osmose - quick start guide



introduction

Congratulations and thank you for purchasing OSMOSE!

Osmose is one of the most expressive synthesizers ever created. It is a complete standalone polyphonic synthesizer featuring our patented Augmented Keyboard Action mechanism, where the keybed responds polyphonically to pressure, aftertouch, and note bend.

It features the EaganMatrix by Haken Audio, a deep modular sound design engine, giving access to incredible sounds ready to explore right out of the box. On top of this, Osmose can also be used as an advanced controller for external hardware and software synthesizers.

By default, Osmose is very sensitive, the lightest touch can control the sound. You can decrease this huge sensitivity, but we encourage you to discover this new approach to enrich your playing experience with a multitude of new nuances!

disclaimer

Osmose is a constantly evolving product, so the information contained in this quick start guide is subject to change without notice and does not represent a commitment on the part of Expressive E.

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before you start

box content

- 1x Osmose expressive synthesizer
- 1x printed Quick Start Guide
- 1x product safety manual. Please read it before using Osmose.
- 1x USB cable
- 1x power supply with international adapters

lockable power supply connector



⚠️ Osmose's power supply has a locking connector to prevent accidental disconnection. When inserting, first align the power connector's wings so they match the horizontal notches on the power input. Push firmly, then rotate the barrel clockwise to secure it to the casing.

keyboard calibration

The rest position of Osmose's keys is calibrated while the unit is booting. Please make sure nothing is touching the keys during this step.

register your device

Please enter the activation code from the printed leaflet that came with your unit on the product registration page of your user account.

firmware update

We recommend that you always install the latest firmware available on your device. The current firmware can be downloaded from our website after registering your product. The procedure is explained here.

quick start video

Watch Osmose's quick start video for an overview of the internal sound engine mode.

online manual

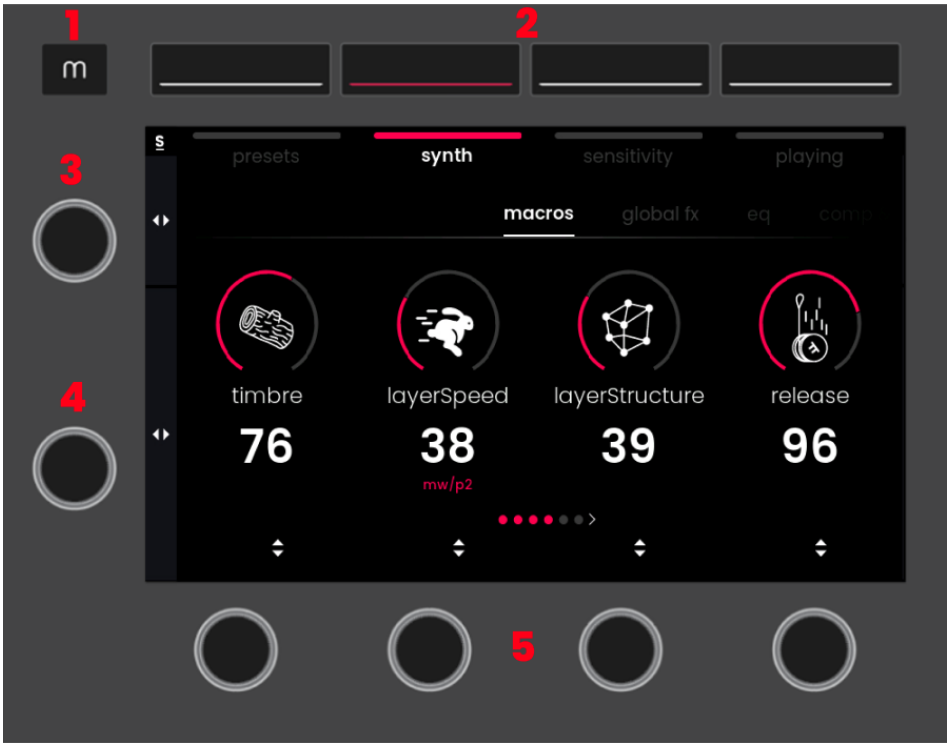
If you need more in-depth information than what is offered in this guide, please refer to Osmose's online user manual.

technical support

If you need assistance or just want to share your feedback with us, please get in touch by creating a support ticket here.

main control interface

The left side of Osmose is built around an interactive graphic interface that provides access to all onboard parameters. The navigation works via five buttons and six clickable encoders whose functions change depending on the current screen.



