

propellerhead

REASON ELECTRIC BASS

OPERATION MANUAL



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Reason Electric Bass

Introduction



The Reason Electric Bass instrument is a Rack Extension version of the popular Reason Electric Bass ReFill. Reason Electric Bass is designed to be the ultimate source for electric bass sounds for any type of contemporary music. Reason Electric Bass is also designed to be the most playable product ever made for people who want to lay down their own electric bass lines in a music software.

With Reason Electric Bass we are solving difficult tasks like the handling of alternate notes, hammer-ons, glissandos, slides, mutes, ghost notes, fret noise etc. Reason Electric Bass takes care of all these issues and provides you with the ultimate production-ready electric bass instruments.

Total sound control

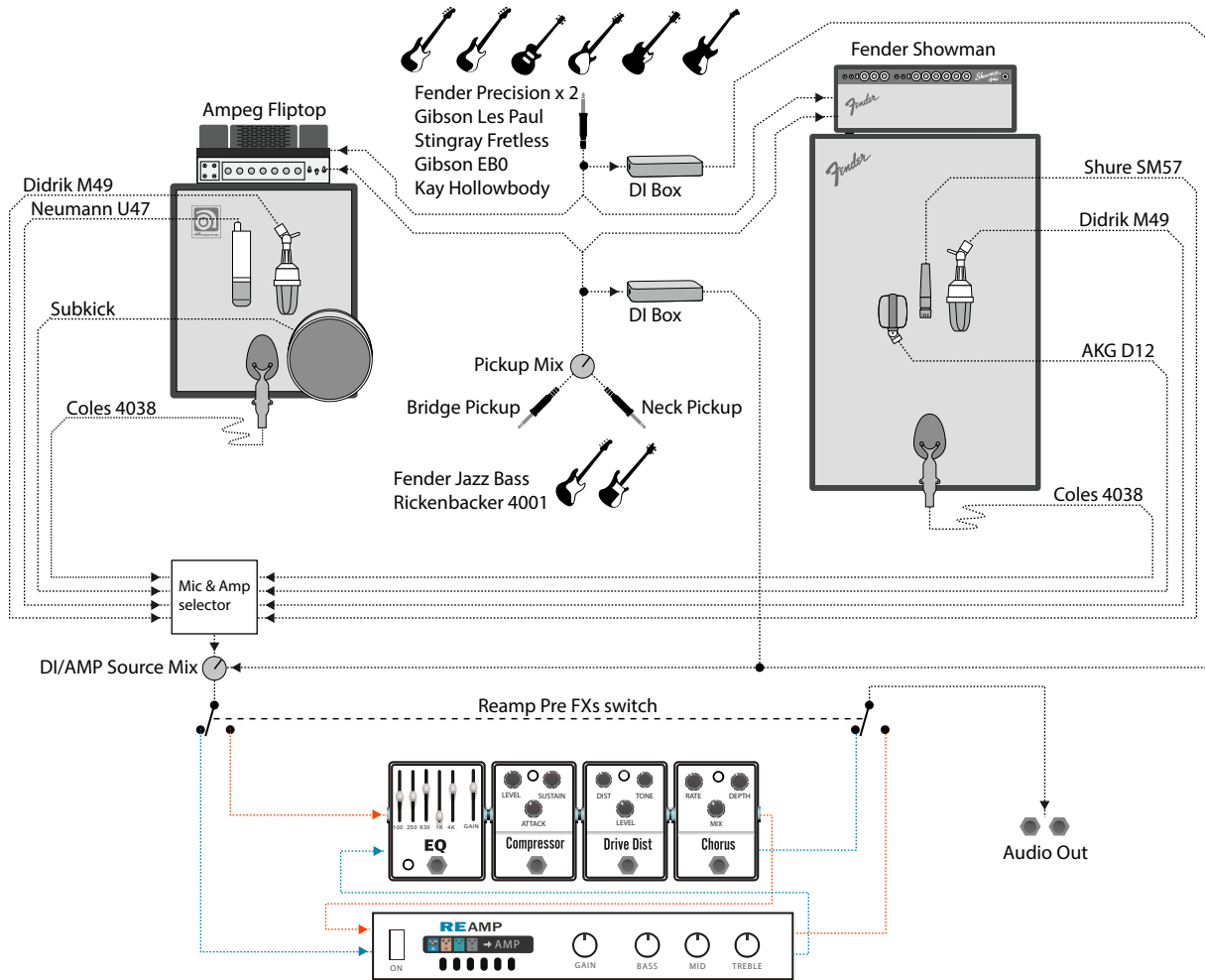
With Reason Electric Bass you have access to a selection of some of the finest electric bass instruments ever produced - hypersampled (see "[About Hypersampling](#)") through signal chains that include some of the true heavyweights in the amp and microphone business.

These signal chains make it possible to swiftly create a tailor made sound and feel of your bass without possessing professional sound engineering skills.



By providing these different signal chains and thus replicating a professional recording situation, Reason Electric Bass lets you be both the musician and the engineer at the same time. Reason Electric Bass gives you all the control you would have in a professional studio - with the added benefit of total recall of not only the mixer settings, but in fact the whole package; the bass, the amp, the microphones, the effects, everything exactly the way you left it.

The illustration below shows the various signal chains that are available in the Reason Electric Bass. For more detailed info about the signal chains used when recording/sampling the electric basses, see ["The signal chains"](#).



