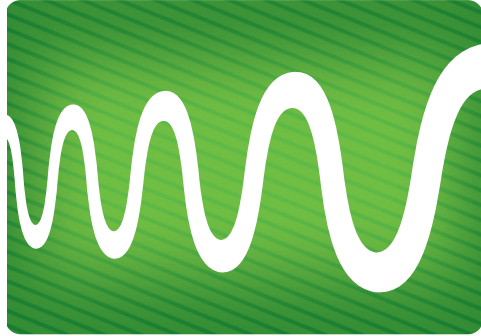


The Serato logo is displayed in white lowercase letters on a green background with a diagonal line pattern. The letters are outlined, giving them a 3D effect.

serato™



Dynamics

User Manual

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RANE
SERIES

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Introduction

Thank you for purchasing the Rane Series Dynamics. The Dynamics is one of the plug-ins that make up Serato's Rane Series, which also includes a graphic EQ and a parametric EQ. The Rane Series plug-ins are based on Rane's award-winning live sound hardware. They have been designed to provide both unique functionality and fantastic sound, we hope you enjoy them.

We trust you will find this manual useful in setting up and getting the best from your Serato product. If you require any assistance beyond the scope of this manual, including up-to-date information on troubleshooting, frequently asked questions, and tips & tricks for the Rane Series Dynamics, please visit our website at serato.com.

Many thanks - the team at Serato Audio Research.

What's Inside?

Your Rane Series Dynamics box should contain the following items. If anything is missing please contact your dealer immediately.

- 1x Serato plug-ins Installation CD
- 1x Dynamics User Manual
- 1x Installation Guide + Serial Number

System Requirements

The following are the minimum system requirements for all of the Rane Series plug-ins.

- Digidesign Pro Tools HD or Digidesign VENUE
- Mac OSX or Windows 2000 or better
- iLok key required for authorization

What is the Rane Series Dynamics?

The Rane Series Dynamics consists of 2 TDM plug-ins for the Digidesign Pro Tools HD or VENUE platforms: the Rane Series Compressor and the Rane Series Gate. It combines the pristine sound quality and excellent features of Rane's top-of-the-line hardware, the C4 Compressor and G4 Gate, with the ease of a functional graphical user interface.

The Dynamics plug-ins present a traditional threshold-relative view of key level and gain reduction as well as broad graphical views of the compression and expansion curves.

The plug-ins can be used in mono, stereo, and multi-mono modes. Note that stereo mode is recommended over multi-mono mode because it links the channels to preserve a stable stereo image.

The installer includes presets for both plug-ins to get you started in many common situations. By creating your own presets for commonly used microphones, instruments and other sound sources you will achieve a level of efficiency that is not possible with hardware systems.

What is the Rane Series Compressor?

The Compressor features a key parametric EQ, and can be operated in two modes: Compressor and Dynamic EQ. For both modes, ± 24 dB of make-up gain is available. Inadvertent clipping is prevented by the inclusion of an oversampled brick wall peak limiter.

Compressor mode is used to automatically control the volume or dynamics of the input signal. When the key reaches the threshold, the compressor begins turning down the signal by an amount set by the ratio control. The compressor simply makes the loud signals quieter. Primary uses of compressor mode are 1) reduce dynamic range of vocalists and other musical instruments that exceed the recording or reproduction capability; 2) prevent clipping and distortion in live sound systems or recording chains; 3) smooth and balance an instrument such as a bass guitar with wide dynamic range and string-to-string level variations; 4) produce louder recordings for broadcast; and 5) even out paging variations due to different speakers in large systems. In compressor mode the key parametric EQ is a bell filter.

Dynamic EQ mode is used to automatically control the volume of a selected band of frequencies of the input signal. In dynamic EQ mode the key parametric EQ is a bandpass filter. This bandpassed key, together with the overall broadband key, is used to drive the band reduction. In dynamic EQ mode the threshold defines the difference between the bandpassed key level and the broadband key level, that results in band reduction. Because this mode depends on the ratio between bandpass and broadband key levels, it is not affected by the absolute input signal level. Dynamic EQ mode is therefore useful for such situations as de-essing, where the troublesome sibilants ('sss' sounds) are reduced while maintaining the correct ratio of broadband to sibilant material.

Note: To switch between modes use the compressor mode switch in the mode switches panel (see page 11).

