Kick & Bass Machine
a Kontakt 5.6 + instrument
by Lussive Audio & A-lusion

Documentation v1.0
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Installation & Requirements

This instrument is created for Kontakt Full Edition <u>v5.6</u> and up.
OS: MacOS or Windows resolution 1000x1000 minimum. Can be used in the Kontakt Player for 15 minutes in demo mode. The instruments requires 20 MB of RAM memory on top of the usage of Kontakt and the DAW.

Loading the instrument

- Start your DAW and load Kontakt 5.6 or up.
- Locate the Instrument in the folder

⊞ LUS Kick and Bass Machine by A-lusion.nki	61.05 kB	01/18/2021 22:04
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- Open the .nki file
- The Kick & Bass Machine is ready to use

Note: if you use Drag and Drop load in Ableton Live, issues might occur. Please load the .NKI from within Kontakt itself in stead of directly loading the .NKI via drag and drop.
Note 2: the instrument can become CPU heavy up to 18% usage, tested on a 2009 8-core Mac Pro.

Features

Kick & Bass Machine description

The Kick & Bass Machine is a sampler instrument which consists of 6 different layers. With these 6 layers many different types of Kick & Bass combinations can be generated for usage in styles as Psy Trance, Hardstyle, Rawstyle and (UK) Hardcore. It's like making your own Pizza. The basic minimum needed layers are the Kick and Bassline layers. These are the key ingredients of your pizza. On top of that the two Extra Basslines, Sub Bass and Attack layers provide additional sounds. See these as the toppings of your pizza.

Layers:

<u>1: Kick layer</u>
This is the main kick layer which holds *20* different kickdrums. There are *10* custom kick slots available to use your own kickdrums. Replace the custom audio wave files and re-load the instrument to use them.

<u>2: Bass layer</u>
This is the main bassline layer which holds 17 reversed basses, 3 regular basses, 5 psy basses and 5 custom bass slots for your own basslines. They are all tuned to G# so replace the audio files with G# tuned basslines.

<u>3: Extra bassline layer</u>
This is the part where you can go all out in creating a bassline to your taste. Based 25 different 'wavetable' sample layers you can spice up your bassline or create one from scratch. Use the LFO, Filters and Envelopes to get the right movement for your desired BPM and rhythm. Use the distortion, bitcrushing and shaper feature to shape your bassline sound to your liking. 10 custom wavetable slots are available. Make sure your audio is tuned to C and has the same length as the custom audio sample you are replacing. This way the roar mode will keep working and tuning is done right by default.

<u>4: Sub layer</u>
The sub layer holds 7 sub bass sounds. Varying from clean sine bass sounds to gated reverb kick sounds and saturated sub sounds.

<u>5: Attack layer</u>
Add some extra attack. 10 attacks and 5 custom attacks are available.

Style Selector
This feature allows quickly changing the sample start time of the bass layers. It also makes it possible to quickly set the speed knobs for straight or triplet rhythm. Read more on this in the detailed descriptions below.

Shuffle Mode
The shuffle mode is used to randomly select layers. Shuffle mode can be activated per layer.
Read more on this in the detailed descriptions below.

Master Effects
The Master Effects can be used for effects like a High Pass Filter, Reverb, Delay, Limiter, Distortion, Saturation, Stereo Imaging and more.

How to use ideas:

Approach 1: The classic
Use a Kick and Bass layer, optionally with an extra attack.

Approach 2: Kick & Bass generation
Use a Kick and Extra Bassline layer, optionally with an extra attack.

Approach 3: Kick & Bass to your taste
Use a Kick and Bass layer, Extra Bassline layer, optionally with an extra attack.

Approach 4: Kick & Bass in full effect
Use a Kick and Bass layer and Clean Bass layer. In this configuration it's advised to enable the cut the bass toggle which removes the sub of the Bass layer.

