Smooth Mesh Cutter User Manual

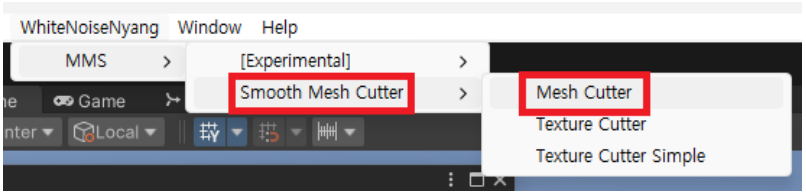
1. Installation

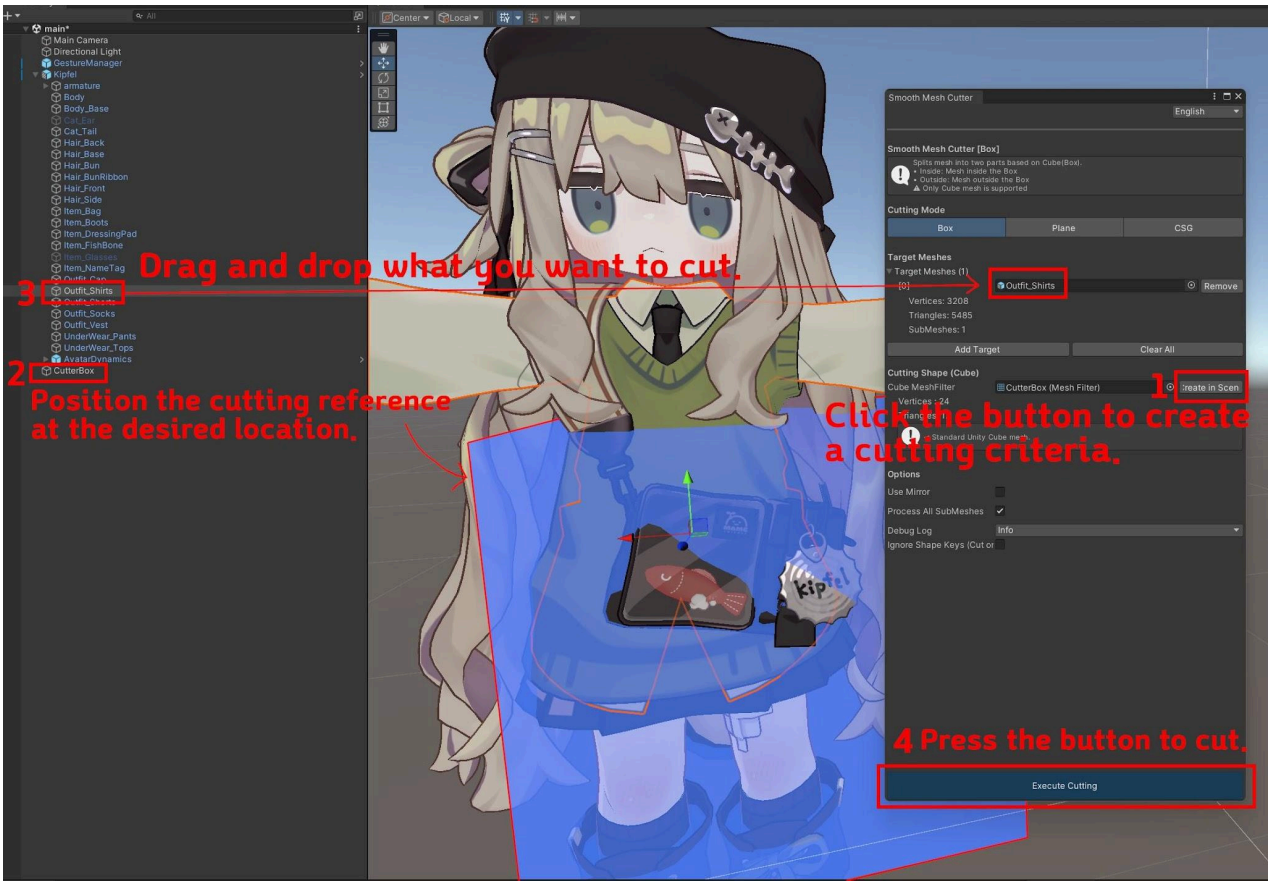
Import the included UnityPackage into Unity.

If you are updating or experiencing issues, delete the Assets/WhiteNoiseNyang/Modul Mesh System folder and reimport.

2. How to Use Mesh Cutter

Select WhiteNoiseNyang - MMS - Smooth Mesh Cutter - Mesh Cutter from the top toolbar.





3. How to Use Texture Cutter

Select WhiteNoiseNyang - MMS - Smooth Mesh Cutter - Texture Cutter from the top toolbar.





Place the target object in the Renderer slot and paint the mask in black to remove that area.