What is the Rane Series Gate?

The Gate features a high- and low-cut pair of key filters, and can be operated in three modes: Gate, Duck, and Expand.

Gate mode operates by turning the signal down a fixed number of dB (the depth) when the key drops below the threshold. Primary uses of gate mode are 1) reduce microphone bleed, handling noise, electrical hum or incidental back ground noise; 2) modify the sound of an instrument by softening or tightening its attack; 3) synchronize two sounds by using one as the external key input.

Duck mode reduces the level of a signal by a certain amount (the depth) when the key exceeds the threshold. Ducking is useful for voiceover and instrument solo applications.

The basic objective of **Expand mode** is the same as gate mode, to reduce the noise floor of a signal. However, expand mode provides a more subtle response than gate mode in applications requiring smooth, natural decay. It works by controlling the ratio of output change to input change, in effect dynamically modifying gain below the threshold. An expander is useful to enhance the long, gradual decay of a piano or guitar, or to reduce stage noise between passages for a quiet vocalist.

Note: To switch between modes use the buttons in the mode panel (see page 18).

About the Key

Both of the Rane Series Dynamics plug-ins have key inputs that drive the gain reduction. The key input can either be internal (the input audio that is being compressed or gated), or external (some other audio signal). By default the key is internal; to switch to an external key simply choose a signal as the key input to the plug-in using the standard Pro Tools or VENUE menus. By deselecting the key input in Pro Tools or VENUE the plug-in will revert to an internal key.



Selecting the key in Pro Tools. The left screenshot shows 'no key input', which results in the key being internal. The right screenshot shows Interface input A 3 being selected as the external key.



Selecting the key in VENUE. The left screenshot shows 'None' for the Key source, which means that the key is internal. The right screenshot shows Channel 2 being selected as the external key.

Both Dynamics plug-ins also have key filters, the Compressor has a parametric EQ, and the Gate has a cut filter pair. To distinguish between the key input pre-filter and the key post-filter, this user manual uses the terms 'key input' and 'key' as follows:

Key Input is used to describe the pre-filtered, internal or external signal coming in to the plug-in that is filtered to become the key.

Key refers to the post-filtered signal that is then used to drive the gain reduction. In dynamic EQ mode the key might also be called the bandpassed key, because both the bandpassed key and broadband key (the key input) are used to drive the dynamic EQ gain reduction.

The Compressor Interface



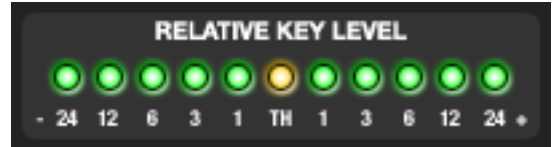
- | | |
|---------------------------------|---|
| 1 Relative Key Level | Shows the level of the key relative to the threshold. |
| 2 Gain Reduction | Shows the amount of gain reduction applied to the audio signal. |
| 3 Key Parametric EQ | Allows you to reduce the detector's response to a limited range of key frequencies. |
| 4 Dynamics Panel | Displays a graph of the gain reduction vs. the key level, as well as having the threshold, ratio, knee, attack, and release controls. |
| 5 Mode Switches | Select the timing mode, Compressor or Dynamic EQ mode, and monitor the key. |
| 6 Post-Compression | Displays the peak and RMS level of the post-compression signal. |
| 7 Make-up Gain | Allows you to compensate for gain loss caused by your compression settings. |
| 8 Peak Limiter | Controls the threshold at which the peak limiter kicks in. |
| 9 I/O Levels | Display the peak and RMS levels going in to and coming out of the plug-in. |
| 10 Scale | Switches the key, post-compression, peak limit, and I/O level scales between dBFS and dBVU. |
| 11 Control Value Editors | Allow you to read and edit the value of any control. |

The Compressor Interface

Relative Key Level

In Compressor mode, the **Relative Key Level** shows the level of the key relative to the threshold (dBr), making it easy to gauge how close the key signal is to the onset of compression. The threshold indicator (the yellow TH LED) is lit when the key is at or above the threshold.

In Dynamic EQ mode, this meter displays the relative difference between the broadband key level and the bandpassed key level, as compared to the threshold.



