



KNOBULA

Instruction Manual



Kickain

Thank you for purchasing the Kickain kick drum module.

Kickain is a unique product that combines a very powerful kick drum with a stereo side chain compressor in a single 12hp Eurorack module.

Like all our products, Kickain is designed to be simple and immediate to use, giving you the most essential controls needed to create a compelling kick drum sound whilst minimising the effort associated with optimising a side chain compressor. This manual will explain how to get the best from this module and how to get the best sounding mixes from your Eurorack setup.

Installation

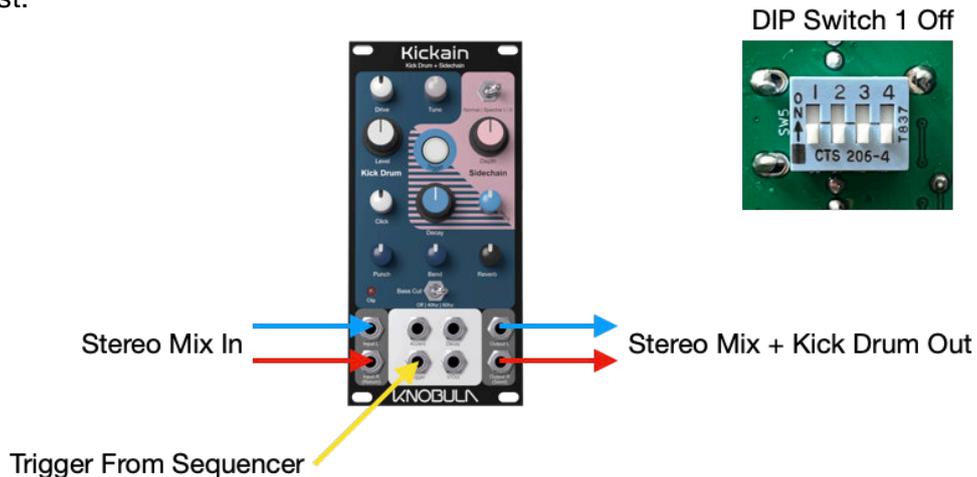
Power

Connect the Kickain module to a Eurorack +-12v power supply using the ribbon cable provided.

Use the DIP switch at the back of the unit to select the mode that best suits your workflow. By default your Kickain is set to Stereo mode.

Stereo Mode

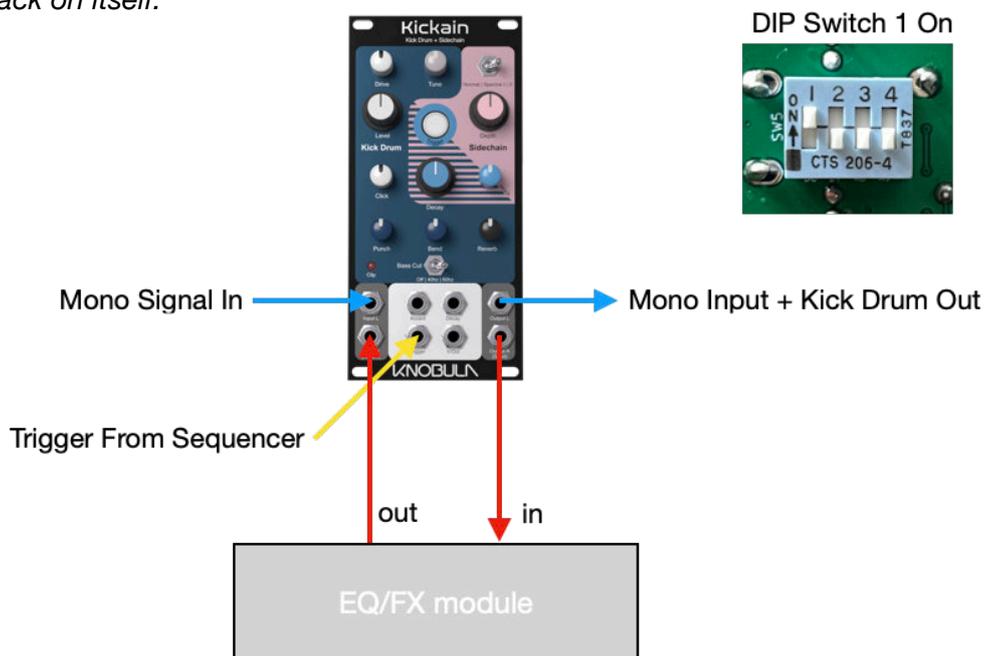
Stereo in and stereo out, simply pass a stereo mix through the unit and Kickain does the rest.



Mono Mode

Mono in mono out with FX send and return loop. Set DIP switch 1 on the back of the module to On and restart the module. Connect the Send to the input of another module such as EQ or Distortion and connect that back into the Return input. If the Send is not connected to the Return in this mode you will not hear the kick at all so at the very least you must patch a cable from Send to Return.

Note: Do not connect the Send to the Return in standard mode or the unit will feedback on itself.



