Bass Slapper

User Guide

Waves Bass Slapper User Guide

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Welcome

Thank you for choosing Waves. In order to get the most out of your Waves processor, please take some time to read this user guide. We also suggest that you become familiar with www.waves.com/support. There you will find an extensive answer base, the latest tech specs, detailed installation guides, new software updates, and current information on licensing and registration. Sign up at the support site and you will receive personalized information about your registered products, reminders when updates are available, and information on your authorization status.

Introduction

Bass Slapper is a sample-based virtual instrument that enables you to play a bass guitar on a MIDI keyboard. It provides a uniquely realistic bass sound by playing notes the way a seasoned bass player would play them—not just the notes, but also the correct position on the fretboard with the corresponding articulation preference. This produces natural-sounding samples without the need for manual layer selections. There's an extensive library of high-resolution samples, chosen and recorded carefully in a way that best captures the essence and sound signature of the slap bass technique.

Bass Slapper is powered by the Waves Sampler Engine (WSE), a state-of-the-art multi-sample engine designed to deliver solid, high-quality sampler performance. It provides a multitude of sound processing options, which range from shaping the core sample tone to selecting among modulation and spatial effects that are carefully designed for Bass Slapper.

Acknowledgment

All samples were recorded by Or Lubianiker, a highly-regarded live and session bass player. The samples were recorded with Or's signature sound in mind, using his choice of bass, strings, and preamps. His profound technical understanding of slap technique formed the base for the legato and articulation systems, and shaped the sound of the sample library.

What is Slap Bass?

Slap Bass, or "Slapping," is a bass-playing technique that focuses on the percussive nature of the sounds generated by a string rebounding against the frets. Bassists use the side of their thumb to strike the strings and their index or middle fingers to pull the strings and bounce them against the frets, resulting in a sharp attack followed by a quick decay. This, in some ways, resembles both bass drum and snare sounds. Slapping was made famous in the 70s funk, disco, and pop scenes by accomplished bassists such as Larry Graham, Louis Johnson and Bootsy Collins.

Over the years, Slapping has become a rich discipline on its own right and a distinct sound that accompanies every genre, from timeless pop songs to jazz and fusion compositions.

The Sample Library

The sample library contains over 3700 samples, all of which are designed to give you the most extensive and rich slap vocabulary possible.
The library contains these sample categories:

- Slap samples
- Pull with the 1st and 2nd fingers samples
- Hammer On and Pull Off (legato) samples
- Percussive samples
- Release samples
- Slides and special effects samples

All of these were recorded with several velocity layers and round robin samples.

There are two identical Bass Slapper sample libraries: Standard and High Definition. The main difference is the quality, and therefore the size, of the files. Let's say you're creating your sound at home on a laptop—where storage may be limited—but you will mix on a large rig in a studio. You may choose to use the SD library at home and then load the HD samples when you mix. All programming is maintained when changing between libraries.

Components

Bass Slapper is a stereo-only virtual instrument plugin. It appears under the related selection menus for virtual instruments under all supported DAW host applications. Bass Slapper also works as a standalone application, using ASIO (Windows) or Core Audio (Mac) drivers to play through your audio device. Bass Slapper receives MIDI data to trigger notes and control changes.

In addition to the plugin, there is a free-standing Bass Slapper application.

