

## **1. Quick Start**

- 1.1 Box Contents
- 1.2 Schematic Diagram
- 1.3 Connections
- 1.4 Powering up Hades

## **2. Operation**

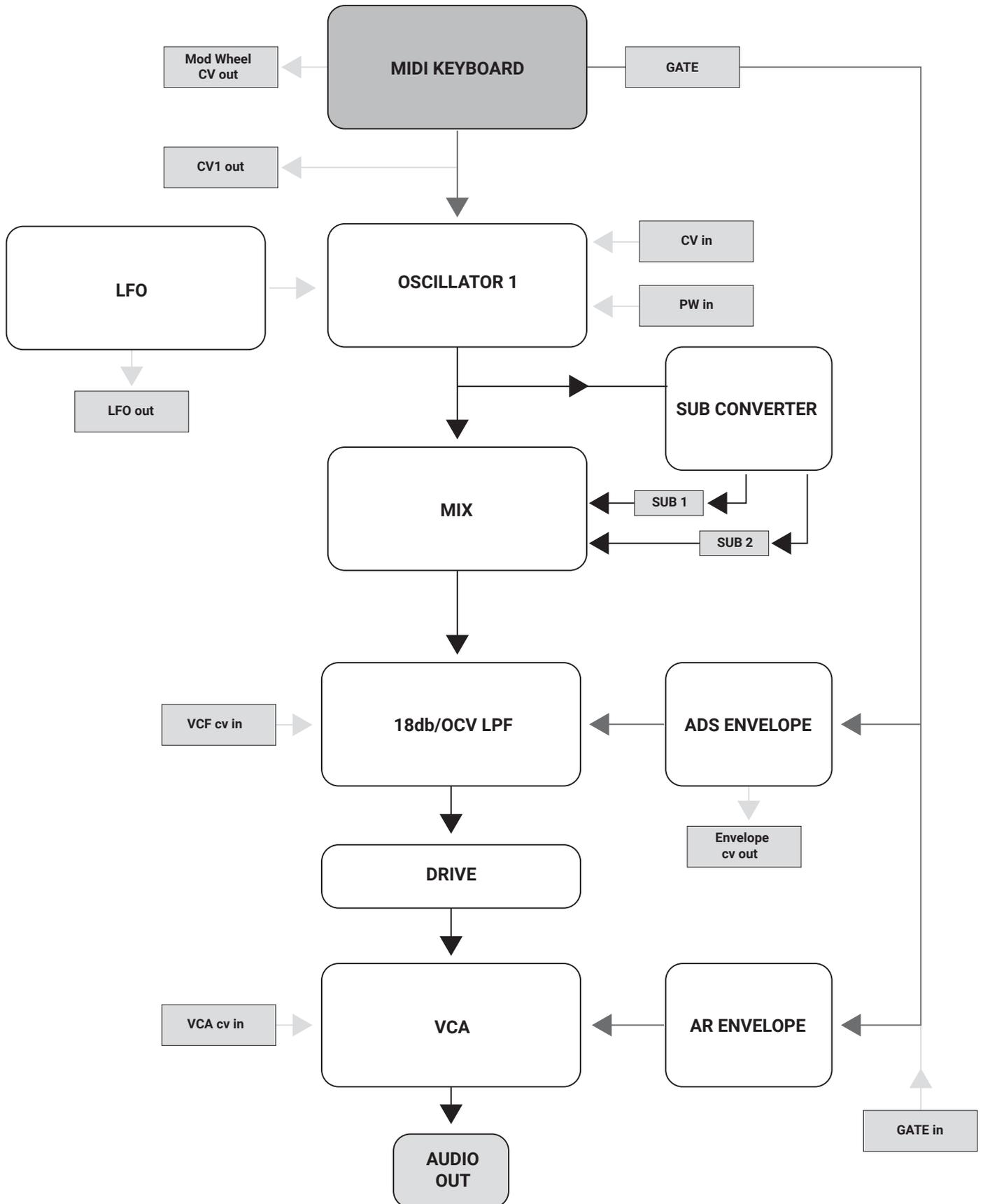
- 2.1 Midi Interface
- 2.2 Oscillator and Sub-Oscillators
- 2.3 Filter
- 2.4 Drive
- 2.5 Amplifier
- 2.6 Envelope
- 2.7 LFO
- 2.8 Patching
- 2.9 Eurorack

