

# DANDEAN ESSENTIAL BASS

## USER GUIDE



# Credits

Programming: Wolfram Franke

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Sound Design: Dan Dean and Alessandro Cardinale

Sample Content: Dan Dean

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# 1. Introduction

Thank you for purchasing our Dan Dean Essential Bass instrument.

We hope you enjoy it as much as we do, have a lot of fun with it and make great music with it.

Dan Dean Essential Bass is a premium quality instrument that combines an advanced synthesis engine with a stunning array of sampled sounds from world famous electric bass guitars. Built on the entirely new Acktion platform, it features the same powerful engine as our Biotek organic synthesizer.

The Dan Dean Essential Bass user interface is designed to place a straightforward range of sound sculpting tools right at your fingertips.

Each bass instrument is mixed into four effect busses, each featuring a sum overdrive, a compressor, a modulation effect like chorus, flanger, phaser or sum filter, and a space effect like delay or clocked delay, or natural, plate or non-linear reverb.



## 2. Installation & Authorisation

The installation including all sample and instrument data requires approximately 5.7 GB space on your hard drive.

Dan Dean Essential Bass can be installed and unlocked on up to 4 different computers with a single license.

### 2.1 Windows PC



Please observe the system requirements of your host application!  
Dan Dean Essential Bass only runs in 64 bit host applications.

1. Refer to the folder where the downloaded Dan Dean Essential Bass.zip archive is located.
2. Double click on the archive file to extract it.
3. Double click on the “Dan Dean Essential Bass 1.0.0.exe” file to launch the installer. In this example, 1.0.0 refers to the current version number of the file, which most likely differs from this example.
4. Follow the on-screen instructions.
5. You also need to install the sample and instrument content. Please double click on the installer files and follow the on-screen instructions. If any other installation path is used as the suggested one, please make sure to relocate the content within the Dan Dean Essential Bass Global menu (see corresponding chapter).

Default installation locations on Windows:

VST 64-bit: C:\Program Files\Steinberg\VstPlugins\Dan Dean Essential Bass(64-bit).dll

AAX 64-bit: C:\Program Files\Common Files\Avid\Audio\Plug-Ins\Dan Dean Essential Bass(64-bit).aaxplugin

### 2.2 macOS

1. Refer to the folder where the downloaded Dan Dean Essential Bass.zip archive is located.
2. Double click on the archive file to extract it.
3. Double click on the “Dan Dean Essential Bass 1.0.0.pkg” file to launch the installer. In this example, 1.0.0 refers to the current version number of the file, which most likely differs from this example.
4. Follow the on-screen instructions.
5. You also need to install the sample and instrument content. Please double click on the installer files and follow the on-screen instructions. If any other installation path is used as the suggested one, please make sure to relocate the content within the Dan Dean Essential Bass Global menu (see corresponding chapter).

Default installation locations on Mac:

AU: /Library/Audio/Plug-Ins/Components/Dan Dean Essential Bass.component

VST: /Library/Audio/Plug-Ins/VST/Dan Dean Essential Bass.vst

AAX: /Library/Application Support/Avid/Audio/Plug-Ins/Dan Dean Essential Bass.aaxplugin

## 2.3 Linux Ubuntu

1. Copy the Dan Dean Essential Bass.so file into your VST plugins directory. Common locations are shown below.

2. Ensure your host is set to scan the location

3. Perform a plugin scan in your host

Common Linux VST directories:

/usr/lib/vst

usr/local/lib/vst

~/vst

Please follow these instructions to install the Dan Dean Essential Bass content

1. Create a Dan Dean Essential Bass directory at "~/Tracktion/Dan Dean Essential Bass/" (may already exist)

2. Copy the "Instruments" content to „~/Tracktion/Dan Dean Essential Bass/Instruments"

3. Copy the "Samples" content to „~/Tracktion/Dan Dean Essential Bass/Samples"

4. Restart your host and any open instances of Dan Dean Essential Bass

You should end up with two folders:

"~/Tracktion/Dan Dean Essential Bass/Instruments" containing ".Dan Dean Essential Bass.ddb1inst" files

"~/Tracktion/Dan Dean Essential Bass/Samples" containing ".ddb1sample" files

To authorize the plugin on Linux, you must use the offline authorization method.

## 2.4 Authorisation

Dan Dean Essential Bass uses a software based copy protection and can only run without any restrictions with an activated license.

After installation, please load Dan Dean Essential Bass as instrument plug-in within your DAW. The plug-in is currently locked and running in demo mode (a noise occurs periodically).