Functional Block/Flow Diagram
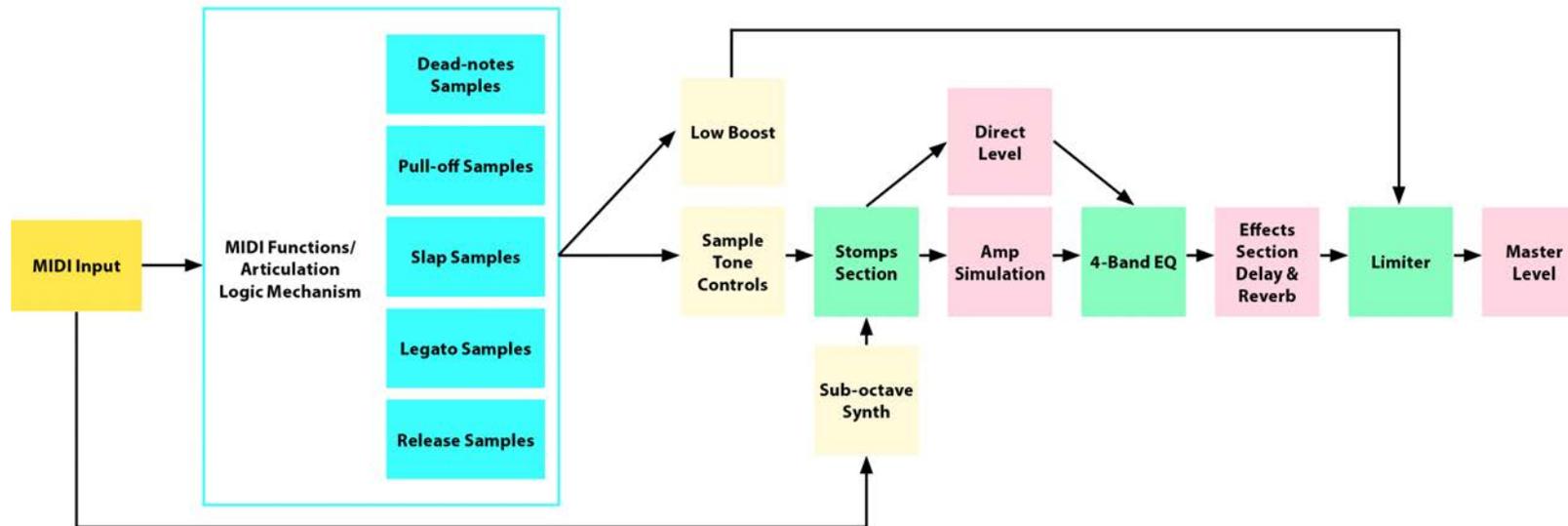
Getting Started

Bass Slapper is easy to use, and you can undoubtedly learn to use it without our help. There are many different ways to use it and you will quickly come up with a way that's perfect for you. But while you're getting started, we suggest you use the work sequence we describe below. Once you're comfortable using Bass Slapper, arrange your workflow any way you like.

By default, Bass Slapper opens with the FX section hidden. Click on the + (plus) button on the bottom left to reveal the FX processors.

1. Insert the Bass Slapper plugin on an instrument track in your DAW, or launch the standalone application. The plugin will load its default preset and will be ready for you to use.
2. Play a few notes and explore the basic tone controls, which are located on the body of the bass.
3. Refine the tone and timbre of the sound with the Fretboard Position control. This moves the playing position up and down the fretboard.
4. Use the FX sections to sculpt your bass sound. Click on the + (plus) beneath the fretboard to reveal these pedalboard processors.
5. Set the Velocity Curve control to adjust your keyboard, in order to get the feel you like. This control is in the MIDI section. Once you're happy with the keyboard touch, you can uncheck the VEL (velocity) box in the top bar. This prevents the velocity setting from changing when a preset is loaded.

Navigating the Presets

Bass Slapper presets are managed with the WaveSystem Toolbar at the top of the window. Use the Next/Previous preset arrows on the Toolbar to scroll through presets. Click the Load button to see all presets. Refer to the WaveSystem Toolbar User Guide for more information at http://www.waves.com/downloads/manuals.

Selecting the Samples Folder

When you first launch the standalone application or instantiate the plugin, you will likely see a prompt, "Please locate your Waves Instrument's Samples Library folder." Navigate to the folder that holds your sample library and click OK. This path will be saved with the plugin preferences. Information about the samples folder is shown in the WaveSystem toolbar. To select a different sample folder, click on the Samples Library bar and navigate to the desired folder. The folder must contain valid Waves sampled instrument files with the WSF resource, otherwise the OK button will be grayed out. This new selection replaces the existing folder location preference.

