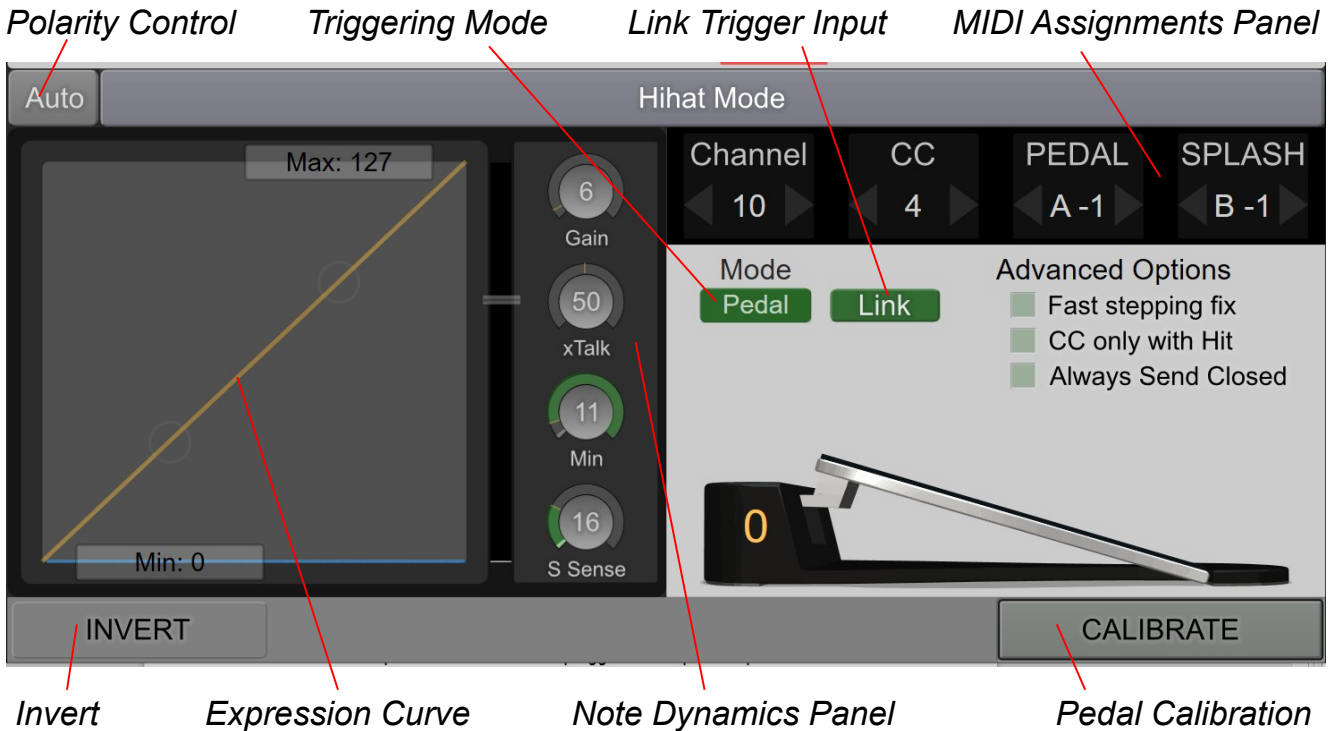## Hihat Mode

When using this mode, the pedal sends out a CC message corresponding to the position of the pedal, and velocity sensitive notes when the pedal is pressed down quickly.

Polarity Control   *Triggering Mode*   *Link Trigger Input*   *MIDI Assignments Panel*

Invert   *Expression Curve*   *Note Dynamics Panel*   *Pedal Calibration*

Link Trigger Input

Because a hihat setup includes a controller plugged into a pedal input and hihat cymbal(s) plugged into a trigger input, it's important to link the two for best performance.

When you press the 'Link Input' button, all the trigger inputs are highlighted and you can select the input you want to link.

After you link a trigger input, the icon for that input will turn into a hihat cymbal. The currently linked input is highlighted in a darker shade. It can be unlinked by clicking on it again.

Triggering Mode Selector

eDRUMin offers two different methods processing velocity sensitive notes from your hihat control. The 'pedal' method uses the movement of the pedal to produce the notes. This method is suitable for hihat setups where the pedal is completely detached from the hihat cymbal and also works very well for a hihat on a stand that only has a single cymbal.

For a hihat that has two cymbals that bang together, the 'impact' mode is probably the best choice. With this method, closed hihat articulations are produced by measuring the impact of the hihat cymbals.

Adjust the MIDI settings for your Pedal

From the MIDI Assignments Panel, you can set all the MIDI related settings for your pedal. When changing the pedal note and splash note, the notes will auditioned so you can hear what a particular assignment corresponds to in your sampler.

Channel

This is the MIDI Channel the hihat will use The default channel for drums is 10.

Pedal Note

This is the note value that is output when the pedal is pressed down quickly.

Control Change

This is the CC message that the pedal outputs as it moves. Most, if not all, drum modules expect hihat pedal position to be transmitted as CC 4.

Splash Note

This is the note value that is output when pedal sends a pedal note and then immediately returns to open.

Look here for help setting your note assignments in various VST drum samplers.

Adjusting the Responsiveness Closed Hihat Notes and Splashes

Before you adjust any of these control, make sure your hihat controller is properly calibrated.

Pedal Method

Gain

This Gain control compensates for how fast your pedal changes values. The faster your pedal moves, the lower you need to set the Gain Control. Hihat controllers typically work best with low gain values and Expression pedals work best with high gain values.