Click on the Unlock button in the headline of the plug-in window to open the authorisation window.

Click Unlock to start a 30 day trial, if you haven't purchased the plug-in. If you have purchased the plug-in it will become unlocked permanently.

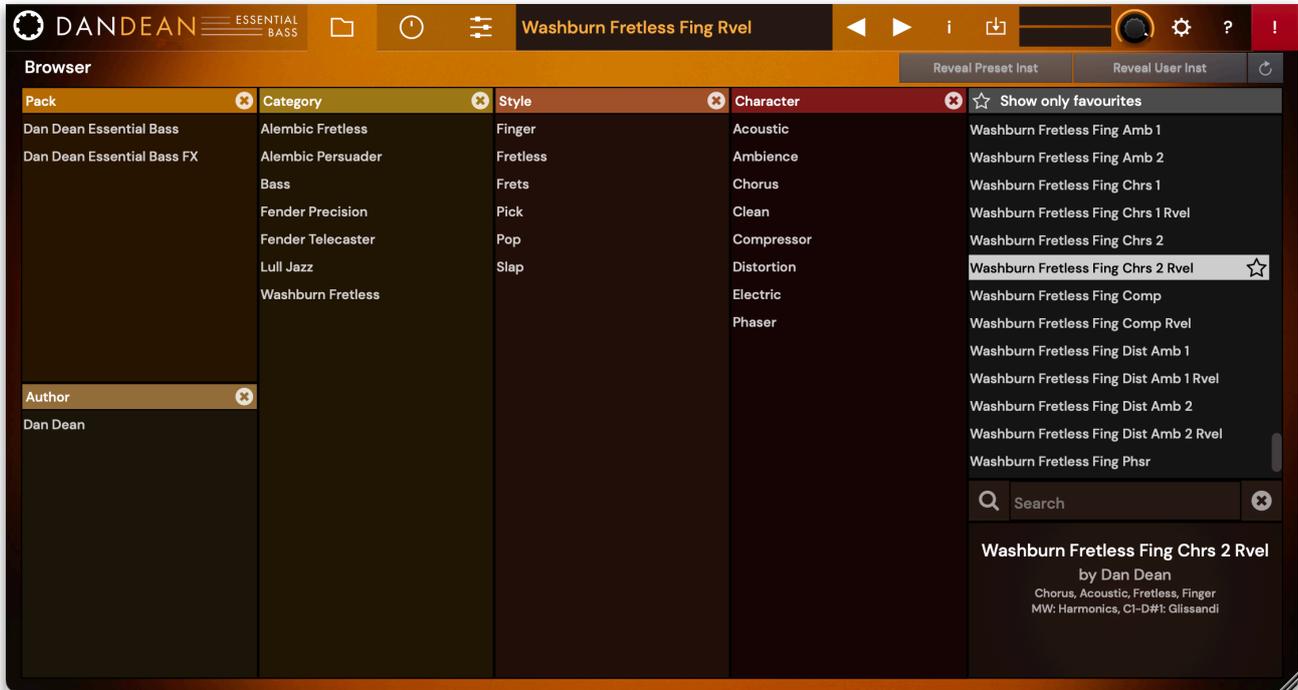
Please enter your email address and password from Tracktion Marketplace and click on "Register" to unlock Dan Dean Essential Bass permanently. You need an active internet connection for this procedure.

You can alternatively click on the "Offline Unlock" button, if your computer has no internet connection. Please follow the onscreen instructions.

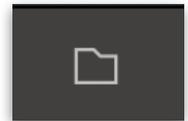
After a successful authorisation, you can use Dan Dean Essential Bass without limitations and fully featured forever.

## 3. Basic Operation

### 3.1 Loading Instruments on the Browser Page



Click on the folder button in the head section to open the **Browser** section. Here you can quickly locate e.g. categories or styles of Instruments by selecting one or more tags.



Use the **Search** field below the Instrument list on the right to perform a full-text search of the Instrument library.

To filter the library by **Category**, **Style** or **Character**, click on one or more tags in the corresponding column. You can also combine filter attributes. To clear a filter, click on the corresponding **X** in the header of an attribute column. The filter results are displayed immediately in the right Instrument list.

You can mark your favourite instruments by clicking on the star symbol next to the Instrument name in the Instrument list. Click on **Show only favourites** to only show your favourite Instruments.