Gain Reduction

The **Gain Reduction** meter displays the amount of gain reduction applied to the signal, lighting from right to left as the amount of gain reduction increases. This meter does not reflect any gain reduction occurring due to limiting. Gain reduction occurring due to limiting is displayed in the peak limiter section.

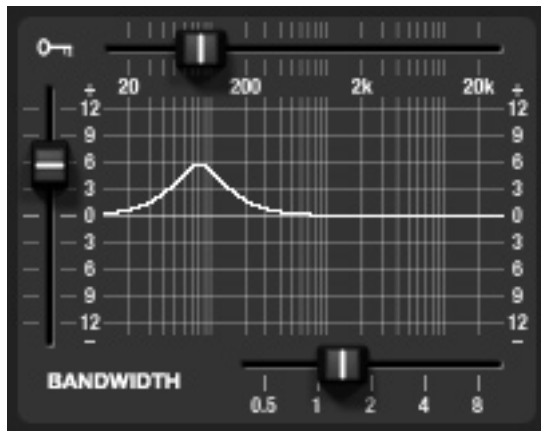
In Compressor mode this meter displays the amount of gain correction being applied to the broadband program material.

In Dynamic EQ mode this meter shows the amount of gain correction being applied to the dynamic EQ in the main signal chain.

The gain reduction meter is a good way to see if there is 'pumping' happening in your sound, as its meter ballistics follow the actual gain reduction determined by the threshold, ratio, knee, attack, and release controls. For example, with a long release time you might see that gain reduction is being applied for too long after the key has dropped below the threshold.



The Compressor Interface



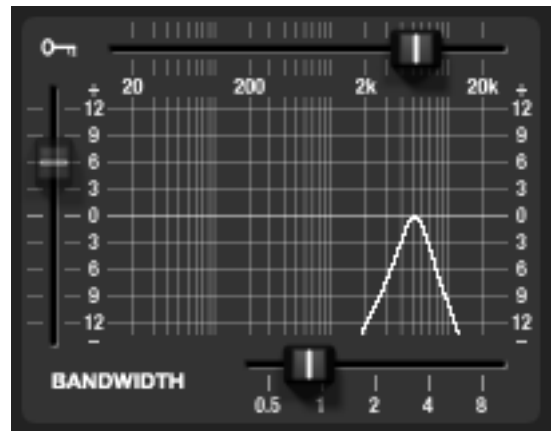
Key Parametric EQ

The **Key Parametric EQ** allows you to apply a single band of equalisation to the key input. You can use it to control which part of the incoming sound is activating the compressor. For example, removing a bass hump in a drum mix key input might allow for more natural cymbal compression without removing the bass from the source sound.

In Compressor mode, the key parametric EQ operates as a normal, 2nd-order, parametric EQ filter with independent **Gain**, **Frequency** and **Bandwidth** controls.

In Dynamic EQ mode, the key parametric EQ controls define a bandpass filter of the key and a dynamic EQ in the main signal path. The difference between the levels of the broadband key and the bandpassed key is compared to the threshold, and the dynamic EQ's gain is automatically adjusted to maintain the proper ratio of sibilant to non-sibilant content.

The parametric EQ gain control has no function in dynamic EQ mode.



Note: The parametric EQ filter is only applied to the key input, it does not affect the main output.

Note: The key input can either be internal (the audio you are compressing) or external (some other signal). By default you are using an internal key; to switch to using an external key simply choose a signal as the key input to the plug-in using your Pro Tools or VENUE menus. By deselecting the key input in Pro Tools or VENUE the Compressor will revert to an internal key.

The Compressor Interface

Dynamics Panel

The **Dynamics Panel** contains the threshold, ratio, knee, attack, and release controls, alongside a visual representation of the effect the Compressor is having on your sound.

Compressor Mode

The screenshot to the right shows this panel when in Compressor mode.

The **Threshold** is the beginning point of your gain reduction. When the key is below the threshold, a compressor acts like it is being bypassed. Above the threshold, the gain reduction begins to reduce the volume of the output.

In Compressor mode, the threshold defines the absolute level above which the gain reduction begins. A high threshold of between -10 dBFS and 0 dBFS will only reduce the loudest peaks in the sound, whereas a lower setting like -30 dBFS will compress much more of your incoming signal.

The **Ratio** control defines the ratio of key change to output level change, once the key has exceeded the threshold. It is adjustable from 1:1 (no compression) to 10:1 (heavy compression).