Approach 5: Kick & Bass madness
Go all in and use all layers. Make sure you use the sub just of 1 layer or use the phase invert to blend them together.

Approach X: Just do your thing
Load multiple instruments to have an instrument (and output) per layer, use all layers together, use just a layer to combine your own audio track samples, etc. The ideas can be infinite.

KICK & BASS MACHINE   BY a-lusion

General features

Kick 1 ▾ **‹ ›**	**Layer selection** - Click the dropdown menu to select another layer sound. Use the left and right buttons to navigate through every layer sound.
0°	**Phase invert** – Some layers have a "phase invert" knob. Use this to blend the low-end. Sometimes inverting the phase of a sound glue the layers together nicely.
(knob)	**Knob –** click and drag with your mouse to change the value. CMD / CTRL + click will reset to the default position, in case the knob has a default position.
(indicator)	**Mute layer** – if the indicator lights blue, the layer is playing. This can be used to quickly mute a layer without having to select the – layer. When not blue, it's muted.
(toggle)	**Toggle** – the toggle can be used to browse through effects menu 1 and 2, LFO menu and can be used to cut the sub of the Bass and Extra Basslines layers.
RESET LABELS	**Reset Labels** – some text displays are updated with knob and slider values. Click this button to reset the text displays to it's default instrument text.
(reset icon)	**Reset Layers** – Each layer consists of a reset layer button. This resets knobs and buttons that have direct impact on the sound to the "no impact" value.
VELOCITY OFF	**Velocity mode** – DAW note velocity can be enabled to draw quick volume changes. It is of by default so playing on the keyboard always has the same volume.

Layer 1: Kick

Volume control
- inf .to + 6 dB

Kick selection
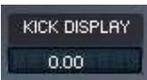Choose the desired kick layer here.

Phase invert
Invert the phase of the kick waveform in case this blends better with the other layers.

Pitch control
36 to 36 notes

Display
The text display shows the values of the knobs right of the display.
Click any of the knobs to see it's current value or twist any knob.
You can reset the display by clicking the Reset Labels knob on the bottom of the instrument.

LP / HP Filter
8.2 to 35.5 kHz
Use the low-pass and highpass filter if desired. The filter works on all kick layers at once.

Equalizer
18 dB to + 18 dB
20 Hz to 20 kHz
Bandwidth 0.33 to 3.00
Set a narrow bandwidth to add or remove a certain frequency. Set a wide bandwidth to shape the overall sound of the layer. Like adding more bass or top-end.
The EQ works on all kick layers at once.

Saturation
0.00 to 100.00 (0 = no saturation)
Use the saturation to thicken the kick sound if that's possible and desired.
The saturation works on all kick layers at once.

AMP Env
Attack: 0.00 to 420.8 Ms Decay: 0.00 to 25 value
Use the attack knob to remove the attack of the kick. Can be good to do when using an additional attack layer. Use the Decay to make the kick shorter to make room for the bassline] in case the kickdrum sound is longer than half of the full beat.
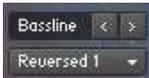The AMP Env works on all kick layers at once.

Layer 2: Bass

Volume control
- inf .to + 6 dB

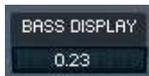**Bass selection**
Choose the desired bass layer here.

Phase invert
Invert the phase of the bass waveform in case this blends better with the other layers.

Pitch control
36 to 36 notes

Display
The text display shows the values of the knobs right of the display.
Click any of the knobs to see it's current value or twist any knob.
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The AMP Env works on all kick layers at once.

Bitcrusher
Crush your bass layer to fewer bits with this.

Start
Use this knowb to change the sample start of the bass layer.
Each bass sample has additional silence before the actual bassline plays.
This way you can set the bassline to different BPMs and in both straight and triplet rhythms.
Use the Style Selector to automatically set the predefined value for BPMs 140 till 180 BPM.