To load a selected Instrument, simply double click on its name in the Instrument list. Alternatively, you can click once on an Instrument to bring the Instrument list into keyboard focus, use the **Up** and **Down** arrow keys on your keyboard to select an Instrument and use the **Return** key to load it.

Another way to search and load an Instrument is to click on the Instrument name field in the **Header** section on any page. This opens a smaller version of the browser which only shows the Instrument list, the Favourites filter and the search field.

## 3.2 Saving Instruments

To save an Instrument, click on the **Save** button in the header section. User Instruments are saved to the User Instrument directory whereas the factory content and further instrument packs are located in the Preset Instrument directory on disk. They are both shown in the Instrument library in alphabetical order.



## 3.3 Control Elements

### Rotary Controls

To set a value, click on the dial, hold down the mouse button and move the mouse up and down or, depending on the Control Behaviour setting in the Global menu, in a circular manner around the control. A double click resets the parameter value to its default.



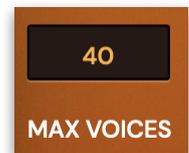
### Buttons

A click on a button activates or deactivates it. The button lights up when it is active.



### Value Selection Fields

Click in a Value Selection Field and move the mouse up or down to change the parameter value. Double click in a Value Selection Field to set the parameter value to its default value.



### Pop-up Menus

Click on the control to open a pop up menu where you can choose the desired parameter value.



## 4. The Basic User Interface



Dan Dean Essential Bass is divided into different sections which are described in detail within the next chapters.

The **Header** section offers global and basic settings as well as access to the Browser and Effect sections.

The **Browser** section offers an easy-to-use search and load interface for instrument selection.

The **Effect** section includes a four-band equalizer and four effects for each instrument.

The **Macro Controls** section offers controls for editing the current instrument.



The background image and colour scheme change according to the selected bass instrument preset. The controls, however, stay the same.

## 4.1 Header Section

The Header section offers global and basic settings.



- Click on the **DAN DEAN** logo to open a pop-up window with additional information about the plug-in version number as well as the development team.
- Click on the **Folder** button to open the **Browser** section. Read more in the chapter “3.1 Loading Instruments on the Browser Page”.
- Click on the **Rotary Control** button to open the **Macro Controls** section. Read more in the chapter “4.3 Macro Controls Section”.
- Click on the **Effects** button to open the **Effects** section. Read more in the chapter “4.5 The Effects Section”.
- The **Instrument name field** displays the name of the current Instrument. Click on the name to open the instrument list. Here, you can also search by favourite instruments and enter a search term.
- Click on an **Arrow** button to switch to the previous/next instrument.
- The **Instrument information field** opens a pop-up window where you can enter various informations regarding the current instrument. This information will be saved with the instrument. Except for the name, you can enter multiple attributes in the fields separated by commas.

- **Name:** Here you can enter a name for the current instrument.

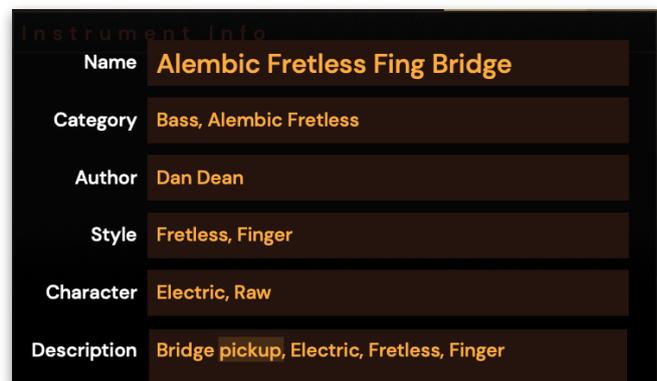
- **Category:** Here you can enter an instrument category, e.g. Bass

- **Author:** Here you can enter the name of the sound designer.

- **Style:** Here you can enter the sound, music or playing style of the current instrument.

- **Character:** Here you can enter a sound character of the current instrument.

- **Description:** here you can enter further information regarding the instrument.



- The **Save** button lets you save the current Instrument. You can also change the name of the Instrument during the storing process.



- The **Master Volume** dial allows you to adjust overall volume of the instrument plug-in. The meter left besides the Volume dial displays the outgoing audio signal.

