SUPER 8

Table of Contents

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2. Welcome to SUPER 8

SUPER 8 aims to capture the essence of polyphonic synthesizers from the 80's era. It possesses an uncompromising vintage sound but also a distinctive character of its own. With a clear and straightforward signal flow, SUPER 8 makes it easy to create and tweak your sounds through a clean, next-generation interface.

Use simple sliders to blend up to four waveforms for each of the two oscillators. Mix the oscillators, sync them, and fold in FM oscillation for more complex tones. Apply low-pass, band-pass, or high-pass filtering, then use ASDR sliders to make quick changes to filter and amplifier envelopes.

Add motion to your sounds by diving into the modulation section. Choose one or more modulation waveforms, then dial in speed and phase settings. For maximum creative flexibility, use modulation routing to map almost any source to any destination.

With SUPER 8 you'll find sweet spots are plentiful and sonic possibilities are endless!

Thank you for choosing SUPER 8.

2.1. Document Conventions

In this document the following formatting is used to highlight useful information:

Italics	Indicates paths to locations on your hard disk or other storage devices
Bold	Highlights important names, concepts and UI elements.
[Brackets]	References keys on a computer's keyboard

The following three icons represent different types of information:

The **tick** icon indicates a useful tip, suggestion or interesting fact.

The **exclamation mark** highlights important information that is essential for the given context.

The **warning** icon alerts you of serious issues and potential risks that require your full attention.

3. Using SUPER 8 in KOMPLETE KONTROL

SUPER 8 is optimized to integrate with KOMPLETE KONTROL using Native Kontrol Standard (NKS). You can explore Factory Preset files in the KOMPLETE KONTROL Browser, and control the instrument using the KOMPLETE KONTROL keyboard.

The following sections explain how to open SUPER 8 in KOMPLETE KONTROL, as well as explore Factory Preset files and use User Preset files.

3.1. Opening SUPER 8 in KOMPLETE KONTROL

To open SUPER 8 in KOMPLETE KONTROL:
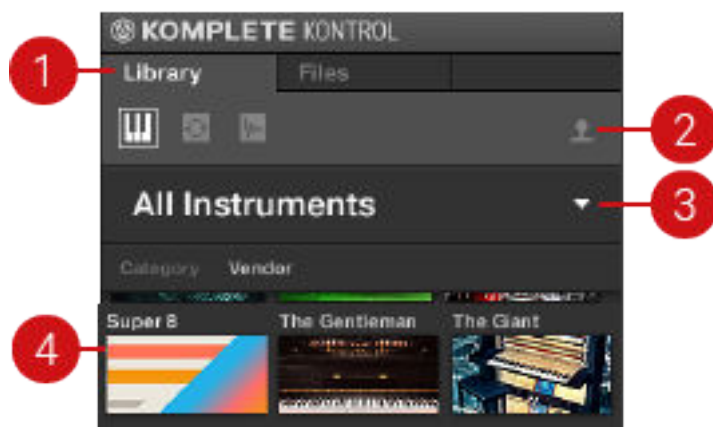
1. Go to the Browser's **Library** tab (**1**).
2. Select the factory content (**2**).
3. Open the Product selector by clicking on the arrow symbol (**3**).
4. Find SUPER 8 in the list of Native Instruments products.
5. Place the mouse over the SUPER 8 entry and click on the arrow symbol that appears in the upper right corner (**4**).
   SUPER 8 loads with its default Preset file.

3.2. Exploring Factory Preset Files in KOMPLETE KONTROL

To explore Factory Preset files in KOMPLETE KONTROL:
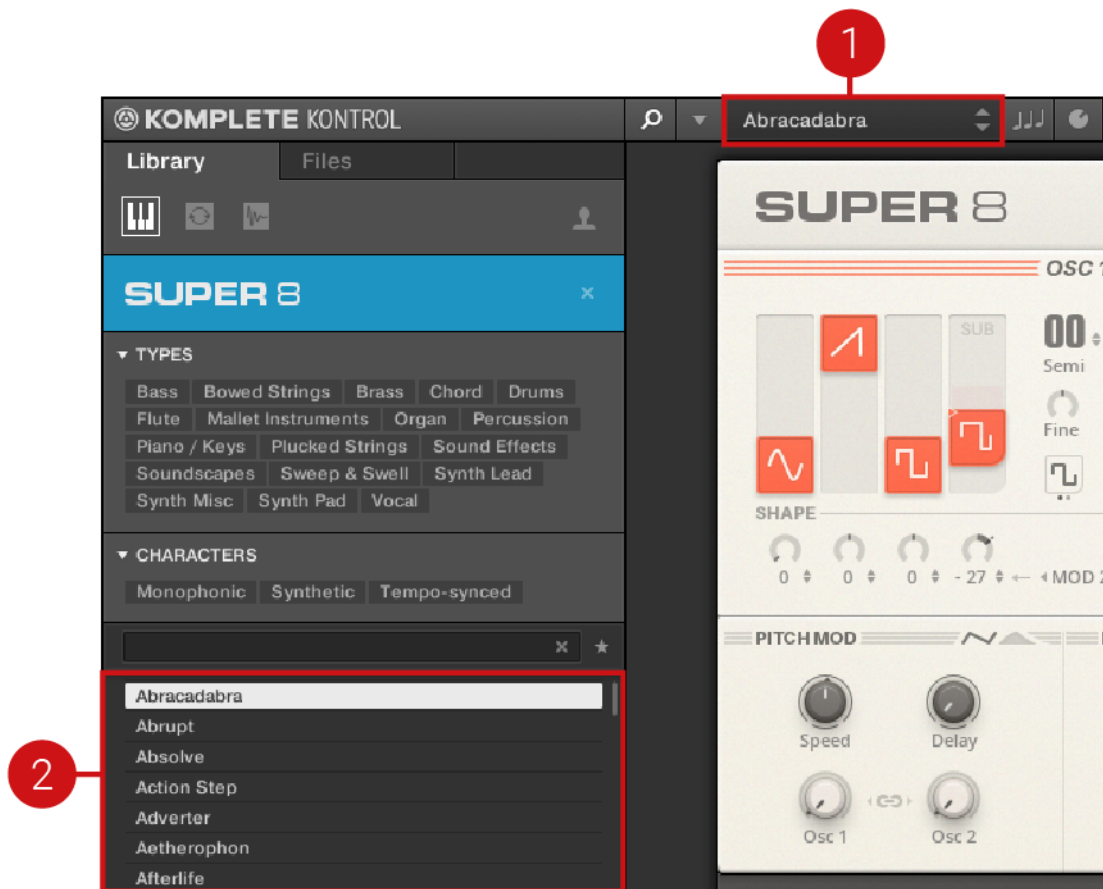
Exploring Factory Preset files in KOMPLETE KONTROL

You can use the Preset display in KOMPLETE KONTROL's Header to load Preset files.

- Click on the arrow buttons in the Preset display (**1**).
  The Preset files are loaded one after the other.

Alternatively, you can load Preset files from the Browser's Results list and benefit from the Prehear function. This allows you to listen to the preview of a Preset file before loading it.

- Click on an entry in the Results list (**2**) to select it.
  The preview of the corresponding Preset file is played back (Prehear needs to be enabled in KOMPLETE KONTROL).

- Double click on an entry in the Results list (**2**).
  The corresponding Preset file is loaded.

Filtering Results by Musical Genre

If you want to only explore Preset files that are associated with a particular musical genre, you can do so by using the **TYPES** filter in the KOMPLETE KONTROL Browser.
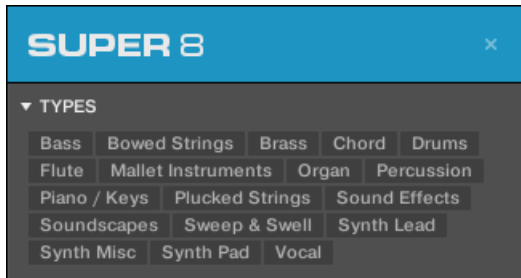
The Types and Sub-Types for SUPER 8

To filter the entries in the Browser's Results list by musical genres:

1. Open the **TYPES** filter in the Browser.
2. Click on the Type **Multitrack** to show the available Sub-Types.
3. Click on one of the musical genres available as Sub-Types.
   The Results list only shows Preset files associated with the selected musical genre.