Speed
The speed knob timestretches the bassline. Dragging the knob to the left makes the sound 'longer' and suitable for triplet rhythm. Drag it to the right to make the sample play shorter.
Use the Style Selector to automatically set the predefined value for BPMs 140 till 180 BPM.

Style Selector

Even though Kontakt has algorithms for BPM independent timestretching, a separate feature is made for this. The Bass layers are all created for 150 BPM and the algorithm of Kontakt for automatic BPM timestreching doesn't hold up for low frequencies when pitching to different notes. In the beginning of each bass sample there is silence added. Because of this it is possible to use the sample START value for syncing the bassline with other BPM's such as 140, 160, 170 and 180 BPM. And anything in between and above.

Because the sample start can be set for each layer individual, it might take some time to sync the start times when you work on another BPM as 150. The Style Selector does this for you.
It also allows setting the speed to straight or triplet rhythm. Note: this can also be done by manually changing the start time if you don't want to timestretch with the speed function.

Predefined styles / BPMs and rhythms. Default is equal to Hardstyle (150 bpm).

How to use:
Select the BPM/ Style and rhythm.
Click "SYNC BASS".
Caution: when SYNC BASS is clicked, the Start and Speed of EVERY bass layer is changed. Also of the not selected bass layers.
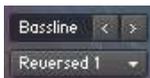
Layer 3 & 4: Extra Basslines

The Extra Basslines layers can be added on top of the bass. Or played solo with the kick depending on your style and configuration.

Volume control
- inf .to + 6 dB

Bass selection
Choose the desired bass layer here.

Pitch control
36 to 36 notes

Panning
Pan the extra bass layer to the left or right.

The Pitch Envelope knobs can be used to set the:

Pitch Transpose (+36 semitones)
Pitch Envelope Attack
Pitch Envelope Attack Curve
Pitch Envelope Hold
Pitch Envelope Decay
(Knobs are displayed in order of the text above)

The roar mode sets the extra bass layers in a very short loop which makes the sound resonate.
The Roar mode is enabled by clicking the button. After that you can use the knob to change the loop length.
Make sure you listen to the tuning as this might be affected by the feature. Listen and correct the tune if needed with the pitch tune per layer.
The Pitch and Roar features work on all extra bass layers at once.

Pitch LFO

Use the toggle to show the Pitch LFO if you don't see it.

The Pitch LFO has five knobs and one activation switch. The top left knob controls the Frequency of the LFO and the top right knob is a delay / attack knob. Turning that knob to the right makes the LFO start later after playing a note. The bottom three knobs shape the LFO sound. You can add a sine shape, saw shape and random shape. It works on both Extra Bassline layer at once.

Filter LFO

Use the toggle to show the Filter LFO if you don't see it.

The filter LFO has six knobs and one activation switch. The top row left knob controls the Frequency of the LFO and the middle knob is a mix knob to mix the LFO sound with the original. The top row right know sets the phase of the LFO. The small bottom three knobs shape the LFO sound. You can add a sine shape, saw shape and square (rectangle) shape. The Sync Menu can be used to change the free HZ frequency mode to the timed mode based on your DAW's BPM. Sync modes 1/4, 1/4T, 1/8, 1/8T, 1/16 and 1/16T are available.
Tip: use the square shape knob in combination with the sync 1/16th mode to get a good rolling bass sound. Use the phase knob to match the LFO start to the BPM. It works on both Extra Bassline layers at once.

Filter

The filter can be controlled with a Cutoff, Resonance and Attack and Decay ENV. Use the filter to make an offbeat bassline by lowering the cutoff and increasing the attack time. Play around with the decay to get the right drive. It works on both Extra Bassline layers at once. Knob values are shown on the FILTER DISPLAY. Click a knob to see it's current value.

Amplifier Envelope

A volume envelope can be set with Attack, Decay, Hold and Release. Use the AMP envelope to make an offbeat bassline by increasing the attack and setting the desired decay, hold and release. It works on both Extra Bassline layers at once. Knob values are shown on the AMP ENV DISPLAY. Click a knob to see it's current value.