For detailed information about the electric basses used in Reason Electric Bass, please refer to ["Aces of basses"](#).

Panel overview

The Reason Electric Bass front panel contains the following sections:

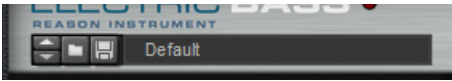


The Reason Electric Bass front panel sections.

- **1. Patch Selector (for browsing, loading and saving patches).**
- **2. Direct Signal/Amp signal mixer.**
- **3. Master Volume.**
- **4. Instrument selector (with Bridge/Neck pickup mixer for dual pickup basses).**
- **5. Mic+Amp selector.**
- **6. Unfoldable Stomp box and built-in Amp section.**
- **7. Articulation section (Hammer-On and Glissando).**
- **8. Mod Wheel indicator/control.**

Global controls

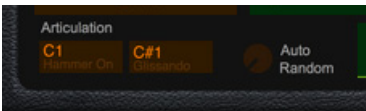
Loading and saving patches



Loading and saving patches is done in the same way as with any other internal Reason device. See the “Sounds and Patches” chapter in the Reason Operation Manual pdf for details.

! **Note that loading patches might take a few moments, due to the sample set loading times.**

Articulation



→ **Click and hold the C1 button - or hold down the C1 key on your MIDI keyboard - to momentarily introduce the Hammer-On effect.**

Hammer-on is the thinner sound you get when you quickly press a string against the fretboard with your fret hand without plucking the string with your other hand. By pressing the Hammer-On key while playing, the Hammer-On effect is introduced for every played note.

→ **Click and hold the C#1 button - or hold down the C#1 key on your MIDI keyboard - to momentarily introduce Glissando.**

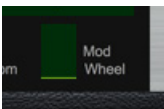
Glissando is the sound you get when you slide the finger on the fret board from one fret to another while the string is still sounding. By pressing the Glissando key while playing, a whole note glissando is introduced for every played note. The direction of the glissando is from down a whole note up to the played note.

→ **Turn the Auto Random knob to introduce Hammer-On effects, Glissandos, Ghost notes and Fret Noise randomly as you play.**

This is great if you want to focus entirely on the bass playing and not on the extra “sound effects”.

See [“Playing Reason Electric Bass”](#) for more details.

Mod Wheel



By using the Mod Wheel on your MIDI keyboard you can simulate damped notes (strings). The amount of damping is controlled with the Mod Wheel.

→ **Use the Mod Wheel on your MIDI keyboard - or click and drag in the green box - to introduce damping.**

About Pitch Bend

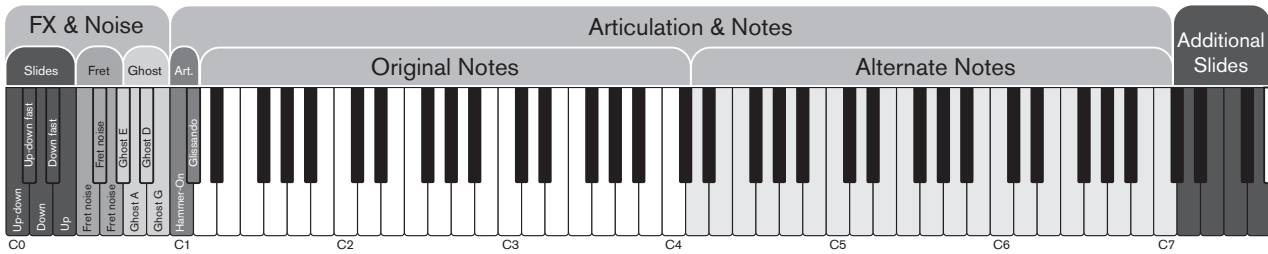
Reason Electric Bass responds to Pitch Bend via MIDI. The pitch bend range is fixed at +/-2 semitones.

About Aftertouch

Reason Electric Bass responds to Channel Pressure, which can be used for introducing pitch vibrato to the sound.

Playing Reason Electric Bass

All patches and electric bass instruments in Reason Electric Bass use the following keyboard layout:



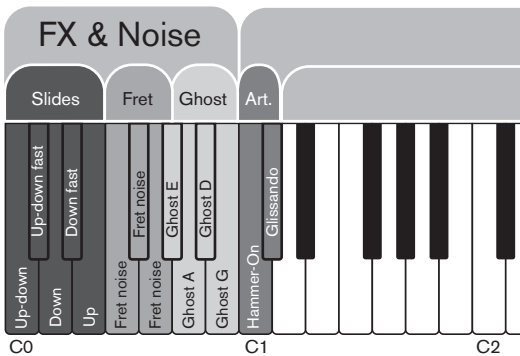
Keys C0-C#1 are used for FX, fret noise and for modifying the sound.

Keys D1-C4 play back the regular bass notes whereas keys D4-C7 play back the D1-C4 *note range* using alternate notes. Both the regular D1-C4 notes and the D4-C7 notes make use of release samples - samples that trig from key releases - to add even more realism.

Keys C#7-G7 are used for playing back additional slides.