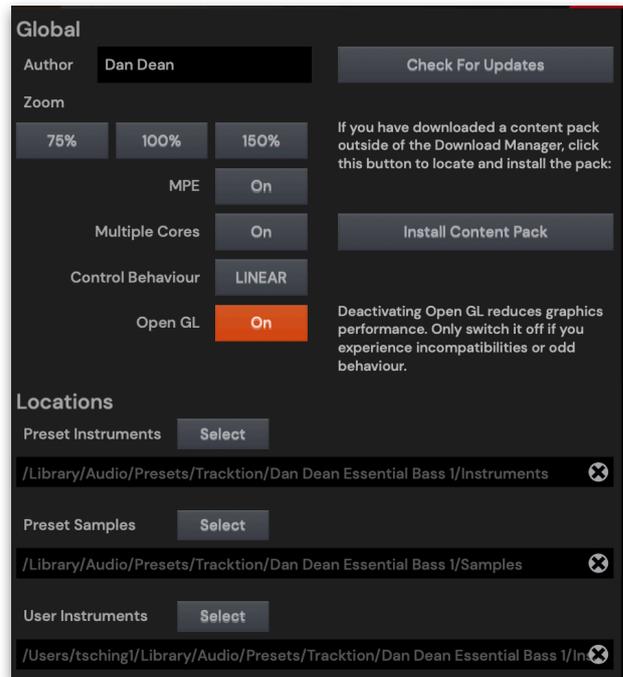
- Click on the **Global** button (gear symbol) to open a pop-up window with additional parameters. Click the **Global** button again to close the Global menu.

- **Author:** here you can enter the name of the sound designer.

- **Zoom:** click on the corresponding zoom button to change the size of the plug-in window. The standard size is 100%. You can also

drag the handle in the lower right corner of the window to change its size to your needs.

- **MPE:** activates or deactivates the global MPE mode (MIDI Polyphonic Expression) for all Layers. Read more about the MPE functionality on page 16.
- **Multiple Cores:** we strongly recommend to activate this option. However, especially when running multiple instances of Dan Dean Essential Bass, turning off the multi core processing can improve CPU performance on certain systems — typically older computers.
- **Control Behaviour:** when using a mouse to adjust the rotary controls, the input movement can be selected to be linear or circular. If set to “Circular”, you change a value of a rotary control by clicking on it and moving your mouse in a circular motion around the control. You don’t need to stay inside the control bounds, though, you have a wide range to fine-tune the value. If set to “Linear”, rotary controls behave like value display controls. Moving the mouse up or right increases a value, moving it left or down decreases it.
- **Open GL:** activates or deactivates the Open GL graphic engine. If deactivated, the graphic performance is reduced. We recommend to switch **Open GL** off only if you experience incompatibilities or odd behaviour.
- **Check For Updates:** click on this button to open the Tracktion Marketplace. If an update for Dan Dean Essential Bass is available, it will be shown here. You need an active internet connection to check for updates.
- **Install Content Pack:** if you have downloaded a content pack outside of the Tracktion Download Manager, click this button to locate and install the pack.
- **Locations:** click on the corresponding button (e.g. **User Instruments**) to open the folder where the instruments or samples are placed. If you want to move the preset/sample content, you need to show Dan Dean Essential Bass the new data path. This can be done within the Locations window.
- **Help (Question Mark):** click on this button to open the PDF manual of Dan Dean Essential Bass.
- **Panic (Exclamation Mark):** executes an “All Notes Off” command to terminate stuck notes. **Panic** immediately sets all envelopes to their release phases. Panic also stops the arpeggiator playing when running in Latch mode.



## 4.2 Browser Section

For more information please refer to the chapter “3.1 Loading Instruments on the Browser Page”.



## 4.3 Macro Controls Section

This section includes macro controls to edit the currently loaded instrument quickly. All controls are patch specific macro controls pre-assigned by the sound design team to numerous features.



## ARTICULATIONS

Dan Dean Essential Bass uses articulations to modify the bass sound during playback. There are two ways to use different articulations:

- On an electric bass, players can cause a string to vibrate only in sections by touching it lightly at the appropriate point. This can produce a pure and clear note of a cool, silvery quality. It is called ‘flageolet notes’ or ‘harmonics’. Here, you can use the mod wheel for this. Turning it up switches the current played bass sound to a flageolet note.
- Other articulations can be triggered by key switches to maximize the playable range. They cannot be changed internally and are only active for as long as the corresponding key switch is held. The following key switches are available:
  - C1 triggers a slide up glissando articulation over one octave
  - C#1 triggers a slide up glissando articulation over a fifth
  - D1 triggers a slide up/down glissando articulation over one octave
  - D#1 triggers a slide down glissando articulation over a fifth

Macro controls can be unipolar or bipolar, which means that their neutral value is either at their leftmost or at their center position. The Semitone control, for example, allows to tune the instrument up- or downwards from its neutral setting.

