

The background of the entire page consists of a series of concentric circles in various shades of green, creating a hypnotic, tunnel-like effect that draws the eye towards the center. The circles are centered and expand outwards to the edges of the frame.

BROOMSTICKBASS

Documentation for the demoverison by Sven Bornemark

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I wish to thank you for your interest in this demoverision of our software. I'm Sven Bornemark, musician and creator of BROOMSTICK**BASS**. I dreamt up this virtual instrument and my gifted colleagues helped me realise it. We all hope you'll find it useful.

Please take your time and check out the possibilities. Don't expect to fully understand every aspect of our instrument after only two minutes – it may take three.

If you run into problems – either computer related or if you're having problems getting the most out of our product – don't hesitate to call for assistance at one of these two places:

www.mi7.com

www.bornemark.se

Welcome to my world of musical tools!



What is BROOMSTICKBASS?

BROOMSTICK**BASS** is a virtual instrument that's split into three sections:

- **The Auto player**, where you can use any of the over 100 musical styles included. Play chords that suit your song and BROOMSTICK**BASS** will deliver bass lines.
- **The Instrument vault**, where you can choose from a vast amount of sampled bass instruments in four categories: acoustic, electric, keyboard and pedal.
- **The DSP section**, with fine effects specially tuned for bass, that let you enhance your bass sounds and even go a bit over the top.



What to expect from **BROOMSTICKBASS**?

Certain musicians, like a guitarist or a percussionist, play repeated phrases throughout a song. In many ways, bass playing is similar to that.

Repeating patterns – in this case bass lines – lend themselves well to computerisation. Given enough variations and controllability, a piece of software like **BROOMSTICKBASS** can function like a live bassist. You'll have to learn how to steer this virtual instrument in the direction you want, and that isn't too complicated.

Don't expect **BROOMSTICKBASS** to compose your songs for you or even arrange them. It takes the skill and ingenuity of a live musician to do that. But if it's inspiration and functionality you're after, you've come to the right place.

This demoverison of **BROOMSTICKBASS** has only a handful of styles (the retail version has over one hundred of them) and two basses (the full version has over twenty with more available as free downloads in the future). You may start by looking in the styles list (with the link button lit) for a suitable pattern. By playing chords (even simple one-finger chords) you can lay down a bass track in minutes.

Once that's been done, you may want to tweak the sound or even change the instrument. Or dig deeper into the newly created MIDI part and edit certain notes. None of this is very difficult. We have tried to make the whole process as easy and intuitive as possible.

So – expect to be entertained and even a bit surprised. Expect a new way of laying down a cool bass line. Expect a short learning curve and an instrument to grow with, both in terms of musical understanding and expandability.

And expect a bit of fun!

After installation, it is a good idea to make sure that BROOMSTICK**BASS** is properly set up and ready to play:

1. Load BROOMSTICK**BASS** as a VST Instrument. Make sure BROOMSTICK**BASS** is chosen as an output from a MIDI track and that the MIDI channel is set to channel 1. If required, make sure your external MIDI keyboard is routed to this track.
2. Open the BROOMSTICK**BASS** window. Make sure the Auto button is pressed and that the Link button is active (the small, green triangular light should be on). Now, click in the Style window to load a Style.
3. Adjust the tempo of your sequencer so that it falls into the BPM range given in the Range window. (You don't **have** to do this, but it probably helps you appreciate the styles if you do).
4. Click on one of the lower keys (anywhere in the range C1–C3) in the on-screen virtual keyboard. You should now hear a cool bass line pumping out of your speakers. Press the metronome button (the one with the drum kit) to hear this bass in a musical context.
5. Make sure your external MIDI keyboard is properly connected by playing a key. BROOMSTICK**BASS** should play the same way it did when you played it from the on-screen keyboard.

Now you are free to learn more about our virtual instrument by turning every knob and pushing every switch. Happy hunting!

A few words about the main page

Auto mode



Style selector and Link button

When in Auto mode, you may want to start by selecting a style. Clicking on a style name displays a pop-up list of genres, and each genre contains a number of individual styles.

Please note! There are over 100 styles in the full version!

With the Link button activated (indicated by the little triangular green light), BROOMSTICKBASS will load a bass instrument that suits the style. This is practical when browsing the archive for suitable bass lines and sounds. After loading a style **with** an instrument, you can load any other instrument (only two basses available in this demoversion) by clicking on the instrument selector. By turning the Link button off, loading new styles will leave the choice of instrument unchanged.

A few words about the main page

The Reference chart in Auto mode

You can do several things with the control octave in Auto mode. Perhaps the most obvious task here is to choose variations with (control octave) keys **C–G**. **G#** restarts any 2 or 4 bar pattern from bar 1 and **A** stops BROOMSTICKBASS from playing.