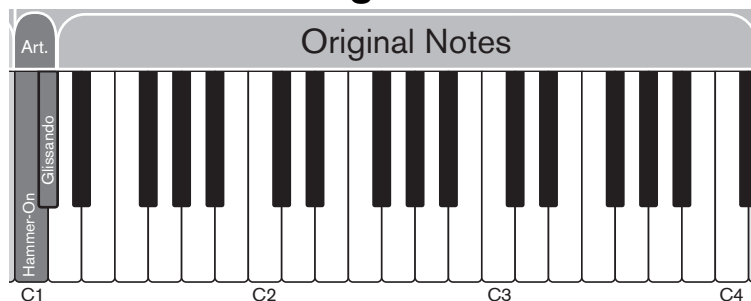
FX & Noise

The FX & Noise section of the keyboard, keys C0-B1, is used to produce various types of slide effect sounds and fret noise.



- **Slides**
The slides on keys C0-E0 are the characteristic “wroom” sound generated when playing full neck slides. There are five slide variations, with different directions and speed.
- **Fret noise**
Fret noise is the different types of noise that appear when you move your fingers on the fret board from one position to another. The fret noise sample selection is controlled by velocity.
- **Ghost**
Ghost notes are the sound that occurs when damping a string. There is one ghost note per string (E, A, D, G) and there are also several velocity layers.

Articulation & Original notes



The Articulation keys C1-C#1 are used to play back Hammer-on and Glissando samples (see below). Keys D1-C4 are used for playing back the original bass note samples.

- **Original notes**

These are the regular bass note samples. The notes of each of the instruments were sampled very tightly in the note range and with several velocity layers to guarantee authentic playback.

- **Hammer-on**

Hammer-on is the thinner sound you get when you quickly press a string against the fretboard with your fret hand without plucking the string with your other hand. The Hammer-On (C1) key works as a momentary switch, enabling you to switch between regular sustained plucked notes and hammer-on notes when playing in the D1-C4 and D4-C7 ranges. The hammer-on notes also use several velocity layers.

- Hammer-ons are perfect for altering the tone slightly for a more “live” feel when playing bass lines.

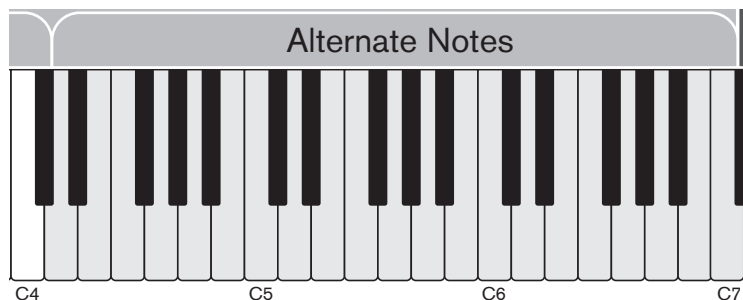
- **Glissando**

Glissando is the sound you get when you slide the finger on the fret board from one fret to another while the string is still sounding. The Glissando key (C#1) works as a momentary switch. By pressing the Glissando key while playing notes in the D1-C4 and D4-C7 ranges, a whole note glissando is introduced for every played note. The direction of the glissando is from down a whole note up to the played note. The Glissando notes also use several velocity layers.

- **Release samples**

The release samples are the sound that occur when you release the string with the fret hand and at the same time damp the string with the other hand. In all patches and electric bass instruments there are release samples for every note. The release samples have been very carefully programmed to faithfully reproduce the behavior in various playing techniques. The release samples also use several velocity layers.

Alternate notes



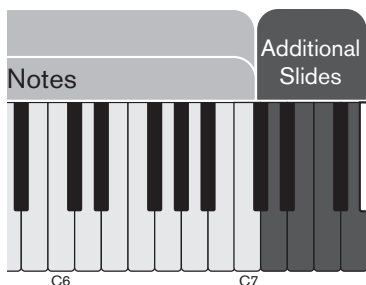
Keys D4-C7 play back the D1-C4 *note range* using alternate samples. Like with the original notes, the Articulation keys C1-C#1 can be used to momentarily introduce Hammer-on and Glissando samples instead. In all patches and electric bass instruments there are also release samples for the alternate notes.

- **Same note repeats**

By using a sustain pedal with your MIDI keyboard you can simulate "tied note repeats". By pressing the sustain pedal and playing the same *note* alternating between the "original notes" keys (D1-C4) and the "alternate notes" keys (D4-C7) you'll get the effect of repeatedly playing the same note without dampening in between. For example, if you want to play the lowest D note in a tied fashion, press the sustain pedal and play the D1 and D4 keys alternating.

- **To avoid overlapping notes when playing at fast tempos and using the sustain pedal, try playing short, staccato-like notes. You could also dampen the notes slightly using the Mod Wheel (see "Mod Wheel").**

Additional slides



Within the key range C#7-G7 you'll find additional full neck slides.

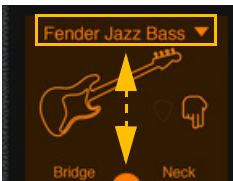
Sequencer recording tips

Since Reason Electric Bass offers all these great tools for modifying and bringing life to your bass lines, it could probably be a little tricky to record everything in one take. A very convenient working method when recording Reason Electric Bass basses in the Reason sequencer is to first record the actual bass notes on one lane in the track. Then, add Articulation (glissandos and hammer-ons), ghost notes and fret noises on additional Note lanes to "authenticate" the bass line. This way it will be much easier to get the effects and noises in their correct positions and also much easier to edit the bass sequencer track afterwards.

