

# WAVES

# BASS RIDER

## USER GUIDE



## TABLE OF CONTENTS

Chapter 1 – Introduction.....	3
1.1 Welcome.....	3
1.2 Product Overview .....	3
1.3 Concepts and Terminology.....	4
1.4 Components .....	5
Chapter 2 – Quick Start Guide .....	6
Chapter 3 – Interface and Controls .....	7
3.1 Interface.....	7
3.2 Controls .....	8
3.3 WaveSystem Toolbar.....	10

# Chapter 1 – Introduction

## 1.1 Welcome

Thank you for choosing Waves! In order to get the most out of your new Waves plugin, please take a moment to read this user guide.

To install software and manage your licenses, you need to have a free Waves account. Sign up at [www.waves.com](http://www.waves.com). With a Waves account you can keep track of your products, renew your Waves Update Plan, participate in bonus programs, and keep up to date with important information.

We suggest that you become familiar with the Waves Support pages: [www.waves.com/support](http://www.waves.com/support). There are technical articles about installation, troubleshooting, specifications, and more. Plus, you'll find company contact information and Waves Support news.

## 1.2 Product Overview

Bass Rider is an innovative, easy-to-use plugin that rides bass levels automatically. A companion to our popular Vocal Rider plugin, Bass Rider delivers perfect bass levels, without changing the natural sound of your bass. Optimized especially for the frequency range and envelope characteristics of bass instruments, Bass Rider covers all the basses: DI, amplified, acoustic, synth, upright—you name it.

A real timesaver with dedicated studio and live components, Bass Rider keeps bass levels in check and solid throughout your mix. Unlike a compressor, Bass Rider works note by note, without disturbing their inner dynamics, so they sustain and decay naturally. Best of all, since Bass Rider keeps your levels steady with automatic gain adjustment, now you can focus on the feel and flow of your bass—and use compression to add color and character.

With Bass Rider, you'll never mix bass the same way again.

## 1.3 Concepts and Terminology

In contemporary music, the bass usually helps form the foundation of a mix. However, bass is also regarded as one of the hardest parts of the mix to “get right.” Taming bass levels can be tricky, as they are naturally very dynamic. Therefore, some sort of bass leveling is often required. Bass frequencies often vary in the power they produce, and behave in ways that may seem counter-intuitive. For example, a C1 note will generate much more energy than a C3, even though the C3 is perceived as louder. The most common way to compensate for different bass levels is to heavily compress the signal. However, heavy compression reduces the overall dynamic range of the bass, since louder notes are “squashed,” while quieter notes are compressed less, and note attacks may “smear,” while note sustains can “swell.”

So, we studied how contemporary mixers keep their bass levels steady, and found that many first prepare their bass tracks by manually adjusting overly quiet or loud notes in order to avoid the artifacts of over-compression. However, this is a very time-consuming approach. Bass Rider offers a quicker way to deal with the dynamic range of bass instruments, by detecting notes and their envelopes, and automatically adjusting the gain of each note to a specified level.

### Target

The Target Fader is used to set the desired bass level range. To achieve the most transparent results, we recommend setting it to around the average level of your bass input. Higher Target values will result in more added gain and higher overall loudness. It's also important to keep in mind that gain applied to quiet notes also boosts any noise accompanying the note. Use the Output Fader to adjust the overall output level for mix positioning.

### Note Detection

Note Detection is the process by which Bass Rider detects note attack, sustain, and release in order to determine the appropriate gain leveling for each note. Bass Rider's

default settings are generally effective on a wide variety of material. In cases when fine-tuning is necessary, use the note detection Sensitivity and Response controls located under the Target fader.

### **Artifacts**

In this plugin, Artifacts is the term we use to describe parts of the signal that trigger detection, but are not in part of the note we want to ride. Artifacts may include string buzz, amp crackles, transient noises, squeaks, and even modulation within individual notes.

### **Spill**

When riding mic'd sources, some spill from other instruments may make its way into the bass signal. This spill may be detected as notes, and its gain increased. Use the Ignore Spill control to help avoid the detection of spill signal.

