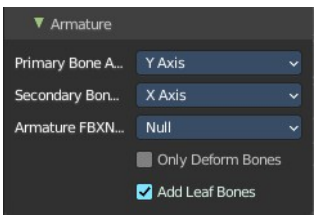
Tangent Space

Add binormal and tangent vectors together with the tangent space information. This feature just works with tris or quads.

Prioritize Active Color

Make sure active color will be exported first. Could be important since some other software can discard other color attributes other than the first one.

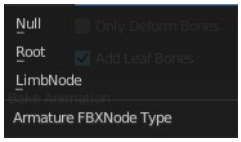
Armatures



Primary Bone Axis

The primary bone axis orientation.

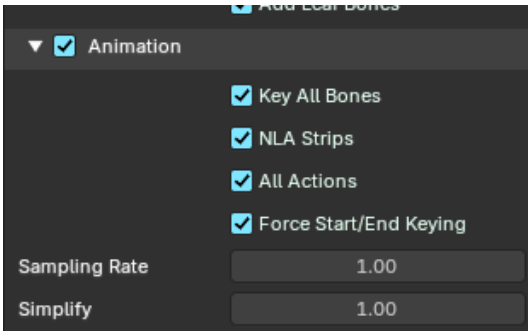
Secondary Bone Axis
The secondary bone axis orientation.

Armature FBX Node Type


FBX type of node used to represent a Blender Bone.

Only Deform Bones
Only export deforming bones, and none deforming ones when they have children.

Add Leaf Bones
Add a final bone at the end of every bone chain.

Animation


Export baked keyframe animation.

Key all Bones
Force export at least one key of animation for all bones.

NLA Strips
Export each non muted NLA strip.

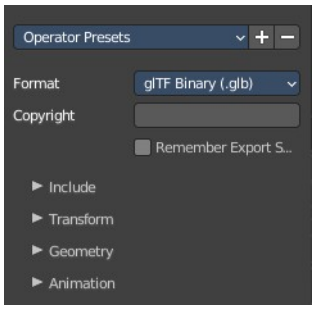
All Actions
Export each action as a separated FBX anim stack.

Force Start/ End Keying
Always add a key frame at start and end of actions for animation channels.

Sampling Rate
How often to evaluate animated values, in frames.

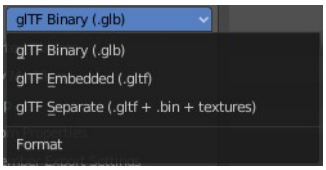
Simplify
Simplify the animation. 0.0 to disable. 1.0 does not simplify at all. Higher values simplifies the animation then.

---

glTF 2.0 (glb, gltf)


The GL Transmission Format from the Khronos Group is a file format for 3D scenes and models, and is based at the JSON standard.

Format



Choose between three export formats. Binary, Embedded and Separate.

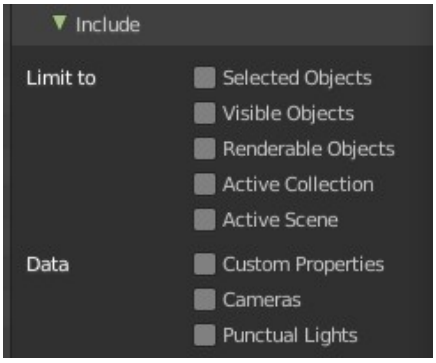
Copyright

Enter a custom copyright string.

Remember Export Settings

Store glTF settings in the blender project. You need to save the project then.

Include



Limit to

Limit the export to the chosen selection.

Selected Objects

Export just selected objects.

Visible Objects

Export just visible objects.

Renderable Objects

Export just renderable objects.

Active Collection

Export just selected objects from the active collection.

Active Scene

Export everything in the active scene

Data

Custom Properties

Include custom properties in the export.

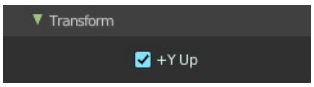
Cameras

Include cameras in the export.

Punctual Lights

Include punctual lights in the export.