Selecting electric bass instruments



Instrument selector



→ **Click in the name field to bring up a list of the included instruments, and then select the desired instrument from the list.**

Alternatively, click and hold on the instrument illustration and drag up/down.

The selected bass instrument is illustrated in the display, and the playing style (pick or fingered) is highlighted to the right of the instrument.

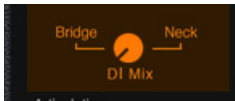
The included instruments are:

- **Jazz Bass (f)**
A 1968 Fender Jazz Bass played with the fingers.
- **Precision (f)**
A 1965 Fender Precision Bass played with the fingers.
- **Precision (p)**
A 1978 Fender Precision Bass played with a pick.
- **EB-0 (f)**
A 1972 Gibson EB-0 played with the fingers.
- **Les Paul (f)**
A 1969 Gibson Les Paul played with the fingers.
- **Kay Hollowbody (p)**
A 1963 Kay Hollowbody played with a pick.
- **StingRay 5 Fretless (f)**
A 2001 Music Man StingRay played with the fingers.
- **Rickenbacker (p)**
A 1974 Rickenbacker 4001 played with a pick.

! **Note that switching instrument will take a few moments, due to the sample set loading time.**

For detailed information about the different electric bass instruments used in Reason Electric Bass, refer to [“Aces of basses”](#).

Pickup mixer



For instruments with dual pickups you can set the mix between the bridge and neck pickups.

→ Turn the Pickup Mix knob to set the balance between the pickups.

! Note that the Pickup Mixer only has audible effect on the dry DI signal. If the Source Mix slider (see “The DI/Amp Source Mix control”) is all the way up to 100% (Amp), the Pickup Mix setting is of no importance.

Selecting microphone and amp



In this section you select which combination of amp and recording microphone you want to use.

Microphone and amp selector



→ Click in the name field to bring up a list of the included microphone+amp combination, and then select the desired combination from the list.

Alternatively, click and hold on the mic+amp illustration and drag up/down.

The selected microphone+amp combination is illustrated in the display.

The included microphone and amp combinations are:

- **A M49**
A Didrik De Geer M49 microphone and an Ampeg B-15 S Portaflex (flip-top) Bass Combo amp.
- **A U47**
A Neumann U47 FET microphone and an Ampeg B-15 S Portaflex (flip-top) Bass Combo amp.
- **A Subkick**
A Yamaha SKRM-100 Subkick microphone and an Ampeg B-15 S Portaflex (flip-top) Bass Combo amp.
- **A Coles**
A Coles 4038 microphone and an Ampeg B-15 S Portaflex (flip-top) Bass Combo amp.
- **F SM57**
A Shure SM57 microphone and a Fender Showman “Black face” amp.

- **F M49**
A Didrik De Geer M49 microphone and a Fender Showman “Black face” amp.
 - **F D12**
An AKG D12 microphone and a Fender Showman “Black face” amp.
 - **F Coles**
A Coles 4038 microphone and a Fender Showman “Black face” amp.
- ! **Note that switching between the Amp models (Ampeg and Fender) will take a few moments, due to the sample set loading time.**

For detailed information about the different amps and microphones used in Reason Electric Bass, refer to “The amp rigs” and “The mics”.

The DI/Amp Source Mix control



At the top center of the front panel is a mixer, which lets you set the balance between the DI signal (the signal that comes straight from the electric bass pickup(s)) and the signal that comes from the currently selected amp via the currently selected microphone.

- **Set the DI/AMP slider to achieve the desired mix.**

Stomp box and built-in amp section



In this section you can choose to run your electric bass signal through various stomp (effect) boxes. You can also route the signal to a built-in amp - the ReAmp - to add more character to the signal.

- **Click “Show Stomp & Re Amp” button to open the Stomp box and built-in amp section:**



EQ



This is a 5 band equalizer with +/-10 dB amplification/attenuation per band.

- **Click the EQ button to switch on/off the EQ.**
- **Set the amplification/attenuation of the bands with their corresponding sliders.**
- **Set the overall gain/attenuation for all frequency bands with the Gain slider.**

Compressor



This is a Compressor for restricting the dynamics of the signal.

- **Click the Compressor button to switch on/off the Compressor.**
- **Set the output level with the Level knob.**
This is basically the same as "make-up gain" in traditional compressors.
- **Set the combination of compression ratio and release time with the Sustain knob.**
A high Sustain value will make the volume even, and the signal will sustain for a long time.
- **Set the time it should take before the compression effect sets in, with the Attack knob.**
A long Attack time will make the transients pass through unaffected, which might be desirable in many situations.

Drive Dist



This is a distortion effect.

- **Click the Drive Dist button to switch on/off the effect.**
- **Set the distortion character with the Dist knob.**
- **Set the distortion tone with the Tone knob.**
- **Set the distortion level with the Level knob.**

Chorus



This is a stereo chorus effect.

- ! **Note, though, that if you route the ReAmp *after* the stomp boxes the Chorus output will be in mono, see “ReAmp” below.**
- **Click the Chorus button to switch on/off the effect.**
- **Set the rate of the modulation with the Rate knob.**
- **Set the depth of the effect with the Depth knob.**
To get a static sound, set Depth to zero.
- **Set the dry/wet mix with the Mix knob.**

ReAmp



The ReAmp is a built-in amplifier which can be used for amplifying and/or changing the character of the signal further.