## **1.4 Components**

WaveShell technology enables us to split Waves processors into smaller plugins, which we call **components**. Having a choice of components for a particular processor gives you the flexibility to choose the configuration best suited to your material.

Waves Bass Rider includes two components each in 2 channel configurations:

- Bass Rider, Mono and Stereo
- Bass Rider Live, Mono and Stereo

Mono and Stereo Components have a latency of 42ms and have a round, transparent sound; Live Mono and Stereo components have only a 5ms latency and add a little punch to note start events.

## Chapter 2 – Quick Start Guide

Since Bass Rider delivers best results signals with minimal processing, we recommend using it prior to applying EQ or compression.

- Insert Bass Rider on your bass track.
- Begin playing your song and watch the energy meter shown on the Target Energy Meter.
- Set the Target Slider within the action area so that loud notes go a little outside it.
- Now, solo your bass track and check that all notes are detected.
- If notes are missed, increase the Sensitivity setting and set Response to Fast. If string noise, buzz, etc. are being unintentionally detected as notes, increase the Artifacts setting.
- The main Rider fader will move automatically, leveling your bass.
- Un-solo the bass track and set its overall level using the Output fader.
- Limit the amount of automatic gain change by setting the Min/Max Range faders.

Here are some solutions to common issues you may encounter:

Problem	Solution
Soft notes that follow loud notes are not detected.	Increase the Sensitivity level, set Response to Fast.
Artifacts are detected as new notes during the sustain portion of long notes.	Increase the Artifacts level.
Fret/string noise and/or ghost notes are detected and amplified.	Increase the Artifacts level.
Background noises are detected and amplified.	Increase the Spill level.

## Chapter 3 – Interface and Controls

### 3.1 Interface



## 3.2 Controls

- 1) **TARGET ENERGY METER** shows the energy of the input signal.

Range: 0 to -42 dBFS

- 2) **TARGET SLIDER** sets the desired bass level range and calibrates the Rider Fader “0” position. We recommend setting the target to around the average level of the input.

Range: 0 to -42 dBFS

Default: -14

- 3) **NOTE DETECT SENSITIVITY** controls the note detector sensitivity. Higher values detect more notes; lower values detect fewer individual notes.

Range: 0 to 100

Default: 50

- 4) **NOTE DETECT RESPONSE** controls the note detector response. Once a note is detected, this value determines when the detector resets for the next note. Slow response is calibrated for long note releases; fast response is calibrated for short note releases

Range: Slow or Fast

Default: Slow



**5) IGNORE SPILL** controls the amount of spill that the detector should ignore.

Range: -50 to -3 dBFS

Default: -40 dBFS

**6) IGNORE ARTIFACTS** controls the note detector's tolerance to artifacts. Lower values ignore fewer artifacts; higher values ignore more artifacts, which may require re-adjustment of Note Sensitivity.

Range: 0 - 100

Default: 50

**7) MAX RANGE** sets the upper boundary of the Rider Fader movement range.

Range: -11 to +12 dB

Default: +12

**8) MIN RANGE** sets the lower boundary of the Rider Fader movement range.

Range: -12 to +11 dB

Default: -12

**9) RIDER FADER** is Bass Rider's automatic control, which moves according to the internal detectors' algorithm to level-out the bass signal, similar to manual fader riding. The Rider Fader can be moved by the mouse for manual gain adjustment; when the mouse is released, automatic riding will resume.

Range: -12 to +12 dB

Default: Idle value

**10) OUTPUT** trims the bass output gain, post-auto riding; the Clip LED shows when output is clipping.

Range: -12 to +12 dB

Default: 0

**11) IDLE ARROW** sets the Rider Fader value when there is no bass activity.

Typically, it is in the middle of the range, to avoid drastic gain changes between passages.

Range: -12 to +12 dB

Default: 0

**12) EFFECTIVE RANGE** displays the total gain range available for automatic riding.

Range: 1 to 24 dB

Default: 24

### 3.3 WaveSystem Toolbar

Use the bar at the top of the plugin to save and load presets, compare settings, undo and redo steps, and resize the plugin. To learn more, click the icon at the upper-right corner of the window and open the WaveSystem Guide.