## 3.3. Saving and Loading User Preset Files in KOMPLETE KONTROL

In order to permanently save all adjustments and settings made in SUPER 8 including your sound variations, combinations of sound presets, samples, and patterns, you need to save a User Preset file.
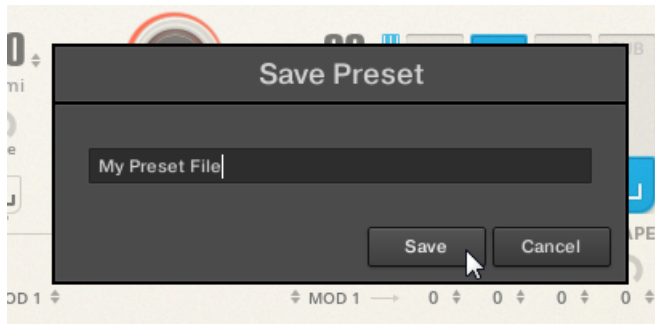
Saving User Preset Files

To save a User Preset file:

1. Select the entry **Save As…** in the **File** submenu of the KOMPLETE KONTROL menu.
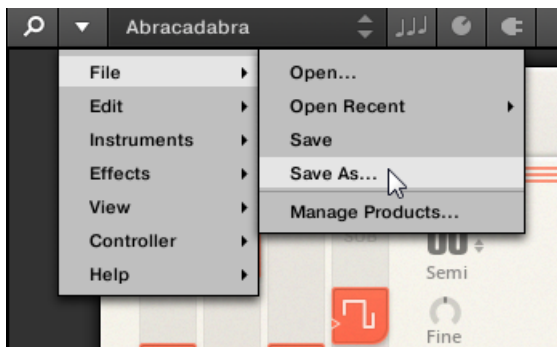
2. Enter a name for your User Preset file and click on **Save** in the **Save Preset** dialog.

Your User Preset file is saved.

Loading User Preset Files

To load a previously saved User Preset file:

1. Select the user content in the KOMPLETE KONTROL Browser and ensure that SUPER 8 is selected in the Product selector.
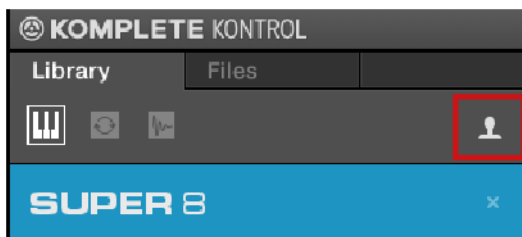
2. Find your User Preset file in the Results list and double-click on it.
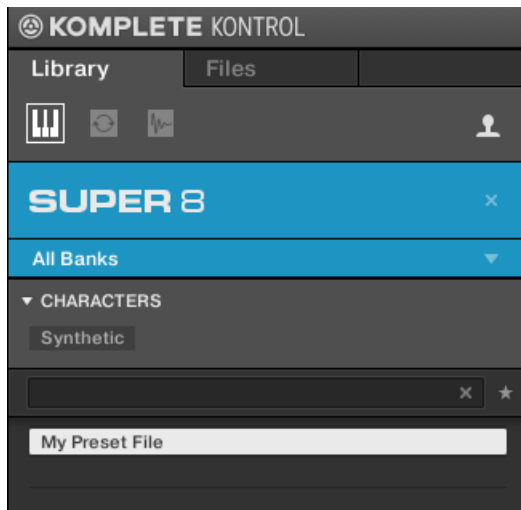
Your User Preset file is loaded.

> **!** User presets saved through the Super 8 Preset Browser require a restart of KOMPLETE
> KONTROL to show up in the user category of KOMPLETE KONTROL. For more information
> on the Preset Browser see Preset Browser.

4. Overview of SUPER 8

SUPER 8 consists of several main sections that structure the instrument's functionality in a logical and intuitive way:

Overview of SUPER 8

(**1**) **Header**: The Header contains four subsections: the Preset Browser for loading and storing Presets, the global settings relating to tuning and playing modes, Unison dealing with voice stacking, and to the far right, the main volume output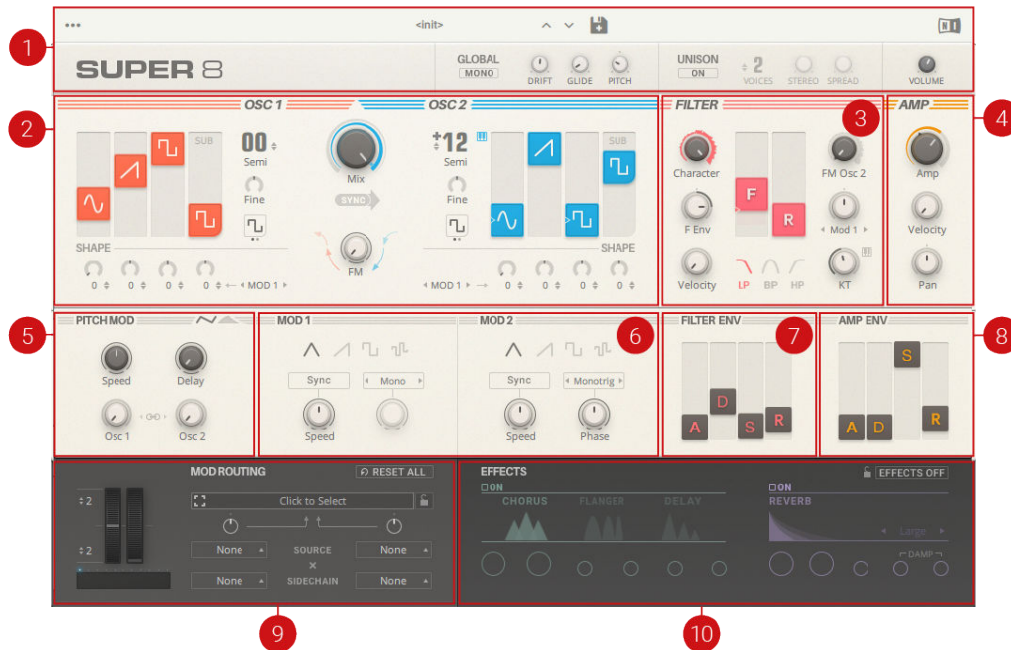. By clicking the three dots in the top left corner the settings are revealed. For more information about the Header, refer to Header.

(**2**) **Oscillators**: The Oscillator section is the primary sound source of SUPER 8. It enables you to set the raw waveforms and wave shapes which will determine the harmonic content of your sound. For more information about the **Oscillators**, refer to Oscillators.

(**3**) **Filter**: The Filter section provides extensive control of the timbre, harmonic content, and final character of the sound. It can be used in combination with the Filter Envelope and Modulation sections to add movement and interest to the sound. For more information about the **Filter**, refer to Filter.

(**4**) **Amp**: The Amplitude section sets the volume for each voice and contains the Velocity parameter which determines how loud the sound is when a note is triggered and the Pan parameter for creating stereo effects. For more information about the **Amp** refer to Amp.

(**5**) **Pitch modulation**: The Pitch Modulation section provides two methods to modulate the pitch of the Oscillators. For more information about **Pitch Modulation** refer to Pitch Modulation.

(**6**) **Modulators**: The Modulator section provides the waveforms for modulating parameters, and the various modes to modulate the Voices in different ways. For more information about the **Modulators** refer to Modulators.

(**7**) **Filter Envelope**: The Filter Envelope section contains Attack, Decay, Sustain and Release time parameters which modify the timbre of the sound over time. For more information about the **Filter Envelope** refer to Filter Envelope.

(**8**) **Amplitude Envelope**: The Amplitude Envelope section contains Attack, Decay, Sustain and Release time parameters which modify the amplitude of the sound over time. For more information about the **Amplitude Envelope** refer to Amp Envelope.

(**9**) **Modulation Routing**: The Modulation section contains a flexible routing system which will quickly enable you to route control signals to modulate parameters. For more information about **Modulation Routing** refer to Modulation Routing.

(**10**) **Effects**: The Effects section provides two effect units. The first effects unit contains a chorus, flanger, and delay, one of which may be selected for use at a time. The second effects unit includes a reverb containing three different room types. For more information about **Effects** refer to Effects.

