

User Interface

INTERFACE

FK

IK

IK Spline

Tools Menu

Rename Menu

Skin Joints Menu

Initial Pose Menu

Character Menu

Skin Helpers Menu

Select Menu

Cleanup Menu

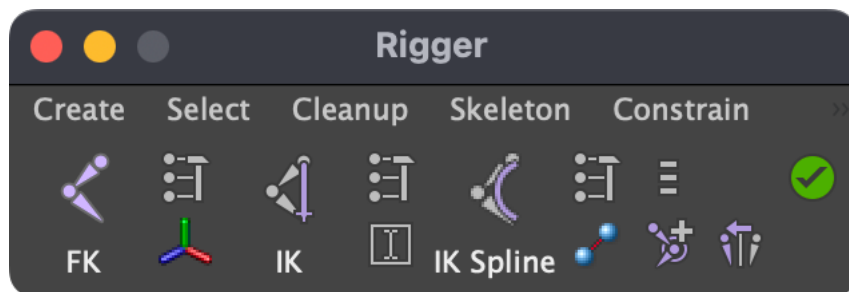
Settings

Biped Template Menu

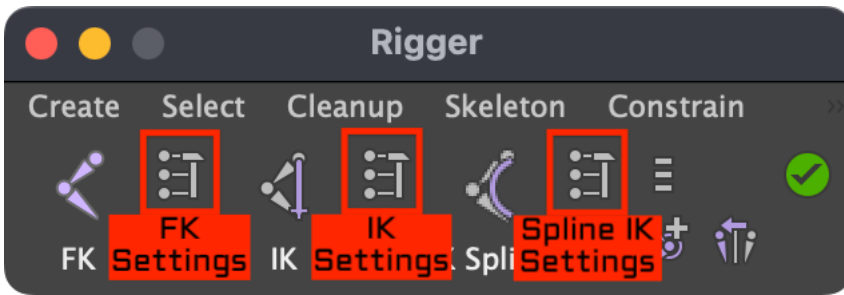
Quadruped Template

INTERFACE

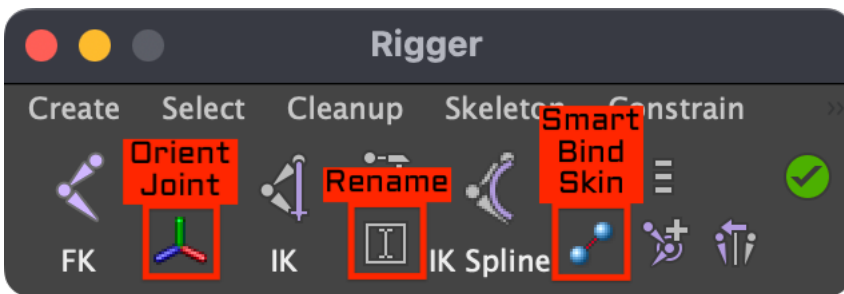
The Rigger interface is designed in such a way that the necessary tools are at hand. FK, IK and IK Spline are 3 basic methods for skeleton animation. To provide the necessary functionality for the rig, these techniques can be combined.



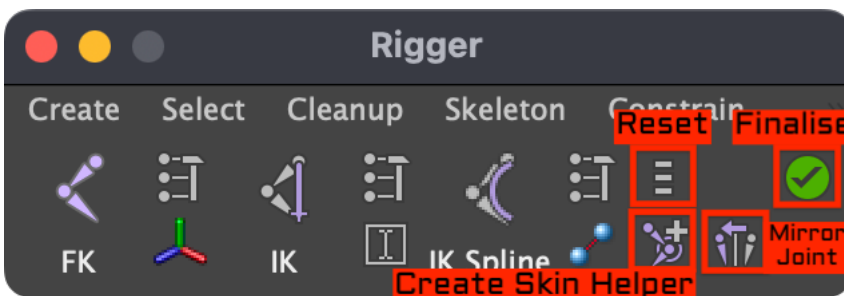
To the right of each element is a button for setting parameters.



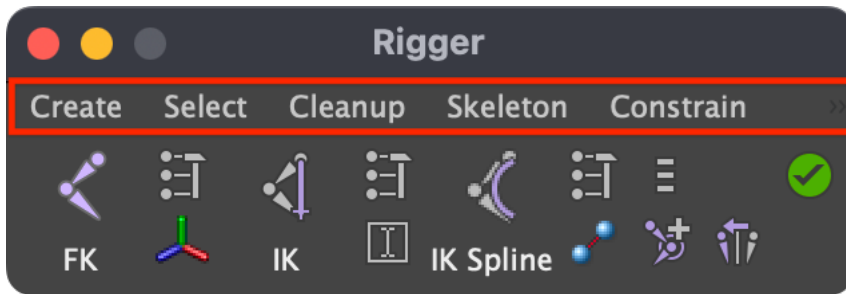
Under the settings buttons there are additional tools for rigging: the orientation of the bones, the tool for mass renaming and the button for skinning.



In the very right part of the plugin is an icon for resetting the pose of the character, the finalise rig button, a mirror joint button and a Create Skin Helper button. When you right-click on any icon, a menu with additional tools appears.



At the top of the plugin is a menu for quick access to the necessary elements (Create, Select, Cleanup, Skeleton, Constrain, Skin, Mesh, Help).

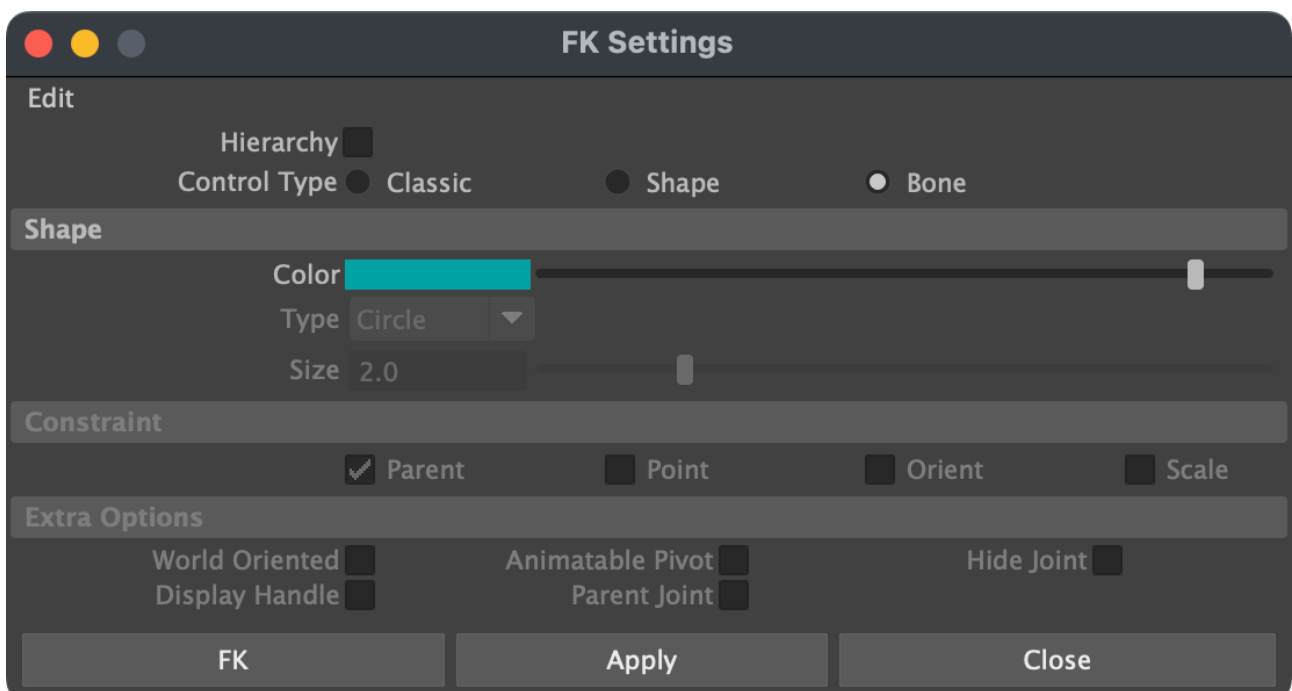


FORWARD KINEMATICS

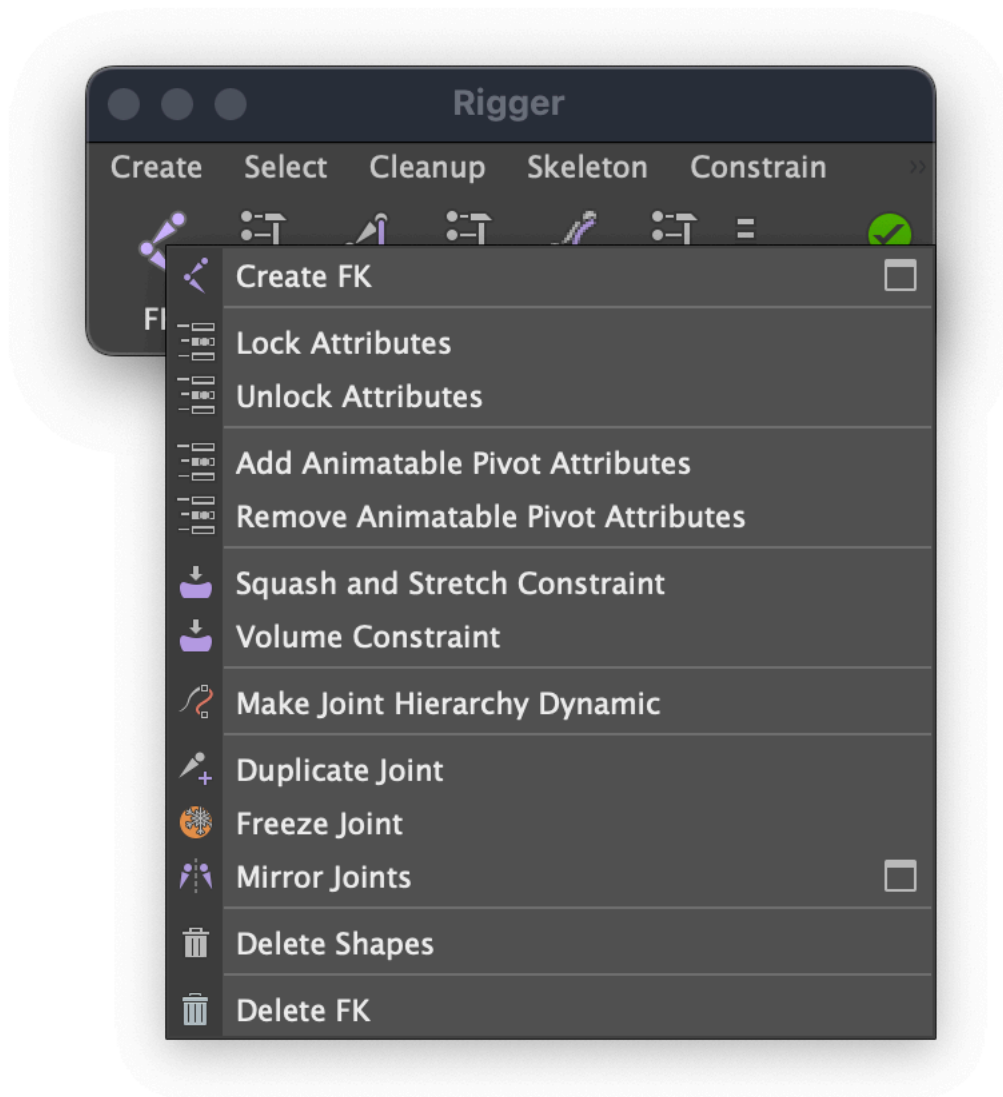
To create the joint, click 'FK' and draw a bone. Move it to the desired position relative to the model and press 'FK' again. Rigger automatically marks this bone as a controller, saves the initial pose and adds the 'Rotate Order' attribute.

```
[gfycaat data_id="RealAffectionateHoiho" data_autoplay=true data_controls=false data_expand=true data_title=false]
[youtube url="https://www.youtube.com/watch?v=iTqd2cyOgtk"]
```