# 1. Quick Start

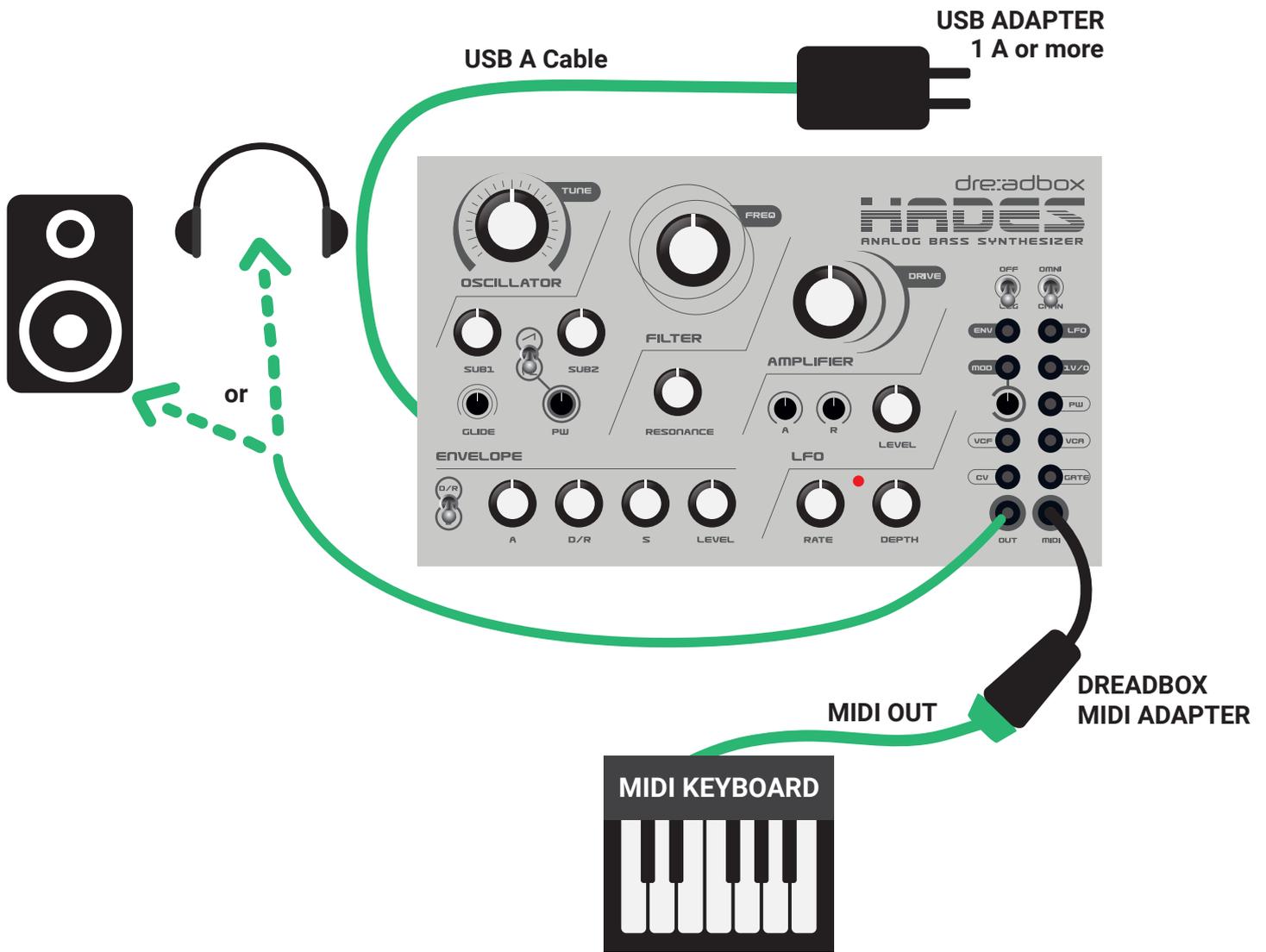
## 1.1 Box Contents

Hades Bass Synthesizer, 42HP case, 1x Midi DIN5 to 3.5mm adapter type A, 1x Ribbon cable for Eurorack Connection.

## 1.2 Schematic Diagram



### 1.3 Connections



### 1.4 Powering up the Hades

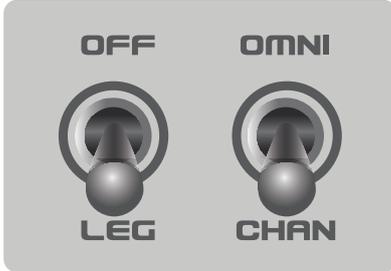
In order to power Hades sufficiently, use a good quality USB power adapter with minimum 1A and a good quality USB A cable. The USB adapter nor the USB A cable are included in the box.

