

VELOCITY *Curve*



A N D R E W



R U S S E L L

Overview



a player device by Andrew Russell

Compatible with Reason 9.2 and later

Velocity Curve takes incoming notes, and transforms their velocities based on a curve that you specify.

Numeric values in Velocity Curve are specified in terms of MIDI velocities.

MIDI note velocities range from 0 to 127, with 0 meaning note-off, and 1 to 127 meaning varying levels of intensity.

Front Panel

Low In / Low Out

[Curve Mode]

Position the Low endpoint of the curve

High In / High Out

[Curve Mode]

Position the High endpoint of the curve

Velocity Curve

[Curve Mode]

Change the shape of the curve



Draw

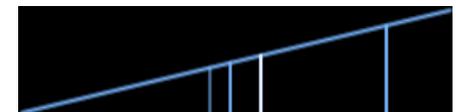
Toggle between Curve Mode and Draw Mode

Low Cut

Enable note muting

Interactive Display

- Shows currently playing notes, indicating their input and output velocities as a bar graph
- *[Curve Mode]* Modify curve controls
- *[Draw Mode]* Edit the curve directly
- In “fine-edit” mode, shows the current coordinate as an X, Y (input, output) pair
- See the mode pages for keyboard modifiers



Back Panel

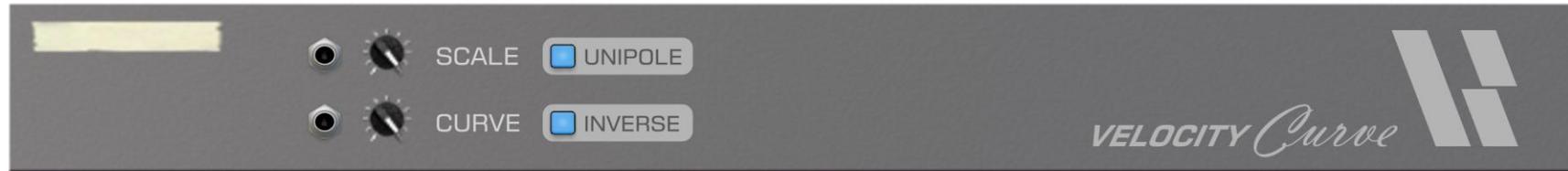
CV Scale

Scale output velocities

CV Scale Unipolar

Changes the interpretation of CV Scale values
(see table)

Velocity Scale	Bipolar (default)	Unipolar
0% (min)	≤ -1.0	≤ 0.0
50%	-0.5	0.25
100%	0.0	0.5
150%	0.5	0.75
200%	1.0	1.0
1000% (max)	≥ 9.0	≥ 5.0



CV Curve

[Curve Mode]

Value in the range -1.0 to 1.0 to add to the Velocity Curve parameter

CV Curve Inverse

[Curve Mode]

Invert the value of CV Curve before adding it

NOTE: The normal range of the Velocity Curve parameter is -100% to 100%.

By using CV Curve, you can expand that range to -200% to 200%.

NOTE: Velocity scaling operates in the range of 1 to 127, so scaling to 0% will produce a velocity of 1, not 0.

To achieve velocity scaling down to 0 (mute), add a second Velocity Curve device with Low In set to 2, and Low Cut enabled.

Curve Mode



Curve Mode provides an quick and easy way to specify a velocity transformation, using only a handful of controls

Velocity Output Specification

- An input velocity equal to Low In produces an output velocity equal to Low Out
- An input velocity equal to High In produces an output velocity equal to High Out
 - Low In takes priority, if Low In and High In are equal
- Input velocities between Low In and High In produce output velocities between Low Out and High Out
- The shape of the curve between the Low and High endpoints is controlled by the Velocity Curve parameter
- Input velocities outside of High In produce an output velocity equal to High Out
- Input velocities outside of Low In produce an output velocity equal to Low Out, or zero (muted) if Low Cut is active
- Note that Low In and Low Out values do not have to be less than High In and High Out values

Display Interactions

- You can move the Low and High endpoints by clicking and dragging them in the display
- You can change the Velocity Curve parameter by clicking and dragging the centre of the curve up and down
- Hold SHIFT while clicking and dragging display elements to use fine-edit mode
- Hold CONTROL while clicking display elements to reset them to their defaults

Draw Mode



Draw Mode allows you to fully specify a velocity transformation by directly drawing onto the display
You can specify output velocities (from 0 to 127) for all possible input velocities (1 to 127)

Low Cut Behaviour

- Low Cut must be enabled to draw an output velocity of 0 (mute note)
- If Low Cut is subsequently disabled, drawn velocities of 0 will be output as 1
- If Low Cut is re-enabled, velocities drawn as 0 will be remembered

Copying the curve from Curve Mode

- When first entered, Draw Mode uses the curve from Curve Mode
- You can continue to modify the curve using the Curve Mode controls, until you interact with the display
- After interacting with the display, using the Curve Mode controls will show a “Draw is On” warning on the display

Display Interactions

- Click and drag in the display to directly draw a velocity transformation
- Hold SHIFT while drawing to use fine-edit mode
- Hold ALT while clicking and dragging in the display to read values without modifying them
- Hold ALT + SHIFT while drawing or reading to lock to an input velocity, editing only its output velocity
- Hold CONTROL and click the display to reset to copying the curve from Curve Mode (see above)

About Andrew Russell

Andrew Russell is a former computer game developer from Australia, bringing his experience developing high-performance game engines and designing fun, intuitive and delightful user experiences to the world of music software.

Also from Andrew Russell