1. **MODE Button** - allows switching between Sound Engine mode and External MIDI mode.
2. **MENU Buttons** - access one of the four menus of a mode.
3. **TAB Selector** - scrolls through the tabs of a menu. When in Sensitivity or Playing menu, pressing the Tab Selector freezes the settings of the menu to retain them even when switching presets.
4. **PARAMETER Selector** - scrolls through parameters inside a tab. When in Playing menu, pressing the Parameter Selector starts or pauses the Arpeggiator or switches Pressure Glide on and off.
5. **VALUE Encoders 1-4** - change the value of the parameter displayed above or scroll through a list of options. Pressing a Value Encoder might perform another special operation depending on the context.

mode selection screen



Press the Mode button, then turn and press Value Encoder 1 to switch between controlling the internal Haken Audio EaganMatrix sound engine and configuring the behavior of the External MIDI mode.

A symbol in the upper left corner will indicate the currently selected mode at all times:

s e

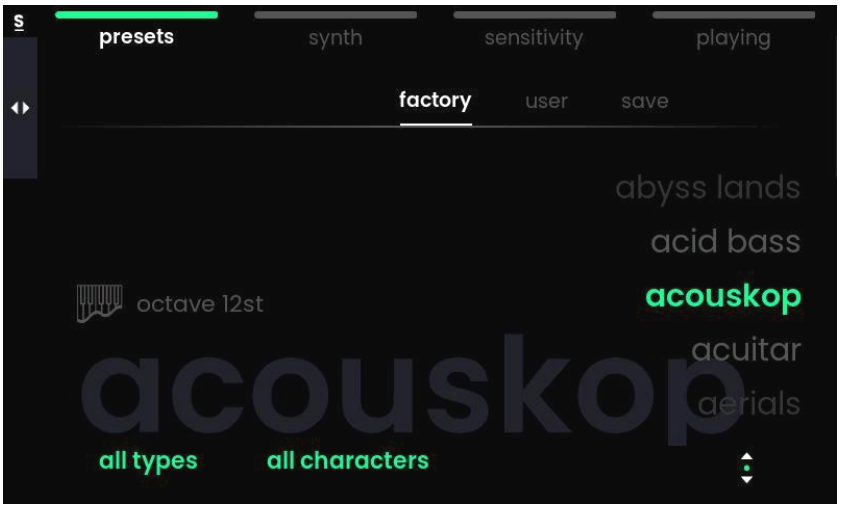
global settings

Pressing Value Encoder 4 while in Mode Selection screen opens the global settings of Osmose. They allow you to change the global tuning, calibrate pedals, display the firmware versions, change the screen brightness, etc.

sound engine mode

presets menu

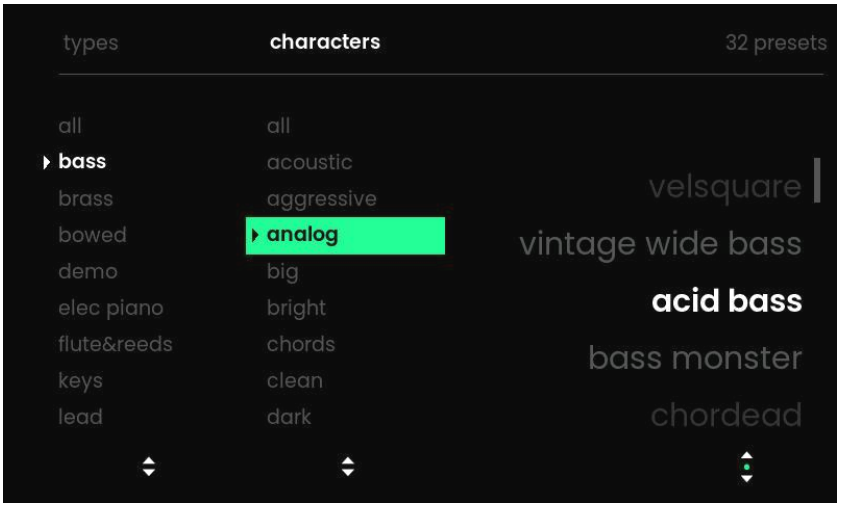
The Presets menu allows you to browse the sounds of the internal EaganMatrix sound engine and save user presets.