Interface and Controls

1. Tone Function Controls
2. EQ and Levels Controls
3. Power Controls
4. Fretboard Position Selector
5. Active Position Range
6. Access Keyswitch Editor
7. MIDI Section
8. Articulaton Control
9. FX Pre
10. FX Post

Tone Section

The tone section contains the controls that affect basic sample sound and articulation. All controls are on the body of the bass.
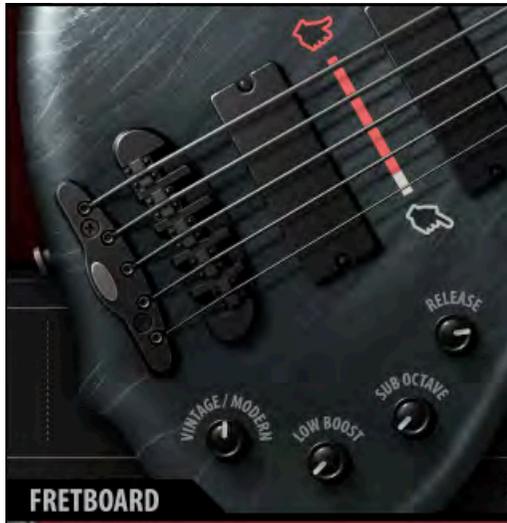
Slap/Pull
This control is depicted as a slider beneath the strings on the body of the bass. It controls which articulation (Slap or Pull) will play as default across a selected range of strings. For example, when the D String is chosen, all samples played on the D and G strings will be "Pull" samples, while the rest will be "Slap" samples. We recommend that you set this slider on the 4th string (D) as your initial setting and experiment from there.

Vintage/Modern
The effect of this control ranges from a warm vintage tone with a rich low end (knob turned all the way to the left) to a detailed, punchy sound fit for a modern production (knob turned all the way to the right). This is an easy way to dial in a suitable basic tone for the samples that are going into the processing chain.

Low Boost

The Low Boost knob enhances the bass and sub frequencies of the sample without sending them into the processing chain. This results in a consistent and coherent low-end response, even with presets that drastically change the sound of the sample— such as using multiple stomps and effects

Sub Octave

A sub-octave synth layer that tracks and changes in tone according to the range. This layer is sent to the processing chain and is affected by all of the modulation and effects in the instrument. It can enrich any bass line and it offers many creative sound design possibilities.

Release

Release samples are the artifacts and mechanical noises that a real bass produces when the musician either stops a note or moves to a new one. These samples are triggered at the very end of every sample. Each note has a unique release sample, which has been sampled at every velocity and that will be played upon releasing its key.

EQ Controls

The EQ section features a four-band EQ with Bass, Low Mid, High Mid, and Treble boost/cut controls. In the processing chain, the EQ is positioned between the "Stomps" and "Effects" sections of the pedalboard.

Levels Controls

The Levels section contains four knobs, each of which controls a different aspect of the instrument's output sound.

Direct
This controls the level of the direct sound—the sample played through the processing chain without amp simulation.

Amp
This is the level of amp simulation. This signal path goes through the same process as the Direct signal, but ends in an amp simulation module that shapes the tone as would an 8x10 cabinet. The Amp simulation path is parallel to and independent of the DI level. It has different frequency response and compression than does the Direct signal.

We recommended that you begin by choosing either the amp or the direct as the main tone, and then slowly mixing between the two to find the right balance.

Limiter

The Limiter knob controls the threshold of the output limiter. Higher settings yield more gain reduction.

Output

This controls the output level of the instrument.

Power Controls

The power section contains five toggle buttons that allow you to deactivate the Tone, Pre FX, Amp, Post FX, and Limiter sections separately. Deactivating modules decreases CPU load and may improve performance. This is particularly useful in CPU-heavy projects with lots of plugins: projects where every bit of power matters.

Fretboard and Position Controls

The Fretboard section features a 24-fret, 5-string bass guitar neck with a position indicator (a 5-fret range, highlighted red) and note displays. Playing a note triggers a visual indication on the fretboard that marks the exact position of the sampled note. Clicking a string on any fret will show the selected note.

Position Selector

There are eleven numbers above the fretboard; together these make up the Position Selector. Each selection represents a five-fret range in which selected notes will be played in compliance with how a bass player actually performs. Strings share some of the same notes. This selector gives the user a way to explore the tonal variations that come from playing the same line using different note positions and articulations.