This tool uses the same UI as Mesh Deleter With Texture, but with the internal engine replaced by SMC. Usage is identical to Mesh Deleter With Texture.

https://github.com/gatosyocora/MeshDeleterWithTexture

3-1. Texture Cutter Advanced Settings

These settings can be adjusted when you feel the cut was not performed correctly.

- Precision : Precision for UV boundary detection. Higher values are more precise. A value of 8–20 is recommended.
- Sample Interval : Sampling interval for UV boundaries. Lower values search more densely. A value of 2–8 is recommended.

4. Mesh Cutter Additional Details

4-1. Language Settings

You can change the language from the top-right corner. Korean, English, and Japanese are supported.

4-2. Cutting Mode

- Box : Splits the mesh into inside and outside based on a Cube 3D object.
- Plane : Splits the mesh into front and back based on a Quad 3D object.
- Boolean : Splits the mesh inside and outside of any Solid Mesh.
    - ⚠️ Uses a BSP Tree algorithm, which may be slow and unstable. Recommended only when Box cutting does not work correctly.

4-3. Target Mesh

This is what you want to cut. If you want to cut clothing, the clothing is the target.

Use “Add Target” to add objects to cut.

Adding multiple targets allows you to cut them all at once.

4-4. Cutting Shape

This is the cutting reference. If you are cutting clothing using a box, the box is the reference.

Click the “Create in Scene” button to generate the cutting shape. It appears as a semi-transparent blue object at the center of the Scene view and is automatically assigned to the cutter slot.

4-5. Mirror

Mirror mode cuts the mesh symmetrically along a specified axis.

When enabled, a semi-transparent red cutter is shown as a preview.

You can mirror along the X, Y, or Z axis.

Selecting Object Pivot uses the selected object as the center axis.

Selecting World Coordinate uses the specified coordinates as the center axis.

4-6. SubMesh Selection

When “Process All SubMeshes” is selected, all materials are targeted for cutting.

To cut only specific materials, uncheck this option and select the ones you want.

4-7. Ignore Shape Keys

When enabled, all shape keys are set to 0 before cutting.

Useful for meshes with shape keys that hide parts such as clothing.

The result is output with all shape keys preserved.

4-8. Results

Cutting results are output as “Name_Pos” and “Name_Neg”.

Mirror cutting results are output as “Name_Cut1”, “Name_Cut2”, and “Name_Cut3”.

The mesh file (.asset) generated by cutting is automatically saved in the same folder as the original mesh file.

For example, if the original mesh is at Assets/Models/Character.asset, the result is saved as Assets/Models/Character_Pos.asset.

If the same name already exists, a number is automatically appended. (Character_Pos 1.asset)

4-9. Boolean Advanced Settings

Lowering the Epsilon (CSG Precision) value increases precision. The default value is sufficient in most cases, but you can adjust it if the result seems imprecise.

5. Experimental Tools

⚠️ Warning! There is no guarantee that experimental tools will work correctly!

These tools exist solely for experimentation and, except for Mesh Extractor, have not been thoroughly tested.

These tools are located under [Experimental].

5-1. Mesh Extractor

SubMesh : Extracts only the vertices belonging to the specified SubMesh (material).

Bone : Extracts only the vertices influenced by the specified Bone.

BlendShape : Extracts only the vertices influenced by the specified BlendShape.

5-2. Boolean Union

Merges two meshes into one. Overlapping areas are handled automatically.

If the root bones differ, the bone structure of Mesh A is followed.

5-3. Simple Bone Remover

Removes the specified Bone.

Pressing the 0 Weight button automatically filters out bones with zero influence (weight = 0).

The weight of removed bones is set to 0, and the remaining weights are normalized.

5-4. Easy Bone Remapper

Allows you to replace specific bones with others.

Auto-mapping is supported but may not be complete.