- **Click the On button to switch on/off ReAmp.**
- **Click the ReAmp Pre FX button if you want the ReAmp before the effect boxes in the signal chain.**



- ! **Note that since the ReAmp is a mono amplifier, routing it *after* the stomp boxes will turn the Chorus effect into mono.**
- **Set the preamp level with the Gain knob.**
A high value will generate distortion.
- **Set the tone with the Bass, Mid and Treble knobs.**

Connections



! Remember that CV connections are NOT stored in the Reason Electric Bass patches! If you want to store CV connections between devices, put them in a Combinator device and save the Combi patch.

Sequencer Control CV inputs

The Sequencer Control CV and Gate inputs allow you to play Reason Electric Bass from another CV/Gate device (typically a Matrix or an RPG-8). The signal to the CV input controls the note pitch, while the signal to the Gate input delivers note on/off along with velocity. There are also inputs, with attenuation knobs, for modulating the Pitch Bend and Mod Wheel parameters.

DI Out L&R

Connect to these audio outputs to route the unaffected DI signal from the bass pickup(s) to a destination for further processing. These outputs can be used “in parallel” also if the other audio outputs are used.

Amp Out L&R

Connect to these audio outputs to route the Amp signal to a destination for further processing. These outputs can be used “in parallel” also if the other audio outputs are used.

Main Out L&R

These are the main audio outputs. When you create a new Reason Electric Bass device, these outputs are auto-routed to the first available Mix Channel in the Reason main mixer. If there is no Mix Channel available, a new one will be automatically created.

The best of the best - how Reason Electric Bass was created

With the emphasis on sonic and creative realism, it is vital that every component along the path from the bass guitar strings to your computer is the best of the best - no weak links anywhere.

We therefore took the utmost care in assuring that the studio, the recording gear, the instruments, and last but not least the talent involved, was top notch across the board.

More than 25 years of experience of electric bass recording assures the absolute best combinations of instruments, amp rigs, microphones, mic pre-amps, mixer and recording equipment.

Aces of basses

Our first goal was to gather a representative selection of fine electric bass models. We wanted a wide range of basses, with different character, to cover different musical styles. We therefore contacted one of the most renowned session bass players in Sweden, Sven Lindvall, to see what he would suggest. Sven took a tour around his studio and returned with the impressive collection presented on the following pages. All instruments except for the Rickenbacker are owned by Sven.

Fender Jazz Bass - 1968 (played with the fingers)

One of the most recorded bass models of all times. This particular instrument is in original condition with no parts exchanged.

Pickups: two bi-pole pickups connected in parallel.

Strings: Ernie Ball Nickel Round Wound (a couple of months old).

Character: Very dynamic bass which sounds very different depending on playing style and is therefore suited for a wide variety of musical styles. Very direct sound with lots of presence.

Famous users: Flea (Red Hot Chili Peppers), Geddy Lee (Rush), Leland Sklar, Jaco Pastorius.



Fender Precision - 1965 (played with the fingers)

The Fender Precision bass was the first mass-produced electric bass model and is probably the most best-selling electric bass of all times. The first "P-bass" shipped in 1951 and it's still being manufactured today.

The P-bass with flat wound strings played with the fingers produces the typical warm and "round" '60/'70 R'n'B and Motown sound.

This particular instrument was sampled played with fingers and there is hardly any distortion in the samples - not even in the loudest velocity layers.

Pickups: 2 single coil (1 pick-up for 2 strings) that work like a humbucker.

Strings: Ernie Ball Flatwound for less overtones and more "round" tone.

Character: Very deep and warm sound with characteristic mid-range and only a little high end.

Famous users: James Jameson (The Funk Brothers, Motown), Donald "Duck" Dunn (Stax), Pino Palladino.



Fender Precision - 1978 (played with a pick)

This P-bass is very similar to the 1965 P-bass described on the previous page. The big difference in sound mainly depends on the round wound strings and the fact that it's played with a pick. It also has a maple fret board which gives it a harder and more transient tone.

Pickups: 2 single coil (1 pick-up for 2 strings) that work like a humbucker.

Strings: Ernie Ball Round Wound.

Character: The round wound strings played with a pick makes the sound very rich in overtones, perfect for rock, new wave and punk music.

Famous users: Adam Clayton (U2), Geezer Butler (Black Sabbath), Sid Vicious (Sex Pistols).



Gibson EB-0 - 1972 (played with the fingers)

The short scale EB-0 is one of Gibson's most popular bass models and was manufactured between 1959 and 1979. The design is very similar to the popular Gibson SG electric guitar.

Pickups: one EB humbucker.

Strings: Ernie Ball Round Wound.

Character: The EB-0 is renowned for its deep and fat sound. It's very suitable for distorted sound.

Famous users: Jack Bruce (Cream), Bill Wyman (Rolling Stones), Glen Cornick (Jethro Tull), Andy Fraser (Free), Kim Gordon (Sonic Youth).



Gibson Les Paul - 1969 (played with the fingers)

An American medium scale bass with British sound manufactured between '69 and '71. The body is made out of solid mahogany, set 3-piece mahogany neck with rosewood fretboard. Due to its heavy weight the Les Paul bass is more popular in the studio than on stage.

The first Les Paul bass was a low-impedance instrument which required a transformer to play through standard amps. The output impedance on this particular instrument has been modded to suit standard amps, though. In Reason Electric Bass only the signal from the neck pickup was sampled. On the other hand, it's the neck pickup that provides the characteristic Les Paul sound.