## 2. Operation

### 2.1 MIDI Interface

Hades Midi interface will allow the following actions:

- Note(s) on / off (gate).
- Pitch tracking up to 9 octaves (C -1 up to C 10). The pitch is converted to 1v/oct which can be accessed via the dedicated patch.
- Pitch wheel for 3 semitones up/down. This is also transmitted by the 1v/oct output.
- Modulation wheel (accessible only via patch) 0- 5v



#### MIDI Channel Selection

When the switch is set to OMNI, all channels are active. When it is set to CHAN, it will play the last channel received when the switch was in the OMNI mode.

For example, in order to set Hades to channel 2:

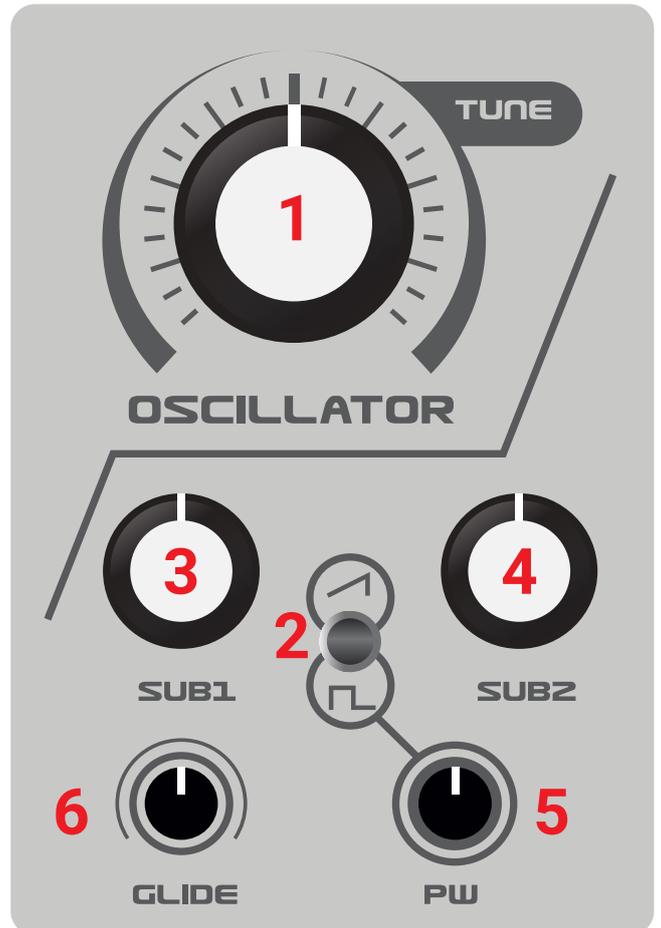
- Set the switch to OMNI mode
- Set your MIDI keyboard to Channel 2
- Play any note
- Then switch to CHAN

#### Keyboard re-trigger on the ADS Envelope

### 2.2 Oscillator and Sub-Oscillators

The Hades oscillator needs about 2 to 3 minutes to warm up. You can just turn on the synth and play, but the tuning will change during that time. It work with the classic 1v/octave controllers or a midi source. By default the tune knob should point at about 12.00 o'clock for a correct tuning.

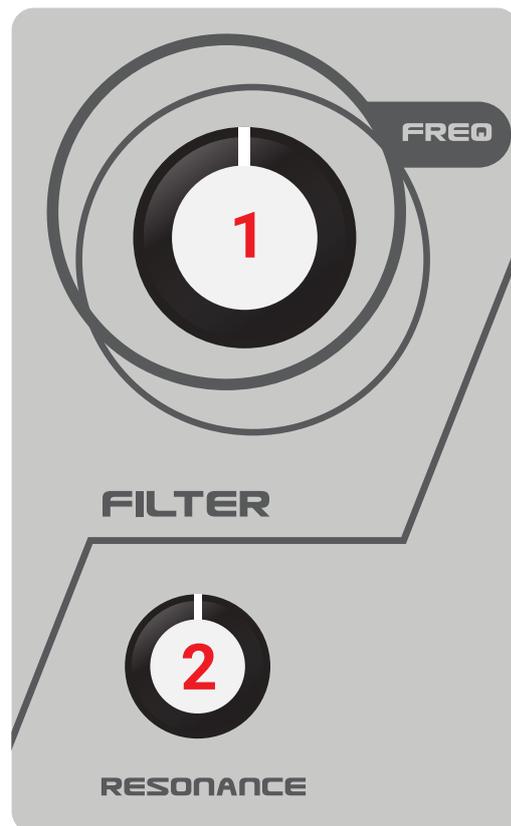
1. Oscillator Master Tune.
2. Oscillator wave selection (Center position is OFF)
3. Sub wave one octave below level
4. Sub wave two octaves below level
5. Pulse width
6. Oscillator glide amount



## 2.3 Filter

The filter of the Hades is a 3-pole 18db/octave resonating OTA based low pass filter. Its frequency ranges from 20Hz up to 20KHz

1. Sets the Cutoff Frequency of the Filter
2. Sets the Resonance Amount



## 2.4 Drive

Hades has an Opamp - OTA drive circuit that is able to drive - and works best at - low and rich harmonic frequencies . It is a fairly simple 1 knob function. Its action is not linear, but it has a logarithmic response.