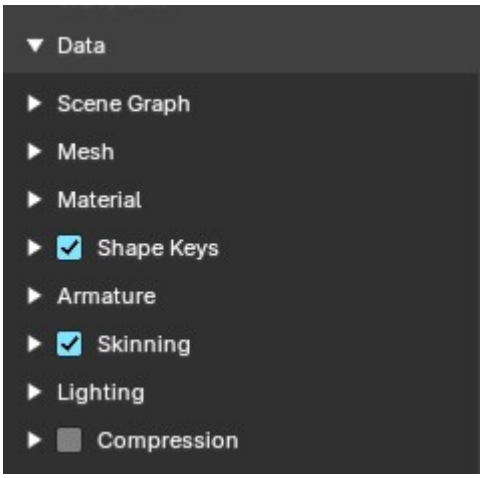
Transform



Y+ Up

Export all objects with the Y up orientation.

Data



Scene Graph

Geometry Node Instances !experimental!

GPU Instances

Flatten Object Hierarchy

Full Collection Hierarchy

Mesh

Apply Modifiers

Apply all modifiers before export.

UV's

Export UV's

Normals

Export Normals.

Tangents

Export Tangents.

Attributes

Export attributes when the names start with an underscore '_'

Loose Edges

Export loose edges.

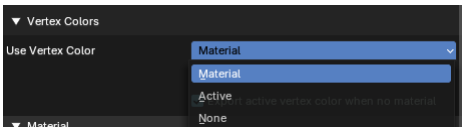
Loose Points

Export loose points.

Vertex Colors

These are Color attributes.

Use Vertex Color



How to export the vertex colors. You can export them from the Material, Active vertex color selected in the mesh data or None.

Export all vertex colors

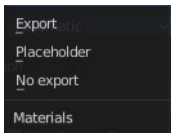
Export all vertex colors, even if not used by any material. If not vertex color is used in the mesh materials, a face COLOR_0 will be created, in order to keep material unchanged.

Export active vertex color when no materials

When there is no material on an object, export the active vertex color (color attribute)

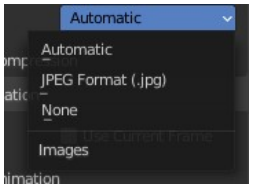
Material

Materials



How to deal with materials at export. Export them, export with placeholders, or don't export.

Images



How to deal with images at export.

Automatic

exports PNG images as Png Images, and Jpg Images as Jpg images.

Jpeg Format (jpg)

Exports all images as jpg.

None

Exports no images.

Image Quality

Quality of the image compression.

Create WebP

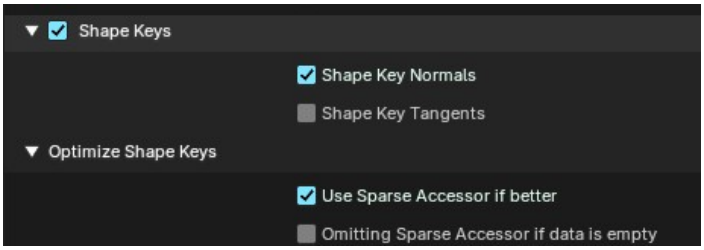
Creates a WebP texture image for every texture image. For images that are already a WebP texture, nothing happens.

WebP Fallback

For all WebP textures, create a PNG fallback texture.

Shape Keys

Export Shape Keys. Also called Morph Targets.



Export Shape Keys

Toggle to export the shape keys.

Shape Key Normals

Export vertex normals with shape keys (morph targets)

Shape Key Tangents

Export vertex tangents with shape keys (morph targets)

Optimize Shape Keys Subpanel

Use Sparse Accessor if better

Try use Sparse Accessor if it saves file size space on disk.

Omitting Sparse Accessor if data is empty

Omits Sparse Accessor if data is empty.

Armature

Use Rest Position Armatures

Export armatures using the default rest position as joints' rest pose. When off, current frame pose is used as the rest pose.