factory tab : access the factory library
user tab : access the user presets
save tab : save your current preset into the user preset memory

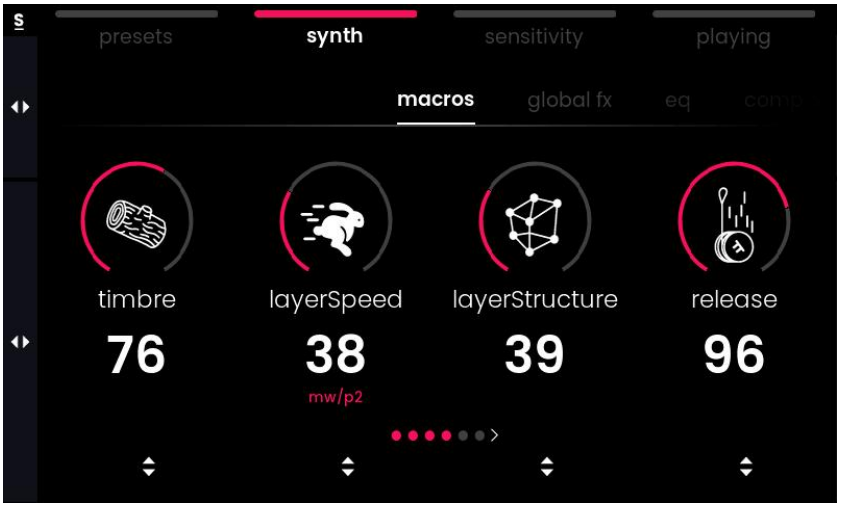
The currently loaded sound is highlighted in green color. If a playing feature is activated, a press glide or arp icon appears on the left side of the screen. Value Encoder 4 scrolls through the preset list. You'll need to click the encoder to actually load a sound.

You can narrow down the preset list by selecting a type and character. Turning Value Encoder 1 or 2 lets you scroll through a list of filters. Click the encoder to activate a filter.



synth menu

The Synth menu allows you to adjust the sound of each selected preset individually. It also lets you change the behavior of the sliders and pedals for that sound.



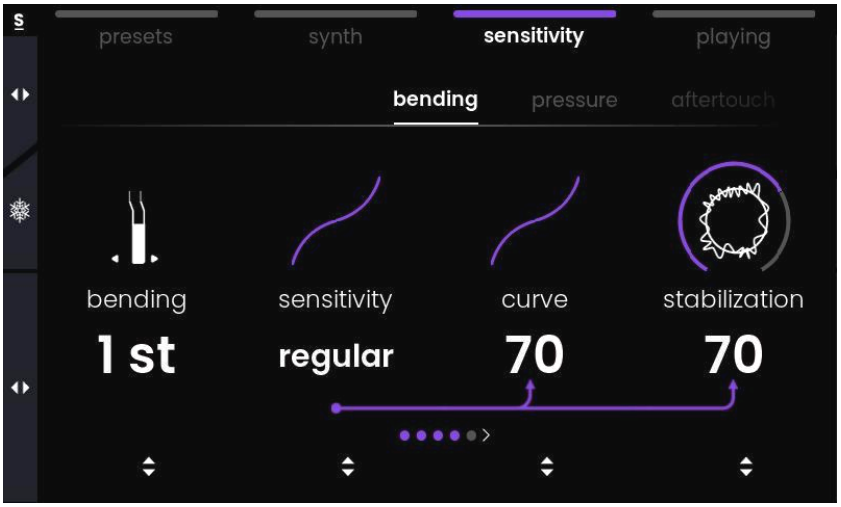
macros tab : tweak predefined macros for subtle to drastic changes to the sound. Macros are chosen by our sound designers on a per-preset basis and have entirely different effects depending on the preset.
global fx tab : select the preset's global reverb or delay effect and adjust its parameters
eq tab : access a shelving equalizer to change the frequency balance between lows and highs
comp & gain tab : configure the pre-gain, the compressor settings, and the post gain
voice tab : set the pitch slider range
assign tab : define the parameters controlled by the modulation slider and the pedals.