Double-click on any control to set the parameter to its default value.

The following macro controls are available:

## FX LEVEL

Controls the mixture between the dry signal output and the wet effect signal output processed by the effect bus. A setting of 0% results in a completely dry signal, 50 % means that the signal is routed with equal volume into the effect unit and forwarded dry and 100 % means that no signal is sent out dry but it is routed into the Effect bus with full level. Note that almost all of the individual effects also have a Mix setting so typically you turn up FX LEVEL to 100%.

## AMPLIFIER

Here, you can activate an amplifier simulation to feed the sound through. Click on the amplifier name to choose one of the presets in the pop-up menu (see image on the right). The available amplifier simulations are named to roughly represent their character but you are invited to experiment with them.



## PITCH / PITCH BEND Section

- **Octave:** Sets the basic pitch of the Instrument in steps of one octave in both directions.
- **Semitone:** Sets the pitch of the Instrument in semitone steps (from -12 to +12). The standard setting for this parameter is 0.
- **Pitch Bend:** Here you can determine the bend range for the Pitch bend. The range goes from -60 to +60 semitones.

## ENVELOPE Section

The Envelope section offers controls for Decay and Release.

- **Decay:** Determines the decay rate or amount of time it takes for the bass signal to fade out while you hold a key. Note that positive values might not make have a noticeable effect since the maximum length of the sound is determined by the underlying sample, which naturally fades out as a real bass does.
- **Release:** When you let off a key, the release phase of the sound begins. During this phase, the envelope fades to zero at the rate determined by the Release value.

## OUTPUT Section

- **Velocity:** Specifies how much volume level will be affected by keyboard velocity. Use this feature to give more expression to the bass sound. With a setting of 0.00 velocity will have no effect on the volume. For positive settings the volume rises with higher velocities.
- **Rel Noise:** Release samples are triggered after a note has been released. This adds an overall natural sound feeling of a bass sound. The higher the release velocity, the louder the release sample. With this knob, the release noise level can be customized as desire.

## GLIDE Section

Enables or disables the Glide effect. Glide describes the continuous gliding from one note to another. This effect is very typical for fretless stringed instruments.

- **Glide Rate:** Determines the glide time. Low values will give a short glide time in a range of milliseconds that gives a special character to the sound. Higher values will result in a long glide time.
- **Portamento/Glissando:** If Portamento is selected, a continuous glide is performed on all new notes. For Glissando, the Glide effect reacts in the same manner as by changing the pitch in semitones.
- **Legato:** If activated, a continuous glide is performed only when notes are played legato. Staccato played notes start on the exact pitch of their note.

## VOICES Section

- **Max Voices:** Determines the maximum number of voices that the current instrument produces. Decreasing the number of voices improves efficiency and therefore reduces load on CPU. If voice count is set too low, then “voice stealing” can occur with the possibility of audible artifacts. Do not use Max Voices to simulate a monophonic voice allocation, to achieve this use the Mono setting described below.
- **Mono:** If activated, only one voice is sounding, no matter how many notes you play. When you play a number of notes without releasing older notes and then release the last played note, the previous note can be heard. If you release that note, again the previous note can be heard and so on until you’ve released all notes.
- **MPE:** Click on this button to activate the MPE option for the instrument. The global MPE option must also be activated. Activating MPE allows you to play slides easily, e.g. by playing a C3 and sliding up to G3. In this mode, the instrument plug-in reacts on incoming MPE data that is sent by a MPE Controller as for example the Roli Seaboard.

MIDI Polyphonic Expression (MPE) is a method of using MIDI to enable expressive electronic musical instruments to control multiple dimensions of sound polyphonically. In MIDI, channel-wide messages (such as pitch bend, CCs, and channel aftertouch) are applied to all notes being played on a single channel; therefore, in MPE each note is assigned its own channel so that those messages can be applied to each note individually.

An MPE instrument typically has three dimensions of expression / control — left-right (X-axis); front-back (Y-axis); and pressure (Z-axis) — each axis can be mapped to various parameters of sound and be applied on a per-note basis.

In the Dan Dean Essential Bass plugin, sounds only react to movements in the X-axis creating the aforementioned sliding effect you would achieve on a real bass by sliding your finger up- or downwards on the frets.