Export Deformation Bones Only

Export only the bones that have deform influence assigned.

Remove Armature Object

Remove Armature object if possible. If Armature has multiple root bones, object will not be removed.

Flatten Bone Hierarchy

Flattens bone hierarchy. Useful in cases of non-decomposable transformation matrices.

Skinning

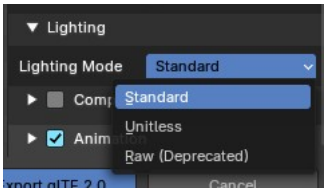
Bone Influences

Choose how many Bone influences to export.

Include All one Influences

Allow export of all joint vertex influences. Models may appear incorrectly in many viewers. Allow vertex influences greater 4.

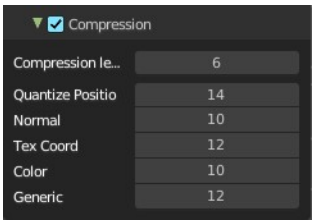
Lighting



Lighting Mode

Optional backwards compatibility for non-standard render engines. Applies to lights. Standard is the Physically- based glTF lighting unitcs (cd, lx, nt) and Raw is the standard Blender lighting units, now deprecated.

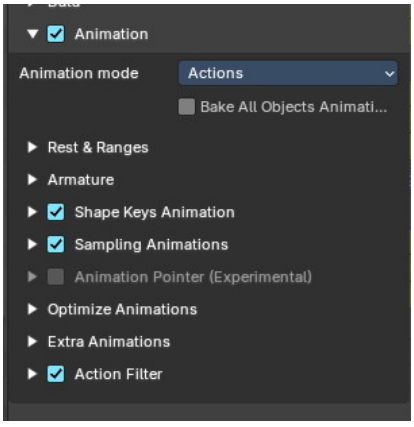
Compression



Compress the mesh data using the Draco algorithm.

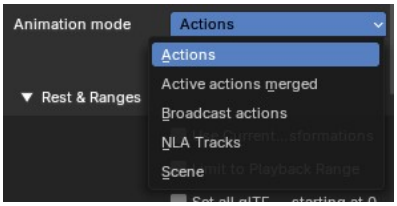
The settings should be self explaining.

Animation



Export active actions and NLA tracks from the animation data.

Animation Mode

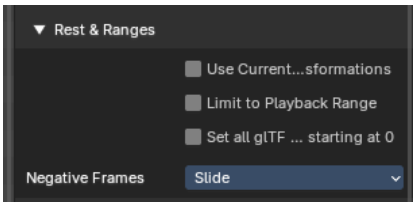


Export actions, active merged actions, NLA tracks or the Scene animation data.

Bake All Objects Animations

Force exporting animation on every object. Can be useful when using constraints or drivers. Also useful when exporting only selection.

Rest & Ranges



General timeline rules for the animation export.

Use Current Frame as Object Rest Transformations

Export the scene in the current animation frame. When off, frame 0 is used as rest transformations for objects.

Limit to Playback Range

Clips animations to selected playback range.

Set all glTG Animation starting at 0

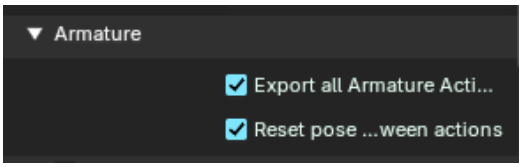
Set all glTF animation starting at 0.0s. Can be useful for looping animations.

Negative Frames

Negative frames are slid or cropped to frame 0.

Armatures

Armature animation export settings.



Export all armature Actions

Export all actions bound to a single armature.

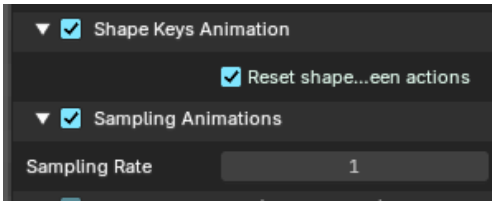
Note: Option does not support exporting multiple armatures and their actions.