We suggest that you adjust this setting to a value that associates with the pitch range of the notes being played in order to ensure that the sampler triggers proper legato and articulation selections that sound natural within that range. Experiment with this control and listen to the multitude of tonal options it introduces to any bass line. Different settings can result in drastically different sounding lines.

Dead-notes Trigger
This button changes every note on the keyboard to a corresponding dead-note sample, according to its location on the fretboard, and in compliance with the articulation settings (Slap/Pull and Position settings). This is like a bass player muting the strings with his left hand; a very common technique in "Slapping."

This control is not automatable, but it is MIDI assignable.

Keyswitch Editor
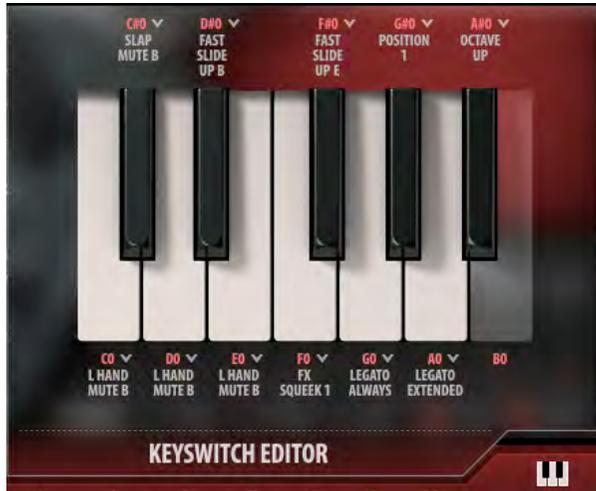
Use the Keyswitch Editor to assign specific samples and articulation controls to the keys of the lowest octave (C0–B0). These keys are not otherwise used, so assignments do no not affect playing samples. To access the editor, click on the Keyboard icon located just above the fretboard. The editor opens with the factory setup. To modify these settings, click the down arrow next to a note label, and then choose an assignment from the dropdown menu.

When using a keyswitch that's assigned to **articulation** controls, you should first hold the keyswitch, and *then* play a note. Keyswitches that are assigned to **samples** function like all other keys; they are sensitive to note velocity. For example, assigning the "All Slap" articulation to the key A0 means that every note will play as a "Slap," as long as A0 is held.
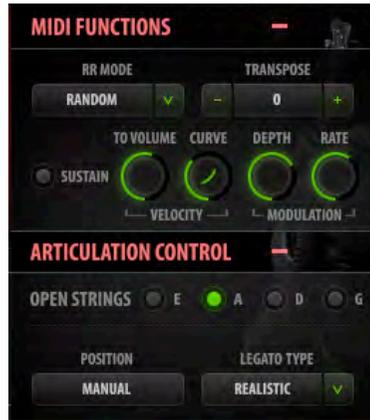
MIDI Functions/Articulation Section

The MIDI Functions/Articulation Section contains controls that manage basic functions: velocity behavior, round robin order, transposition, and sustain pedal activation. Click on the **+** (plus) symbol to expose a section.

Window Collapsed   Window Expanded

Round Robin Mode

Controls round robin playback order**:** forward, reverse, and random playback of round robin samples. When the Round Robin Mode is switched off, the longest available sample will always play.

Transpose

Adds pitch offset to the incoming MIDI notes in semitones from -24 to +24.

Velocity to Volume

Determines the extent to which velocity layers will differ in playback volume. When this knob set to 0, all velocity layers will play at their original levels. When set to 10, the velocity layers will vary drastically in volume.

Velocity Curve

The Velocity Curve control changes the curve of the velocity response from logarithmic to exponential. Use it to adjust the feel of your MIDI keyboard.

Modulation

Modulation controls the depth and rate of pitch modulation. Higher Depth settings result in a wider range of movement between pitch values below and above the sample. The modulation rate determines how fast or slow it will move between the values. Modulation depth is, by default, mapped to the modulation wheel on the keyboard.

Sustain Pedal Button

The Sustain Pedal button activates/deactivates the sustain pedal. The Sustain LED lights when the sustain pedal is in use.