Kick Drum Parameters



Tune

Pitch control for the drum oscillator. This sets the minimum base frequency of the kick sound without any additional pitch envelope modulation.



Drive

Distorts the waveform of the drum oscillator. Low values produce a smooth sine waveform increasing to a distorted triangle towards the centre of the control. Beyond that the overdrive circuit is influenced by the punch envelope, giving a harsher distortion at the front of the sound.



Level

The volume gain of the whole kick drum sound that is mixed back into the output.



Click

Emits a range of different filtered clicks at the start of the sound. Low values produce a short electronic click that increases in length towards the centre of the control to produce a short noise burst. Higher values produce a range of filtered versions with decreasing cutoff and increasing resonance. The volume of the click also alternates between high and low as the control is tuned, so small adjustments can produce a vast range of clicks.



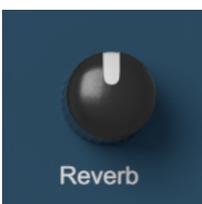
Bend

This controls the amount of pitch bend depth from the main decay envelope. Turning this control to zero will produce a constant pitched note, whilst higher values will modulate the pitch from high to low at a rate set by the Decay control.



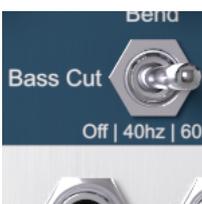
Punch

Punch adds energy to the very start of the sound. It has a similar effect to Bend that modulates the pitch, but it uses a separate short envelope independent of the Decay control. Increasing the value of Punch increases the depth of pitch modulation to the kick drum oscillator.



Reverb

Adds various acoustic room effects to the sound. Lower values produce the effect of a second drum skin, increasing values produce room reverb that is gated by the main Decay envelope. Higher values beyond the centre will produce an increasingly brighter reverb that is not gated by the main envelope. The decay time of the envelope is also influenced by the Decay control so very long reverbs can be achieved at the extreme values.

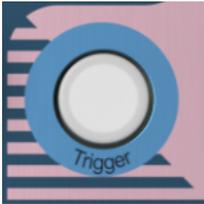


Bass Cut

This switch can limit the minimum frequency produced by the kick drum. Off has no effect and will enable Kickain to produce inaudible subsonic frequencies. The 40Hz setting will attenuate the sound as it reaches 38Hz, a useful limit that is similar to real life drums and the 60Hz setting is good for lighter, pitched up kick sounds.

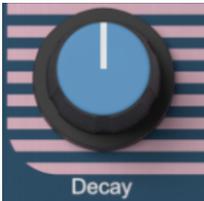
DIP switch 3 changes this control into an independent decay control for the kick, offering either 100%(no change), 75% or 50% of the main decay time. Does not affect the Sidechain decay.

Combined Kick and Sidechain Parameters



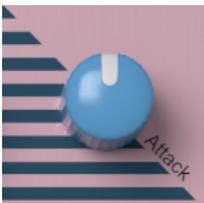
Trigger

Manually triggers the the kick drum sound. Illuminates when pressed or when triggered externally.
Mute mode can be enabled with DIP switch 4. This changes the button from a momentary trigger to a toggled mute on/off button.



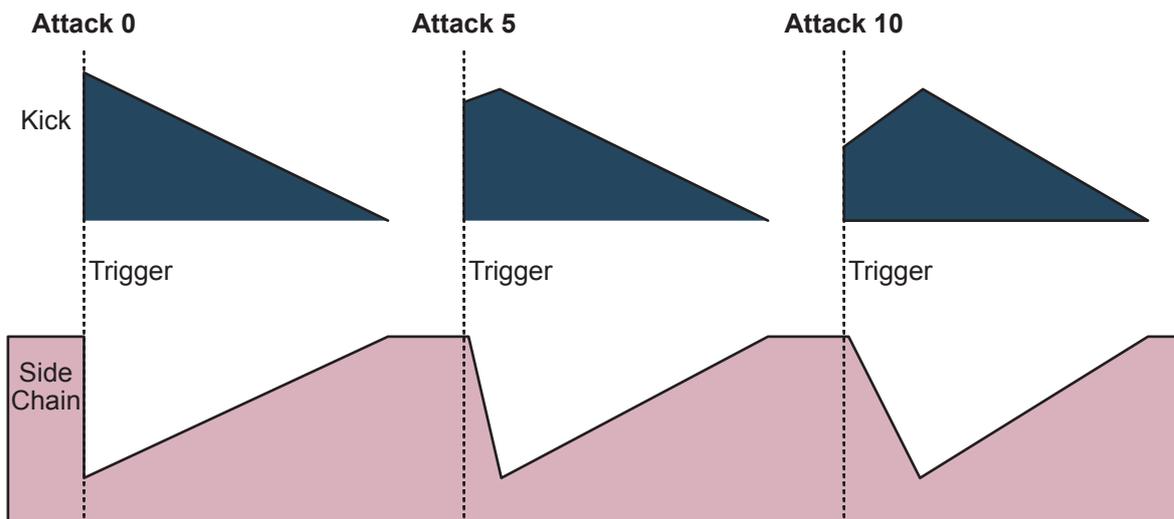
Decay

Controls the decay time of the main kick envelope. This envelope also controls the release time of the sidechain compressor and the decay time of the reverb. *To control the kick and sidechain decay times independently of one another see rear DIP switch option 3 below.*