FK Settings



In the FK settings, you can choose one of 3 forward kinematic modes: Classic, Shape and Bone. In Bone mode (default), the bone is marked as a controller and is used later for animation. The color of the controller is determined using the 'Color' slider. Shape mode allows you to add a Shape Node to any object. When creating a shape, the 'Shapes' attribute is created on the main control ('rig_ctrl'), which turns on and off the display of the shape curves. Only 5 controller shapes: Square, Circle, Cube, Sphere and Cross. Shape diameter is controlled using the 'Size' attribute. In 'Classic' mode, an object of type NURBS Curve is created, placed in a group. Depending on the 'Constraint' setting, a 'Parent', 'Point', 'Orient' or 'Scale' constraint is created for the selected object. For the Classic mode, additional options are also available: 'World Oriented' (the controller is oriented to world coordinates), 'Display Handle' (creates a minimalistic controller with high priority for selection), 'Animatable Pivot' (the bone moves under the controller and attributes are added for animation of the center of rotation), 'Parent Joint' (the bone moves under the controller) and 'Hide Joint'. To create an FK for the entire bone hierarchy, enable the 'On Hierarchy' mode.



Lock attribute

Lock Rotate, Translate and Scale attributes.

Unlock attribute

Unlock Rotate, Translate and Scale attributes.

Add Animatable Pivot Attributes

Adds attributes for the ability to change and animate the center of rotation (only works with the 'Classic' FK).

Remove Animatable Pivot Attributes

Remove center of rotation attributes.

Squash and stretch constraint

Preservation of volume in tension. To create 'Squash and Stretch Constraint', select the bone, right-click on the FK icon and select 'Squash and Stretch Constraint'.

Volume constraint

Allows you to create a wavy effect for a whole chain of bones. The effect is controlled with the help of the attributes 'Volume', 'Position' and 'Fallof' on the root bone.

Make Joint Hierarchy Dynamic

Create nHair dynamics on joint hierarchy. An 'Intensity' attribute will be created on the top controller. You can control other attributes of the dynamics with the hairSystem node. If you want a collision on object then select the object mesh and create a passive collider.

Duplicate Joint

The command duplicates two joints connected to one bone.

Freeze Joint

Allows you to set zero values of the translation attributes on the joints (only works with individual joints).

Mirror Joints

Duplicates the current joint chain across the specified plane. The command works with multiple selection, skin helpers and volume savers.

Delete Shapes

Deletes object's shape node.

Delete FK

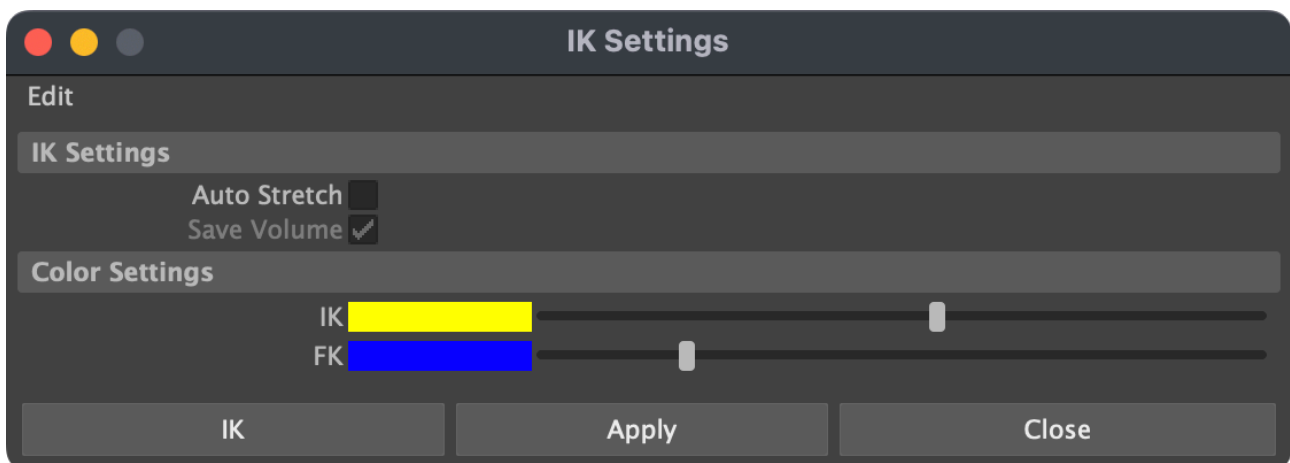
To delete the FK controller, select the bone, right-click on the FK icon and select 'Delete FK'.

INVERSE KINEMATICS

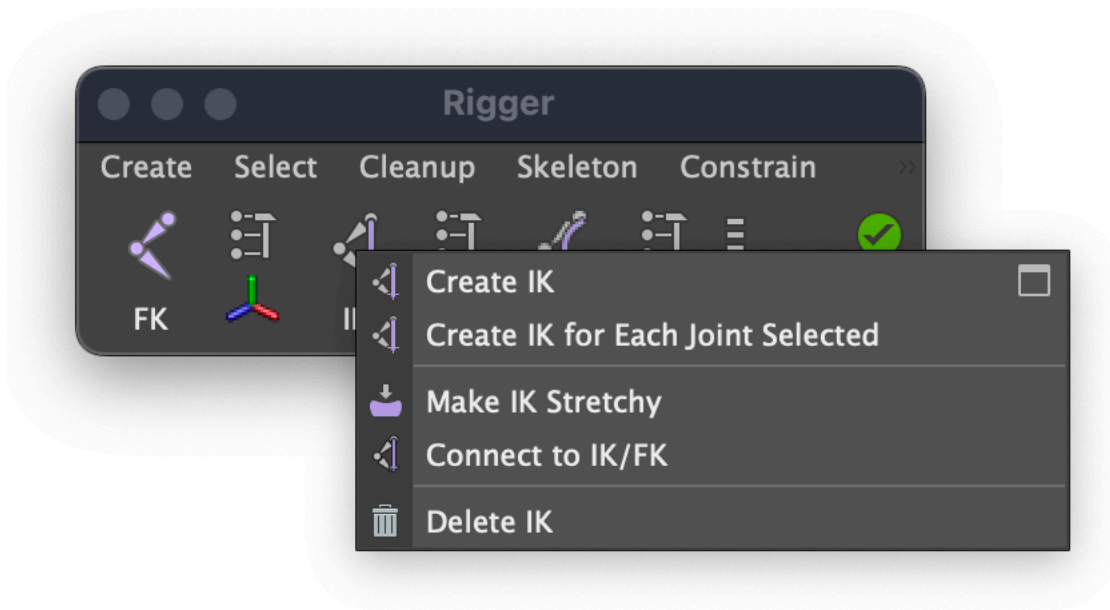
To create an IK, select one or more bones and click 'IK'. To switch the kinematics, select the bone or IK Handle and press 'Character Menu > IK / FK' or press right mouse button on the joint and choose 'Enable ikHandle'. You can also change the 'Ik Blend' attribute by selecting the IK Handle. Depending on the kinematics, the color of the bones changes (blue by default for FK, yellow for IK). Select IK Handle and press 'T'. In this way, you can quickly control the attributes 'Twist' and 'Pole Vector' that are responsible for the rotation.

```
[gfycaat data_id="CreativeNippyFlea" data_autoplay=true data_controls=false data_expand=true data_title=false]
[youtube url="https://www.youtube.com/watch?v=17KYmXfblqA"]
```

IK Settings



In the IK settings, you can enable 'Auto Stretch'. The attribute 'Limit Length' and 'Auto Stretch' is added to IK Handle. With 'Auto Stretch' enabled, the length of the IK chain is determined by the distance between the root bone and IK Handle. 'Limit Length' does not allow the IK chain to be shorter than its original length (suitable for arms and legs). The 'Save Volume' option automatically creates a 'Squash and Stretch Constraint' for the IK chain, allowing you to save the volume when compressing and stretching. On the 'Color Settings' tab, you can change the color of the IK and FK modes.



Create IK for Each Joint Selected

Allows you to create an IK for all selected bones.

Make IK Stretchy

Adds the 'Limit Length' and 'Auto Stretch' attributes to the IK Handle, allowing you to stretch the IK chain while preserving the volume.

Connect to IK / FK

Associates the selected object with the IK Handle. Now you can switch kinematics without selecting IK Handle.