Travel

The travel control determines how far the pedal needs to move in the downward direction before a note can be produced and as such acts a bit like a sensitivity control. Moving the travel upwards means that you'll need to press the pedal further down to trigger a note.

xTalk

If you are using a hihat setup where pressing down on the hihat pedal causes the hihat cymbals to vibrate, you can use the xTalk control to prevent those vibrations from causing false triggers. The control's meter measures the vibrations of the hihat trigger when the pedal generates a note. Set the value of the control above the meter.

Min

If you find your pedal is triggering notes on low velocity presses, increase the Min to filter them out.

Splash Sensitivity

If you find your pedal is triggering splash articulation too easily, lower the splash sensitivity.
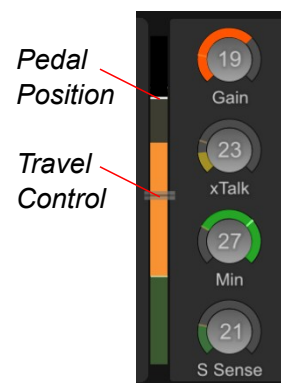
Impact Method

The velocity of closed hihat pedal notes in this setup is determined by the vibrations of the hihat cymbals as they come together. It's very important that your hihat trigger settings are optimal. Poor choice of threshold and hit decay values will affect the ability to accurately trigger the closed hihat pedal articulation.

Hihat pedal Thresh

This needs to be set very carefully. Setting it too low will cause false triggering when your hihat cymbals move, and setting it too high will result in missed pedal events.

To make adjustments, use the yellow meter. The thresh setting will be optimal when the meter shows 5% to 20% while pressing the pedal to trigger the close hihat pedal note, like it does in the image on the right.

Scaler

The scaler control is used to determine the velocity of a close hihat pedal articulation. Increase the value of the control to to get higher velocity notes. The meter in this control displays the final velocity of the notes.
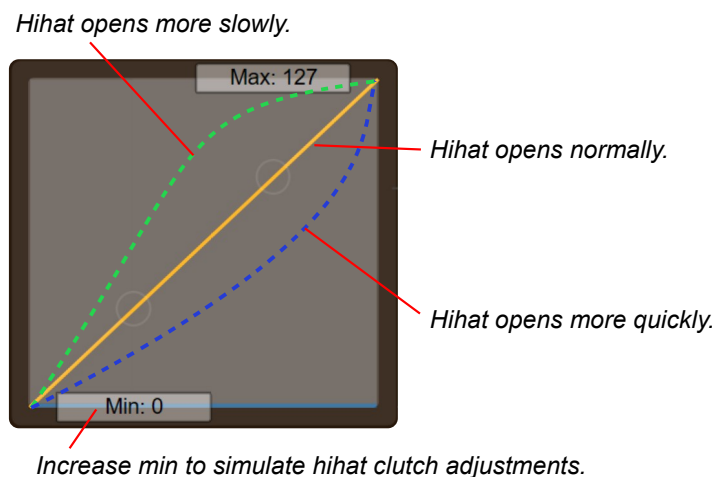
Splash Sensitivity

This control allows you to control how easily you can trigger the splash articulation. Increasing the value of the control increases the size of the green meter. Any time the indicator false inside the green meter, a splash note is triggered.
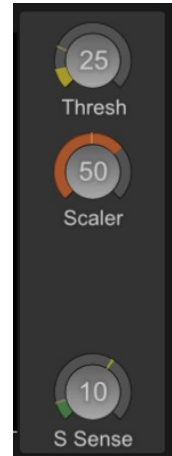
Adjusting the Dynamics of the Hihat Position CC

While the controls in the Note Dynamics Panel affect the dynamics of the closed hihat articulation and splash, the Expression Curve allows you to control the dynamics of the control change messages which correspond to the openness of your hihat.

The Expression curve can be turned on and off by simply clicking in the background of the control.

Hihat opens more slowly.

Hihat opens normally.

Hihat opens more quickly.

Increase min to simulate hihat clutch adjustments.

The orange CURVE control affects the transition rate from open to close. You might want to adjust the curve to control how fast the hihat opens when you release the pedal.

The MIN control allows you to simulate adjustments to the clutch of a hihat, effectively allowing you to restrict the amount of openness when the pedal is fully released.

> **Note**: The Expression Curve is not available when using Note Mode.

Advanced Hihat Options

For most users, these options should be left unchecked. They are advanced options that most users do not need to be concerned with and can produce unwanted results.

▣ Fast Stepping Fix

In some drum triggering software applications, most notably Superior Drummer, rapid up and down movements of the hihat pedal can cause strange audible artifacts due to the way it transitions between hihat samples.

One way to remove these artifacts is to stop sending CC position values for a short period of time after a closed pedal note is produced. Checking this box will do exactly that.

▣ CC only with Hit

Superior Drummer will attempt to transition between hihat samples whenever the hihat pedal is moving. Most people regard this as a feature as it provides a more natural sounding hihat is most situations, but others do not like the subtle artifacts that it produces. By checking this checkbox, *e*DRUM*in* will only send the hihat positional CC just before a hihat note is sent. This effectively prevents the Superior Drummer from being able to transition between hihat samples at all.

▣ Always Send On Closed

In normal operation, the closed hihat sound is only produced when the pedal moves downward at a great enough velocity. If the hihat pedal is slowly pressed down all the way, no closed pedal note is produced.

For some drum modules and software applications, this can lead to the an open hihat sound continuing to be heard even after the pedal has been completely closed.

By checking this option, *e*DRUM*in* will always send out the lowest velocity closed pedal note given the following conditions:

- The hihat pedal moves to the fully closed position.

- The hihat was previously hit or a splash note was sent.

- The hihat pedal was less than 85% closed when the hihat cymbal was hit.