4.1. Header

The Header incorporates four sections: Preset Browser, Global, Unison, and Volume.

Header overview

(**1**) **Preset Browser**: Browse, load, and save presets through the Preset Browser. For more information about the Preset Browser, refer to Preset Browser.

(**2**) **GLOBAL**: Contains parameters related to the instrument's tuning. For more information about the Global section, refer to Global.

(**3**) **UNISON**: Contains parameters related to the instrument's voicing. For more information about the Unison section, refer to Unison.

(**4**) **VOLUME**: Adjusts the instrument's main volume output.

(**5**) **Settings**: Display the credits, reveal the user folder where user presets are stored, toggle usage data tracking and tooltips on or off, and rescan the preset content library.

4.1.1. Preset Browser

The browser contains the following controls:
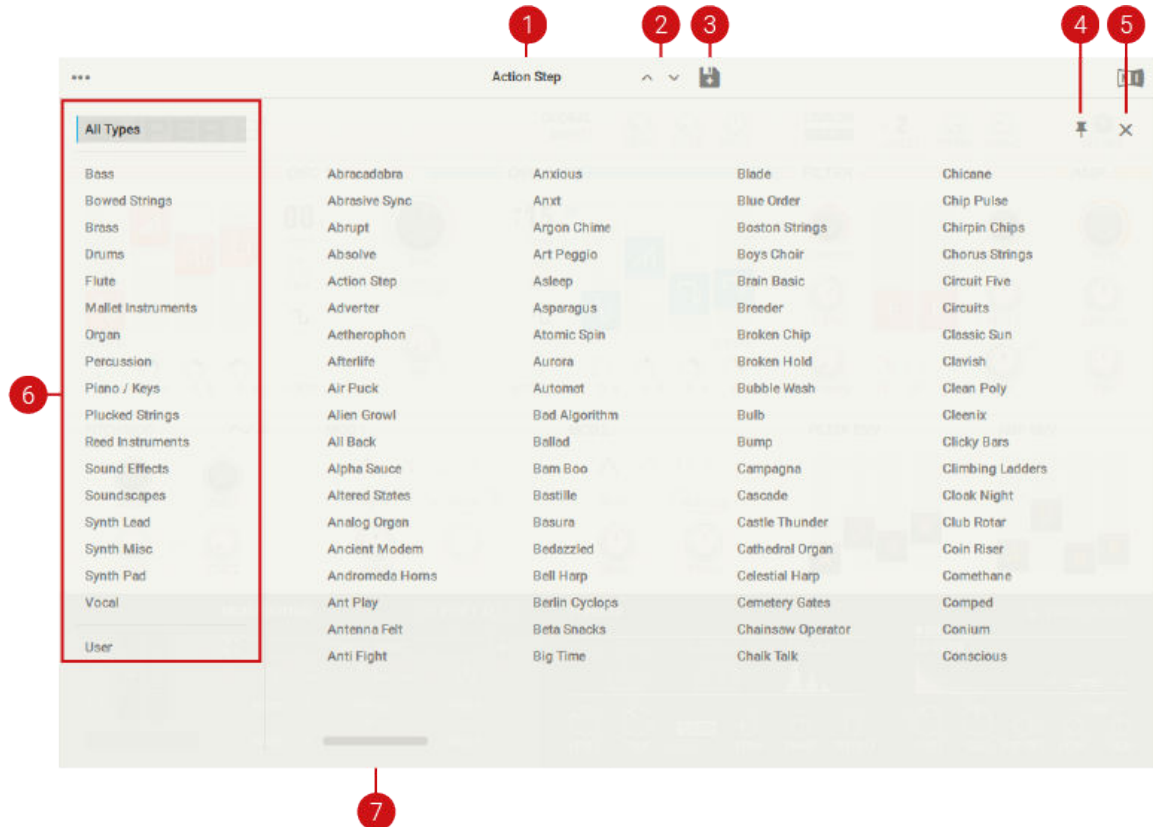
(**1**) **Active Preset**: The name of the currently active Preset is displayed here. By clicking on the name the Preset Browser opens and closes.

(**2**) **Previous/Next Preset**: By clicking on the up/down arrow buttons the next or previous Preset from the selected category is loaded immediately.

(**3**) **Save Icon**: Save a Preset by clicking the Save icon (disc icon) and giving it a name in the resulting dialog. Presets saved like this are always stored in the user folder, even when they are modified factory Presets. The location of the user folder can be revealed through the settings menu in the Header.

(**4**) **Pin**: By default, the Browser closes automatically after a Preset is selected. To keep the Browser open while selecting Presets, click the pin icon. You can close a pinned Browser by clicking on (**1**) or (**5**).

(**5**) **X**: Click the **X** symbol to exit the Browser.

(**6**) **Categories**: An alphabetically ordered list of preset categories based on instrument types and styles. The selected category is highlighted. Click another category to display its Presets. Your saved Presets are in the **User** category.

(**7**) **Page Scroll**: When a category has more than one page of Presets, a scroll bar appears at the bottom of the Browser. Click and drag the scroll bar to move through the pages in the Presets list. Additionally, you can scroll via your mouse wheel or touchpad.

Loading a preset from the Browser

To load a preset from the Browser:

1. Click the name of the (**1**) **Active Preset** to open the Browser.
2. Select a category from the (**6**) **Categories**.
3. Select a Preset from the resulting list on the right.
   The selected Preset will be loaded.

Saving a preset

To save a modified preset:

1. Click the (**3**) **Save Icon**.
2. Enter a name for your modified preset in the resulting dialogue.
3. Click **Save**.
   The preset has been saved and will show up in the **User** category of the browser.

4.1.2. Global

The Global section contains the parameters that affect the overall sound such as monophonic or polyphonic mode, Drift, Glide, and Pitch.
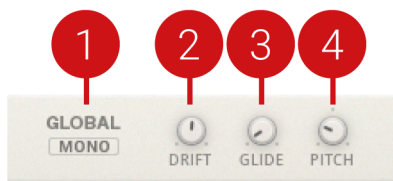
Global section overview

Global Parameters

(**1**) **MONO**: Switches the synthesizer into monophonic mode where one note can be played.

(**2**) **DRIFT**: Adds randomized detuning to the oscillators to emulate the tuning instability of vintage synthesizers.

(**3**) **GLIDE**: Adjusts the time it takes the GLIDE function (portamento) to smoothly move from the pitch of one note to the next.

(**4**) **PITCH**: Transposes the global pitch of the synthesizer in a range of -24 to +24 semitones (2 octaves).

4.1.3. Unison

When two or more voices are played on one key they are said to be in unison. SUPER 8's Unison mode can stack up to eight voices at a time, dividing the total number of voices by the number of keys being played.

Using the Stereo and Spread parameters, voices can also be detuned and spread across the stereo field to create very dense sounds. Unison is therefore great for creating big sounds, especially powerful leads and basses.

If five or more voices are used SUPER 8 will be forced into Mono (monophonic) mode (see Global).

Unison section overview

(**1**) **UNISON ON**: Enables Unison mode to stack up to eight voices. Use VOICES to increase the number of voices. If five or more voices are stacked, the synthesizer automatically switches to monophonic mode.

(**2**) **VOICES**: Selects the number of voices to be stacked in unison mode. When five or more voices are selected the **MONO** button in the Global section is automatically switched on.

(**3**) **STEREO**: Places the selected number of voices across the stereo field in order to widen the sound. Turning the knob to the right will increase the stereo effect.