⚠️ The 'Analog Echo' effect within the global fx tab is able to produce very loud feedback when its 'feedback' parameter is increased above a value of 75. Be ready to lower the volume when experimenting with this effect.

ℹ️ If you wish to save the changes you have made, use the save tab inside the presets menu.

sensitivity menu

The Sensitivity Menu allows the user to change the response of the Augmented Keyboard Action.



bending tab : change the response of the lateral movement on each key, incl. the pitch bend range and the amount of stabilization.
pressure tab : change the response of the first part of the key travel. 'note on' determines the position where a key actually triggers a note.
aftertouch tab : change the response of the second part of the key travel.

For each of the three axis motions, Value Encoder 1 allows to quickly choose between a set of predefined responses that affect all parameters of a tab.

default sensitivity tab : lets you save the current sensitivity setting as the default setting. Once saved, the setting will be used for all factory sounds and for all user presets that don't have a specific sensitivity setting saved with them.

❄️Freeze Sensitivity function:
Pressing the Tab Selector in Sensitivity Menu switches the Sensitivity Freeze on and off. When Freeze is enabled, the current sensitivity settings will be kept across preset changes, no matter the default sensitivity and no matter whether there is a custom sensitivity saved in a user preset.

playing menu

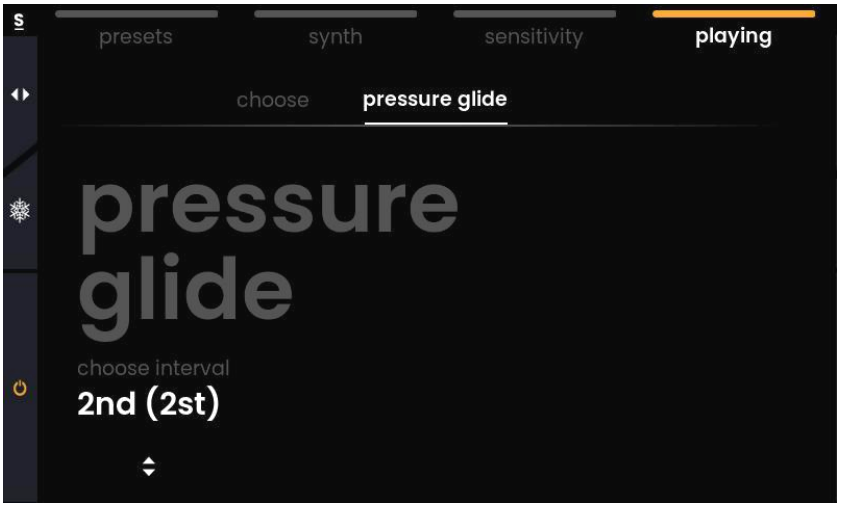
The Playing menu gives access to advanced features that interpret your playing in intelligent ways, enhancing your experience even further. Turn Value Encoder 1 to choose either Pressure Glide, the Arpeggiator, or no playing feature at all.

❄️Freeze Playing function:
Pressing the Tab Selector in Playing Menu switches the Playing Freeze on and off. When Freeze is enabled, the current playing settings will be kept across preset changes, no matter what is saved in the preset you dial up.

pressure glide

The pressure glide feature lets you define a pitch interval within which two keypresses are interpreted as a legato line instead of polyphonic playing.