Delete IK

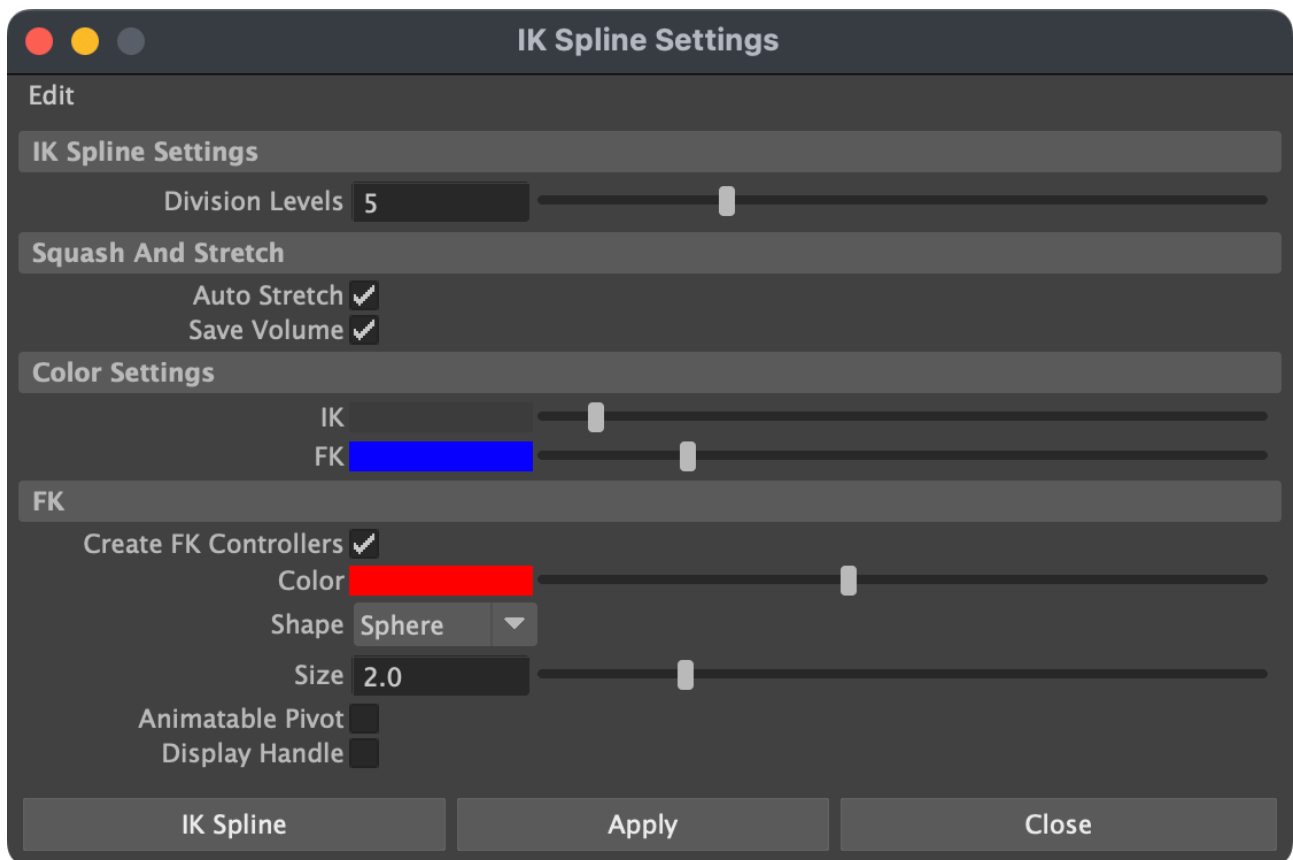
To remove an IK, select the bone, right-click on the IK icon and select 'Delete IK'.

IK SPLINE

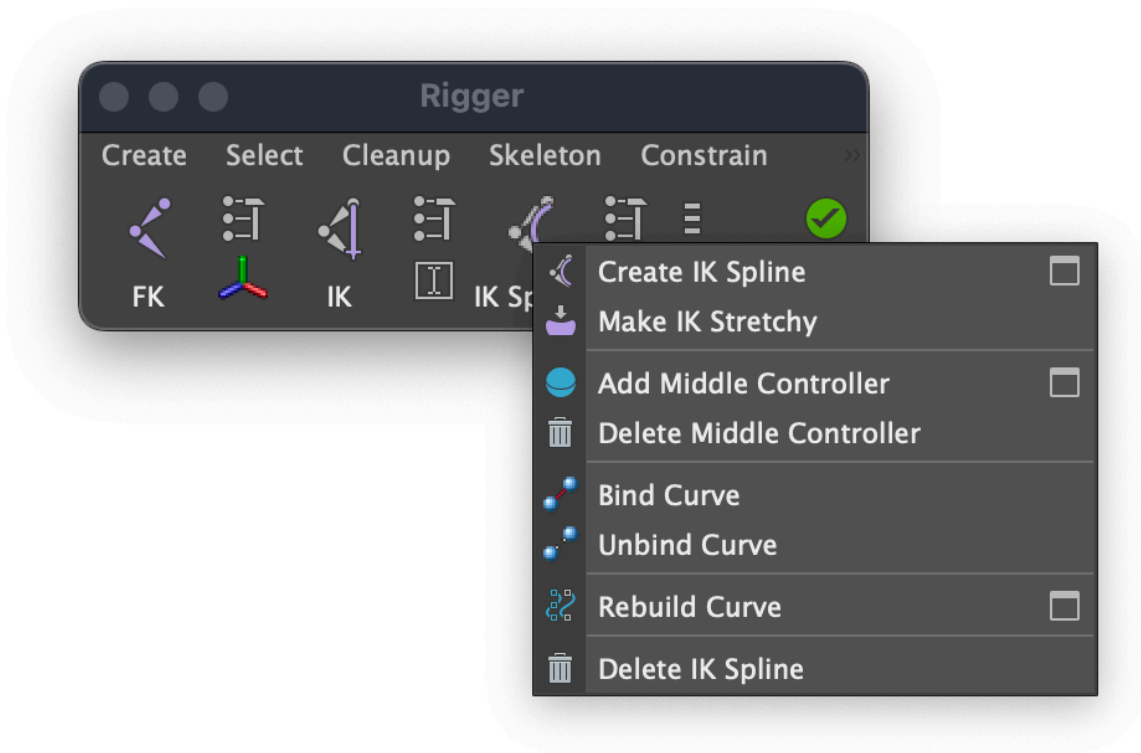
To create an IK Spline, select one or more bones and click 'IK Spline'. The original bone will be divided into seven parts and two FK controllers will be added to control the orientation of the IK Spline. When IK Spline is created on a bone with an existing IK, the source bone will not be changed and will control the orientation of the IK Spline.


```
[gfycaat data_id="PoliteMarvelousAvians" data_autoplay=true data_controls=false data_expand=true data_title=false]
[youtube url="https://www.youtube.com/watch?v=B1-F5Dlnh90"]
```

IK Spline Settings



In the IK Spline settings, you can change the number of bones that will be used in IK Spline. The 'Auto Stretch' and 'Save Volume' attributes are similar to the settings in the IK settings window and are responsible for the automatic compression and stretching of the IK Spline chain. On the 'Color Settings' tab, you can change the bone color of IK Spline, the color of the FK mode. The 'Create FK Controllers' attribute allows you to automatically create Classic FK controls for IK Spline. The Color attribute changes the color of the controllers. Shape: the shape of the controls. Size: size of controls. Animatable Pivot: create controls with an animated rotation center. Display Handle: Create minimalistic controllers with high selection priority.



Make IK Stretchy

Adds the attributes 'Limit Length' and 'Auto Stretch' to the IK Spline Handle, allowing you to stretch the IK Spline chain while maintaining volume.



Add Middle Controller

Adds an additional FK controller to change the central shape of the IK Spline.

Delete Middle Controller

Removes the middle controller from IK Spline.

Bind curve

Binds an IK Spline curve to bind joints.

Unbind curve

Detaches the IK Spline curve from the bind joints, allowing you to change their position and center of rotation.

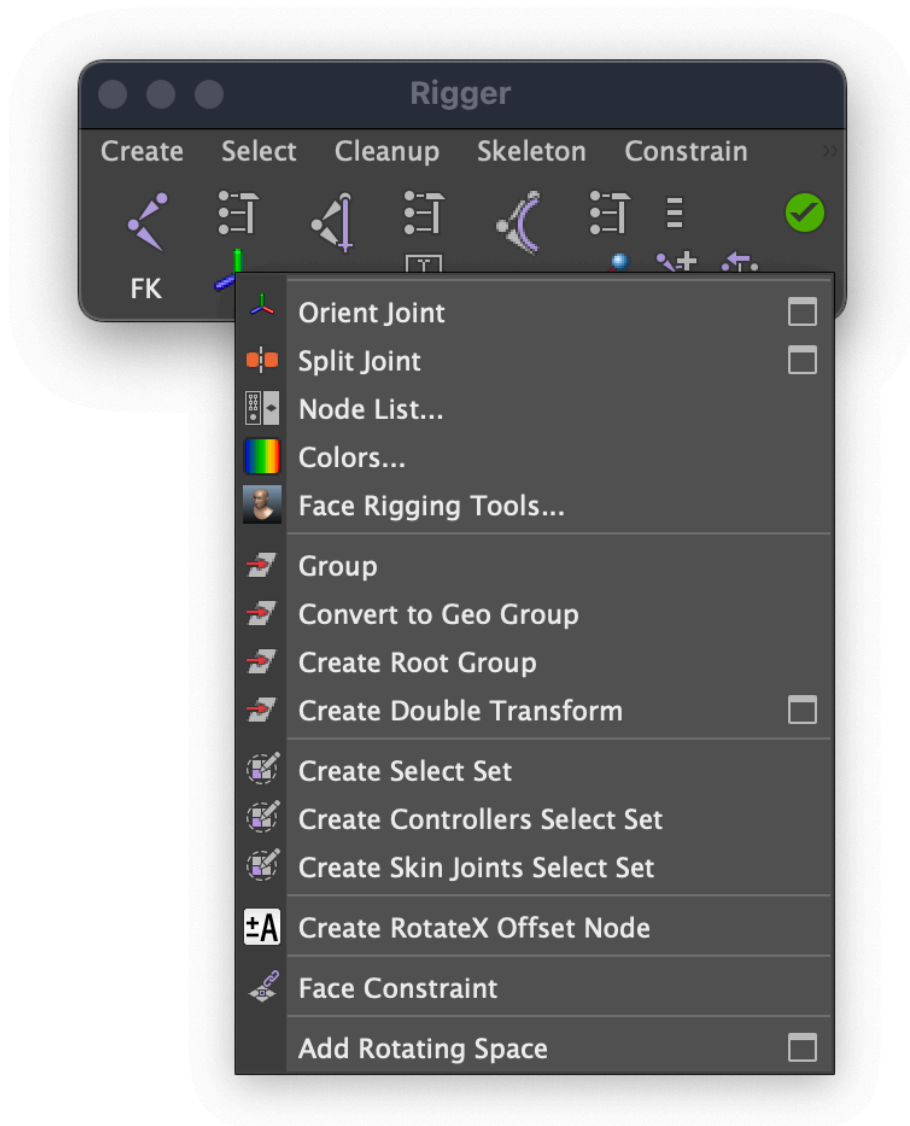
Rebuild curve

Reduce or increase the complexity of a Spline IK curve. Try different values to find the right type of deformation.