HP Filter, Bitcrush and Noise OSC

The knobs above are grouped in an OTHER DISPLAY area.
The HP Filter is automatically set when the Sub Bass layer's Cut Bass toggle is enabled. It can also be manually be controlled. It works on both Extra Bassline layers at once.
The Bitcrusher crushes the bits of the extra basslines layer.
The noise knob is in fact a noise oscillator which is added to the sound to give is a more smooth sound.
Knob values are shown on the OTHER DISPLAY. Click a knob to see it's current value.

Scrub

The scrub feature is the key feature in shaping your extra bassline sound. Each extra bassline layer can be individually 'scrubbed'. By dragging the fader left or right, the sample start of the wavetable layer is changed. Because every extra bassline layer consists of a changing sound over time, this feature is a creative tool to precisely shape the bassline sound.
All the way to the left means the sample starts at the beginning. All the way to the right plays the sound at the end of the wavetable.

Destroy

The destroy featre can be enabled by clicking the "line-in" element. It lights blue in case the distortion is enforced. The Destroy and More knobs can be used to control the amount of distortion. The Trim feature is an overall gain feature for the complete Extra Basslines layer. Because of the distortion, the layer's volume can be too loud in comparison to the other layers. This can be resolved by the overall volume feature. It works even without the distortion being enforced. This way it can also be used as a general gain feature regardless of the distortion amount. It works on both Extra Bassline layers at once.
Knob values are shown on the DESTROY DISPLAY. Click a knob to see it's current value.

Overall volume control of the Extra Basslines

Mod Wheel Destination

An intuitive Mod Destination feature enables you to quickly set the different shaper knobs. Play your bassline in a loop and click your mouse to navigate from knob to knob in the Mod wheel destination while changing the mod wheel. This way you can quickly shape your desired sound. There is an invert button which you can use to change the direction of the mod wheel behavior.
There are two mod destination slots available.

Shaper

Inherited from the Screen Designer, the Shaper feature allows creative distortion on the bass layers.
Shape 1 is a bandpass filter. *(1: Cutoff, 2: Res, 3: Bandwidth)*
Shape 2 is a peak EQ filter. *(1: Frequency 1, 2: Frequency 2)*
Shape 3 is an overall EQ. *(1: Frequency, 2: Gain, 3: Bandwidth)*

All shape controls are positioned before the destroy / distortion effect.
Enable a shape function by clicking the respective button before the knobs.

It works on both Extra Bassline layers at once.
Knob values are shown on the SHAPE DISPLAY. Click a knob to see it's current value.
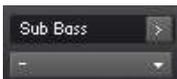
Layer 5: Sub Bass

The Sub Bass layer isn't necessary is you use the Bass layer's sub frequencies. But it might be good to use the Sub Layer in stead of the bass of the other layers for the best quality result.

Volume control
- inf .to + 6 dB

Sub selection
Choose the desired sub layer here.

Phase invert
Invert the phase of the kick waveform in case this blends better with the other layers.

Pitch control
36 to 36 notes

Speed
The speed knob timestretches the sub bass. Dragging the knob to the left makes the sound 'longer' and suitable for triplet rhythm. Drag it to the right to make the sample play shorter. This can also be used to better align the sub frequencies in comparison to the other layers.

Cut Bass
This toggle makes it easy to cut the sub bass on the Bass and Extra Bassline layers.
When toggled up, you'll see the High Pass Filters of those layers move to around 100 / 200 hz
The values can be manually changed after toggling.
When toggling down, the sub of the layers is restored again.

Layer 6: Attack

The Attack layer isn't necessary if you only need the Kick layer. But it might be good add some more spike to your kick and bass sound.

 Volume control
- inf .to + 6 dB
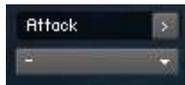
 Attack selection
Choose the desired attack layer here.