Unlike regular portamento which makes the pitch glide to a new note within a fixed amount of portamento time, Haken Audio's Pressure-weighted Portamento reacts to the pressure ratio between the two notes. The pitch will dynamically glide between the notes in real-time, reacting to how you distribute pressure between them.

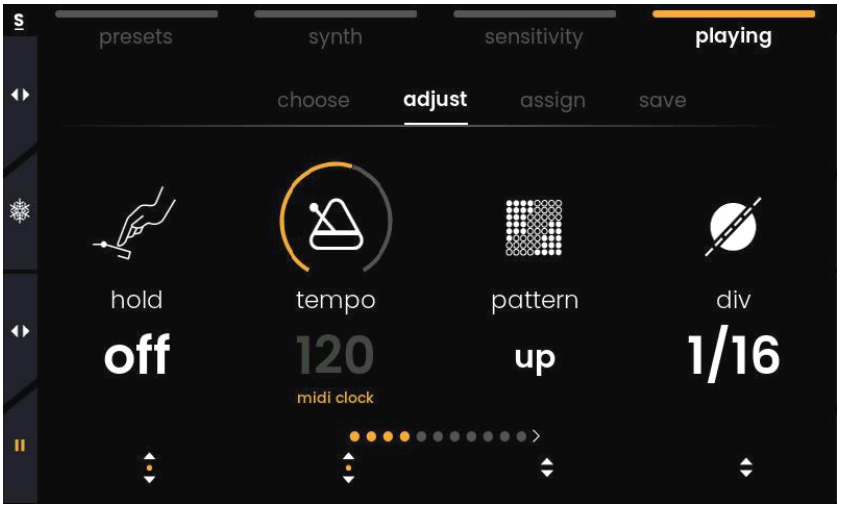


ℹ️ Important note when intending to play chords:
Two notes pressed simultaneously within the interval that you have set will always be joined into one pitch. For instance, with a pressure glide interval of 2 semitones, you can play chords with stacked thirds or wider voicings, but as soon as you play seconds, you will end up with one note with an averaged pitch instead of two discrete notes.

⏻ Activate or deactivate Pressure Glide with a click on the Parameter Selector.

arpeggiator

Our MPE Arpeggiator has the classic parameters that you would expect, but on top of that, your gestures can introduce a myriad of variations to your pattern by modulating every single note independently with your fingertips.



choose tab : load an arpeggiator preset
adjust tab : set the arpeggiator parameters. Click the Value Encoder below Tempo to switch between internal and external MIDI clock.
assign tab : let gestures and controllers modulate arpeggiator parameters
save tab : save the current arp settings as an arp preset

▶️⏸️ Start or pause the Arpeggiator with a click on the Parameter Selector.

external midi mode

introduction

In addition to being a standalone synthesizer, Osmose can act as an expressive MIDI controller. All functions of the External MIDI mode work independently and in parallel to what is set up for the internal sound engine.

Please be aware that some synthesizers and DAWs might not support the new kind of interactions that Osmose offers, or only support them to a certain extent.

connect osmose to your computer

When you connect Osmose to your computer, two USB MIDI ports will appear:

external midi port

‘Osmose Play/Port 1’ [macOS] or **‘Osmose’ [Windows]**
Sends data according to the configuration chosen in External MIDI Mode (MPE by default). Use this port to control any external synth.

haken audio port

‘Osmose Haken/Port 2’ [macOS] or **‘MIDIIN2/MIDIOUT2 (Osmose)’ [Windows]**
Sends data of the internal synth engine in MPE+ format. Use this port to make the connection with the Haken Editor and to record performances using the internal engine in an external sequencer to replay or edit them.

⚠️ By default, Osmose doesn’t send any data on the Haken Audio port. This avoids receiving every message twice in applications that activate all recognized MIDI ports by default. You can activate the Haken Audio port in the Global Settings -> midi i/o -> haken usb mode.

a word on mpe

Osmose is part of a family of MIDI Polyphonic Expression (MPE) instruments and controllers that strive to tear down the expressive restrictions of common electronic instruments. When starting to control external instruments from Osmose, it's useful to understand the way legacy MIDI communication is set up and how the MPE extension builds upon this.