(**4**) **SPREAD**: Spreads the selected number of voices by detuning them. Turning the knob to the right will increase the detuning effect.
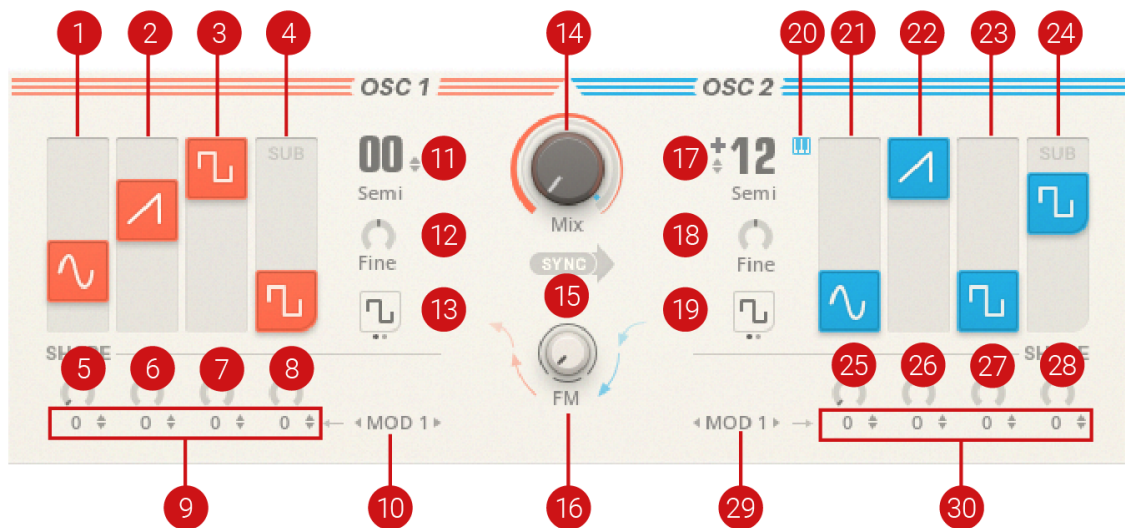
4.2. Oscillators

Oscillators provide the raw building blocks of the SUPER 8's sound by producing waveforms that each have a distinctive sound character. The two oscillators are nearly identical in design and each generates up to four waveforms simultaneously. The combination of these waveforms and wave shapes determine the harmonic content of the signal. When blended using the waveform level controls and the Mix knob, their combined signals can be used to create an endless array of sounds.

The shape of each waveform can be varied using the Shape parameters or automatically modulated using the shape modulators. This provides a great variety of different wave shapes and timbres and modulating them also adds interest and movement to the sound.

The Sync function is used to force Oscillator 2 to be hard synced to Oscillator 1. When Sync is engaged, Oscillator 2 will have it's phase reset each time that Oscillator 1 finishes a cycle. Using Sync can create an aggressive, or metallic sound, great for classic vintage leads. Adding modulation to the frequency of Oscillator 2 can significantly enhance this effect.

FM (Frequency Modulation) can also create more varied and interesting sounds. The FM control modulates the frequency of Oscillator 1 using the output of Oscillator 2 as a modulation source to produce more harmonically rich waveforms. Experimenting with the pitch of the oscillators can create non-tonal, metallic sounds and bell-like sounds.

Oscillator section overview

Oscillator Parameters

(**1**) **Sine Level**: Adjusts the level of the sine waveform for Oscillator 1.

(**2**) **Sawtooth Level**: Adjusts the level of the sawtooth waveform for Oscillator 1.

(**3**) **Pulse Level**: Adjusts the level of the pulse waveform for Oscillator 1.

(**4**) **Sub / Noise Level**: Adjusts the level of the sub-oscillator or white noise for Oscillator 1, depending on which one is selected using the Sub / Noise Switch (**13**).

(**5**) **Sine Shape**: Adds a second sine wave at an octave higher than the fundamental frequency. Turn the knob to the right to add this extra sine.

(**6**) **Saw Shape**: Morphs the waveform from a triangle (left) to a sawtooth (middle), to a PWM sawtooth (right). Double click to set to a pure sawtooth wave.

(**7**) **Pulse Shape**: Controls the pulse width of the pulse waveform. Double click to set to a pure square wave.

(**8**) **Sub Shape**: Controls the pulse width of the Sub waveform. Double click to set to a pure square wave.

(**9**) **Shape Modulation Amount**: Applies modulation from the selected Shape Modulation Source (**10**) to the waveform above.

(**10**) **SHAPE Modulation Source**: Select the modulation source for the Shape Modulation Amount Controls (**9**). Modulation sources include MOD 1, MOD 2, F. ENV (Filter Envelope).

(**11**) **Semi**: Adjusts the pitch of Oscillator 1 in a range of -48 to +48 semitones.

(**12**) **Fine**: Adjusts the pitch of Oscillator 1 in the range of -50 to +50 cents.

(**13**) **Sub/Noise Switch**: Select between sub-oscillator or white noise for Oscillator 1.

(**14**) **Mix**: Adjusts the volume balance between Oscillator 1 and Oscillator 2. In the far left position, only Oscillator 1 can be heard, in the far right position, only Oscillator 2 can be heard. When Mix is centered there is a perfect balance between both oscillators.

(**15**) **Sync**: Forces Oscillator 2 to be hard synced to Oscillator 1. Try increasing the pitch of Oscillator 2 when hard sync is engaged, for a classic sync effect.

(**16**) **FM** (Frequency Modulation): Modulates the frequency of Oscillator 1 using the output of Oscillator 2 as a modulation source. FM produces more harmonically rich waveforms. Experiment with the pitch of the Oscillators to create non-tonal, metallic sounds and bell-like sounds.

(**17**) **Semi**: Adjusts the pitch of Oscillator 2 in a range of -48 to +48 semitones.

(**18**) **Fine**: Adjusts the pitch of Oscillator 2 in the range of -50 to +50 cents.

(**19**) **Sub/White Noise Switch**: Select between sub-oscillator or white noise for Oscillator 2.

(**20**) **Keytracking On/Off**: Turns keytracking on and off for Oscillator 2. When turned off, a frequency value can be set in hertz.

(**21**) **Sine Level**: Adjusts the level of the sine waveform for Oscillator 2.

(**22**) **Sawtooth Level**: Adjusts the level of the sawtooth waveform for Oscillator 2.

(**23**) **Pulse Level**: Adjusts the level of the pulse waveform for Oscillator 2.

(**24**) **Sub/Noise Level**: Adjusts the level of the sub-oscillator or white noise for Oscillator 2, depending on which one is selected using the Sub/Noise Switch (**19**).

(**25**) **Sine Shape**: Adds a second Sine wave at an octave higher than the fundamental frequency. Turn the knob to the right to add this extra Sine.

(**26**) **Saw Shape**: Morphs the waveform from a triangle (left) to a sawtooth (middle), to a PWM sawtooth (right). Double click to set to a pure sawtooth wave.

(**27**) **Pulse Shape**: Controls the pulse width of the pulse waveform. Double click to set to a pure square wave.

(**28**) **Sub Shape**: Controls the pulse width of the Sub waveform. Double click to set to a pure square wave.

(**29**) **Shape Modulation Source**: Select the modulation source for the Shape Modulation Amount controls (**30**). Modulation sources include MOD 1, MOD 2 F. ENV (Filter Envelope).

(**30**) **Shape Modulation Amount**: Applies modulation from the selected Shape Modulation Source (**29**) to the waveform above.

4.3. Filter

The Filter takes the basic, raw sound of the oscillators and noise generator and subtracts frequencies, changing the tone of the sound. This change can be varied over time using the Filter Envelope or modulated using the modulators (MOD 1 & 2) to produce more dynamic animated timbres.