Delete IK Spline

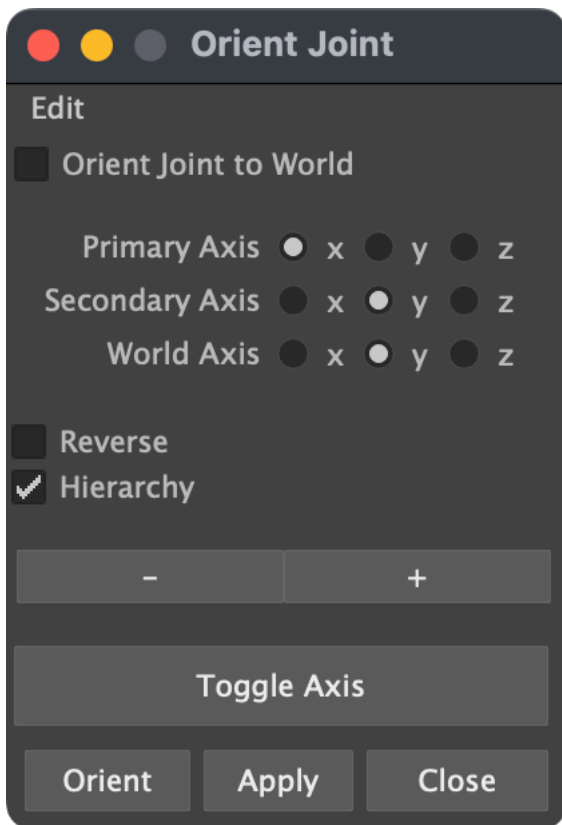
To remove IK Spline, select the bone, right-click on the IK Spline icon and select 'Delete IK Spline'.

TOOLS



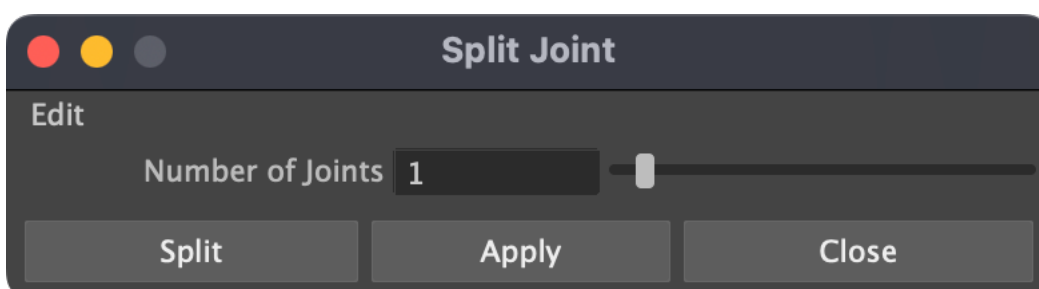
Orient Joint

If nothing is selected, clicking on the 'Orient Joint' icon opens the orientation settings window. If a bone is selected, then the bone is oriented, in accordance with the parameters of the Orient Joint window.



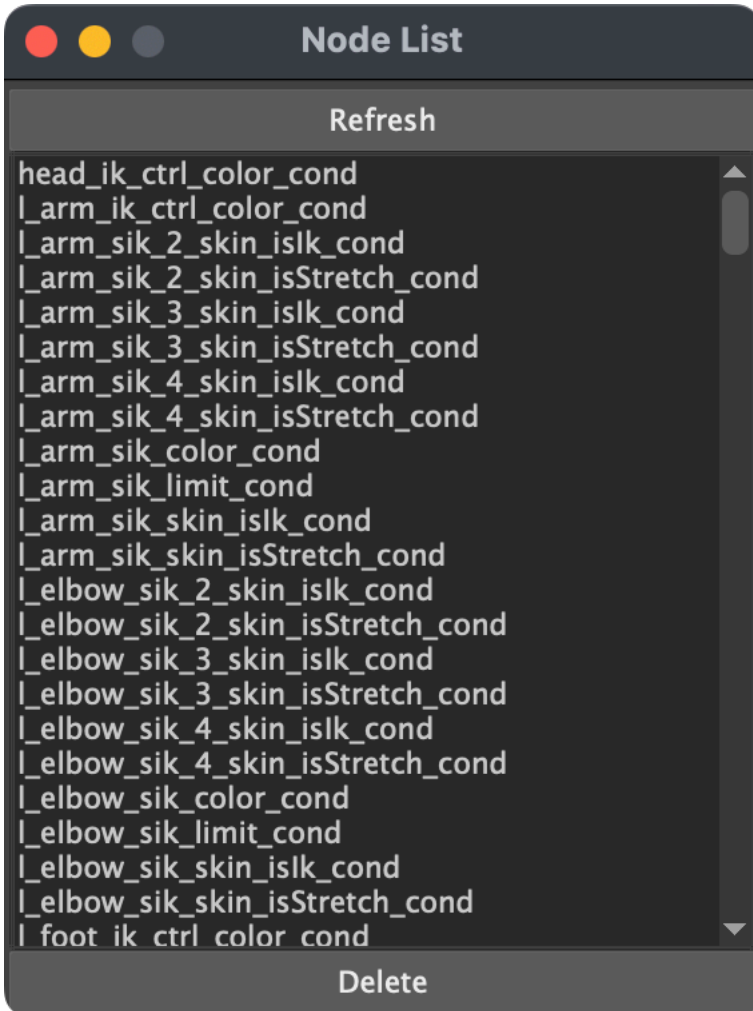
When the 'Orient Joint to World' option is turned on, all bones are oriented in accordance with the world axes. 'Primary Axis' allows you to specify the primary local axis for the bone. This is the axis that determines the direction of the bone. 'Secondary Axis' allows you to specify which axis will be used as the secondary orientation of the bone. The 'Reverse' option inverts the World Axis. When the 'Hierarchy' option is turned on, all the bones in the selected bone hierarchy are oriented. The '+' and '-' buttons let you fine tune the orientation on X. The 'Toggle Axis' button turns on and off the display of the local axes of the hierarchy of bones. The last bone in the hierarchy is automatically oriented in accordance with the selected parameters.

Split Joint



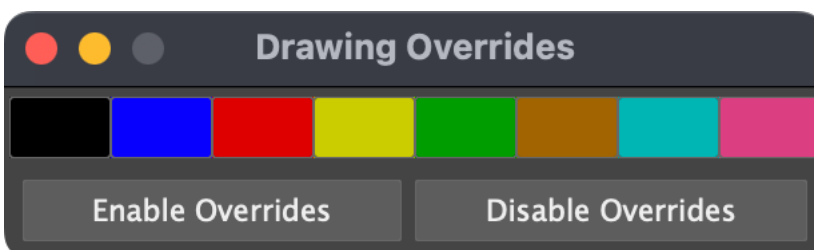
'Split Joint' allows you to split a bone into several bones. The number of divisions can be changed in the Split Joint Settings window.

Node List



A window with the list of nodes such as condition, multipleDivide, reverse, plusMinusAverage, distanceBetween and remapValue.

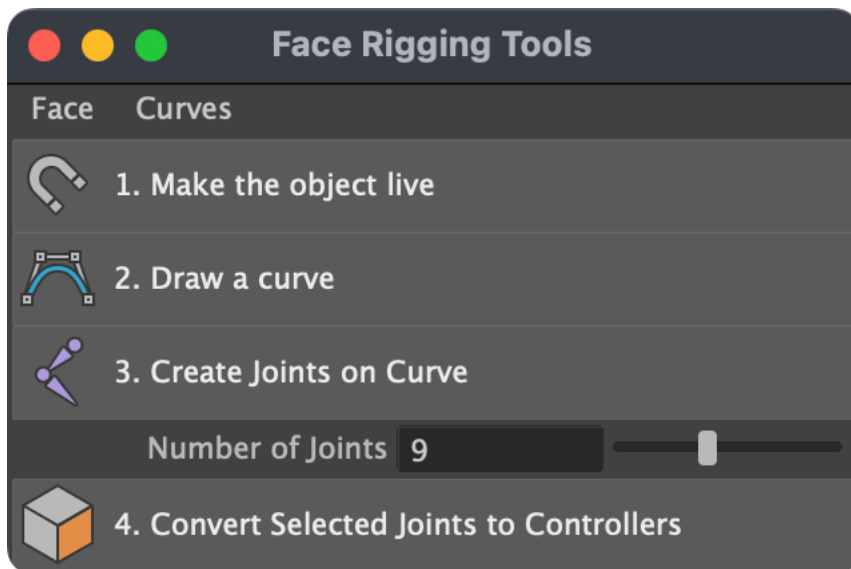
Colors



In the 'Colors' window, you can change the color of the selected controllers.

Face Rigging Tools

Creates a ribbon type setup that is suitable for soft deformations.



Group

Grouping an object with the center of rotation preserved.

Convert to Geo Group

Moves the selected group to 'rig_ctrl' and renames it to 'geo'.

Create Root group

Create master controller 'rig_ctrl'.

Create Double Transform

Create an additional dual controller.

Create select set

Allows you to create a Select Set for selected objects.

Create Controllers Select Set

Allows you to create a Select Set for all controllers (*_ctrl).

Create Skin Joints Select Set

Allows you to create a Select Set for all Skin Joints.