The **Knee** controls the action of the compressor around the threshold. Setting a hard knee (0 dB) and a ratio of 10:1 means that the compressor starts to reduce the signal with a 10:1 ratio as soon as the key has hit the threshold. With a soft knee setting (20 dB), and the same 10:1 ratio, the compressor starts to compress when the key is 10 dB below your set threshold, and hits full 10:1 compression when the key is 10 dB after your threshold. A soft knee allows for more subtle compression, as opposed to a more clinical hard knee.

The **Attack** control determines how fast the gain reduction is applied to your signal once the key exceeds your threshold. With a short attack, even the quickest transients are caught and compressed. With a longer attack, quick transient peaks will be unaffected but longer sounds will activate it. Adjusting the attack is very useful for tailoring the 'clickyness' or 'softness' of drum sounds.

The **Release** controls the rate at which the compressor stops reducing your signal after the key has dropped below the threshold. It is important to understand the difference between release rate, as determined by this control, and release time. The release rate determines how long it takes for the gain to change by 10 dB, not how long it takes to return to unity gain (no gain reduction).

With a short release the compressor stops reducing your signal almost as soon as the sound drops back under the



The Compressor Interface

threshold. For example, if your signal is being reduced by 5 dB when you have a short release of 20 ms, the compressor will return to unity gain in only 10 ms. A longer release can sound more natural.

Note: If you are unsure of how to set the attack and release controls, then switch on auto timing. When auto timing is selected, the attack and release controls are ignored; instead the attack and release are appropriately fixed for most types of input audio.



In Compressor mode, the **Key Level** meter at the top of the panel shows the raw level of your key. The key level is a good place to start when making adjustments to your threshold, once you have a rough level set here you can use the relative key level LEDs on the left of the interface to fine-tune it. In compressor mode this meter displays either dBFS or dBVU, as set by the scale switch.

The **Gain Reduction** meter at the right of the panel shows the amount of gain reduction applied to your signal. For a finer resolution use the gain reduction LEDs on the left of the interface.

The grid in the centre of the panel has vertical lines of constant key levels in dB, and horizontal lines of constant gain reduction in dB. The red **Dynamics Curve** on this grid shows the gain reduction controlled by your threshold, ratio, and knee settings. This visual aid is designed to help with basic settings decisions before fine-tuning by ear.

The dynamics curve represents the actual gain reduction for a given key level with attack and release times of 0 s. When either of the attack and release times are non-zero, the actual gain reduction may drift vertically from the curve as the attack and release rates are applied to your signal. When the key level passes the threshold and the attack is non-zero, the actual gain reduction can drift above the curve. When the key level drops below the threshold and the release rate is non-zero, the actual gain reduction can drift below the curve.

Traditional View

Click on the grid at the top-right of the dynamics panel to switch between the standard view (which has horizontal lines of constant gain reduction) and **Traditional View** (which has diagonal lines of constant gain reduction). The name traditional view refers to its similarities with the traditional input vs. output display. The Compressor does not display input vs. output since the input does not necessarily have a relationship to the key, and it is the key, not the input, that is driving the gain reduction.



The Compressor Interface

Dynamic EQ Mode

The dynamics panel displayed when using Dynamic EQ mode is shown to the right.

In Dynamic EQ mode, the meter at the top of the panel now displays the **Relative Band Level** in dBr (therefore it is not affected by the dBFS / dBVU scale switch, described on page 13). This level is the relative difference between the broadband key level and the bandpassed key level. The threshold determines the *relative* sound level in the specified band that will cause gain reduction *only within that band*.

The meter to the right now shows the **Band Reduction**, or the amount of gain correction being applied to the dynamic EQ in the main signal chain. The scale of the grid has been reduced since the amount of band reduction when in dynamic EQ mode is limited to 15 dB.

The new graph in the middle of the panel displays a static curve and a moving shaded curve. The static curve shows the maximum possible band reduction produced with your key parametric EQ settings. The moving shaded curve shows the current band reduction being applied to the input signal.