- **Tune:** 440.00 Hz is widely used as concert pitch in the United Kingdom and the United States. In continental Europe, the frequency of the note A commonly varies between 440 Hz and 444 Hz. In the period instrument movement, a consensus has arisen around a modern baroque pitch of 415 Hz (A<sub>b</sub> of A 440), baroque for some special church music (Chorton pitch) at 466 Hz (A<sup>#</sup> of A 440), and classical pitch at 430 Hz.

## 4.4 Effects Section

Here you find all parameters of the four effect busses as well as the equalizer. For each effect bus, one of 9 different effect types can be selected.



### The Effect Types in Detail

Click on one of the corresponding buttons (**Effect 1** to **Effect 4**) to activate it. The corresponding button is lit in orange.

Use the pop-up menu to select the desired effect. Based on the selected effect type, different editing parameters are available.



## Equalizer

Dan Dean Essential Bass offers a four-band equalizer (LOW/MID 1/MID 2/HIGH).

- **Low/High Band Selection:** Selects the filter type of the first and last band. A **Shelf** filter type looks like a normal or an inverted “S” and it sounds similar to a low or high pass filter with adjustable stop band attenuation or boost. A **Bell** filter looks like a normal or inverted bell and sounds and works similar to a band pass or notch filter, again with variable boost or attenuation and also with variable width. A **Cut** filter is identical to a low or high pass filter, only its naming is reversed. So, a low cut filter is the same as a high pass filter and vice versa.
- **Frequency (Freq):** Controls the cutoff (shelf) or center (bell) frequency of the band. Moving the dial to the left results in a lower frequency of the band’s cutoff or center frequency, to the right increases it.
- **Quality (Q):** Controls the quality or width of the band. When using a bell type, moving the dial upwards results in a narrower band, moving it downwards widens it. With the shelf type, it emphasizes or attenuates the frequency band around the cutoff frequency.
- **Gain:** Controls the gain boost or cut off the band. Clicking and moving the dial upwards increases the gain of the band, moving it downwards decreases it.



## Distortion

This effect offers an overdrive, also known as saturation or distortion. It affects the sum of all voices routed into this effect bus, which creates a different distortion depending on the number of voices you play due to intermodulation.

- **Type:** Selects the **Drive Type**. Light, Medium and Hard are typical diode clipping circuitries in different strengths and symmetries. Clip is a hard clipping similar to that of a transistor distortion, Tube simulates a tube or valve overdrive and Fuzz results in a very strong distortion.
- **Drive:** Controls the amount of overdrive.
- **Post Gain:** Controls the output level of the distorted signal.
- **Tone:** Controls high-frequency attenuation of the drive signal.
- **Emphasis:** Controls the feedback of the **Tone** parameter.



## Chorus

The Chorus multiplies the signal by generating delayed copies of it and slightly modulating the speed with which these delayed signals are played back resulting in a detune effect. The signal then sounds like an ensemble or, as the name says, a chorus. **Speed** and **Depth** work hand in hand in Dan Dean Essential Bass, when **Auto Depth** is activated: when you increase Speed, the depth is automatically decreased so that the detune effect stays the same. If you want to change the detune, adjust **Depth**.



- **Mix:** Adjusts the relation between the dry signal at the full left to the wet effect signal at the full right. Set it to 70% for maximum effect.
- **Stages:** Dan Dean Essential Bass offers three chorus types with either 2, 4 or 6 independent delay lines, where half of them is routed to the left input and output and the other to the right input and output. Click & drag the mouse to switch between the stage types.
- **Delay:** Sets the minimum delay length. For a chorus effect, you typically increase it to around a tenth of its value range, for a flanger effect, you would set it to 0. The rest of the value range is just for your pleasure.
- **Feedback:** Controls the level of the signal that is fed back into the chorus. With a small setting of **Delay** and **Depth** and a high positive or negative setting of **Feedback** you can create a typical flanger effect, especially with 2 Stages.
- **Auto Depth:** Automatically controls the strength of the modulation to keep the overall detune effect the same. **Mod Depth** will be reduced all the more, the higher the settings for **Speed**.
- **Speed:** Controls the basic modulation speed. When using 4 Stage or 6 Stage, the 3rd and all following delays are modulated with a slightly higher or lower speed, depending on the setting of **Spread**.
- **Depth:** Adjusts the strength of the modulation, resulting in the detune effect. When using 4 Stage or 6 Stage, the depths of the 3rd and all following delays are slightly longer or shorter.
- **Spread:** Controls the deviation of the various delays. When **Spread** is set to full left, all modulations happen in sync albeit the 3rd and following stages are offset in phase to let the chorus still sound rich when using 4 Stage or 6 Stage. When you increase Spread, the delay deviations are increasingly stronger.
- **Random:** Adds a random movement to the **Spread** parameter. It produces linear ramps that adapt to **Speed**. This makes sure that the Chorus effect sounds not that static.