Reset pose bones between actions

Reset pose bones between each exported action. This is needed when some bones are not keyed on some animations.

Shape Keys Animations

Shape Key animation export settings.



Shape Keys Animations Toggle

Toggle to export Shape Key animations.

Reset pose bones between actions

Reset shape keys between each exported action. This is needed when some shape key channels are not keyed on some animations.

Sampling Animations

Sampling Animations Toggle

Toggle to re-sample animations.

Sampling Rate

How often to evaluate animated values in frames

Animation Pointer !experimental!

Export material, Light & Camera animation as Animation Pointer.

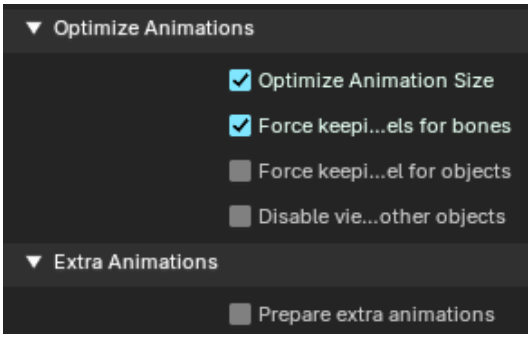
Animation Pointer Toggle

Toggle to set Animation Pointers.

Convert TRS/weights to Animation Pointer

Export translations, rotations and scale and weights as Animation Pointers. Uses the KHR_animation_pointer extension.

Optimize Animations



These options help to optimize the file size.

Optimize Animation Size

Reduce exported file size by removing duplicate keyframes.

Force keeping channels for bones

If all keyframes are identical in a rig, force keeping the minimal animation. When off, all possible channels for the bones will be exported, even if empty (minimum animation: 2 keyframes)

Force keeping channel for objects

If all keyframes are identical for object transformations, force keeping the minimal animation.

Disable viewport for other objects

When exporting animations, disable viewport for other objects, for performance.

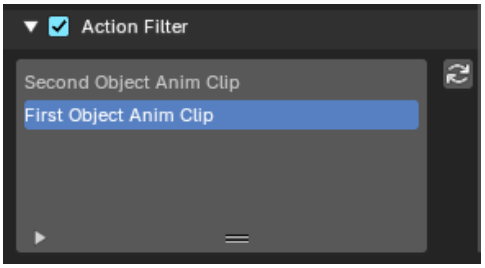
Extra Animations

The are considered somewhat experimental and require third-party extensions.

Prepare extra animations

Export additional animations. This feature is not standard and needs and external extension to be included in the glTF file.

Action Filter



This is a filter that will detect and list all the action clips of a scene.
Here you can select one specific action clip.

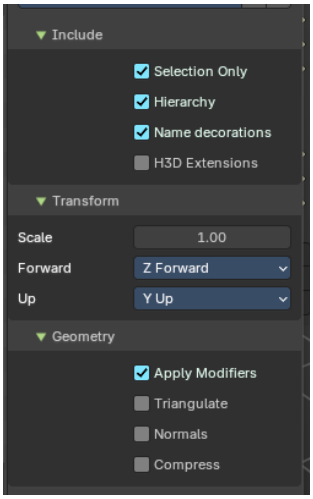
Action Filter Toggle

Turn on the action filter.

Action Filter List
Shows all the action clips of the file.

Action Filter Refresh
Refreshes the action clip list.

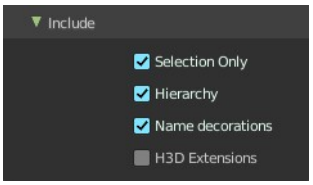
X3D Extensible 3D



Extensible 3D (X3D) is a family of co-ordinated royalty-free open standards for file formats that can store representations of interactive 3D objects and scenes.

Include

Selection Only
Export just selected objects.

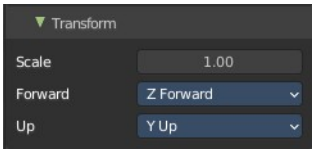


Hierarchy
Export Parent Child relationship.