Create RotateX Offset Node

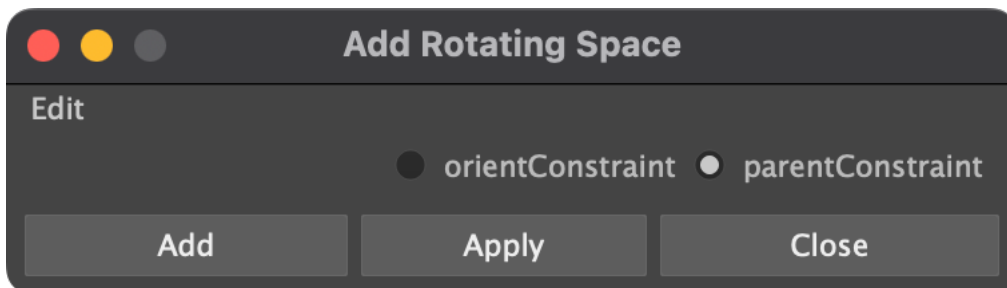
Create a node with an inverted Rotate X value for the selected bone. Sometimes necessary to create an IK Spline on mirrored bones.

Face constraint

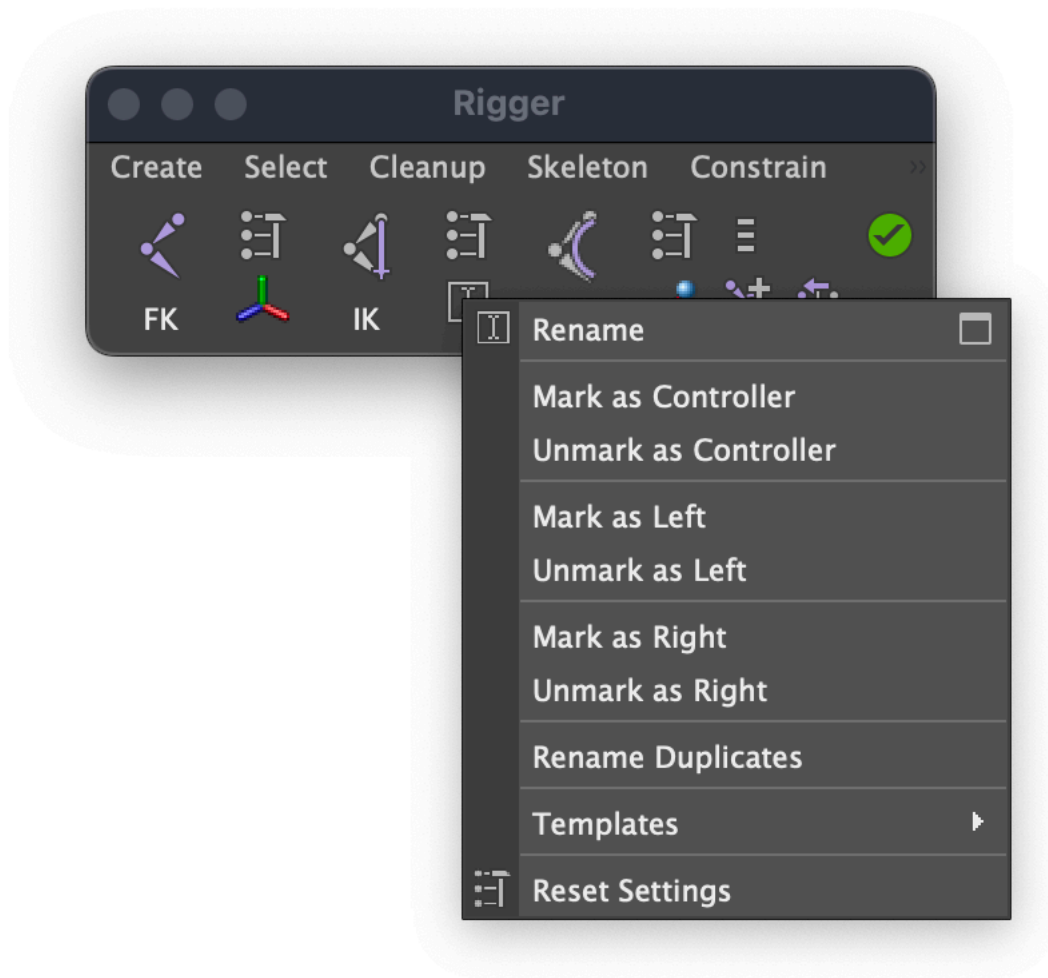
Creates a locator anchored to the selected polygon.

Add Rotating Space

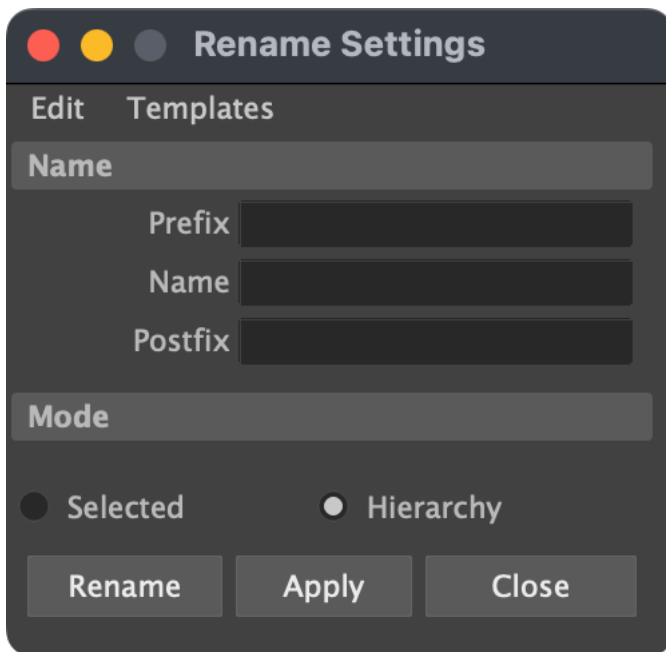
Allows you to create a switchable constraint between two or more objects. The Space attribute will be added. Select two or more objects, then Add Rotating Space.



RENAME



A tool for mass renaming of bones. Allows you to change the name, add a prefix and postfix to the hierarchy, or only for selected objects.



Mark as Controller

Add postfix "_ctrl".

Unmark as Controller

Deleting postfix "_ctrl".

Mark as Left

Adding the prefix "l_".

Unmark as Left

Delete the postfix "l_".

Rename Duplicates

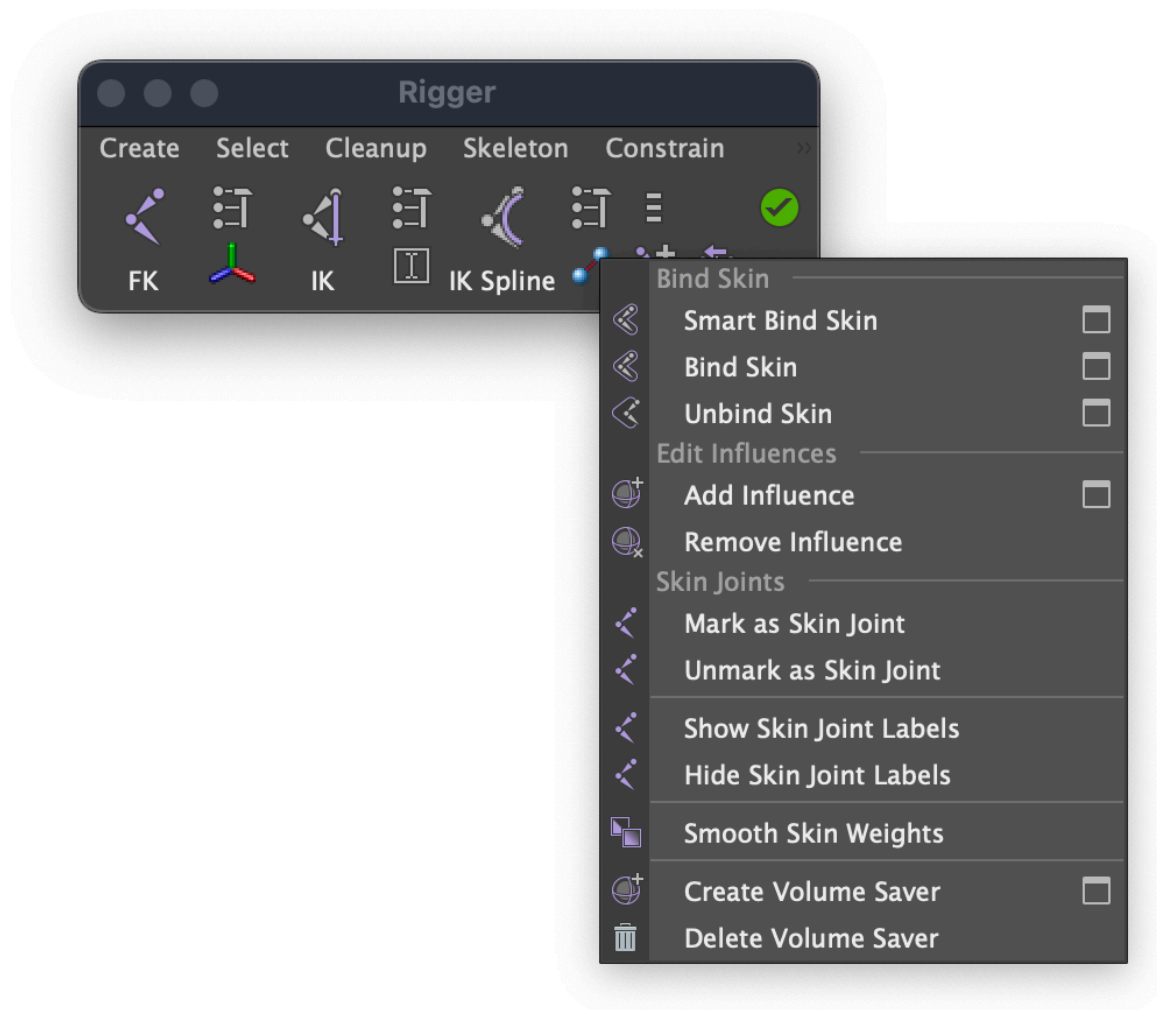
Search and rename duplicate object names.

Templates



Here are the main presets for quickly renaming the body parts of the character. Only the prefix "l_" is used, since the skeleton for the right side of the character is usually mirrored on the left side.