Please also note, that you can move the control octave into other positions with the switches in the Settings section on the Edit page.

Chord display

In Auto mode, you can enter chords for your song by playing either the on-screen keyboard or using an external MIDI keyboard. The keyboard layout for musical entry and control octave are always identical for the on-screen keyboard and your external keyboard.

You may enter “one-finger chords” or “fully fingered chords”. Here’s a quick guide. One finger chords (in the example key of C):

C key only = major chord

C + any white key to the left = 7th chord

C + any black key to the left = minor chord

This scheme is identical to that of many home keyboards.

The Metronome button

Adding a simple drum pattern to the Auto bass lines helps clarifying the musical usefulness of the styles and variations. Use the Metronome to get into the right mood while arranging and composing, but please use another drum module for the drum sounds of your song; the metronome drums are for rhythmical guidance only.

A few words about the main page

The Modulation Wheel modes

There are two really cool functions in Auto mode, both of which are related to the modulation wheel. The first is a “connecting” mode, accessed by pushing the modulation wheel up to the position between 10 and 90% of full travel. This plays a special variation, suitable for moving between chords.

Example: You may want to go from C to F in a song. On many occasions, a live bass player would play a small connecting passage like C-D-D#-E-F (or similar) instead of just “jumping” abruptly from C to F. In Connecting mode the bass still pumps out its rhythm but (usually) only the root note, so you are supposed to play the actual passage. You return to normal Auto mode by moving the mod wheel back again.

The second function is accessed by pushing the modulation wheel up all the way. This invokes “temporary manual mode”, where you take over the playing. To return to “normal” Auto mode from either of these special modes, simply return the modulation wheel to its initial position.



A few words about the main page

Manual mode



The Reference chart in Manual mode

You select Manual mode by pressing the Manual button in the middle of the screen. From now on, the keyboard is yours!

Use the Instrument selector in the top right corner to choose your bass. This demoverison only contains two instruments while the retail version of BROOMSTICK**BASS** offers a selection of over twenty basses.

You can access the various articulations via keys **C to G** in the control octave. With no control key pressed, you play the “normal” notes, meaning the two or three layers of velocity for each instrument. Holding down (control octave) **C** produces Staccato mode, where four discrete short notes are played randomly – perfect for those rock style “pumping eights” style passages.

A few words about the main page

For the acoustic and electric basses, control keys **C#** and **D#** produce slide down and up. **D** creates realistic Hammer-ons and Pull-offs (you need to play overlapping notes to hear this effect) and **E** activates Legato mode (again, you need to play overlapping notes to hear this effect) or Single Trigger mode for the synthesisers.

The last three keys produce bass-specific noises. “Smack” is the sound made when quickly placing the picking hand across the strings. “Ghost note” is a note that is so damped it’s lost its tonal content (jazz and blues bass players use ghost notes a lot!). “Fret noise”? Yes, that’s right! It’s the noise a bass player’s hand makes as it travels across the frets of the neck of the instrument.

Of all the articulations mentioned above, only Staccato and Legato apply for the synthesiser and pedal basses.

Poly/Mono

Many of the **original** instruments included in BROOMSTICK**BASS** can be played polyphonically, i.e. they can be made to play several notes simultaneously. It’s not totally uncommon for acoustic and electric bass players to play octaves or ten note intervals, at least occasionally. Just listen to Lou Reed’s ‘Walk on the Wild Side’ and you’ll know what I mean. Herbie Flowers sure made one mean performance on that one!

However, in the seventies most synthesisers were monophonic. Emulating them in an instrument like BROOMSTICK**BASS** usually works better when this switch is set to Mono mode. That way you never run the risk of revealing the fact that you’re using a measly computer instrument in your song!

The “single trigger” effect works in both mono and poly modes – although for a realistic simu-

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lation of a monophonic 70's synthesiser, mono mode is better.

Release

The release time is set to a sensible default value for all instruments, e.g. the double bass and the church organ pedals have a slower release than the snappy synthesisers.

However, you may want to change this value, especially for the synthesiser basses. You'll notice how their tonal character changes with increased release time. Feel free to experiment, but try to avoid overly long values – they'll only make your bass lines sound muddy.

Release Noise

For good realism, we've implemented release noises in the electric and acoustic bass instruments. A good bass player **can** manage to keep those noises to a minimum, but release noises really **are** part of any stringed bass sound.

So, if you've had it with realism, simply turn this knob counter-clockwise to reduce or remove the effect.

A few words about the edit page



The Edit page is split into two sections – DSP and Settings.