Name Decorations
Add Name Prefixes to indicate their tpye.

H3D Extensions
Export shaders for H3D.

Transform

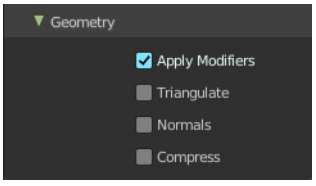


Scale
The scale factor.

Forward
The forward orientation.

Up
The up orientation.

Geometry



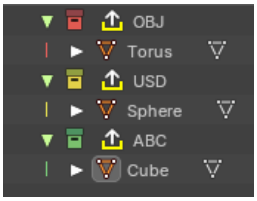
Apply Modifiers
Apply modifiers before export.

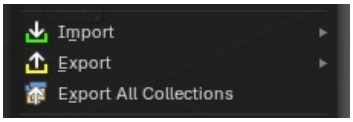
Triangulate
Triangulate the geometry before export.

Normals
Export Normals.

Compress
Compress the exported file.

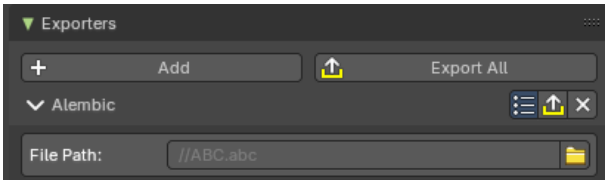
Export All Collections



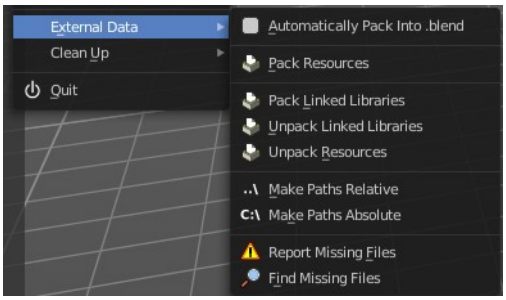


Export all collections that have been assigned Exporter Operators in the Properties Editor Collections Tab. When an Exporter Operator is assigned to a collection, it will export with the Exporter Operator properties and assigned file paths.

Note: *To assign Exporter Operators to a collection, use the Exporters panel in the Collections Tab in the Properties Editor.*



External Data

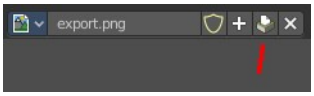


A Blend file may work with external data. Textures for example. Or text files. Or other Blend files, used as libraries.

In this menu you can adjust some settings for external data.

External data like textures or text files can also be packed directly into the blend file. This has some advantages, like that now all data is in one file. But also some drawbacks. Texture editing is for example not longer possible. You would have to export the texture first to be able to save the modifications.

Packed data displays a packed icon in the drop down box. This example is from the header of the UV editor. But you can see this icon also in the material editor at the texture node then.



Library Blend files cannot be packed. Use append instead of link to have the data of another blend file in the blend file.

Automatically Pack into .blend

Automatically pack all files into the blend file. Don't forget to save the blend file. Note that this greys out the two menu items Pack all into Blend and Unpack packed Files.

Pack Resources

Packs all external data into the blend file. Note that the paths must fit, and the external data must be available. A common pitfall here is that the textures uses absolute paths, and are moved to another location meanwhile. See Make all Paths Relative or Find missing Files. Or that you have a not longer existing file linked that shouldn't be in the blend file at all. See Outliner, Orphan Data.

You will get a warning when something is missing.

Pack linked libraries

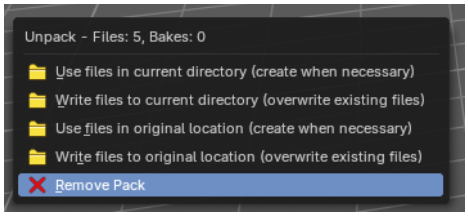
Pack all linked library files into the current .blend file

Unpack linked libraries

Unpack all linked library files from the current .blend file to their original locations.