SKIN JOINTS



Smart Bind Skin

The first press remembers the selected geometry (or all geometry if nothing is selected) and skin it to the bones marked as 'Skin Joints'. When pressed again without selection, it detach the geometry. The next time you press it, it will re-skin. Thus, you can quickly edit the position of the bones without wasting time on skinning. [youtube url="https://www.youtube.com/watch?v=6ME2NBZeegQ"]

Bind skin

Binds geometry to any transform node or hierarchy of nodes.

Unbind skin

Unbind the geometry.

Add Influence

Add extra bone to the skin cluster.

Remove Influence

Remove bone from skin cluster.

Mark as Skin Joint

Mark bone as 'Skin Joint'.

Unmark as Skin Joint

Remove the label 'Skin Joint'.

Show Skin Joint Labels

Show all Skin Joint Labels.

Hide Skin Joint Labels

Hide all Skin Joint Labels.

Create skin helper

Create an additional joint influence parented to the selected bone.

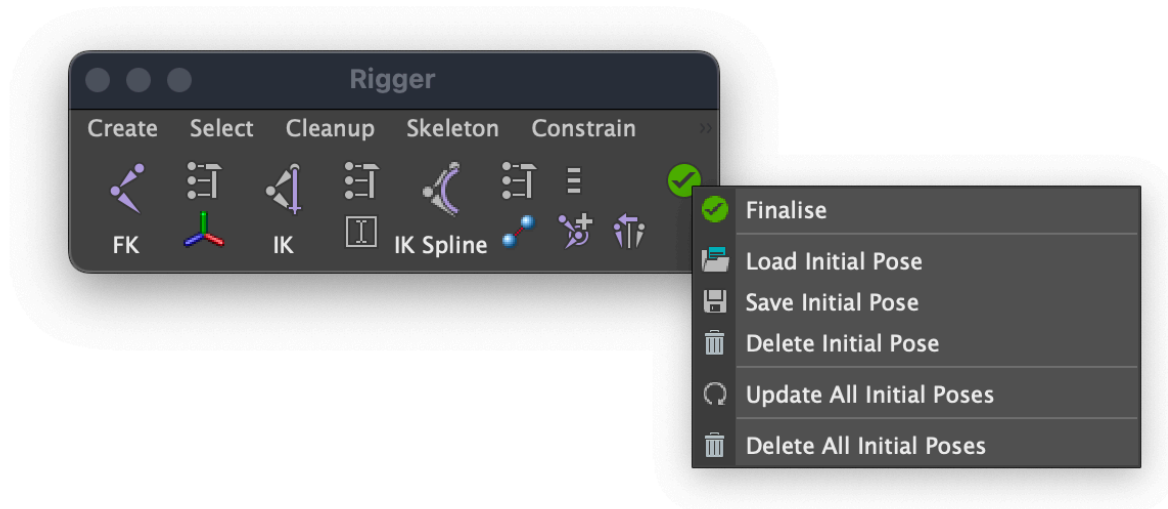
Show skin helpers

Show bones marked as Skin Helpers.

Hide skin helpers

Hide Skin marked as Skin Helpers.

INITIAL POSE



The Initial Pose nodes allow you to store the values of the Translate, Rotate and Scale attributes. Thus, you can return objects to their original position even if the initial values of the attributes are different from zero (for example, in bones).

Save Initial Pose

Save the initial position of the controller.

Update All Initial Poses

Delete all the initial positions and recreate them for all controllers in the scene.

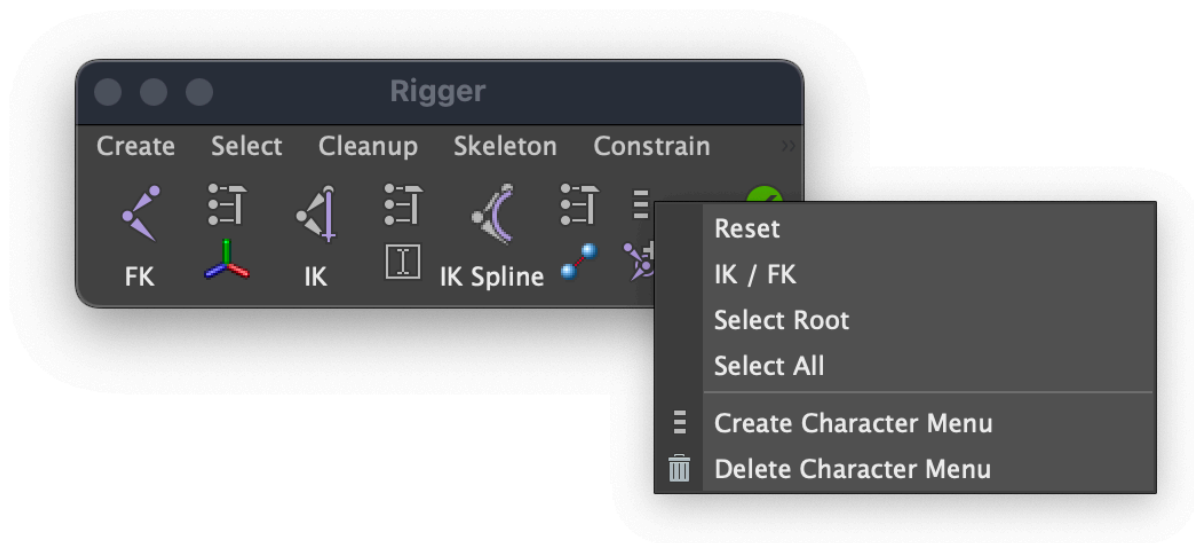
Delete Initial Pose

Delete the initial position of the controller.

Delete All Initial Pose

Delete all the initial poses.

CHARACTER MENU



Reset

Return the controller to its original position.

IK / FK

Seamless kinematics switching. To switch kinematics, highlight the IK Handle or the bones of the IK chain and press 'Switch IK / Fk'.

Select Root

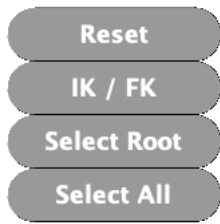
Select master controller (`rig_ctrl`).

Select all

Select all controllers (`* _ctrl`)

Create Character Menu

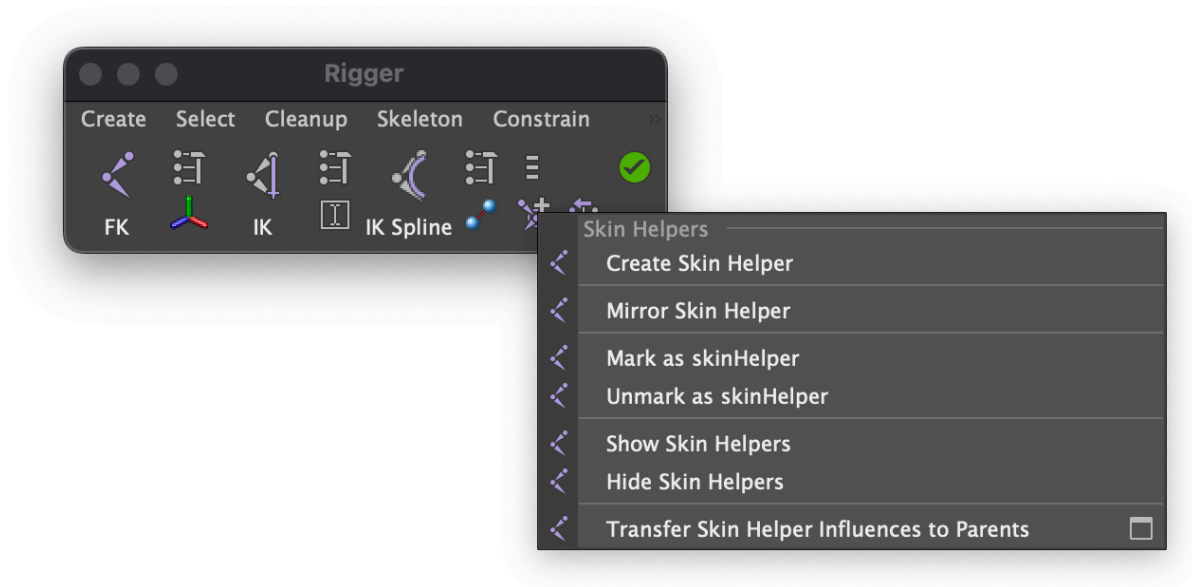
Create a character menu. Allows you to access the character management functions when the HUD is on. This menu can be saved with a scene and used by animators that do not have the Rigger plug-in.



Delete Character Menu

Delete the menu.

SKIN HELPERS MENU



Create Skin Helper

Creates a Skin Joint marked as `'_skinHelper_'`. Allows you to optimize character skinning without manually painting weights. Create Skin Helpers where no deformations are needed. They can be removed in the future with the 'Transfer Skin Helper Influences to Parents' command.

Mirror Skin Helper

Duplicates a Skin Helper.

Mark as Skin Helper

Adding the `'_skinHelper_'` postfix.

Unmark as Skin Helper

Removing the postfix '_skinHelper_'.

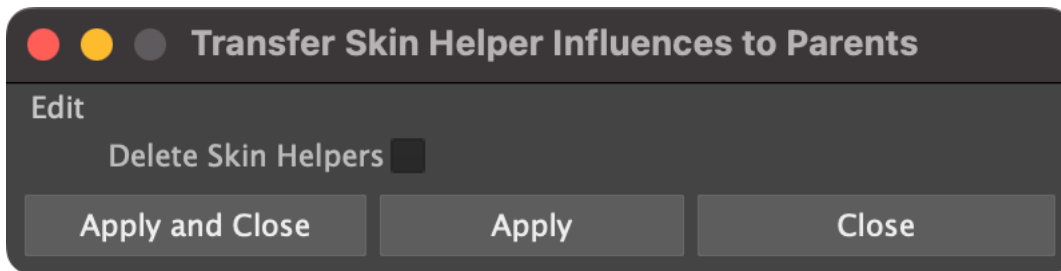
Show Skin Helpers

Show joints marked as '_skinHelper_'.