## Phaser

The Phaser creates 2, 4, 6, 8, 10 or 12 phase-shifted signal copies creating equally spaced peaks and dips in the frequency spectrum. These phase-shifters are modulated in a way that a sweeping effect is created.

- **Mix:** Adjusts the relation between the dry signal at the full left to the wet effect signal at the full right. Set it to 50% for maximum effect.
- **Stages:** Sets the number of stages that are used for creating the phase-shifted signal copies. Click & drag the mouse to switch between the stage types.
- **Frequency:** Sets the center frequency of the phaser. Note that **Depth** and **Spacing** both influence the resulting frequencies of the phase shifters.
- **Spacing:** Controls the relative frequencies of the phase shifters. This spreads the peaks and dips in the frequency spectrum
- **Feedback:** Controls the level of the signal that is fed back into the phaser.
- **Modulation Speed:** Controls the modulation speed
- **Modulation Depth:** Sets the depth of the modulation.
- **Modulation Spread:** Controls the deviation between the left and right stereo side.



## Compressor

The Compressor reduces signals which exceed a certain **Threshold** level in volume by an adjustable **Ratio**. The speed of this level reduction is controlled by **Attack**, when the signal starts to exceed the threshold, and **Release**, when it drops below the threshold again. When you set its parameters to extreme values, the signal might start to „pump“, so use your ears to set the values properly. This pumping effect might even be wanted, so use it to your liking. However, extremely short **Attack** or **Release** settings might create audible noise in the signal, which happens because the compressor changes its settings far in the audio range rather than creating a smooth envelope.

- **Gain:** Sets an input gain offset. Sometimes, the input signal is a little bit too low or loud, which you can change with **Gain**.
- **Threshold:** Sets the threshold above which the Compressor starts to reduce the signal level.



- **Make-Up Gain:** Sets the output gain offset. A compressor reduces loud signals and **Make-up Gain** allows you to boost up this reduction back to a nice level.
- **Ratio:** Sets the compression ratio. 1:1 means that no compression takes place, while higher values result in an increasingly stronger compression.
- **Attack:** Sets the speed of the level reduction when the signal exceeds the **Threshold** level.
- **Release:** Sets the speed of the return to normal level when the signal drops below the **Threshold** level again.
- **Soft Knee:** With a setting of 0, the signals above the threshold is compressed instantly according to the set ratio (hard knee). Higher values let the onset of compression sound more gradual while producing a less drastic result.
- **Characteristic Diagram:** Displays the characteristic curve of the compression based on **Threshold** and **Ratio**.

## Filter

The Filter effect filters the sum of all voices routed into this effect bus. Please be careful when you switch to the **Comb** or **Redux** filter type, making sure that either the **Feedback** parameter is not at the full extreme or that the **Bit Depth** is too low.



- **Type:** Selects the filter type (LP6/12/24, HP 6/12/24, BP12/24, BS 12/24, Comb, Redux, Ladder LP6-24, Sallen-Key LP)
- **Cutoff:** Controls the cutoff (on low pass or high pass types) or center (on band pass or band stop types) frequency of the filter.  
  
When using the **Comb** filter type, this control adjusts the start frequency of the comb effect.  
  
When using the **Redux** filter, this control adjusts the sample rate reduction.
- **Resonance:** Controls the resonance of the filter if set to any of the 12 dB or 24 dB filter types. On 6 dB filter types, this control does nothing. On band stop types, it narrows the stop band, which is almost inaudible.
- When using the **Comb** filter type, this control adjusts the positive or negative feedback into the filter.
- With the **Redux** filter type, this control adjusts the bit depth.

## Delay

Dan Dean Essential Bass offers a time-based and a clock-based stereo modulation delay. Stereo means that the left and the right signals are processed independently, while modulation means that the Delay can slightly or heavily detune its output periodically making the signal richer or creating special effects.