Unpack Resources

Unpack packed files exports all packed data. You will get an options menu choose between several different unpack methods.



Use Files in current Directory (create when necessary)

Extracts all files to the current directory of the blend file. If the files in the current directory exists, reuse it. Else extract the ones from the blend file.

NOTE! The title is misleading, it does NOT write the files to the current directory. But into a sub folder, textures for example, in the current directory. Which gets created if necessary. And this option is not to change.

Write files to current directory (overwrite existing files)

Extracts all files to the current directory of the blend file, and writes it to the current directory. Existing content will be overwritten.

NOTE! The title is misleading, it does NOT write the files to the current directory. But into a sub folder, textures for example, in the current directory. Which gets created if necessary. And this option is not to change.

Use files in original location (create when necessary)

Extracts all files into their original directories where they were before packing them into the blend file. If the files in the original directory exists, reuse it. Else extract the ones from the blend file. This feature uses absolute paths.

Write files to original location(overwrite existing files)

Extracts all files into their original directories where they were before packing them into the blend file. If the files in the original directory exists, reuse it. Else extract the ones from the blend file. This feature uses absolute

paths.

Remove Pack

Removes the internal data. And uses the file in the original directory from where the data was once packed. It does not export anything. It assumes the old folder still exists.

Make Paths Relative

The path will be shortened to just the file name. For example, C:\myfolder\mysubfolder\mytexture.jpg turns into texture.jpg . Relative paths allows you to move the whole project folder to another location. The file paths will still be valid.

Make Paths Absolute

Makes all paths absolute. For example, texture.jpg turns into C:\myfolder\mysubfolder\mytexture.jpg. Absolute paths requires the full valid path for all files.

Report Missing Files

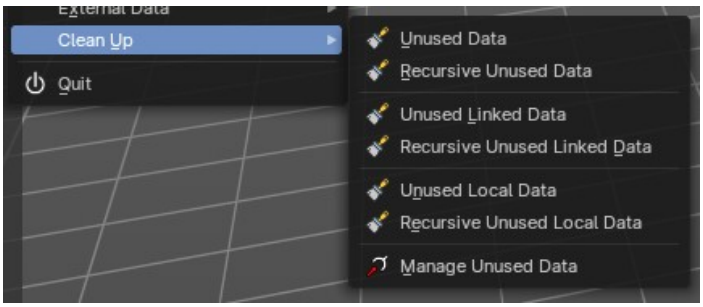
Scans through the blend file and tries to find missing files. You will get a warning when a missing file is found.

Find Missing Files

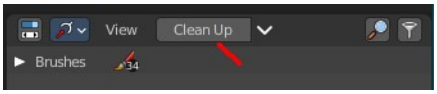
Browse for the new location of moved files.

Clean Up

Here you can remove unused data. It removes all data from the scene that is not longer in use and has no fake user assigned to keep it in the scene.



It is similar functionality to the Clean Up feature in the outliner. But more granular. Unused Data does the same than the Clean Up button in the outliner.



Unused Data

Removes unused data blocks.

Recursive Unused Data

Recursively removes unused data blocks. Means the child objects gets removed too.

Unused Linked Data

Removes unused data that is linked to this file.

Recursive Unused Linked Data

Recursively removes unused data that is linked to this file. Means the child objects gets removed too.

Unused Local Data

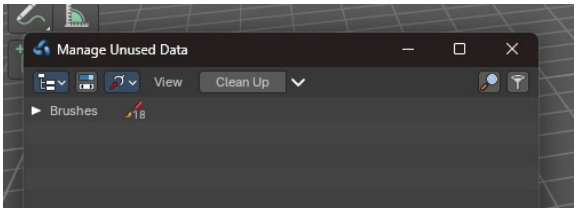
Removes unused local data.

Recursive Unused Local Data

Recursively removes unused local data. Means the child objects gets removed too.

Manage Unused Data

This opens a pop-out floating Outliner Editor in the Unused Data mode, so you can view and manage the unused data.



Quit

Quit Bforartists.