 Pitch control
36 to 36 notes

 Length
Sets the length of the attack sample played. Turn left to make the sound shorter.

 Decay
Sets the decay time of the attack sound right after the hold time has passed.

Sphere animation

The sphere shows when the instrument is playing. When the shaper is active, the colors are different.
You can disable the sphere if it annoys you or to slightly save some CPU.

Shuffle Mode

A unique concept, inherited from the Kick Configurators, is the Shuffle Mode.
This mode allows random layer selection. Custom Layers are excluded.
This way you can creatively come up with intersting kick bass results quickly.

Layers can be made eligible for shuffling by clicking the indicators as shown blue in the image above.
Click the dice to roll.
Affected knob values and de scrub faders are automatically updated to the layer's setting.

Click the button to go back to the previously diced layers. This can only be used once.

Master Effects

The Master Effects section is divded into to sections. You can toggle between both sections by using the Toggle Icon. This will only visually change the display and doesn't enable or disable effects.

Available effects are:
Saturation, Distortion, Bitcrusher, Delay incl timed rhythm setup, Reverb incl pre-delay, High Pass Filter incl Resonance, Bandpass Filter incl Resonance, Gain and Stereo Width.

Note: in case Delay and/ or Reverb is added, you still hear them at full spectrum if the high pass or bandpass filters are used. This is due to the routing of the reverb and delay in Kontakt as Send Effects.
In case you want to use a Band Pass or High Pass on the full chain, please use an external DAW EQ / Filter.

Bandpass Filter
The bandpass filter has to be enabled by clicking the button.

Saturation
The saturation knob can be used to add overall warmth and saturation to the sounds resulting in a more expressive sound.

Lo-Fi / Bitcrusher
The bitcrusher knob can be used to add some gentle highs to the sound or bitcrushed effects.

Reverb & Pre-delay
Reverb can be added, which works on the Bass layer and Extra Basslines layersl. The pre-delay can be used to delay the reverb sound for better placing in the track. But of course you can always add a high quality external VST reverb in your DAW as Send Effect to your liking.

Stereo Width
The Stereo Width can be used to either make the sounds more mono (left) or more stereo (right). The middle position is the original sample audio stereo width.

Limiter
As combining layers may result in loud audio, a Limiter is added. For flexibility you can turn it OFF. You can use the gain knob in effects 2/2 section to change the output volume before going into the limiter. This way you can make the limiter effect more subtle or even not needed.

SKIN 2

There is a second background skin available. Switch between skins by clicking

Tips & Tricks

Automation
By default all knobs have been configured in the Host Automation. Ready to use for all 125 controls.
If needed, you can always automate your controls in your DAW by using the Automation Drag feature in
Kontakt. After enabling automation on one of the features, you can use your automation lanes in your DAW
and any knob you twist in record mode is automated.

Default values
Many knobs have a default setting value. Like 0,0 DB or 0,00 Tune.
Ctrl / CMD + Mouse click results in the knob to be restored to it's default position.

Precision knob set
You can set a knob with more precision by holding the SHIFT key while you change the value.

Pitch Bend
The Pitch Wheel is set to 12 notes so you can bend the basses.

Toggle
The effects toggle switche act as a visual switch. It does not enable or disable any effects.

Loading your own samples

You can load your own samples by replacing the default and custom audio files.
Locate the [*Samples/LUS Kick and Bass Machine/Samples*] folder.

You can load your own samples by replacing the audio files. Make sure you keep the exact filename and audio
length in case of "extra bass layers". You can keep the originals by replacing your own audio in the filenames
with "custom" included.
Make sure your "extra bassline" sounds are tuned to **C** so you keep the correct rootnote for the notes you play.
The Bass sounds should be tuned to **G#**. The Kick and Attack tuning isn't relevant and can be anything.
Experienced Kontakt users can change the samples via the Expert Zones mode.