- **Mix:** Adjusts the relation between the dry signal at the full left to the wet effect signal at the full right.
- **Time:** Sets the delay time in milliseconds. This parameter is only editable when **Clock** is deactivated.
- **Clock:** Activate it to set the delay time in clock divisions synchronized to the current tempo.
- **Feedback:** Controls the level of the signal that is fed back into the delay.
- **Spread:** Adjusts the relative time of the first repetition compared to the delay length. A value of 0 % means that the delay of both stereo sides produce their first repetition at the same time while smaller values result in the left side repeating first and larger values result in the right side repeating first. This allows you to create ping-pong delays. E.g., when setting **Clock** to 1/4 and **Spread** to -50 % you get an 1/8 ping pong delay. Other interesting **Spread** percentages are 33 % for triplets or 25 % for dotted notes, provided that **Clock** is set to a straight value. If **Clock** is set to a dotted value, you would, for example, set **Spread** to 33 % to have one of the repetitions straight. Also interesting are only slight deviations from 0 %, creating deeper delays. Sounds complicated, but offers a lot of fun.
- **Mod Speed:** Controls the modulation speed.
- **Low Cut:** Removes low frequencies before the signal enters the delay stage so that the first repetition is already filtered.
- **High Cut:** Removes high frequencies before the signal enters the delay stage so that the first repetition is already filtered.
- **Mod Depth:** Adjusts the strength of the modulation, resulting in a detune effect.
- **Low Damp:** Removes low frequencies in the feedback stage of the delay meaning that the low frequencies are dampened over time.
- **High Damp:** Removes high frequencies in the feedback stage of the delay meaning that the high frequencies are dampened over time.
- **Pan:** balances the stereo position of the delay effect.



## Reverb Natural / Reverb Plate / Reverb Non-Linear

Dan Dean Essential Bass features high-quality reverb algorithms in different flavors. They all share common parameters. The reverb natural algorithm simulates the reverberation that occurs in natural rooms. The names suggest the basic size of the simulated room although you can create artificially sounding rooms by changing the reverb time to unnatural values.

The Reverb Plate algorithm simulates a reverb plate. In the late 1950's, the German company EMT (Elektro-Mess-Technik) introduced huge steel plates fitted with a loudspeaker and a microphone. A signal would be sent to the loudspeaker and recorded by the microphone including the vibrations the steel plate generated resulting in a smooth but slightly artificial sounding reverb. The Plate Reverb and its digital simulation is suited well for drum and percussion sounds due to their dense initial reflections.

The non-linear reverb algorithm generates typical gated reverb effects (although it works completely differently) or inverse reverbs. Since it doesn't have an internal feedback it must produce the whole reverb in one turn to create the gate effect. This means that longer reverb times sound less dense than shorter ones. If the reverb starts to sound not dense enough, you might try to increase the Decay of the sound, maybe a snare drum, by a little to smooth it out.



- **Mix:** Adjusts the relation between the dry signal at the full left to the wet effect signal at the full right.
- **Predelay:** Sets the delay before the signal enters the reverb stage. Typically you set it to around a hundredth to a tenth of the reverb **Decay**. **Predelay** strongly affects the perceived size of the reverb effect since it controls the time until the first reflection is generated.
- **Size:** Sets the length of the room size. Lower settings simulate a small room while higher settings simulate a big hall or church.
- **Decay:** Sets the time the reverb needs to decay.
- **Slope:** Controls the slope of the reverb. Setting it to center results in a typical gated reverb where the reverb sound stays equally loud before it is cut off abruptly. Lower values let the reverb decay slightly while higher values result in an inverse reverb which gets louder over its time.
- **Density:** Controls the initial density of the reverb. Lower values result in audible early reflections while higher values produce a dense reverb start.
- **Diffusion:** Controls the density or diffusion of the reverb the longer it sounds. Lower values result in more audible individual reflections while higher values result in a dense reverb tail. Note that even a setting of 0 will still create a reverb becoming more and more diffuse.

- **Low Cut:** Removes low frequencies before the signal enters the reverb stage so that the reverb sound is filtered.
- **High Cut:** Removes high frequencies before the signal enters the reverb stage so that the reverb sound is filtered.
- **Low Damp:** Removes low frequencies in the feedback stage of the reverb meaning that the low frequencies are dampened over time.
- **High Damp:** Removes high frequencies in the feedback stage of the reverb meaning that the high frequencies are dampened over time.
- **Pan:** balances the stereo position of the reverb effect.

## 5. Product Support

If you have any questions, please contact us by email:

[support@tracktion.com](mailto:support@tracktion.com)

or write a request via our support form on:

<https://tracktion.zendesk.com/hc/en-us/requests/new>

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