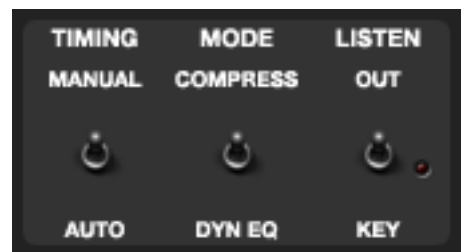


Mode Switches

The **Timing** switch allows you to choose between manual timing, where the attack and release are determined by the attack and release controls in the dynamics panel, or automatic timing where the attack and release are appropriately fixed for most types of input audio. The attack and release controls are ignored when in auto timing mode.

The **Mode** switch changes the mode of the compressor from a traditional Compressor to a Dynamic EQ. Dynamic EQ mode works in a similar manner to a compressor except it only works on a specified band of frequencies. This is especially useful for de-essing and other problem solving tricks.

The **Listen** switch allows you to monitor the key so that you can fine-tune the sound being used to activate the compressor. It is also useful when checking the routing of an external key source into the plug-in. A warning LED is lit when monitoring the key as a reminder to switch back to the output.



Note: For information on selecting an external key see the key parametric EQ section on page 8.

The Compressor Interface



Post-Compression Level

The **Post-Compression Level** shows the peak and RMS level of the signal after the compressor's gain reduction (or dynamic EQ's band reduction) has been applied. This level is displayed in dBFS or dBVU, depending on the setting of the scale switch.



Make-up Gain

The **Make-up Gain**, with its range of ± 24 dB, allows you to compensate for gain loss caused in the compression process. The make-up gain, in conjunction with the peak limiter, have been designed to not cause any clipping of your signal.



Peak Limiter

The **Peak Limiter** is an over-sampled brick wall limiter that will not allow your signal beyond the peak threshold set with the slider. The peak limiter operates without clipping your processed signal. The amount of reduction in dB that the limiter is causing is displayed by the LEDs above the slider.

The meter to the left of the slider displays the pre-peak limiter signal level, and the meter to the right displays the post-peak limiter signal level. These levels are displayed in dBFS or dBVU, depending on the setting of the scale switch.

The Compressor Interface

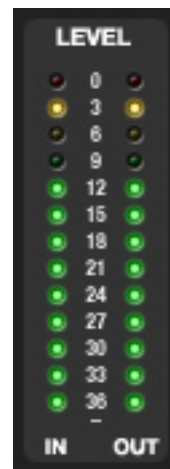
I/O Levels

The **I/O Levels** display the peak and RMS levels of the signals going in to and out of the plug-in. They are useful for ensuring that there is no unintended gain or loss being caused by your settings. These levels are displayed in dBFS or dBVU, depending on the setting of the scale switch.

Scale

The **Scale** switch changes the compressor key, post-compression, peak limiter, and I/O levels from displaying dBFS (full scale), traditionally used in Pro Tools, to dBVU, which is used on the VENUE system. The dBVU scale is an approximation of scale used on traditional VU meters, designed to be more familiar to live sound engineers, where 0 dBVU is the same as -20 dBFS.

This switch is a global preference for all of the Rane Series plug-ins. As soon as you set it, any new Rane Series plug-in that you instantiate will use your new scale setting.



Control Value Editors

The **Control Value Editors** are used to read and edit the value of any control. They are useful for when you know the exact value you want for your control, you can type that value directly into the control value editor, rather than having to accurately adjust the control's slider or knob.

Control values are displayed as 'pages' of up to 3 controls, for example the screenshot here shows a page consisting of the knee, attack, and release controls.

To edit a control, first select it by clicking on its value. You can type in the new value for the control and hit enter or return to send this new value through to the plug-in.

Pressing tab selects the next control value editor in the current page, and pressing shift-tab selects the previous editor.

When none of the control value editors are selected you can cycle through the pages by using the tab key, or shift-tab to cycle through the pages in reverse. The editors also change to display the page containing the last control you have touched.

The Gate Interface



- 1 Relative Key Level** Shows the level of the key relative to the threshold.
- 2 Gain Reduction** Shows the gain reduction applied to your audio signal, as well as whether the gate or ducker is closed or open.
- 3 Key Cut Filters** Allow you to limit the detector's response to a limited range of key frequencies, thereby minimizing false triggering.
- 4 Dynamics Panel** Displays a graph of the gain reduction vs. the key level, as well as having the threshold, depth, ratio, attack, hold, and release controls.
- 5 Mode** The Rane Series Gate has three modes of operation: Gate, Duck and Expand.
- 6 Listen** Allows you to monitor the key.
- 7 I/O Levels** Display the peak and RMS levels going in to and coming out of the plug-in.
- 8 Scale** Switches the key and I/O level scales between dBFS and dBVU.
- 9 Control Value Editors** Allow you to read and edit the value of any control.