## 2.5 Amplifier

Hades's amplifier has a build in AR envelope generator. Notice that when the output Level is at max you get 8 Volts p/p, so be careful not to hurt your ears or damage your speakers.

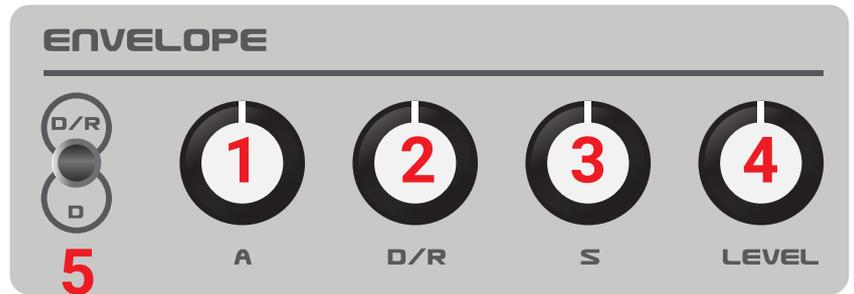
1. Master Volume
2. Attack Speed
3. Release Speed



## 2.6 Envelope

Hades's AD/RS is dedicated to the Filter. It may deliver up to 5V of Envelope (also accessible on a patch).

1. Attack speed
2. Decay and Release speed
3. Sustain point
4. Envelope Level
5. Decay or Decay and Release



## 2.7 LFO

The LFO needs to be patched in order to be used. It has a wide range of frequencies, from 10 minutes up to 3kHz (3000 Hz).

1. Sets the Rate
2. Sets the Depth



## 2.8 Patching

**A. Outputs** - Those patch points only send voltage. You can send their CV to other devices, but first be sure that the receiver can accept such a voltage.

**ENV:** Sends the envelope's voltage in a 0-5V level.

**LFO:** Sends the LFO's voltage in a +/- 5V level.

**MOD:** Sends the modulation wheel into a 0-5V format. The small knob is an attenuator for the total amount.

**1V/OCT:** Sends the Pitch's tracking



**NEVER CONNECT AN OUTPUT WITH ANOTHER OUTPUT**  
**This might cause serious damage to the unit and Dreadbox will not take any responsibility.**

### B. Inputs

Those patch points only receive voltage. It is safe to send more voltage than indicated (up to +/- 10V), but this does not mean that you get a result.

**PW:** Controls the oscillator's pulse width (+/- 5V)

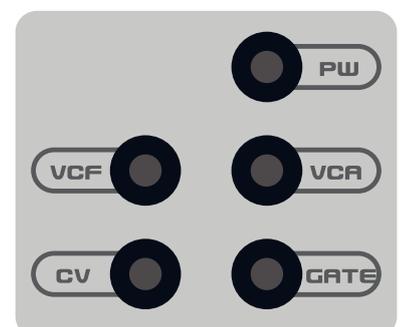
**VCF:** Controls the filter's frequency (+/- 5V)

**VCA:** Controls the Amp's level. (0-5V)

By inserting a cable will deactivate the AR envelope.

**CV:** Controls the oscillator's pitch (+/- 10V)

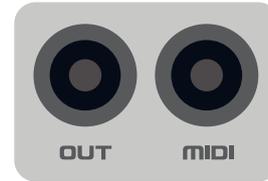
**GATE:** Controls the gate's activation (0-5V)



## C. Interface

**OUT:** Master Output of the synthesizer. It can also be connected with headphones.

**MIDI:** Midi Input. Always use the dedicated midi adapter, which is included in the box.



## 2.9 Eurorack

In order to use the Hades Reissue in a eurorack case, do the following:

- A. Unscrew the 4 corner bolts, which keep the module attached to the case
- B. Remove the module from the case. Afterwards, unscrew the 2 bolts that connect the small PCB to the USB adapter and detach them.
- C. Plug the provided ribbon cable and connect it to the power bus board of a eurorack case.