Attack

Attack controls how the initial dynamics on both kick and input signals are blended together. At zero the kick has very high attack level and the sidechain signal is instantly attenuated. With the control at the centre the kick attack is still instant but the peak level starts lower and the input signal is allowed to fade in slightly. Even higher values will compress the kick sound even more to produce a less 'popped' dynamic on the kick. *See below.*

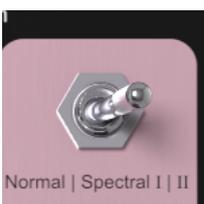


Sidechain Only Parameters



Depth

Controls the amount of sidechain effect on the input signal, zero bypasses the effect altogether. For Spectral sidechaining it is recommended to leave this set to full.



Normal and Spectral Switch

This switch selects between two different sidechain methods. The Normal setting simply attenuates the input signal in relation to the kick drum envelope, also known as 'ducking'. The Spectral settings use a dynamic EQ to remove specific frequencies from the mix that are similar to the kick drum's. The end result is a very transparent sidechain solution that doesn't suffer from typical 'breathing' artefacts even at the most extreme settings, keeping the bass end of the mix tight, focussed and rhythmic.

Spectral I - Only mid to low frequencies close to the pitch of the kick drum are removed from the input signal. A good hybrid setting that still pumps the sound to the beat.

Spectral II - As above but more accurately targeted at bass frequency removal, leaving most of the mid/high frequencies intact for a subtle clean up of the low end of the mix.

Inputs and Outputs



Sidechain Input

In stereo mode connect a stereo mix to the left and Right inputs to be processed by the sidechain compressor. Take care not to overload the inputs by observing the Clip led or there will be audible distortion in your mix. In mono mode connect the Left input as above but make sure the Out R (Send) is connected back to the Input R (Return) either directly or via an FX unit, otherwise the kick will be silent.



Side Chain Output

In stereo mode this output is the sum of the incoming mix through the compressor and the kick drum. The kick drum is always panned centre. In mono mode Output R (Send) contains just the kick drum which must be connected back to the Input R (Return) either directly or via an FX device.



Accent

Accent takes an additional trigger input. When triggered simultaneously with kick Trigger it add extra volume and punch to the kick sound. When triggered independently the accent will produce a low 'reverse' style kick sound.



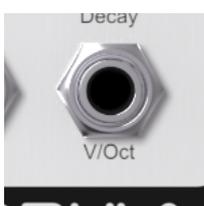
Decay

A bipolar control voltage can increase or decrease the Decay time of the kick drum. This operates in addition to the Decay knob which is still active.



Trigger

Triggers the kick drum from a sequencer trigger signal.



V/Oct (Level)

A bipolar control voltage can be used to alter the pitch of the drum so it can play bass lines.

By changing DIP switch 2 on the back of the unit this can alternatively be used to control the volume level of the drum.

Patch Cards

Kickain
Patch Name

Drive Tune Normal | Spectral I | II

Level Kick Drum Depth Sidechain

Click Decay

Punch Bend Reverb

Clip Bass Cut Off | 40hz | 60hz

Input L Accent Decay Output L

Input R (Return) Trigger V/Oct Output R (Send)

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Kickain
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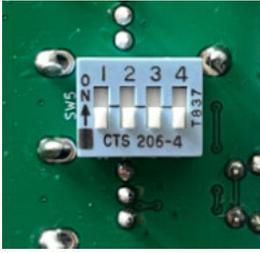
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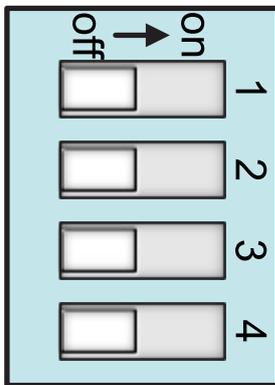
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Rear DIP Switches

Note: Kickain has to be rebooted for DIP switches to take effect.

There are 4 DIP switches on the back of the unit that can be used to configure Kickain for different use cases. By default they are all switched off, meaning Stereo Mode is On and V/Oct controls the main CV input.



Switch	Off	On
1	Stereo Mode	Mono/FX loop Mode. Separate kick out, Send and ReTrun.
2	V/Oct CV in	Kick Level CV in
3	Bass Cut Switch normal	Kick damping. Bass Cut switch changes kick decay 100%,75%,50% of main decay. Sidecahin decay not affected
4	Trigger Button manually triggers the kick	Mute mode. Pressing the Trigger button mures/unmutes the kick trigger.



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Version 1.0

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