The Gate Interface

Relative Key Level

The **Relative Key Level** shows the level of your key relative to the threshold (dBr). The threshold indicator (the yellow TH LED) is lit when the key is at or above the threshold.

Gate and Duck modes use peak detection with instantaneous attack. Expand mode uses RMS detection.

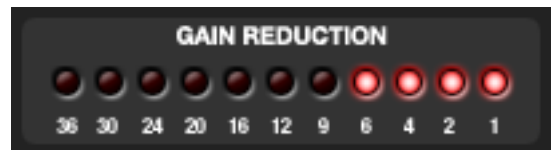
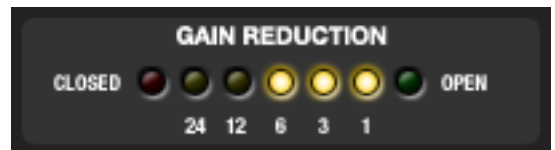


Gain Reduction

The **Gain Reduction** meter displays the amount of gain reduction applied to your input signal, accurately following the attack - hold - release envelope.

In Gate and Duck modes additional open and closed LEDs are displayed. The **Open** LED is lit when no gain reduction is being applied to the signal. The **Closed** LED is lit when the amount of gain reduction being applied is the maximum, therefore it is equal to the depth.

When in Expand mode only the gain reduction LEDs are displayed, as shown to the right.

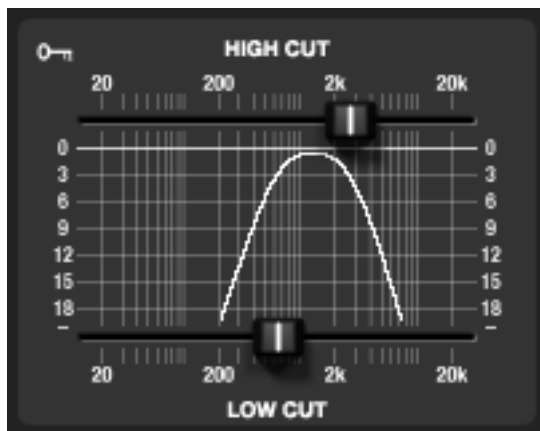


Key Cut Filters

These 12 dB / octave Butterworth **low-cut** and **high-cut filters** are used to limit the detector's response to a particular range of frequencies, thereby minimizing false triggering. For example, removing high frequencies from a kick drum key input could prevent false triggering from cymbal hits or snares, and therefore will produce a cleaner output.

Note: These filters are only applied to the key input, they do not affect the main output.

Note: The key input can either be internal (the audio you are gating) or external (some other signal). By default you are using an internal key; to switch to using an external key simply choose a signal as the key input to the plug-in using your Pro Tools or VENUE menus. By deselecting the key input in Pro Tools or VENUE the Gate will revert to an internal key.



The Gate Interface



Dynamics Panel

The **Dynamics Panel** contains the threshold, depth, ratio, attack, hold, and release controls, alongside a visual representation of the effect the Gate is having on your sound.

Gate and Duck Modes

The screenshot to the left shows this panel when in either Gate or Duck mode.

The **Threshold** slider adjusts the point at which the gate, ducker, or expander is triggered.

In Gate mode, the threshold sets the key level below which the Gate is closed.

In Duck mode, the threshold sets the key level above which the signal is ducked.

In Expand mode, the threshold sets the key level below which downward expansion takes place.

Depth controls the maximum amount of gain reduction that your settings apply. Changing the depth adjusts your sound from a hard gate or duck to a softer or more subtle setting.

In Gate mode, the depth control determines how many dB the signal is attenuated when the key is at or below threshold. In Duck mode, the depth control determines how many dB the signal is ducked when the key is at or above threshold. The depth control is not used in Expand mode, instead it is replaced by a ratio control (see page 18).

In Gate mode, **Attack** determines how quickly the gate opens when the key signal goes above the set threshold. With a setting of 0ms the gate opens (after a short look-ahead) when the threshold is exceeded. A longer attack is useful for getting a smoother sound than the more 'on/off' sound of a short attack.