In a classic MIDI environment, all MIDI messages that belong to a sound are sent on one single MIDI channel. Any modulations (such as pitch bend or changes in timbre) are sent per channel and thus affect all notes of that sound in the exact same way. If other MIDI channels are used, then this is commonly done to address a separate instrument or track of a multitimbral sound engine, e.g. in a hardware workstation or in your DAW.

MPE is an official extension to the MIDI standard where multiple MIDI channels are used to control the same sound. One channel is retained for global messages (master channel), but every single note that is played is granted its own MIDI channel. This way, per-channel modulation can be applied to each note individually, giving you much more control over your polyphonic performance.

backwards compatibility

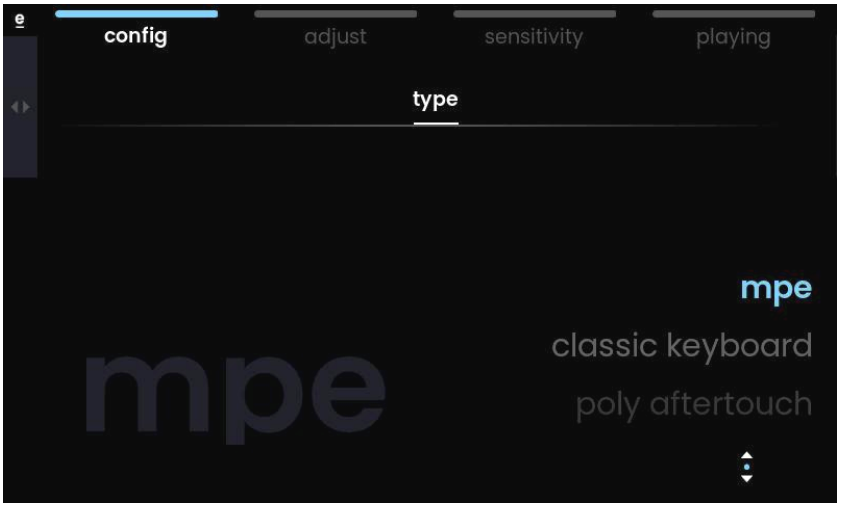
Even if the external software or hardware instrument that you hook up to Osmose doesn't support MPE, you can still intuitively shape their sound directly via the keys of Osmose's Augmented Keyboard Action. Pressure and Aftertouch motion axes can continuously control any parameter inside the synth on a global basis. Bending can perform a pitch bend of all the notes you play as a whole.

In a non-MPE context, this global value of a motion axis will affect all the notes you play in the same manner, just as if you would move a knob or a fader on a standard MIDI controller. Osmose lets you define whether the global value sent by a motion axis is calculated as an average of the individual values of all keys pressed, or whether it is derived from the pressure or bending you apply to a specific single key (highest note, most pressed down, etc.).

ℹ️ Monophonic lines on external synths can always be played very expressively from Osmose. For monophonic sounds, there's always one dedicated channel per voice, even in a legacy monochannel setup.

config menu

The Config menu gives you access to 4 standard configurations that help match the messages sent by Osmose with what is supported by your external synthesizers. Those configurations also contain a dedicated sensitivity setting.



mpe

is the default for controlling MPE-compatible software and hardware. Sends MIDI messages across all 16 MIDI channels according to the MIDI Polyphonic Expression standard.

classic keyboard

is the best choice for full backwards compatibility. It sends mono-channel MIDI messages like a legacy MIDI keyboard would do. The 'Note On' threshold is moved down further along the key travel to mimic traditional keyboard actions.

poly aftertouch

is perfect for software and hardware that offers polyphonic aftertouch. It behaves just like the Classic Keyboard configuration, but sends Polyphonic Aftertouch instead of Channel Pressure for the Aftertouch axis motion.