Hide Skin Helper

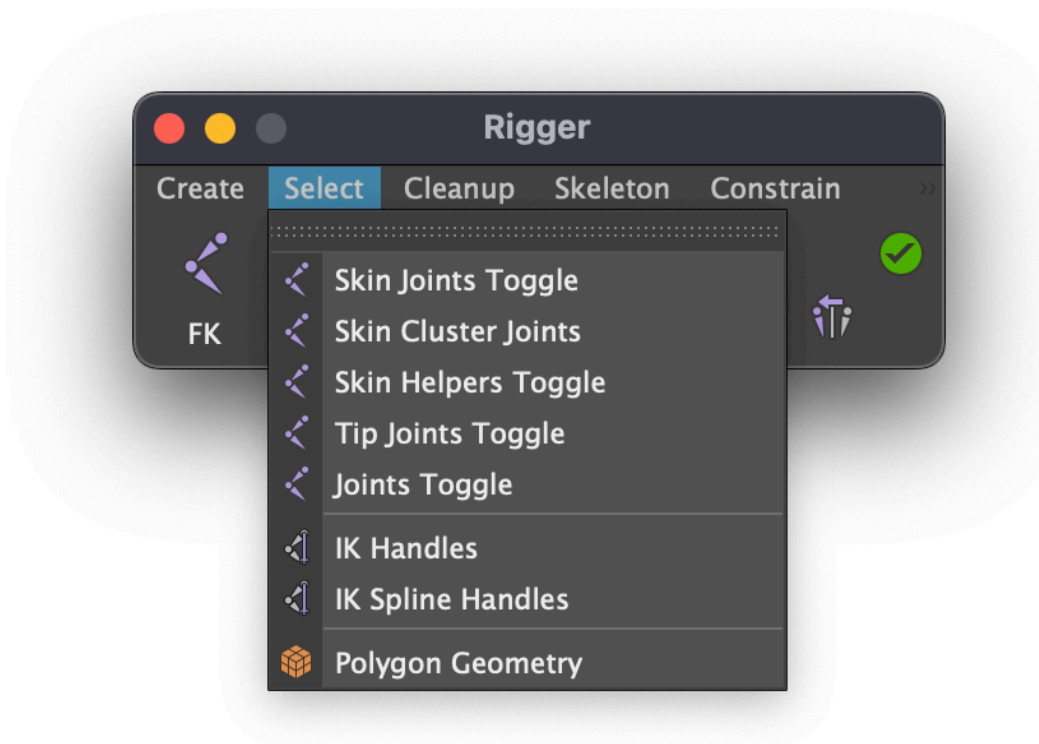
Hide joints marked as '_skinHelper_'.

Transfer Skin Helper Influences to Parents



Disconnects Skin Helpers from the skinCluster, moving their influences to the ancestors. Skinning remains the same.

SELECT MENU



Skin Joints Toggle

Selecting of all bones marked as 'Skin Joint'.

Skin Cluster Joints

Allows you to select all the bones to which the selected geometry is skinned.

Skin Helpers Toggle

Select all objects marked as "_skinHelper".

Tip joints Toggle

Selection of the last bones in the chain (* _tip).

Joints Toggle

Selecting of all bones.

Ik handles

Select all Ik Handles.

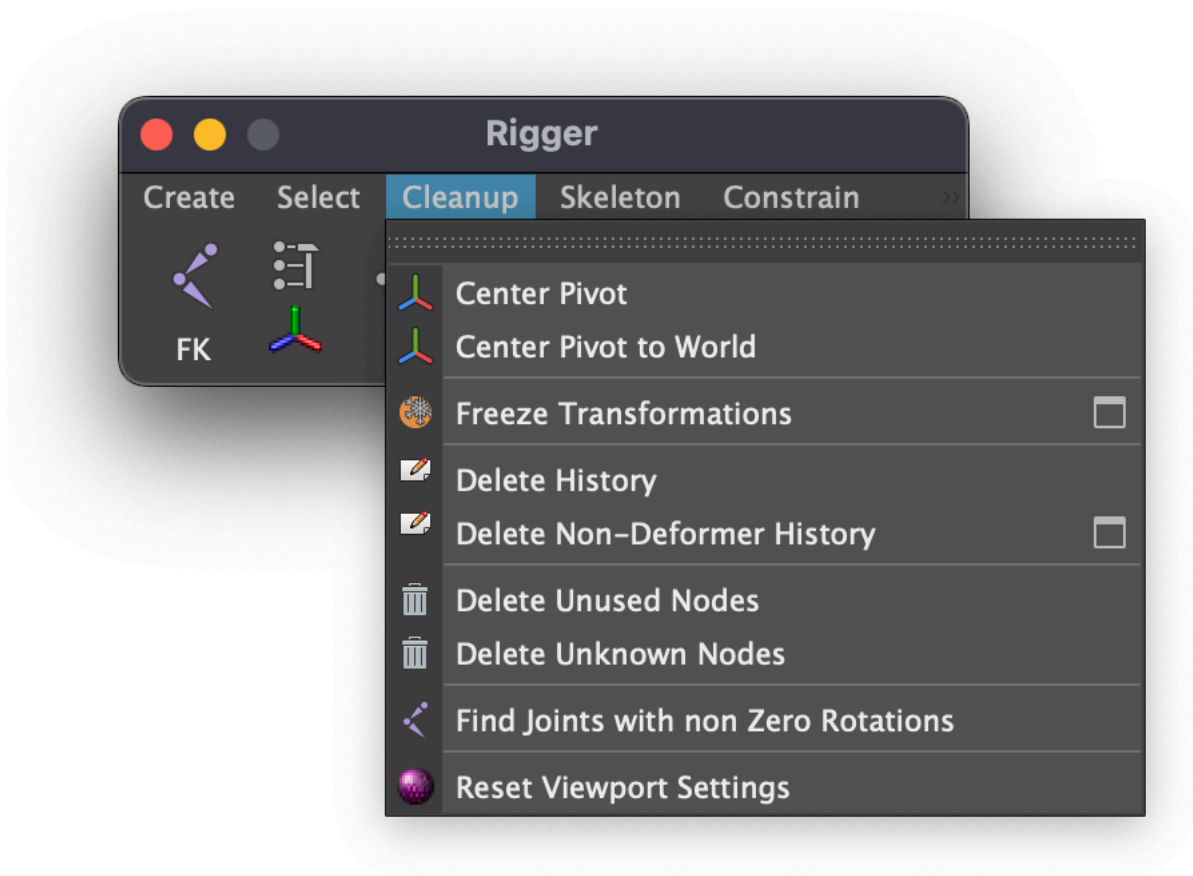
Ik Spline Handles

Select all Ik Spline Handles.

Polygon geometry

Select all the geometry in the scene.

CLEANUP MENU



Center pivot

Centering the center of rotation of an object.

Center Pivot to World

Moving the center of rotation of an object to the origin of world coordinates.

Freeze transformations

Zeroing the Translate, Rotate, and Scale attributes.

Delete history

Delete the history of the creation of the object.

Delete Non-Deformer History

Removing the history of creating an object, leaving the deformers.

Delete Unused Nodes

Removing nodes not used in the rig.

Delete Unknown Nodes

An unknown node may be created by a plug-in that is not supported on the operating system, or by a third-party plug-in that is not loaded in the scene.

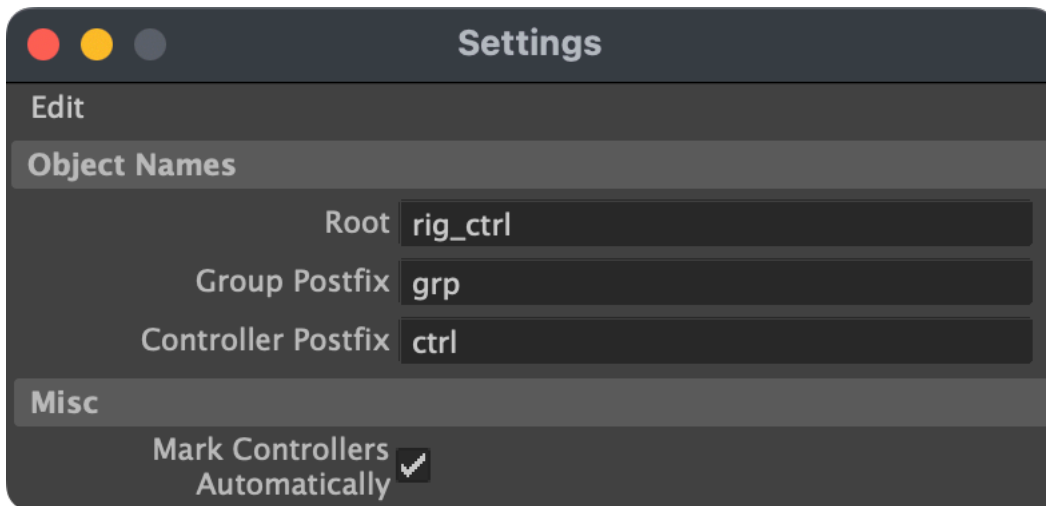
Find Joints with non Zero Rotations

Finds bones in the scene whose rotation values are non-zero.

Reset Viewport Settings

Reset viewport settings to default.

SETTINGS



Root

The name of the root object.

Group Posfix

Postfix for groups.