The Filter Frequency slider specifies the frequency of the Filter, the characteristic of which can be set by selecting one of three filter modes: Low-pass, Band-pass, or High-pass. The Resonance slider can also be used to route a portion of the Filter's output signal back to the input of the Filter, to emphasize the Filter Frequency. Additionally, driving the signal from the oscillators harder into the filter using the Character knob will also produce more distinctive results.
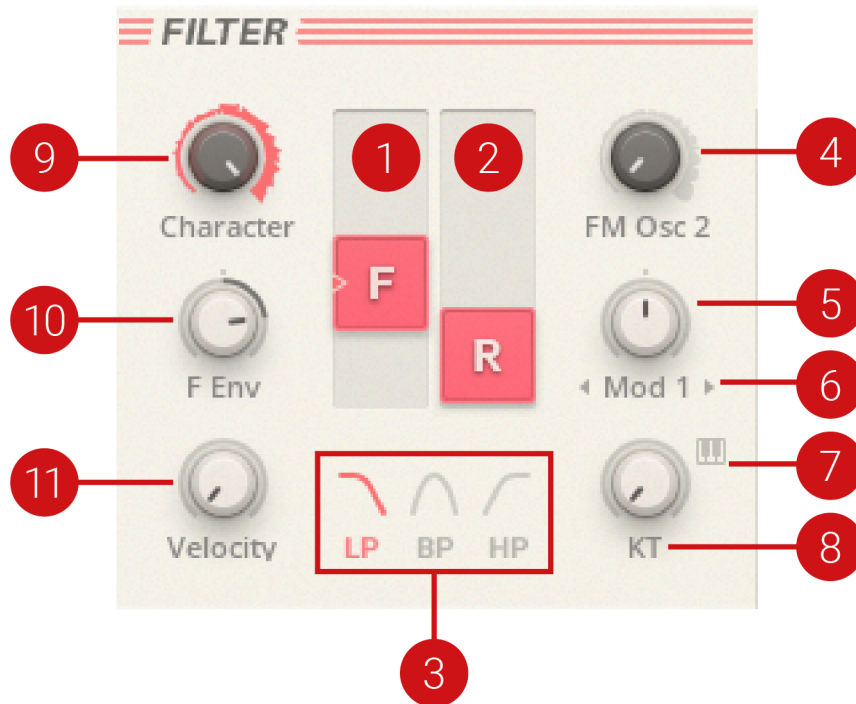
Overview of the Filter section

Filter Parameters

(**1**) **Filter Frequency**: Sets the filter frequency and changes the brightness of the sound. Use this in combination with the **Filter Envelope** and **Modulators** to change the filter over time.

(**2**) **Resonance**: Adds additional emphasis to the overtones of the sound occurring at the filter frequency, giving a distinctive character to the sound. High levels of resonance can cause the filter to self oscillate at the filter frequency.

(**3**) **Filter Mode Select**: Select between three filter modes: Low-pass, Band-pass or High-pass.

• Low-pass passes frequencies below the filter frequency.
• Band-pass passes a band of frequencies centered around the filter frequency.
• High-pass passes frequencies above the filter frequency.

(**4**) **FM OSC 2**: Modulates the Filter Frequency using the output of Oscillator 2 as a modulation source. This is useful for creating sound effects, and for making rich, textured sounds.

(**5**) **Filter Modulator**: Applies Modulation to the filter from either Mod Source 1 or Mod Source 2.

(**6**) **Filter Modulator Amount**: Selects the modulation source to be used by the Filter Modulator.

(**7**) **Key Tracking Chromatic**: Clicking this button, will set the Key Tracking so that the Filter Frequency will follow the pitch of played notes exactly. This is useful when the filter has high resonance and is self-oscillating.

(**8**) **Key Tracking**: Allows the note played on the keyboard to influence the frequency of the filter. In Low Pass filter mode, this will cause higher notes to have more upper harmonics, or to appear brighter than lower notes. This is useful for recreating acoustic instruments since it mimics their behavior.

At the leftmost position, no keytracking will be applied to the filter. To scale the frequency of the filter directly to the keys that are being played, click the Key Tracking Chromatic (**7**) button. To scale the filter frequency at an even higher value, turn the knob past the Key Tracking Chromatic value.

(**9**) **Character**: Adds a subtle amount of drive to the Filter. Turning the knob to the right increases the amount of drive which adds more character to the signal.

(**10**) **Filter Envelope**: Sets how much the Filter Envelope affects the filter frequency. Turn the knob to the right if you want the Filter Envelope to have a strong impact on the filter frequency.

(**11**) **Velocity**: Specifies how the keyboard dynamics (how hard a key is hit) will affect the filter frequency, allowing louder notes to appear brighter.

4.3.1. Filter Envelope

The four-stage filter envelope is designed to add interest by changing the brightness and harmonic content of the sound over time. This can be precisely controlled using the Attack, Decay, Sustain and Release sliders.
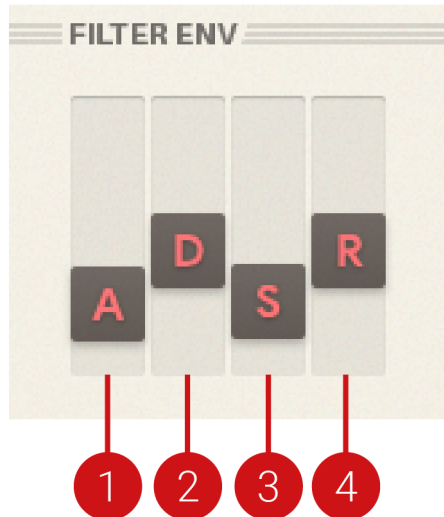
Filter Envelope Overview

Filter Envelope Parameters

(**1**) **Attack**: Specifies the time required for the Filter Envelope to reach its maximum level after a note is played.

(**2**) **Decay**: Specifies the time required for the Filter Envelope to fall to the Sustain level once the Attack portion of the envelope is complete.

(**3**) **Sustain**: Specifies the level that will be maintained while a note is held down, once the Attack and Decay stages are complete.

(**4**) **Release**: Specifies the time required for the Filter Envelope to reach its minimum level after a note is released.

4.4. Amp

After passing through the Filter, a sound may require some adjustment to its volume (amplitude) or panning (stereo position). The Amp section can be used to control the volume and panning before the Master control.
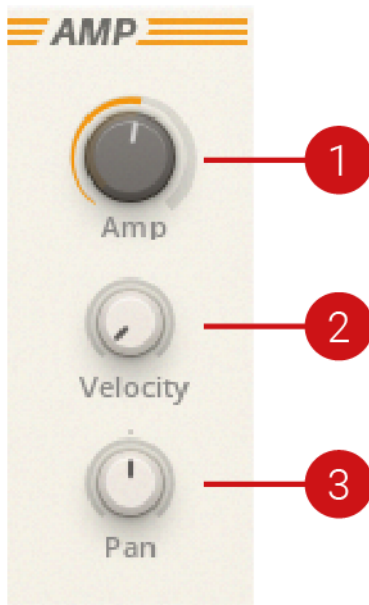

Amp section overview

Amp Parameters

(**1**) **Amp**: Controls the volume of the sound. Unlike the Master Volume, this control is polyphonic, and can be controlled per voice.

(**2**) **Velocity**: Specifies how much the volume will change according to note velocity, in other words, how hard keys are pressed. The larger the value, the more effect keyboard velocity will have on volume.

(**3**) **Pan**: Adjusts the position of the sound in the stereo field. This control is polyphonic, and can be used in combination with polyphonic modulation to create a useful stereo effect.

4.4.1. Amp Envelope

The Amplitude Envelope is used to contour the loudness of a sound over time. This can be precisely controlled using the Attack, Decay, Sustain and Release sliders.
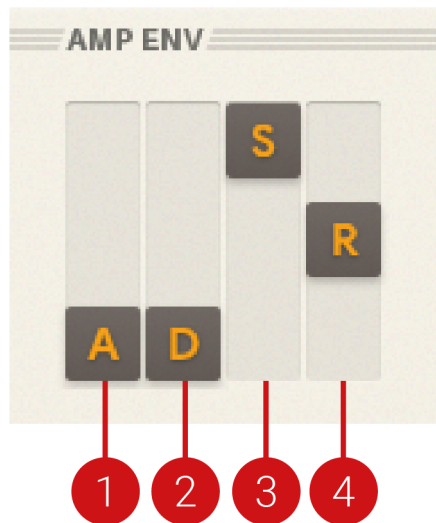
Amp Envelope Overview

Amp Envelope Parameters

(**1**) **Attack**: Specifies the time required for the Amplitude Envelope to reach its maximum level after a note is played.

(**2**) **Decay**: Specifies the time required for the Amplitude Envelope to fall to the Sustain level once the Attack portion of the envelope is complete.

(**3**) **Sustain**: Specifies the level that will be maintained while a note is held down, once the Attack and Decay stages are complete.

(**4**) **Release**: Specifies the time required for the Amplitude Envelope to reach its minimum level after a note is released.

4.5. Pitch Modulation

The Pitch Modulation section provides two methods to modulate the pitch of the Oscillators.

The two modulation types, Pitch LFO and Pitch Envelope, are each accessible using the icons on the right-hand side.

Pitch LFO Mode

Pitch LFO changes the pitch of the Oscillator using the cyclic modulation from the LFO speed, which is set using the Speed knob.