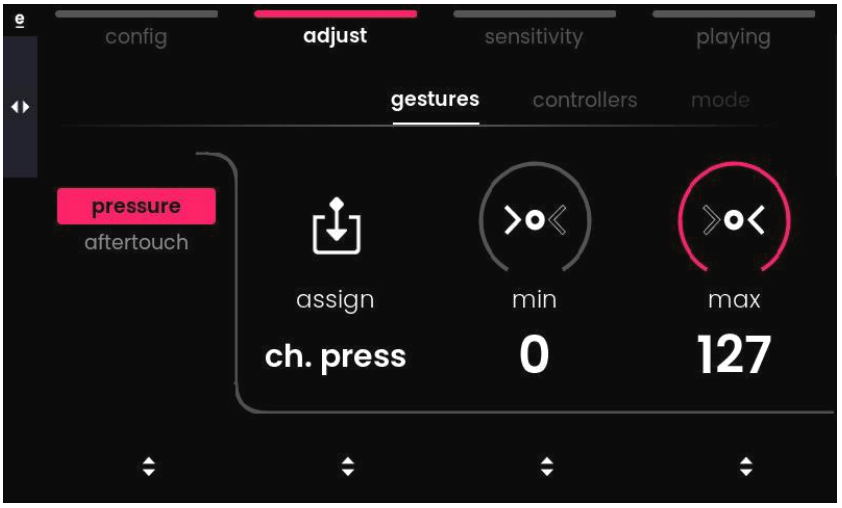
multi-channel

is useful for imitating the advantages of MPE with non-compatible software and hardware. It behaves just like the MPE configuration, where one MIDI channel is used to transmit one voice each, but lacks a channel for global messages.

ℹ️ External MIDI configurations can be fine-tuned via the Adjust and Sensitivity menus.

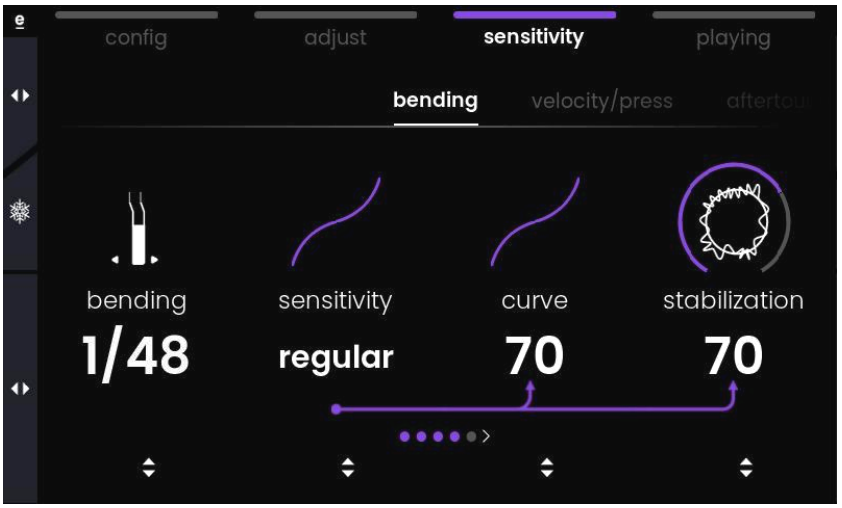
adjust menu

The Adjust menu lets you determine the MIDI channel(s) used, as well as which MIDI message is sent by which key axis motion or controller.



gestures tab : set what is sent by the pressure and aftertouch axes
controllers tab : set what is sent by the mod slider and the two pedals
mode tab : choose the MIDI configuration and MIDI channel(s) used

sensitivity menu



In External MIDI mode, the **velocity/press tab** features additional velocity parameters. Internally, Osmose doesn't use MIDI Velocity at all, but for controlling external devices, MIDI Velocity is derived from the Pressure axis motion.

ℹ️ The bending range inside the **bending tab** isn't shown as a number of semitones but as a fraction. It works together with the maximum bending range that can only ever be set inside the external software or hardware that you control.