Pickups: Two humbucking pickups that were modded to high-impedance. Reason Electric Bass only uses the neck pickup.

Strings: Ernie Ball 5-string vintage round wound set (more than 10 years old). The thinnest string is not used.

Character: "Plunky" sound which sits right in the mix. A lot of mid and low end with a distinctive attack. Sounds similar to a hollowbody bass.

Famous users: Suzie Quatro



Kay Hollowbody - 1963 (played with a pick)

The Kay Hollowbody electric basses were sold on mail order in the US and were quite inexpensive. Because of the low price the Kay bass could be found almost anywhere in studios across the US and has appeared on many recordings over the years.

This model (in very good condition) was chosen for Reason Electric Bass for its “dirty” and “muted” ‘60s” sound. It was played slightly muted with a pick, and only with down-strokes.

Pickups: Gibson Thunderbird humbucker.

Strings: Pyramid Gold Flatwound.

Character: A “plunky”, hollow sound similar to that of the Les Paul bass.

Famous users: No-one that we know of by name but it has appeared on numerous recordings.



Music Man StingRay 5 - 5 string fretless - 2001 (played with the fingers)

The MusicMan StingRay first came out in 1976 and was designed by Leo Fender. It was one of the first production electric basses with active electronics. It featured a 9V battery to power the built-in preamp and EQ. This particular instrument is a 5-string, fretless one and was sampled without the characteristic vibrato.

Pickups: MusicMan Humbucker active.

Strings: D'Addario Stainless Flatwound.

Character: The StingRay doesn't produce the traditional “fretless” sound but a more solid and “round” tone with fantastic frequency response. When you play chords on the StingRay the notes harmonize extremely well together.

Famous users: Tony Levin, Mick Karn (Japan), Louis Johnson (Brothers Johnson), Pino Palladino.



Rickenbacker 4001 - 1974 (played with a pick)

Rickenbacker guitars and basses have very unique design which make them easy to spot wherever they appear. The very popular 4001 model first came out in 1961 and this particular red/white Rickenbacker 4001 bass was manufactured in 1974. It's owned and played by Swedish bassist Stefan Fandén.

Pickups: one humbucker (bridge) and retrofitted with a Toaster (neck).

Strings: Elixir .040-.095 Super Light round wound with Nanoweb coating.

Character: Rickenbacker basses have a very distinctive tone with a rich frequency content - almost piano-like. The 4001 bass has a neck-through construction for really solid sustain.

Famous users: Chris Squire (Yes), Geddy Lee (Rush), Lemmy (Motörhead), Roger Glover (Deep Purple), Paul McCartney, Roger Waters (Pink Floyd).



The amp rigs

Ampeg B-15 S Portaflex Bass Combo

The Ampeg Portaflex "flip-top" bass amp became very popular in the '60s. This all-tube amp model has been used on thousands of classic recordings and is still one of the favorites in recording studios world-wide.

This B-15 S Combo has a powerful 70 watt RMS output fed into a 15" bass reflex speaker.

The powerful, warm and "vintage" sound makes the Ampeg bass amps mighty popular among bass players and recording studios around the world.



Fender Showman "Black face" -64

The Fender Showman is a very popular all-round amplifier designed for use with electric guitars, electric bass guitars and keyboards.

The Fender Showman rig has a warm "all-round" character with a lot of presence - but not so much low end as the Ampeg B-15 S. The Showman can also be forced to distort quite easily which is very nice in many situations.

The 50 W RMS output from the Showman amp is fed to the two 12" elements in the cabinet.

Because of its character the Fender Showman rig was chosen as a nice "sonic counter-part" to the Ampeg rig.



The mics

The amp rigs were captured using a setup of tried and true microphones including Neumann U47 FET, Didrik DeGeer M49, Coles 4038, Shure SM57, AKG D12 and Yamaha SKRM-100 Subkick.



The list below shows with which amp rig the mics were used.

Source	Microphone
Ampeg B-15 rig	1 x Neumann U47 FET
	1 x Didrik De Geer M49
	1 x Coles 4038
	1 x Yamaha SKRM-100 Subkick

Source	Microphone
Fender Showman rig	1 x Shure SM57
	1 x Didrik De Geer M49
	1 x AKG D12
	1 x Coles 4038

AKG D12

Introduced in 1953, the AKG D12 was the world's first dynamic cardioid mic with a "unidirectional" design. It was based on new developments in microphone technology which extended the frequency response deeper into the bass range. The transducer has a special "bass chamber" that boosts the lower frequencies in the 60-120 Hz range giving it a full, round bass end.

Coles 4038

Also known as the “horse shoe” for its shape, the Coles 4038 is a modern classic and studio favorite among ribbon microphones. Originally designed by BBC (British Broadcasting Corporation) some 40 years ago and still manufactured today by Coles Electroacoustics.

Didrik De Geer M49

Hand crafted tube microphone by Swedish inventor Didrik De Geer. A true “Rolls Royce” of microphones with only a handful built.

Neumann U47 FET

A true microphone classic, ideal for recording bass guitars. Originally a valve microphone which was later “upgraded” with a FET transistor due to lack of suitable valves. One of the most sought after microphones in professional studios.