The amount of pitch modulation can be applied to Oscillator 1 and Oscillator 2 separately using the Osc 1 and Osc 2 knobs respectively. The two oscillators can also be linked using the Link icon which will enable the amount of pitch modulation to be applied equally.
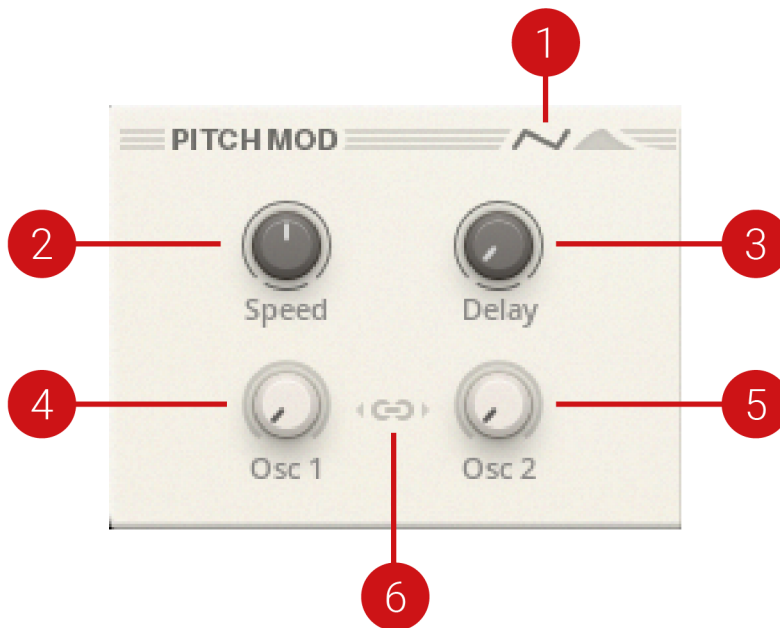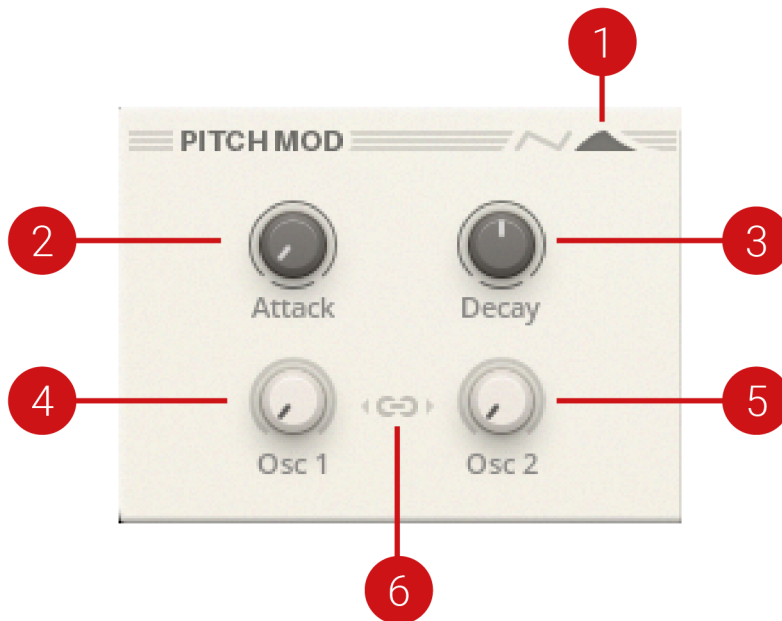
Pitch LFO mode overview

(**1**) **Pitch Mod Type**: Selects the Pitch LFO mode.

(**2**) **Speed**: Adjusts the speed of the Pitch LFO.

(**3**) **Delay**: Turn this control to the left, to have the Pitch LFO be applied to the oscillators immediately after a note is played. Turn this control to the right, to cause the Pitch LFO to be slowly introduced after a short delay.

(**4**) **Oscillator 1**: Adjusts the amount of pitch modulation applied to Oscillator 1.

(**5**) **Oscillator 2**: Adjusts the amount of pitch modulation applied to Oscillator 2.

(**6**) **Link**: Links Oscillator 1 and Oscillator 2 to apply pitch modulation equally.

Pitch Envelope

Pitch Envelope changes the pitch of the Oscillator using the contour of the envelope using the Attack and Decay parameters. The Attack parameter specifies the start of the pitch modulation and the Decay controls the time required for the envelope to fall back down to zero.

The amount of pitch modulation can be applied to Oscillator 1 and Oscillator 2 separately using the Osc 1 and Osc 2 knobs respectively. The two oscillators can also be linked using the Link icon which will enable the amount of pitch modulation to be applied equally.

Pitch Envelope mode overview

(**1**) **Pitch Mod Type**: Selects the Pitch Envelope.

(**2**) **Attack**: Specifies the time required for the Pitch Envelope to reach its maximum level after a note is played.

(**3**) **Decay**: Specifies the time required for the Pitch Envelope to fall down to zero after the Attack portion of the envelope is complete.

(**4**) **Oscillator 1**: Adjusts the amount of pitch modulation applied to Oscillator 1.

(**5**) **Oscillator 2**: Adjusts the amount of pitch modulation applied to Oscillator 2.

(**6**) **Link**: Links Oscillator 1 and Oscillator 2 to apply pitch modulation equally.
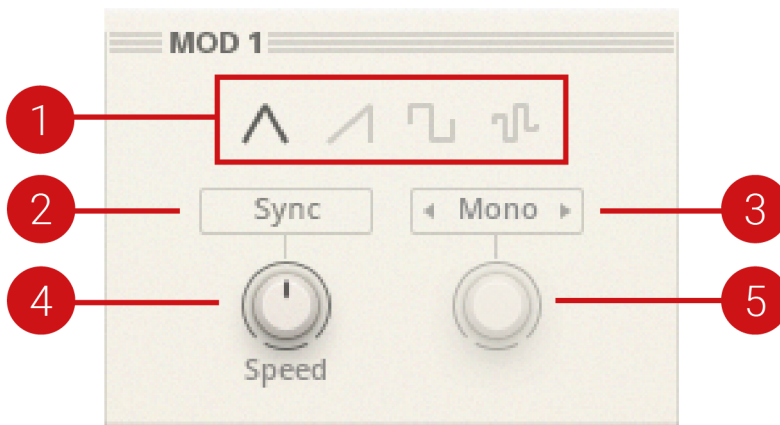
4.6. Modulators

Whenever one synthesizer module influences the behavior of another module, that is known as modulation. SUPER 8 has two modules that are identical and capable of producing controlled, cyclic modulation that can be used for extensive modulation control, opening new avenues for creative sound design.

Each modulator has set waveform shapes that can be combined to create more complex waveforms. The cyclic modulation can be controlled using the Speed knob or they can be individually sync'd to different timing divisions of the host BPM to create interesting polyrhythmic sounds.

The modulators are readily available in the Oscillator section for modulating waveform shapes, and in the Filter section to modulate the filter. In the Mod Routing section, they can also be assigned as a source to modulate any parameter.

The various modulator modes determine how the modulators will affect the voicing and how they are triggered by each new note.

Modulator overview showing Mod 1

(**1**) **Waveform Select**: Selects the source modulation to be used for Modulator 1 or 2. Multiple shapes can be selected to create more complex waveforms. If no waveforms are selected, the Modulator will be disabled.

(**2**) **Sync**: Selects fixed speed rates for Modulator 1 or 2, adjusted to the BPM of REAKTOR or your host.

(**3**) **Modulator Mode**: Select the mode for Modulator 1 or 2:

- **MONO**: One free running LFO, applied to all voices.
- **POLY**: Individual free running LFOs, one for each voice.
- **TRIG**: Individual LFOs which will be triggered on each new note.
- **MONOTRIG**: One LFO which is triggered on the first note pressed down. The LFO will not trigger again until all keys are released.

(**4**) **Speed**: Controls the modulation speed of Modulator 1 or 2. When Sync (**2**) is on, tempo matched rates can be selected.

(**5**) **Trigger Phase**: For TRIG and MONOTRIG modes, this knob will set the starting phase that the LFO is triggered to.

