



## 7.1.25 Editors - 3D Viewport - Header - Curve & Surface - Edit mode - Control points menu

### Table of content

Detailed Table of content.....	1
Edit Mode - Control Points menu.....	3
Extrude Curve.....	3
Tilt.....	4
Clear Tilt.....	5
Set Handle Type.....	5
Recalc Normals.....	5
Smooth.....	6
Smooth Curve Tilt.....	6
Smooth Curve Radius.....	6
Smooth Curve Weight.....	6
Hooks.....	6
Make Vertex Parent.....	7

### Detailed Table of content

#### Detailed table of content

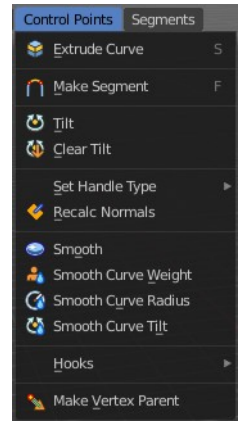
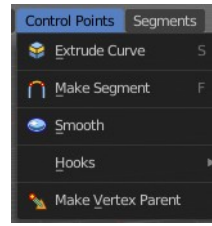
Detailed Table of content.....	1
Edit Mode - Control Points menu.....	3
Extrude Curve.....	3
Last operator Extrude Curve and Move.....	3
Mode.....	3
Move X , Y , Z.....	3
Orientation.....	3
Proportional editing.....	3
Proportional Falloff.....	3
Proportional Size.....	4
Connected.....	4
Projected(2D).....	4
Make Segment.....	4
Tilt.....	4
Last Operator Tilt.....	4
Angle.....	4
Proportional editing.....	4
Proportional Falloff.....	4
Proportional Size.....	4
Connected.....	4
Projected(2D).....	4
Clear Tilt.....	5
Set Handle Type.....	5
Auto.....	5
Vector.....	5
Align.....	5
Free.....	5

Toggle Free/Aligned.....	5
Last Operator Set Handle Type.....	5
Type.....	5
Recalc Normals.....	5
Last Operator Recalc Normals.....	5
Length.....	5
Smooth.....	6
Smooth Curve Tilt.....	6
Smooth Curve Radius.....	6
Smooth Curve Weight.....	6
Hooks.....	6
Hook to New Object.....	6
Hook to Selected Object.....	6
Last Operator Hook to Selected Object.....	7
Active Bone.....	7
Hook to Selected Object Bone.....	7
Assign to Hook.....	7
Remove Hook.....	7
Select Hook.....	7
Reset Hook.....	7
Recenter Hook.....	7
Make Vertex Parent.....	7
Workflow:.....	7

# Edit Mode - Control Points menu

The control points menu exists for Curve and Surface objects in edit mode.

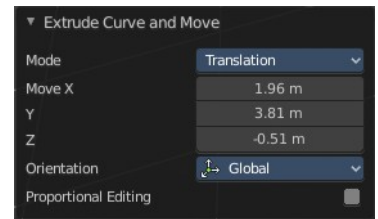
For the surface object type there are not this much operators available. Left the menu with a surface object. Right the menu with a curve object.



## Extrude Curve

Extrudes the selected curve point(s).

## Last operator Extrude Curve and Move



### Mode

A drop-down box where you can choose between different extrude modes.

Default is Translation. Most other methods has no effect.

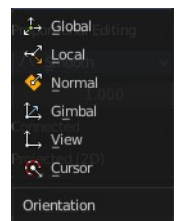


### Move X, Y, Z

The position of the extruded point(s).

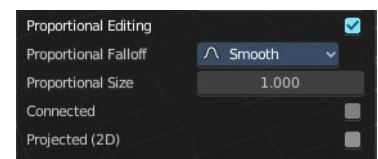
### Orientation

Adjust the orientation of the extrusion. It usually starts with Normal.



### Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.



### Proportional Falloff

Adjust the falloff methods.

## Proportional Size

See and adjust the falloff radius.

## Connected

The proportional falloff gets calculated for connected parts only.

## Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

---

## Make Segment

Joins two curves by adding a segment between the end of the one and the beginning of the other. You can also create a closed curve that way.

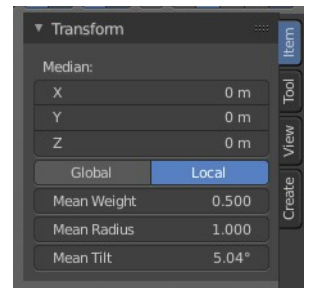
---

## Tilt

Modifies the Mean Tilt.

Activate the tool, and drag the mouse. You will see a value in the header now. The selected curve path will rotate by dragging the mouse.

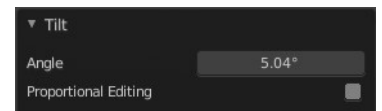
The Tilt angle always starts at zero. It is relative. To modify the Mean Tilt use the edit box in the Transform panel.