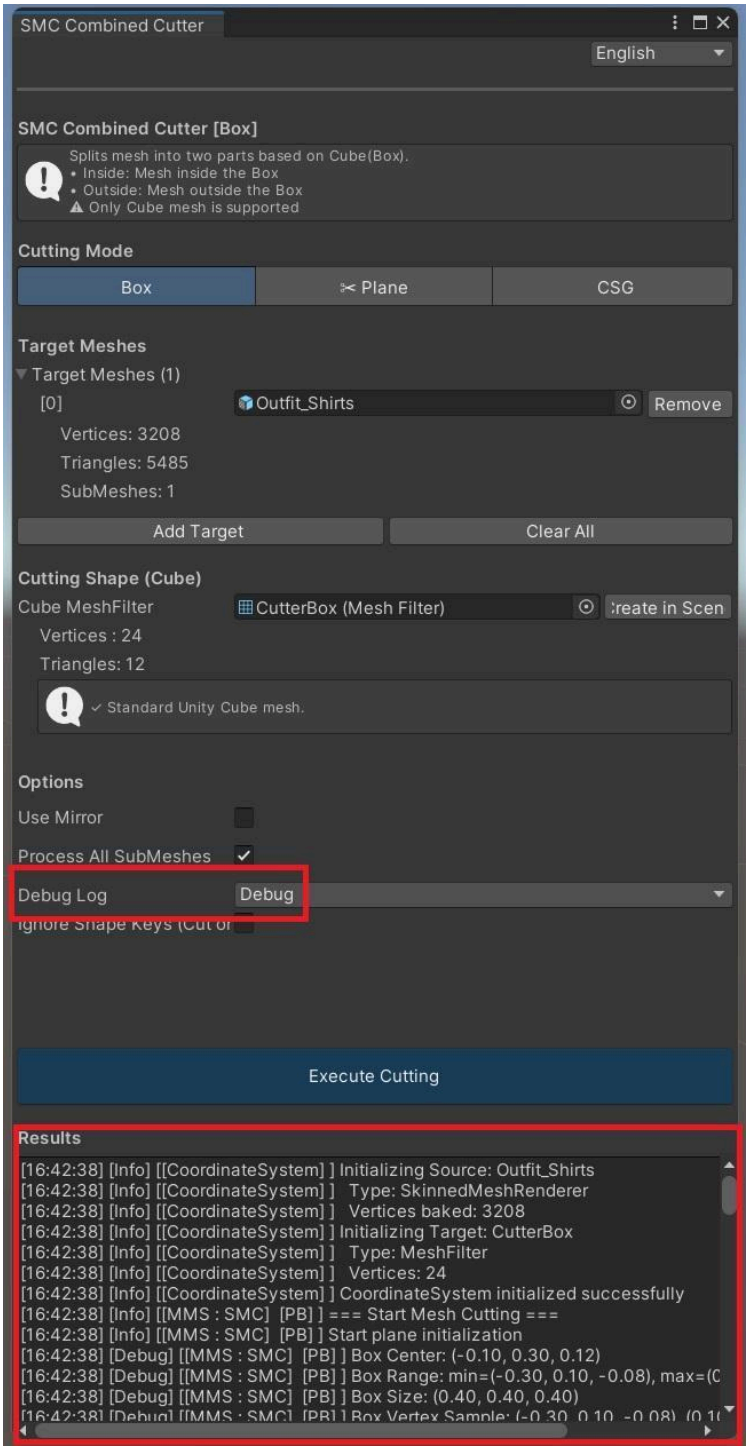
Useful when transferring a mesh to a model with the same armature.

5-5. Simple Mesh Flip

Rotates and flips the mesh along a specified axis.

6. Notes and Warnings

- When using Boolean cutting, issues may occur if the cutting shape is complex or an open mesh such as a Plane. It is recommended to use a Cube or Cylinder as the cutting reference.
- When using Box cutting, very narrow areas may not cut cleanly. In that case, try Boolean cutting with the same settings.
- If an error occurs, set the log level to “Debug” and send the log.


SMC Combined Cutter
English
SMC Combined Cutter [Box]
Splits mesh into two parts based on Cube(Box).
• Inside: Mesh inside the Box
• Outside: Mesh outside the Box
⚠ Only Cube mesh is supported
Cutting Mode
Box
✂ Plane
CSG
Target Meshes
Target Meshes (1)
[0]
Outfit_Shirts
Remove
Vertices: 3208
Triangles: 5485
SubMeshes: 1
Add Target
Clear All
Cutting Shape (Cube)
Cube MeshFilter
CutterBox (Mesh Filter)
Vertices : 24
Triangles: 12
✓ Standard Unity Cube mesh.
Options
Use Mirror
Process All SubMeshes
Debug Log
Debug
Execute Cutting
Results
[16:42:38] [Info] [[CoordinateSystem]] Initializing Source: Outfit_Shirts
[16:42:38] [Info] [[CoordinateSystem]] Type: SkinnedMeshRenderer
[16:42:38] [Info] [[CoordinateSystem]] Vertices baked: 3208
[16:42:38] [Info] [[CoordinateSystem]] Initializing Target: CutterBox
[16:42:38] [Info] [[CoordinateSystem]] Type: MeshFilter
[16:42:38] [Info] [[CoordinateSystem]] Vertices: 24
[16:42:38] [Info] [[CoordinateSystem]] CoordinateSystem initialized successfully
[16:42:38] [Info] [[MMS : SMC] [PB]] === Start Mesh Cutting ===
[16:42:38] [Info] [[MMS : SMC] [PB]] Start plane initialization
[16:42:38] [Debug] [[MMS : SMC] [PB]] Box Center: (-0.10, 0.30, 0.12)
[16:42:38] [Debug] [[MMS : SMC] [PB]] Box Range: min=(-0.30, 0.10, -0.08), max=(
[16:42:38] [Debug] [[MMS : SMC] [PB]] Box Size: (0.40, 0.40, 0.40)