Shure SM57

One of the most popular microphones in recording studios. The SM57 is a dynamic microphone with a cardioid, directional pattern. It doesn't require phantom power and it's very sensitive to direction. The SM57 is perfect for recording loud sources such as drums and amp rigs.

Yamaha SKRM-100 Subkick

Consists of a 6.5" speaker shock-mounted into a 10" drum shell and reverse-wired to an XLR jack to convert the speaker diaphragm into a microphone diaphragm. The Subkick picks up the low-end that a normal microphone can't - from a bass guitar cabinet, for example.

The mic pre-amps and DI-boxes

Chandler TG2

The Chandler TG2 is a recreation of the EMI TG12428 preamp used in EMI/Abbey Road recording and mastering consoles in the late 60's and early 70's. In our setup the TG2 was used together with the Didrik DeGeer M49 tube microphone.

API 512C

The API 512C is a discrete mic/line preamp by the company Automated Processes Inc. The API 512C was used together with the Shure SM57 and Yamaha SKRM-100 Subkick microphones.

Avalon U5

A high-voltage DI-preamp by the company Avalon Design. The U5 was used as DI-box when recording the basses.

Fairman TMA

A tube microphone preamp by Danish company Fairman. In our setup the Fairman TMA was used together with the AKG D12 and Neumann U47 microphones.

Fairman TRC MkII

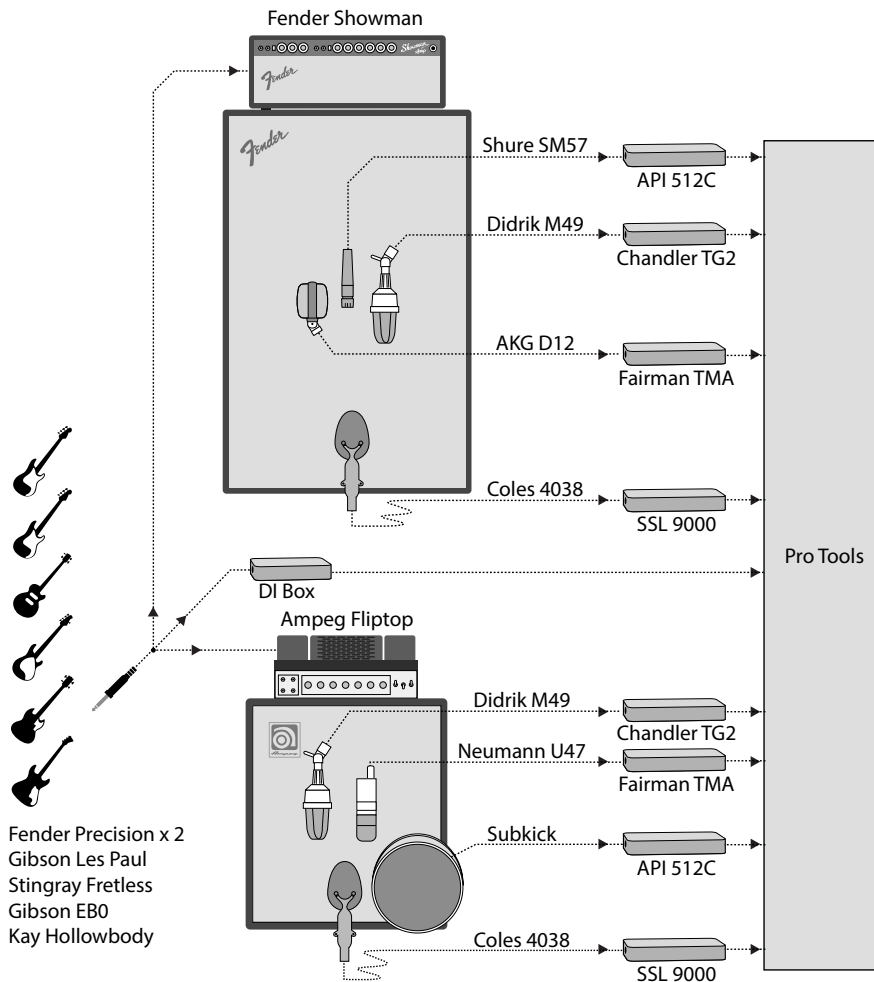
A tube recording channel unit by Danish company Fairman. The TRC was used as DI-box when recording the basses.

REDDI Tube Direct Box

Tube DI box by the company A Designs Audio. The REDDI was used as DI-box when recording the basses.