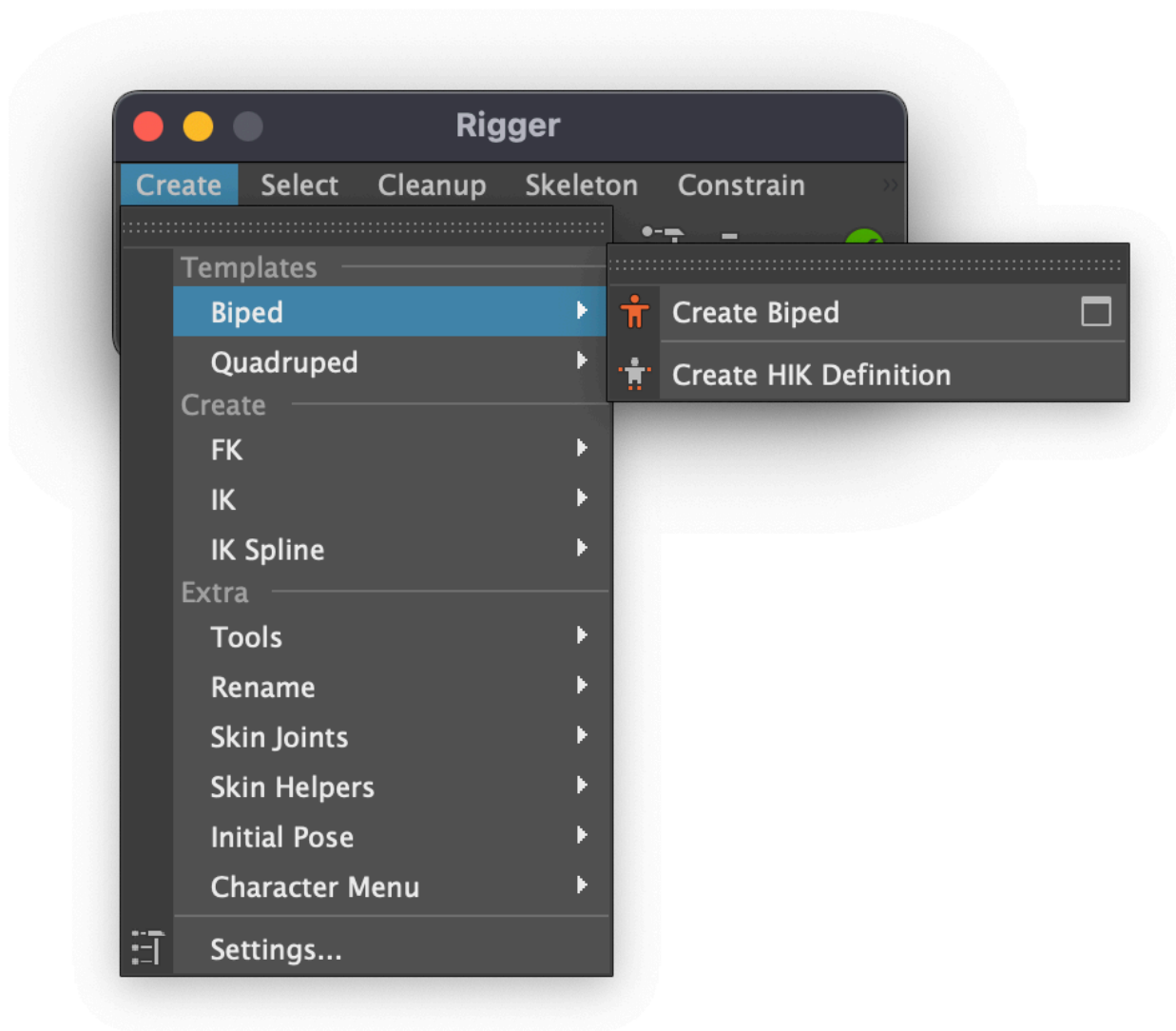
Controller Postfix

Postfix for controllers.

Mark Controllers Automatically

When creating FK, IK and IK Spline, automatically add postfixes to controllers and create initial poses.

Biped Template



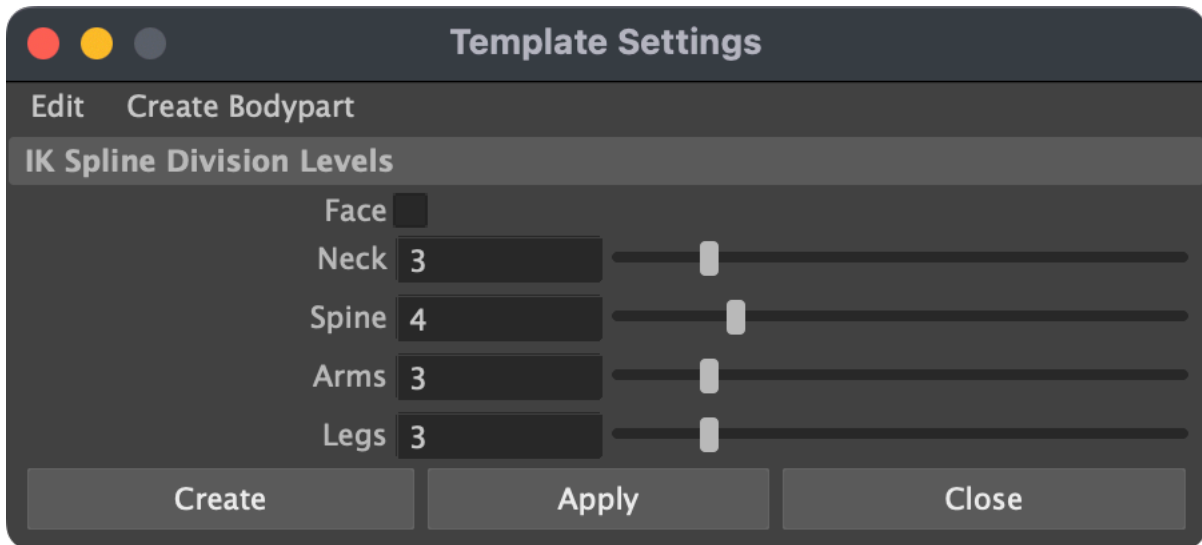
Create Biped.

Creating a ready-to-animate Biped Template.

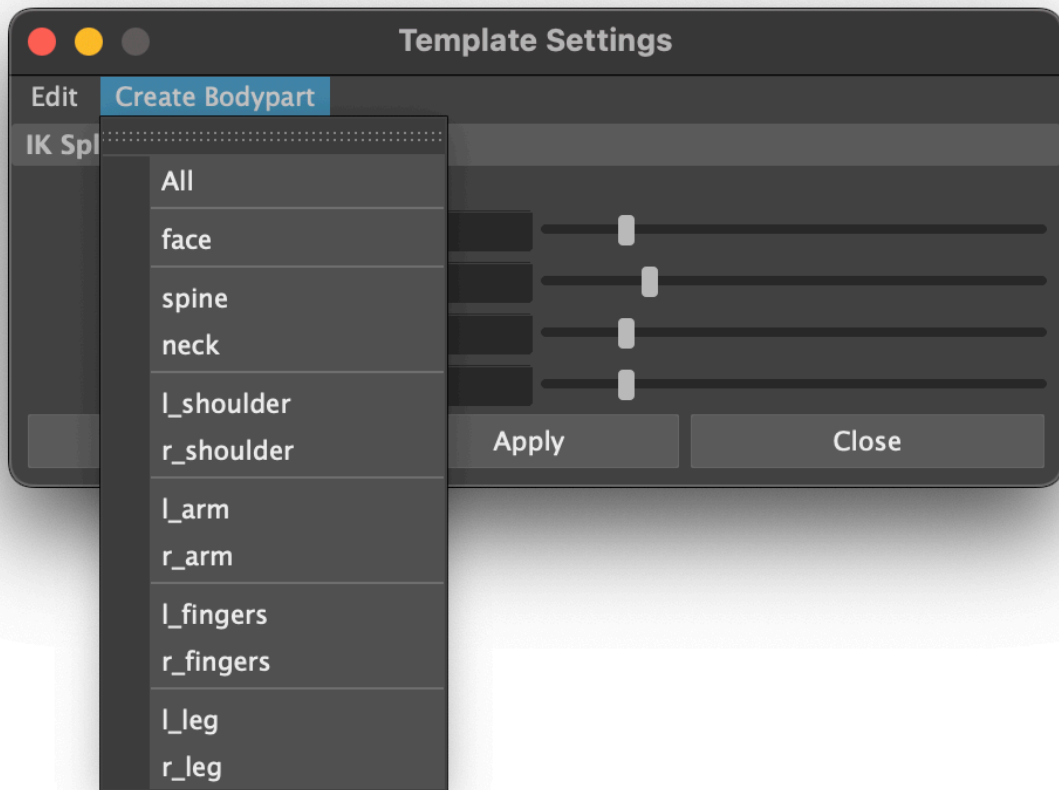
Finalise

Combine body parts and update the initial poses. Click it every time when you adjust the position of the joints when rigging to use 'Reset' function properly.

Template Settings

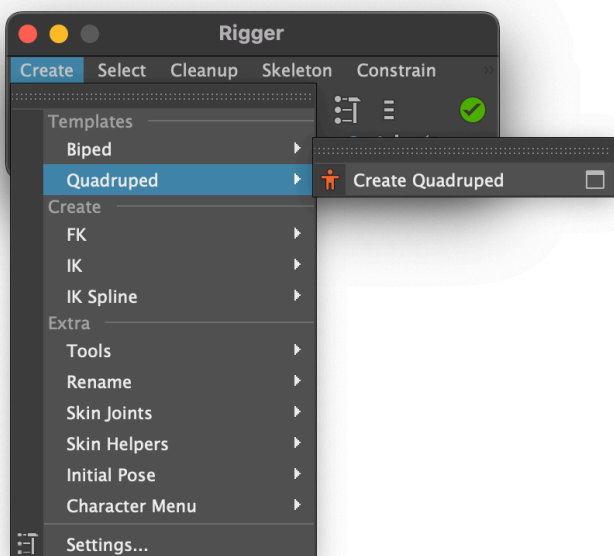


In the settings, you can change the detail of individual parts of the body.



Using 'Create Bodyparts' menu, you can assemble a rig from different modules. Click 'Edit > Connect Bodyparts' to connect modules to each other.

Quadruped Template

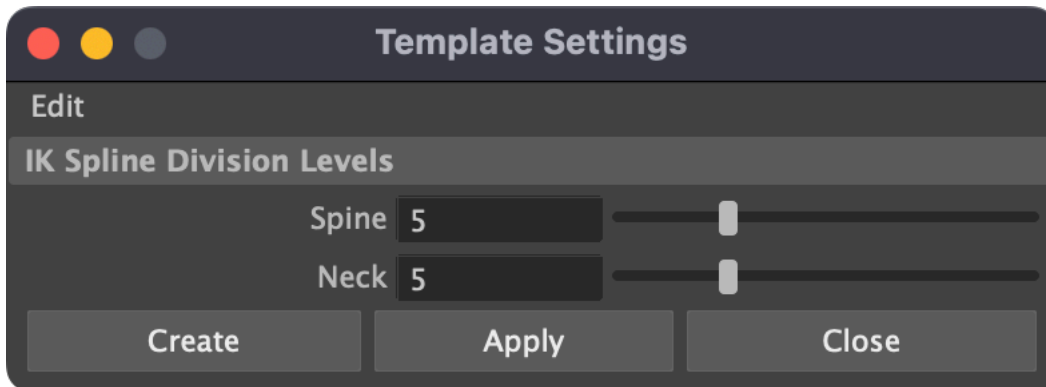


Create Quadruped

Creating a ready-to-animate Quadruped Template.

Finalise

Combine body parts and update the initial poses. Click it every time when you adjust the position of the joints when rigging to use 'Reset' function properly.



In the settings, you can change the detail of individual parts of the body.