There are five effects in the DSP section. The EQ has three bands with a sweepable mid control. The Pitch Shifter can alter the pitch up to +/- one octave (that's +/- 12 semitones) and there's a mix knob to adjust the strength of the effect. The Compressor evens out the output level of **BROOMSTICKBASS** – this is often useful when mixing a song. Chorus brings extra width to the sound, and with the Feedback control turned up you get a Flanger effect. The Overdrive adds a speaker emulation when the knob is at its minimum position and extra dirt to the sound when turned up.

The on/off switches next to each effect allow you to quickly compare the original and processed sound. Remember to turn the effects of your choice **on** in order to hear the changes.

A few words about the edit page

Please note, that all final audio mastering in BROOMSTICK**BASS** is done via presets in the DSP section. Uffe Börjesson's final tweaks are loaded with the basses. You can choose to use these settings as they are or to tweak the sound further. By turning off all the DSP effects, you'll hear the original sounds as they were recorded (usually flat with no EQ or compression).

Accent/Syncope

On the Settings page, you can choose whether or not BROOMSTICK**BASS** will allow you to add accents and syncopes by hitting a key hard (velocity > 100). This behaviour is only for Auto mode and similar to the way Virtual Guitarist works.

Change pattern

Here you control if variation changes will occur immediately or at the start of the next bar when in Auto mode.

MIDI output

When working in a Steinberg host program like Cubase or Nuendo, you can make BROOMSTICK**BASS** write a MIDI track while playing in Auto mode. This is perfect if you want to use the built in styles and variations but need to fix a few notes in a MIDI editor afterwards.

However, this feature may not work in non-VST or non-Steinberg hosts. We take no responsibility for functionality in programs other than Cubase and Nuendo.

We recommend you to turn quantising off while BROOMSTICK**BASS** creates a MIDI track. An incorrect value (or any value, in fact) may trash the finer details of the hand made patterns included in BROOMSTICK**BASS**.

A few words about the edit page

Velocity offset

Adjust this knob to suit the feel and velocity curve of your MIDI keyboard. All MIDI keyboards behave and feel differently and you may want to adjust here, so that normal notes (in the velocity range of 60–99) are heard during normal play and the loud notes are triggered when playing the keys hard.

When on the Edit page, clicking **Main** will get you back to the Main page again.

Tips on using BROOMSTICKBASS

How to use Broomstick Bass in a song

There are several ways of using BROOMSTICKBASS in a song. One method is to simply set the instrument to Manual mode, play bass lines live and use it as any other instrument, as a sound bank.

However, where BROOMSTICKBASS really shines is when you set it to Auto mode, and let all the musicians that have worked on this instrument play **with** you. That's what this section of the documentation is about.

Let's assume you have done your groundwork for a song, and you have a relatively good idea what style of song it's going to be, and in what tempo.

Set BROOMSTICKBASS to Auto mode and load a suitable style. Each style has 8 variations, accessible from the control octave's first 8 keys (C to G). Some of the variations will be relatively similar, others will be very different. The general

Tips on using **BROOMSTICKBASS**

idea is that the first variation presents the style, and the other 7 make up complementing building blocks with the same general feel for your song.

Set your sequencer to record and simply play chords (or single notes) along with your song, and **BROOMSTICKBASS** will automatically play a bassline in the tempo of the host, using the chords you play as harmonic guidance.

Another way of incorporating **BROOMSTICKBASS** into your music is to use the MIDI output function. While this feature has been part of the VST2 protocol for some time now, we know that some hosts don't support plugs outputting MIDI. We only guarantee that it will work in Steinberg's Cubase and Nuendo.

You may have to read the following paragraphs twice. If they appear a bit complicated, that's because they are, even to me (and I'm supposed to be a pro at this)!

Create two MIDI tracks, named "My input" and "BB output". Set the "My input" track's IN to your MIDI controller, and its OUT to Broomstick Bass. For the "BB output" track, set IN to Broomstick Bass and OUT to "Not connected". Next set the "BB output" track's MIDI channel to "ANY".

Next, we select the "My input" track, and we arm both tracks (normally, the currently selected track is auto-armed by Cubase SX). Now we simply press the Record button and make music. When you're finished recording, both tracks will contain MIDI data.

Please note! If you used the plug's virtual keyboard, the "My input" track will actually be empty.

Tips on using BROOMSTICKBASS

The difference between the two MIDI tracks is that the track “My input” contains whatever you recorded onto it (the chord data, as you would expect), but the “BB output” track contains the patterns that BROOMSTICK**BASS** **actually played**.

If you take a look at what’s recorded on the “BB output” track, you may find that while most of the notes are on MIDI channel 1, some are actually on other channels! For technical reasons, this is how the plug handles articulations internally. This is the reason why the “BB output” track has to have its output set to “ANY”, by the way.