4.7. Modulation Routing

In simple terms, modulation routing allows a control signal from one module to be used to influence the value of a parameter in another module. SUPER 8 has a flexible routing system that can be used to quickly and easily setup a modulation route. By clicking on the Destination bar and then selecting a control in the synthesizer, the modulation sources for that control are revealed below. The modulation Source drop-down menu provides a plethora of sources which can be applied to the control, including the Modulation Wheel and the Touchstrip.

The modulation amount is controlled using the Modulation Depth knobs. Further modulation and the modulation signal itself can be modulated using the Sidechain signal. This is useful for adjusting the depth of continuously modulated controls (ie: an LFO) with a static control (ie: the Modwheel).
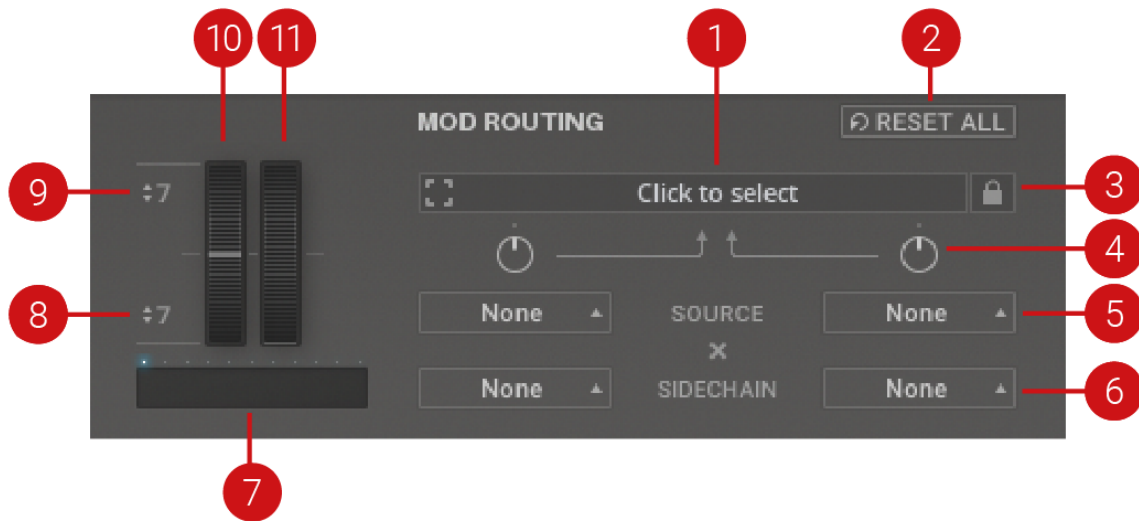
Modulation Routing Parameters

(**1**) **Destination**: To modulate any of the controls, start by clicking here, and then click on the knob or slider that you would like to modulate. Next, use the Source and Depth controls below to apply modulation.

(**2**) **Reset All**: Resets all modulation routing across the entire instrument.

(**3**) **Destination Lock**: Changes the way that modulation destinations are selected. When the lock is enabled, the modulation destination will only be updated if you click the destination box and then click a control. When unlocked, the destination will always update to the most recently clicked control.

(**4**) **Modulation Depth 1 & 2**: Sets the amount of modulation to be applied to the Destination parameter. Turn right to apply positive modulation, and left for negative modulation.

(**5**) **Source 1 & 2**: Select a modulation source from the list.

(**6**) **Sidechain 1 & 2**: Optionally choose a second modulation source, which will be multiplied with the Source selected above. Useful for adjusting the depth of continuously modulated controls with a static control, for example an LFO with the Modwheel.

(**7**) **Touchstrip**: Replicates the touchstrip on a Native Instruments KOMPLETE KONTROL keyboard and can be used as a modulation source in the Mod Routing section.

(**8**) **Pitch Wheel Range Down**: Sets the lower Pitch Wheel range from 0 to -24 (2 octaves).

(**9**) **Pitch Wheel Range Up**: Sets the upper Pitch Wheel range from 0 to +24 (2 octaves).

(**10**) **Pitch Wheel**: Applies pitch bend to notes.

(**11**) **Modulation Wheel**: Controls the amount of modulation applied to the sound. This can be used as a modulation source in the Mod Routing section.

4.8. Effects

SUPER 8's contains two effects slots. The first slot contains a chorus, flanger, and delay from which one effect may be used. The second slot contains a reverb.

All effects can be switch on and off using the Effects Off button to the right. Each effect slot can be switched on using the ON buttons to the left of the effects. The effect used in slot one can be selected by clicking the Chorus, Flanger, or Delay icon.
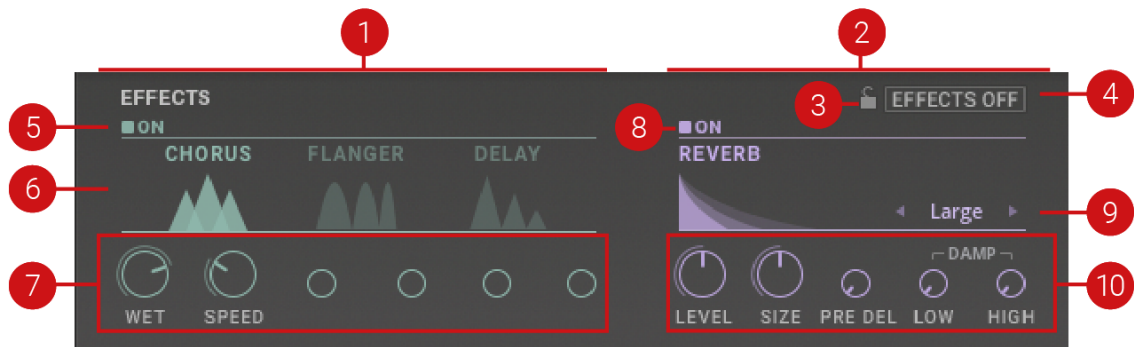

The Effects Overview

Effect Parameters

(**1**) **Slot 1**: Contains Chorus, Flanger and Delay effect.

(**2**) **Slot 2**: Contains the Reverb effect.

(**3**) **Lock**: Locks the effects off. When lock is engaged, the effects will remain off while browsing presets.

(**4**) **Enable**: Switches all effects on or off.

(**5**) **Slot 1 Enable**: Switches effect unit 1 on or off.

(**6**) **Slot 1 Selection**: Selects the Chorus, Flanger or Delay.

(**7**) **Slot 1 Parameters**: Parameters for the selected effect.

(**8**) **Slot 2 Enable**: Switches effect unit 2 on or off.

(**9**) **Reverb Type**: Select the reverb type to be used.

(**10**) **Slot 2 Parameters**: Parameters for the reverb effect.

4.8.1. Chorus

Choruses are used to enrich sounds by adding spatial movement and giving them an ensemble-like quality. They are based on short delays, which are modulated to create a subtle pitch shifting effect. When added back to the original signal, these pitch shifted delays have the effect of filling out the overall sound.