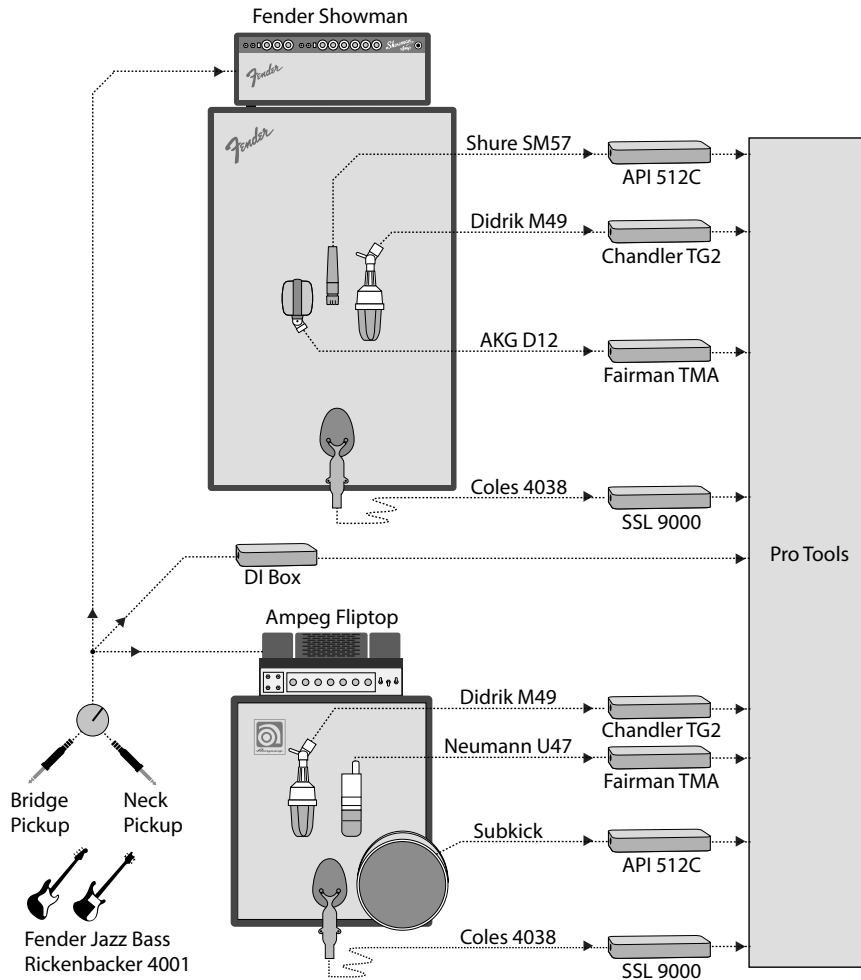
The signal chains

The basses and amp rigs were recorded using parallel signal chains for total sonic flexibility. The figures below show the signal chains for the two bass amp rigs. We used slightly different signal chains for basses with double pickups and single pickups.



The figure above shows the signal chains, including the mic pre-amps, for the six single-pickup basses. The pickup signal is split three-ways - two to the amps and one direct signal to Pro Tools.

For the two double-pickup basses the signal from the pickups can be mixed before sent to the DI/AMP mixer.



The figure above shows the signal chains, including the mic pre-amps, for the two double-pickup basses.

As you can see, we ended up with quite a lot of signals! The samples from all these signal chains can now be freely selected and blended simply by choosing the corresponding bass instrument and Amp+Mic combinations in Reason Electric Bass.

All instruments, with their different amp and mic configurations, were sampled in several velocity layers and with different playing techniques such as hammer-ons, glissandos, alternate notes, slides etc. to form the most complete, dynamic and "live" electric bass instruments ever made for computers.

The studio



The instruments for Reason Electric Bass was recorded at Mandarine Studios in Stockholm. The Mandarine Studios is a modern state of the art recording facility equipped with an SSL 9000 console and an outstanding array of outboard gear.

The people

Sven Lindvall, bass player

Sven is one of Scandinavia's most well renowned and sought after bass players and has worked with numerous Scandinavian and international pop and rock artists over the years.

Niklas Flyckt, engineer

Niklas is one of Sweden's most respected engineers and has recorded and mixed some of the most famous artists in the world.

About Hypersampling

Multisampling is the established standard for digital representation of analog/acoustic instruments. While it has been refined somewhat over the years, multisampling still has a few shortcomings:

- **The dynamic resolution is often too limited, failing to capture the subtle nuances between the steps.**
- **Typically, a single microphone (or, at best, a merged signal from multiple microphones) is used, leaving the recording distance, ambience and character set in stone.**
- **You usually get only one sample per “velocity span”, while a real instrument sounds slightly different for every pluck, stroke or beat (even when played at a static velocity level)**
- **Instruments can be played with countless approaches and techniques, yet multisampling typically only offers the basic archetypes. At best, you get a couple of velocity layers, but these only represent a tiny fraction of all the sound variations you can get out of an analog instrument.**

So, how could we bring something fresh to the table?

The answer: Hypersampling. We like to refer to it as multi-dimensional sampling, because it gives you complete control over many aspects of instrument reproduction that used to be out of reach for the end user.

What is Hypersampling?

Hypersampling involves the following:

- **Multiple velocity levels**
For capturing the full dynamic range of each instrument.
- **Multiple microphones and signal chains**
For capturing, controlling and blending the characters of various amps and mics.
- **Multiple same-velocity samples**
Alternation between similar sounding samples, for a more realistic performance.
- **Multiple variation sampling**
Capturing the different playing techniques, sound attributes and noises that make the instrument come alive.

Credits

The Reason Electric Bass factory sound library features patches created by the following sound designers:

J Chris Griffin

Ian Duncan

All basses were recorded at Mandarin Studios, Stockholm

Producer and project manager: Kristoffer Wallman

Recording engineer: Niklas Flyckt

Bass player and connoisseur: Sven Lindvall

Rickenbacker bass player: Stefan Fandén

Sampling consultant: Per Larsson, SampleTekk

Editing and programming: Peter Jubel, Loui Westin, Kristoffer Wallman and Attila Cederbygd.

Graphics: Andreas Karperyd

Thanks to: Bosse Person, Anders Bagge, Pontus Winnberg, Christian Karlsson, Hans Backenrot and all the beta testers.