In Duck mode, attack determines how quickly the signal is ducked as the key signal goes above threshold.

In Expand mode, attack determines the rate of gain increase as the key signal moves toward the set threshold.

Note: The look-ahead delays the main audio signal by 333 μ s while not delaying the key signal. The gate (or ducker) can therefore turn on before the transient you want. The main signal is then turned on using exponential pre-ramping; this means the audio will not click, and it preserves the spectral content of the audio.

In Gate mode, the **Hold** time determines how long the Gate remains open after the key signal drops below threshold. The hold function is very useful for ensuring the decay portion of your sound does not cut off abruptly when the signal drops, this is especially useful on sounds like tom drums where the initial transient opens the gate but you don't want it to close while the body of the sound is still being produced. The hold time is reasserted whenever the peak signal moves above the threshold.

In Duck mode, hold determines how long the signal remains ducked when the key input drops below threshold.

The Gate Interface

The hold control has no effect in Expand mode.

In Gate mode, the **Release** control determines how quickly the gate closes as the key signal drops below threshold, after the hold time is complete. Shorter settings are more suitable for quick and hard gating effects, while a slower release rate allows for a more natural decay of your sound.

In Duck mode, the release determines how quickly the signal is ramped up when the key signal drops below threshold.

In Expand mode, the release determines how quickly the signal is turned down as the key signal moves below threshold.

The **Key Level** meter at the top of the panel shows the raw level of your key. The key level is a good place to start when making adjustments to your threshold, once you have a rough level set here you can use the relative key level LEDs on the left of the interface to fine-tune it. This meter displays either dBFS or dBVU as set by the scale switch.

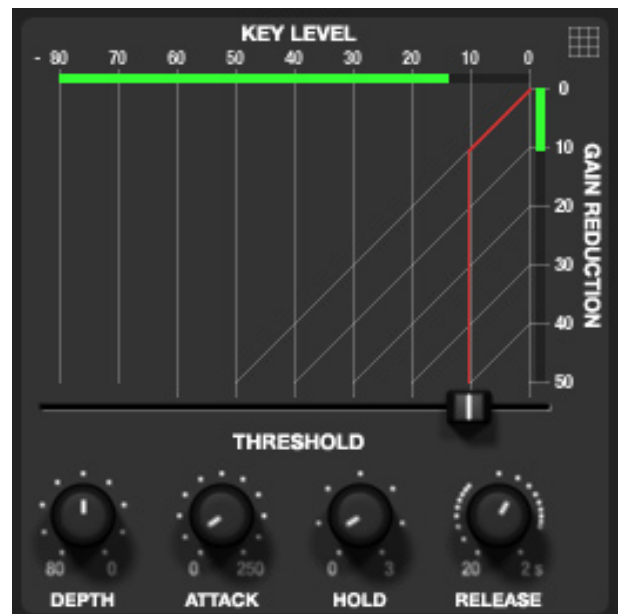
The **Gain Reduction** meter at the right of the panel shows the amount of gain reduction applied to your signal. For a finer resolution use the gain reduction LEDs on the left of the interface.

The grid in the centre of the panel has vertical lines of constant key levels in dB, and horizontal lines of constant gain reduction in dB. The red **Dynamics Curve** on this grid shows the gain reduction controlled by your threshold and depth and ratio settings. This visual aid is designed to help with basic settings decisions before fine-tuning by ear.

The dynamics curve represents the actual gain reduction for a given key level, with attack, hold, and release times of 0 s. When either of these controls are non-zero the actual gain reduction will drift vertically from the curve as the attack and release rates are applied to your signal. The following applies to Gate and Duck modes. When the key level passes the threshold and the attack is non-zero, the actual gain reduction can drift between the depth and 0 dB. When the key level drops below the threshold, and the hold or release times are non-zero, the actual gain reduction can drift between the depth and 0 dB.

Traditional View

Click on the grid at the top-right of the dynamics panel to switch between the standard view (which has horizontal lines of constant gain reduction) and **Traditional View** (which has diagonal lines of constant gain reduction). The name traditional view refers to its similarities with the traditional input vs. output display. The Gate does not display input vs. output since the input does not necessarily have a relationship to the key, and it is the key, not the input, that is driving the gain reduction.