SUPER 8 contains a classic vintage polysynth chorus emulation and provides spaciousness and richness to a sound. It's great for adding thickness or producing a more animated sound. The adjustable parameters are wet and speed.
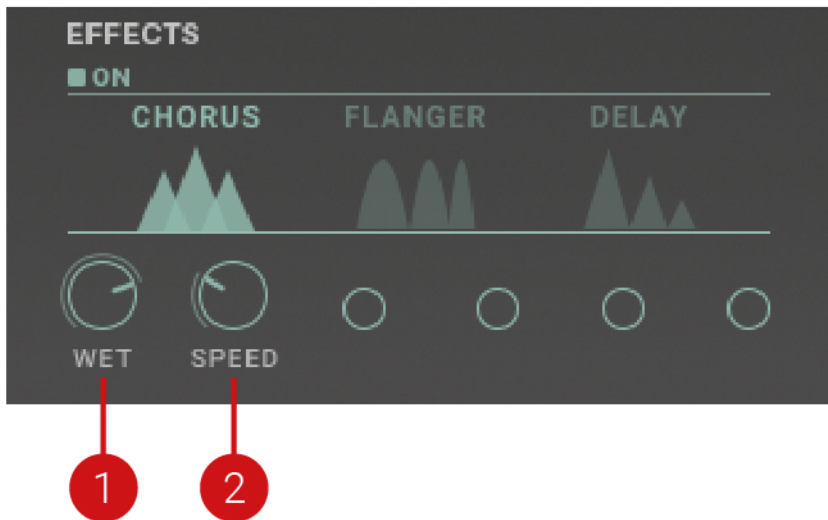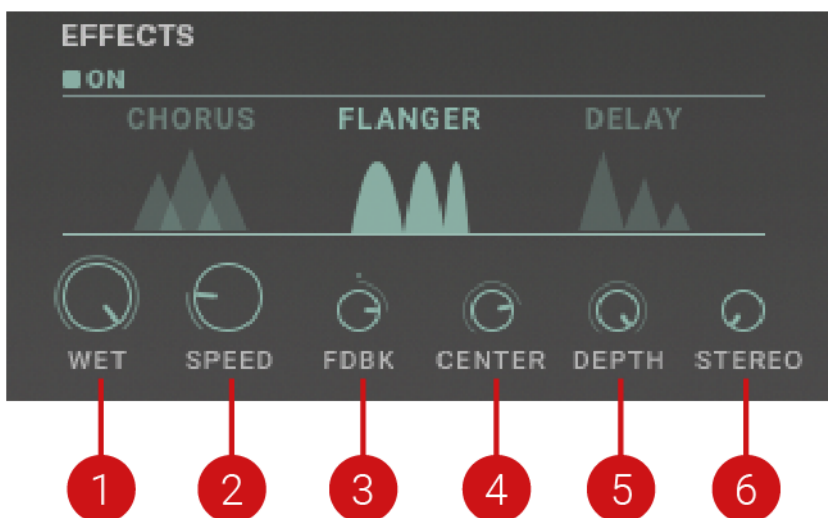
Chorus effect overview

Chorus Parameters

(**1**) **WET**: Adjusts the balance between the original output of the synth and the chorus effect.

(**2**) **SPEED**: Adjusts the speed of modulation.

4.8.2. Flanger

Flangers are used to enrich sounds by adding distinct harmonic effects that can completely transform a sound. They are based on comb filters, with built-in modulation of the comb filter frequency. A comb filter consists of an extremely short delay with feedback that produces harmonically related peaks and notches in the frequency spectrum. This way a flanger adds dramatic filtering effects and resonances to the sound. The results range from metallic textures to the warped sound of a starting jet engine.
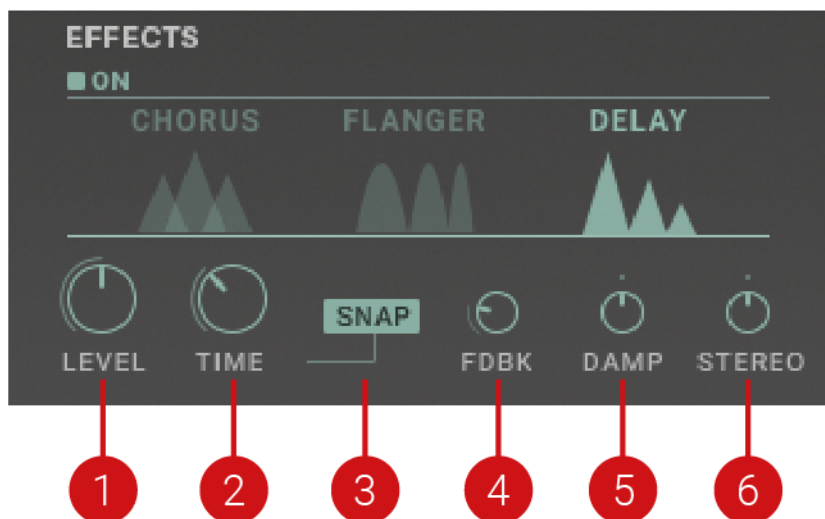

Flanger effect overview

Flanger Parameters

(**1**) **WET**: Adjusts the balance between the original output of the synth and the flanger effect.

(**2**) **SPEED**: Adjusts the speed of modulation.

(**3**) **FDBK**: Turn to the left for negative feedback, and to the right for positive feedback. Negative feedback provides a drainpipe, positive feedback has a more metallic character.

(**4**) **CENTER**: Adjust the center pitch for the flanger.

(**5**) **DEPTH**: Increases the depth of modulation applied to the flanger.

(**6**) **STEREO**: Offsets the modulation of the left and right channels for a stereo flanging effect.

4.8.3. Delay

Delay effects sample a portion of an incoming audio signal, delay it and play it back. This delayed signal is then mixed with the unprocessed (dry) signal. The delayed signal can be routed back to the input of the delay unit via a feedback loop to create echo. By increasing the feedback amount, the number of repetitions increases. Delay repetitions, so-called taps, can be synced to your song's tempo so they work as a rhythmical effect.

For creative effects, the delay taps in Super 8 can be dampened, meaning the frequencies of the delay are reduced. The delay taps can also be placed anywhere in the stereo field using the Stereo knob.

Delay effect overview

Delay Parameters

(**1**) **LEVEL**: Adjusts the amount of delay applied to the sound.

(**2**) **TIME**: Sets the amount of time that the signal will be delayed.

(**3**) **SNAP**: Fixes the delay to values that are snapped to the tempo.

(**4**) **FDBK**: Controls the amount of signal fed back to the delay's input. Around 100%, the feedback signal doesn't decay anymore and enters self-oscillation, at which point the delay produces increasingly louder feedback sounds. Turn down the Feedback control to stop it.

(**5**) **DAMP**: Dampens the delayed signal. Turn to the right to dampen the low frequencies. Turn to the left to dampen the high frequencies.

(**6**) **STEREO**: Center the control to keep the delay centered. Turn to the left or right for a ping pong effect that starts either on the left or right channel.

4.8.4. Reverb

SUPER 8's Reverb effect contains three different reverb types each with its own character and space. Adjustable parameters include Size, Pre-delay, and dampening of both the low and high frequencies of the selected reverb type.
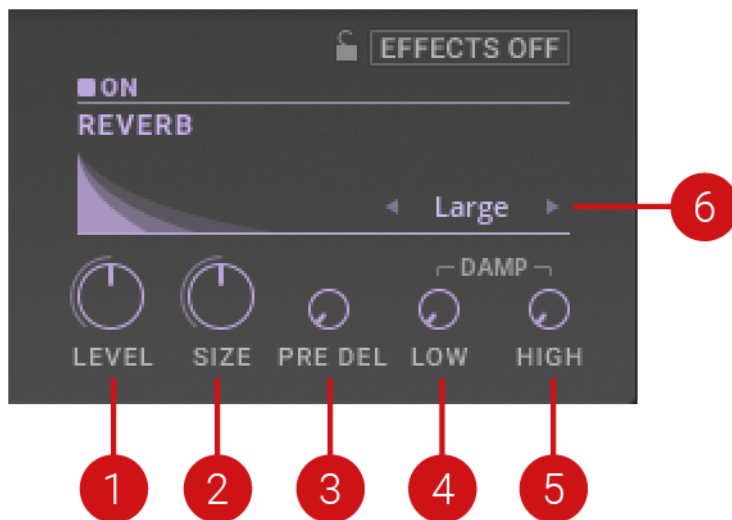
Reverb effect overview

Reverb Parameters

(**1**) **LEVEL**: Adjusts the amount of reverb applied to the sound.

(**2**) **SIZE**: Adjusts the size of the selected reverb.

(**3**) **PRE DELAY**: Adds a pre-delay to the reverb's input, for a delayed reverb effect.

(**4**) **DAMP LOW**: Dampens the low frequencies of the reverberation.

(**5**) **DAMP HIGH**: Dampens the high frequencies of the reverberation.

(**6**) **REVERB Type**: Choose between three different reverb types: **Small**, **Large**, or **Galactic**.

5. Credits

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Quality Assurance: Bymski Stempka, Daniel Ramm

Sound Design: Jamil Samad, Tommaso De Donatis, Angelos Liaros, Jonathan Heppner, Nori Ubukata, Cortex Audio, Torsten Fassbender, Xenos Soundworks, ModeAudio, Jeremiah Savage, Toybox, CinningBao, John Valasis, Message To Bears, Balázs 9b0 Gyutai, The Solos, Eiliyas, Mirko Ruta

Documentation: David Gover

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Product Owner: Marin Vrbica

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