## Last Operator Tilt

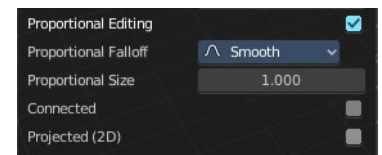
### Angle

The Tilt angle.



## Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.



## Proportional Falloff

Adjust the falloff methods.

## Proportional Size

See and adjust the falloff radius.

## Connected

The proportional falloff gets calculated for connected parts only.

## Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius,

then it gets calculated.

---

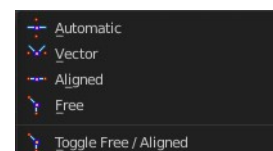
## Clear Tilt

Sets the Mean Tilt to zero.

---

## Set Handle Type

Handles defines the type of handle for the knots of the curve. You have the choice between Auto, Vector, Align and Free. And the Last Operator gives you a fifth possibility to toggle between Free and Align.



### Auto

Auto aligns the handles automatically.

### Vector

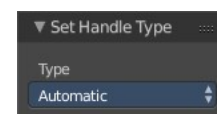
Set Handle type to Vector.

### Align

Set Handle type to Align.

### Free

Set Handle type to Free.



### Toggle Free/Aligned

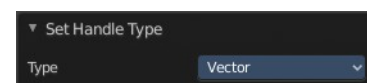
Toggle Free/Aligned.

### Last Operator Set Handle Type

#### Type

Type is a drop-down box where you can set the handle type. You have the choice between Auto, Vector, Align, Free. And the fifth possibility toggles between Free and Align.

---



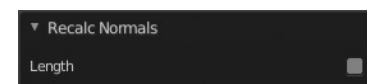
## Recalc Normals

Recalculates the normals of the selected curve.

### Last Operator Recalc Normals

#### Length

Recalculates the handle length too.



## Smooth

Flattens the angles of the selected control point(s).

## Smooth Curve Tilt

Smooths the curve tilt of the selected control point(s).

## Smooth Curve Radius

Smooths the curve radius of the selected control point(s).

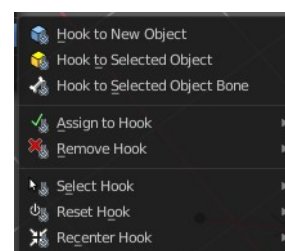
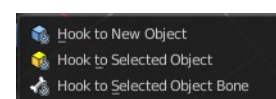
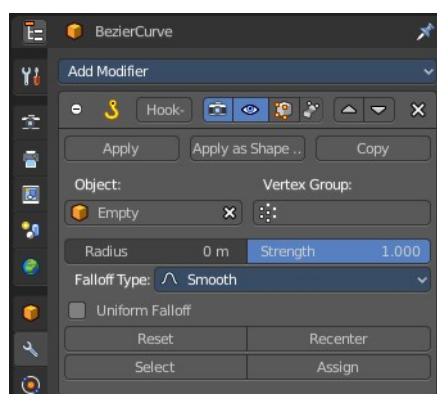
## Smooth Curve Weight

Interpolates the weight of the selected control point(s).

## Hooks

Hooks is a menu with tools around the hook modifier. You could also adjust the hook modifier from the Properties editor. But the menu items are more accessible.

When there is no hook modifier at the mesh then you just see three menu items. When there is minimum one hook modifier applied, then you will see an extended menu.



## Hook to New Object

Creates a new Hook Modifier for the active object and assigns it to the selected vertices. It also creates an empty at the center of those vertices, which are hooked to it.

## Hook to Selected Object

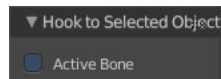
Does the same as *Hook to New Object*, but instead of hooking the vertices to a new empty, it hooks them to the selected object (if it exists). There should be only one selected object (besides the mesh being edited).

## ***Last Operator Hook to Selected Object***

### **Active Bone**

Hook to the object(s) of the active bone.

---



## **Hook to Selected Object Bone**

Does the same as Hook to New Object. But it sets the last selected bone in the also selected armature as a target.

---

## **Assign to Hook**

Assign the selected vertices to the chosen hook modifier. Existing hooks gets overwritten. One vertex can be assigned to more than one hook.

---

## **Remove Hook**

Removes the chosen Hook Modifier from the object.

---

## **Select Hook**

Selects all vertices assigned to the chosen Hook Modifier.

---

## **Reset Hook**

Resets the chosen Hook Modifier.

---

## **Recenter Hook**

Recenter the Hook Modifier.

---

## **Make Vertex Parent**

Parents another object to the selected vertice(s).

### **Workflow:**

In Object mode select the object that you want to parent to a vertex. Shift select the parent object so that both are selected. Enter Edit mode. Then select one vertex for a single point. Then click the Make Vertex Parent button to make the relation.