The Gate Interface

Expand Mode

Switching to Expand mode reveals a **Ratio** control. This indicates the ratio of gain reduction change to key level change when the key is at or below threshold. For example, with a ratio of 4:1, the gain reduction increases 4 dB for every 1 dB the key moves below away from the threshold.

The ratio control is not used in Gate or Duck mode.

The **Hold** control also has no affect in Expand mode. As soon as the key level drops below the threshold, the gain reduction will start decaying at the release rate.



Mode

The **Mode** panel is used to switch between Gate, Duck, and Expand modes. The currently selected mode is displayed by the lit green LED.

Gate mode applies gain reduction to your signal when the key is below the threshold. It is most useful in situations like removing room noise from a drum recording.

Duck mode applies gain reduction to your signal when the key exceeds your threshold. Duck mode is commonly mostly to make a music track quiet when someone speaks into a microphone. Used carefully, ducking allows for many creative mixing possibilities such as using the level of your kick drum mic to duck the level of your ambient room mic for a clearer kick recording.

Expand mode applies progressively more gain reduction as the key drops below the threshold. It is useful for bringing back dynamics to an otherwise lack lustre sound. For example, a vocalist who doesn't have a good dynamic range can be brought to life with careful use of an expander.



Listen

Listen switches between listening to the output produced by the gate and listenening to the key. This allows you to check your key cut filter settings, and if you're using an external key, you can make sure the right input is feeding the key. A warning LED is lit when monitoring the key as a reminder to switch back to the output.

Note: For information on selecting an external key see the key cut filters section on page 15.

The Gate Interface

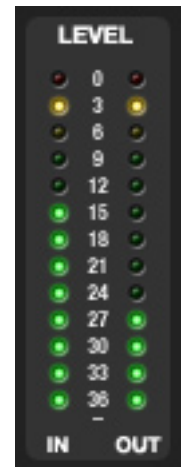
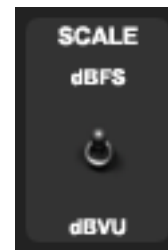
I/O Levels

The **I/O Levels** display the peak and RMS levels of the signals going in to and out of the plug-in. They are useful for ensuring that there is no unintended gain or loss being caused by your settings. These levels are displayed in dBFS or dBVU, depending on the setting of the scale switch.

Scale

The **Scale** switch changes the I/O Levels from displaying dBFS (full scale), traditionally used in Pro Tools, to dBVU, which is used on the VENUE system. The dBVU scale is an approximation of scale used on traditional VU meters, designed to be more familiar to live sound engineers, where 0 dBVU is the same as -20 dBFS.

This switch is a global preference for all of the Rane Series plug-ins. As soon as you set it, any new Rane Series plug-in that you instantiate will use your new scale setting.



Control Value Editors

The **Control Value Editors** are used to read and edit the value of any control. They are useful for when you know the exact value you want for your control, you can type that value directly into the control value editor, rather than having to accurately adjust the control's slider or knob.

Control values are displayed as 'pages' of up to 3 controls, for example the screenshot here shows a page consisting of the key low- and high-cut filters.

To edit a control, first select it by clicking on its value. You can type in the new value for the control and hit enter or return to send this new value through to the plug-in.

Pressing tab selects the next control value editor in the current page, and pressing shift-tab selects the previous editor.

When none of the control value editors are selected you can cycle through the pages by using the tab key, or shift-tab to cycle through the pages in reverse. The editors also change to display the page containing the last control you have touched.

Appendix A - Shortcuts

Mac Shortcut	Windows Shortcut (if different)	Action
Option-clicking a slider or knob	Alt-clicking a slider or knob	Resets the control to its default value.
Command-dragging a slider or knob	Control-dragging a slider or knob	Moves the control in 'fine' increments.
Pressing tab or shift-tab		When no control value editor is selected, tab cycles to the next 'page' of control values, and shift-tab cycles to the previous page. When a control value editor is selected, tab will advance from one text entry field to the next, and shift tab moves backwards through the text fields. If the contents of the field have been altered the new value will be accepted by the plug-in.
Pressing return in a control value editor		Enters the new value into the plug-in and deselects the editor.
Pressing enter in a control value editor		Enters the new value into the plug-in and leaves the editor active to allow continued editing from the keyboard.