Open Strings

The Open Strings section contains four toggle buttons that force the sampler trigger to an open string sample as default when played at the corresponding open string pitch (E1 A1 D2 G2), regardless of the Position setting. This control was added to accommodate for playing a line against an open string the same way many bass players would do if asked to play in one of the open string keys (B E A D G). Prioritizing the open string sample makes sure that the open string pitches are always heard at their best possible tone.

Legato Type

The Legato Type control enables control over triggering the legato samples.

Realistic

- The instrument uses the Position settings to generate legato or non-legato samples, according to the context. For example, when playing a new note on the same string as the previous one, Bass Slapper will mute the played note, since on a real bass it is not possible to play two notes simultaneously on the same string.

Extended

- This mode allows you to trigger legato samples on the same string, beyond the fret range as determined by the position selector. This mode can enhance the legato system when playing phrases with extended legato ranges.

Force Legato

- While this mode is on, the sample engine will trigger legato samples, disregarding realistic limitations or particular strings. This allows the user to play continuous hammer on/pull off samples across strings in a way that's not possible on a real bass guitar. This type of legato resembles the sound of a player constantly "tapping" the bass.

Always

- This mode will always trigger the legato samples, even when the notes played do not overlap. This mode will avoid triggering both slap and pull samples, making the overall sound of the instrument much softer.

Off (Polyphonic)

- Turning Legato Type off allows playing to every note with no legato rules whatsoever. This mode will essentially make the instrument polyphonic, with the ability to play all notes at the same time (even on the same string). This produces a synth-like feel.

Position

The Position switch sets the playing position on the fretboard. Changing positon affects the tone and timbre of a played note.

- **Manual** – The Position setting remains the same, even if notes outside of the position range are played. This allows you to play inside a fret range to maintain realistic sample playback behavior. In the Manual mode, it's useful to assign the Position Slider to a MIDI control or to Keyswitches.

- **Adaptive** –The Position changes based on the notes played. Use this mode to explore the variations in tone across the fretboard without manually changing the active position. When a note is played outside the current range, the position will shift accordingly. The next notes to play will be in this new position range. The Position Slider is inactive in the Adaptive mode.

Pedalboard

The pedalboard contains seven pedals that can be activated either separately or in combination, offering many sound design options. The first five pedals are pre-amplifier in the signal flow; the last two occur post-amplifier.

Pre-Amplifier Processors   Post-Amplifier Processors

FX Pre

The FX-Pre section consists of five pedals, wired in the following order: Compressor, Overdrive, Wah, Phaser, and Chorus. These effects were designed specifically to complement the Slapping technique. Each pedal has parameter controls and a bypass button, and is suitable for live use or automation.

Compressor

This is a standard compressor with Amount and Ratio knobs.
- **Amount** is used to set how much of the signal will be compressed
- **Ratio** determines the amount of compression.

Overdrive

- This is a parallel overdrive that features Mix and Gain knobs, as well as a Hi-Gain switch.
- The **Mix** knob sets the balance between the clean and driven signal.
- **Gain** controls the amount of distortion.
- The **Hi Gain** switch boosts the gain further, allowing for a wider spectrum of driven tones.

Wah

This is a two-in-one "Wah" pedal that can follow the playing dynamics as well as the set values of Speed and Sens.

- **Trigger** selects between the two filter modes:
  - **In**: Filter envelope will respond to the incoming audio signal (velocity sensitive).
  - **Key**: Filter envelope will be triggered based on incoming MIDI notes.
- **Mix** sets the balance between clean and filtered signal.
- **Freq** sets the cutoff frequency for the filter.
- **Sens** determines how sensitive the filter is to dynamics (Input mode) or the depth of the envelope (Key mode).
- **Res** is used to sharpen or flatten the cutoff response.
- **Attack** controls how long it takes for the filter to open.

Phaser

This is a parallel phaser pedal with Mix, Depth, and Rate controls.

- **Mix** controls the balance between the dry and wet signals
- **Depth** controls the amount of modulation.
- **Rate** determines the speed of the modulation.

Chorus

This is a parallel chorus pedal with Mix and Depth knobs.

- **Mix** blends in the processed signal.
- **Depth** determines the amount of modulation.