About the instruments in this demoverison



Fender Precision Bass

It’s totally impossible to exaggerate the impact of the bass constructed by Leo Fender in the early fifties. All of a sudden, the bass player could be heard over a noisy drummer and horn section. And easily play in tune! In effect, this also affected the way a bassist plays – quick runs and intricate rhythms are much easier to play on a bass guitar than on a double bass. According to Quincy Jones, the Fender Bass has played as important a part in rock music as the electric guitar!

The sharp-eyed amongst you will notice that the Fender Precision in BROOMSTICK**BASS** looks a little odd. Here’s its story...

This instrument was originally a 1968 Telecaster Bass when I first bought it in the mid-seventies.

About the instruments in this demoverison

Stupid young man grows tired of the old fashioned body and throws it away. Stupid young man gets fed up with the original single coil pickup and gets rid of it. Stupid young man builds “cool” bodies to improve upon a legendary design. Slightly less stupid young man finally attaches old Tele neck to a P-Bass body fitted with a Badass bridge and an original Fender P-Bass pickup.

This instrument uses flatwound strings. That type was commonplace in the sixties but is rather exotic today. This P-Bass has been recorded with manual damping of the strings, giving it a sound similar to the dampers fitted on the original Precision Bass.

ARP Odyssey

During the seventies, this model was a direct competitor to the famous MiniMoog synthesiser. The Odyssey had inherited most of the cool facilities of the mighty, modular ARP 2600, but it sported a more portable shell and a more comfortable price. In fact, there was a tendency during the seventies among players to be either Moog or ARP fanatics, and then there was a third group who insisted on having both a Mini **and** an Ody!

I bought this particular synthesiser, a black and gold 2800, from a Stockholm musician in 2003. After nearly 30 years, the sliders (there are 43 of them on this baby) are a bit quirky and not so easy to fine-tune, but overall the build quality is amazingly good.



During recording (sampling), editor Lars Westin and myself came up with a rather clever scheme for most of the synthesisers used

About the instruments in this demoverison

in **BROOMSTICKBASS**: We'd record three velocity layers, where the mid sound (ranging from velocities 60 to 99) would be regarded as the normal sound. That way, you can either play our keyboards as rather expressive instruments (with this fake velocity feature) or as three different sounds; just alter the velocity level to make the sound softer or brighter.

The full version of **BROOMSTICKBASS** contains over 20 different instruments:

- Double bass (fingered and bowed), acoustic bass guitar and the dreaded broomstick bass!
- Picked and fingered Fender Jazz Bass and Precision Bass, Gibson Thunderbird, Rickenbacker 4001, Hagström 8-string, slapped Music Man Sabre, tapped Chapman Stick and fingered Ashbory and Manne fretless basses!
- Various sounds from MiniMoog, ARP 2600, Odyssey and Omni, Yamaha DX7 and even a Fender Rhodes Bass Piano!
- Church organ, Hammond B3 organ and Moog Taurus bass pedals!

Furthermore – we'll offer **free Gift Packs** for download, containing additional basses and styles to registered users!



About the musicians

When it came to providing the musical styles included in **BROOMSTICKBASS**, I knew I'd have to rely on a small group of very creative and reliable people. People whom I could instruct to think and work in a special manner and rely on them delivering the goods in time. And without too many errors! This last remark may seem harsh and heartless, but with an ocean of MIDI files to go through, I simply couldn't allow for too many exceptions from the set rules.

At an early stage, I approached Nils Erikson. He'd already assisted me during Groove Agent production, so I was aware of his capabilities. Johan Axelsson is a funky player and he was kind enough to create styles for the instrument he had helped recording. PoA Sörlin has been my close friend for many years, and he produced sweet sounding demo songs for Virtual Guitarist and Groove Agent, among other things. He also helped with the bass styles. Per Almered joined in and delivered, if I understand him correctly, styles he would have wanted to use in his own songs. Not a bad idea!

Other cool cats

The person responsible for the programming of **BROOMSTICKBASS** is Dave Brown, a guy that has produced VST plug-ins longer than most other programmers. All basses were edited, fine tuned and tweaked by Lars Westin with Uffe Börjesson doing the mastering job. Francesco Maisto did the fine design work for the GUI (graphic user interface) and the website. Product manager Per Almered takes care of the things the rest of us tend to forget – a huge task indeed! Graphic designer babusjka is responsible for photographing the instruments, creating the packbox artwork, the layout of the manual, and this very PDF!

Concept and realisation: Sven Bornemark
Software: Dave Brown
Additional code: Paul Kellett
Audio editing: Lars Westin
Graphic design: Francesco Maisto
Musicians: Per Almered, Johan Axelsson, Sven Bornemark, Nils Erikson, PoA Sörlin
Audio mastering: Uffe Börjesson
Photography, layout and cover design: babusjka
Product manager: Per Almered
Production: MI7 (mi7.com)





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