

[Skip to content](#)

Sample Curve Node

The *Sample Curve* calculates a point on a curve at a certain distance from the start of the curve, specified by the length or factor inputs. It also outputs data retrieved from that position on the curve. The sampled values are linearly interpolated from the values at the evaluated curve points at each side of the sampled point.

Note

When the curve contains multiple splines, the sample position is found based on the total accumulated length, including the lengths of all previous splines. The order of the splines is the same order as displayed in the [Spreadsheet Editor](#).

Inputs

Curves

Standard geometry input with a curve component.

Value

A field input to evaluate custom attributes. The evaluation is outputted through the *Value* output.

Factor Factor mode

The portion of the total length used to determine the sample position.

Length Length mode

A length in distance units used to determine how far along the curve to travel before sampling.

Curve Index

An index to only evaluate specific splines, these indices can be specified manually or from the [Index Node](#). This input is ignored when the *All Curves* property is enabled.

Properties

Data Type

The [data type](#) used for the evaluated data.

Mode

How to find endpoint positions for the trimmed spline. The option acts the same as it does in the [Trim Curve Node](#).

Factor:

Find the endpoint positions using a factor of each spline's length. The input values should be between 0 or 1.

Length:

Find the endpoint positions using a length from the start of each spline. The input values should be between 0 and the length of the splines.

All Curves

Sample lengths based on the total length of all curves, rather than using a length inside each selected curve.

Outputs

Value

The value of the input *Value* at the sample point.

Position

The position at the sample along the spline.

Tangent

The normalized [curve tangent](#) at the sample.

Tip

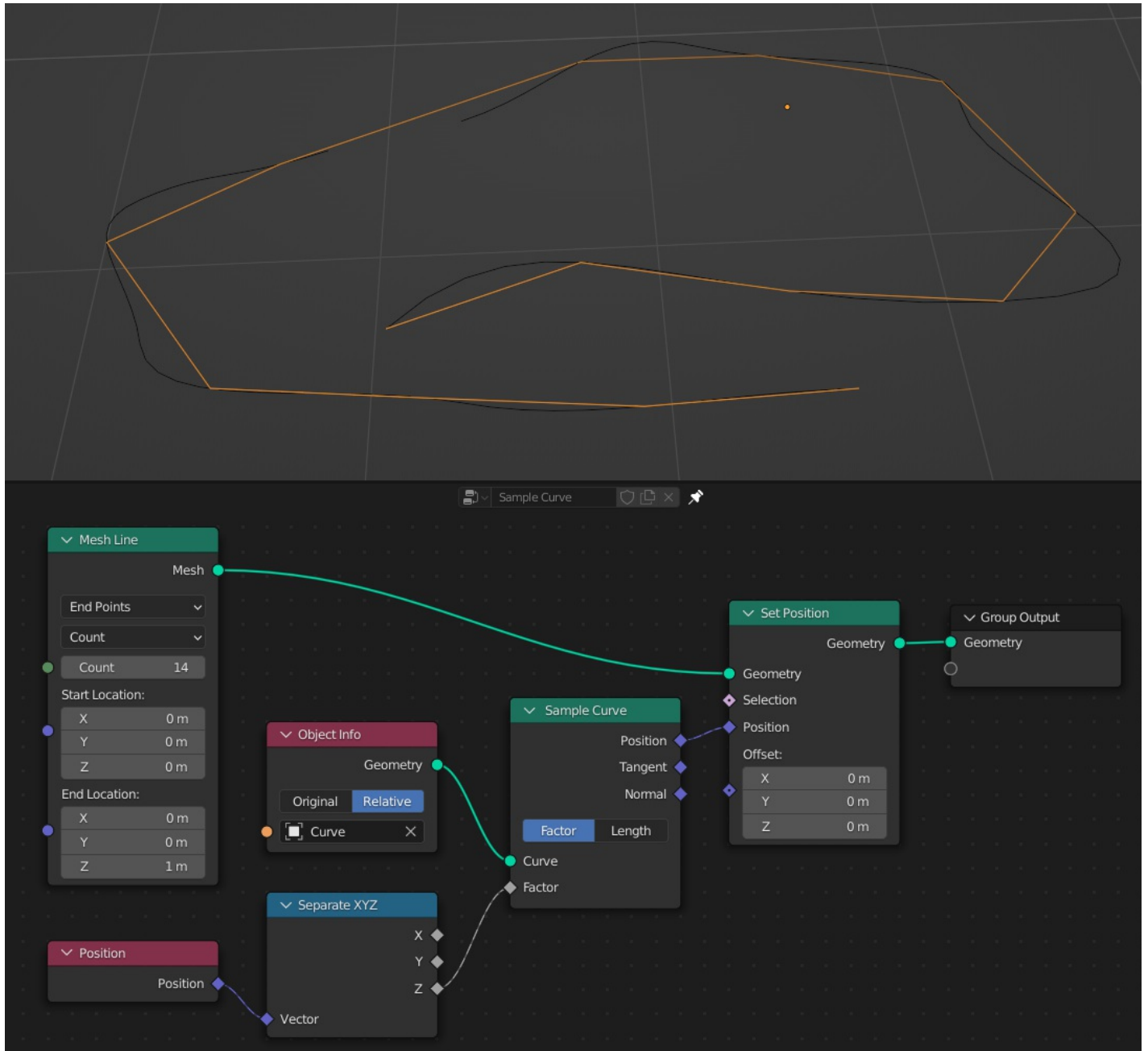
This output can be combined with the [Align Rotation to Vector Node](#) to create a rotation that lines up with direction of the curve. Including the

Normal output in a second align node after can align the other rotation axis.

Normal

The normalized [curve normal](#) at the sample.

Examples



Here, the *Count* mode of the [Resample Curve Node](#) is recreated, except a mesh is used for the result instead of a curve. The Z axis of the position can be used as the sample factor because the position is between zero and one for the entire line.

[Previous](#)
[Curve Sample Nodes](#)

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[Next](#)
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