FX Post

The FX Post section contains delay and reverb pedals, each with parameter controls and a bypass button.

Delay

A delay pedal with Mix, Feedback, and Time knobs

- The **Mix** knob controls the balance between the Dry and the Wet signals.
- The **Feedback** (FDBK) knob determines the time it takes for the repeats to decay.
- The **Time** knob provides control over delay time in Sync rates (such as ¼ note) or Free rates (in milliseconds), using the same knob. The middle position, 12 o'clock, is the slowest Free value. Turning the knob clockwise from this position increases the rate. When the knob setting is less than 12 o'clock, values are defined with respect to the host. Turning the knob counterclockwise increases the rate through musical note values related to the host's BPM.

Reverb

A parallel reverb pedal that features Mix and Time controls.

- The **Mix** knob controls the balance between the Dry and the Wet signals.
- The **Time** knob determines how long it will take for the reverb to decay.

Output Clip Indicator

On the right side of the display is an output level indicator. The meter is not scaled, but it indicates if your output level is particularly high or low so that you can adjust your controls accordingly. On the top of the meter is an output clipping indicator that glows red if a clip has occurred. Click on the light to reset.

Bass Slapper Standalone Application

The Bass Slapper application can be used as a standalone instrument. It requires ASIO drivers for Windows or Core Audio for Mac OS X. Bass Slapper.exe (Win) or Bass Slapper.app (Mac) loads the Bass Slapper instrument and configuration preferences dialogs.

The standalone application's menu file contains three items:

• All Notes Off   Sends an All-Notes-Off MIDI command to Bass Slapper. This is useful in cases of "stuck" sustaining notes.

• Preferences   Displays the Preferences dialog for the Audio, MIDI, and User Choices configurations.

• Exit   Quits the application.

The Preferences Dialog

The preferences dialog allows configuration of Audio, MIDI, and User Choices.
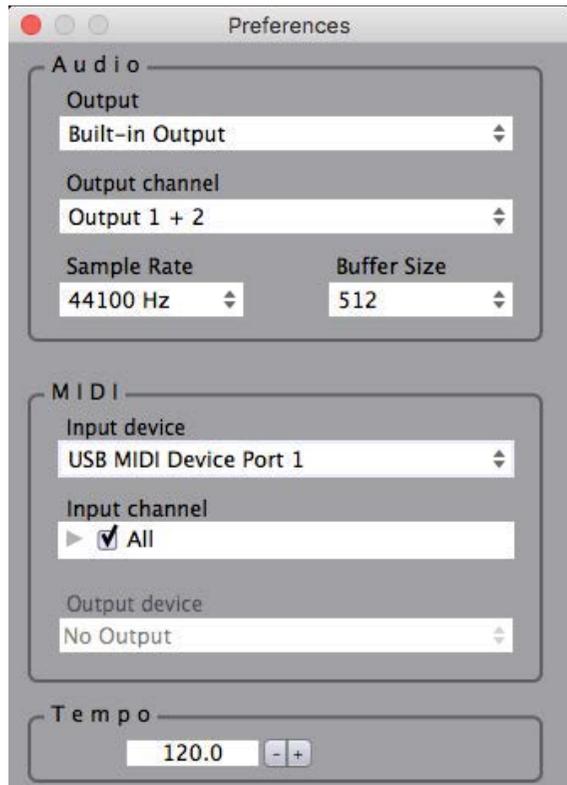
Audio provides control over the following parameters:

> **Device** displays the audio devices available on the system. **Output Channels** allows selection of audio outputs from the selected device.
>
> **Sample Rate** is used to select sample rate.
>
> **Buffer Size** is used to display/select buffer size.

MIDI provides control over the following parameters:

> **MIDI Input device** displays a list of available MIDI input devices on the current system. Select the MIDI device for receiving MIDI data.
>
> **Input Channel:** The Clavinet standalone is ready to receive MIDI in OMNI mode from all channels. The MIDI Channel Control allows the selected MIDI device to receive MIDI input only from certain channels, as selected in the checkboxes.

Windows Users: To apply sample rate and buffer size settings you must close the application.