PANDORA

ADAPTIVE ORCHESTRAL TRANSITIONS & EFFECTS

PROJECT**SAM**
cinematic sampling

REFERENCE MANUAL

1.0.5

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INTRODUCTION

Thank you for purchasing Symphobia 4: Pandora!

Symphobia 4: Pandora lets you summon rousing cinematic risers, foreboding falls, and earth-shattering crescendos with unmatched ease and flexibility. Pandora's innovative Adaptive Sync quickly and effortlessly matches its huge library of articulations and effects with your sequence – so your next deadline needn't be a nightmare. Plus, fully-customizable sound design tools help you quickly sculpt your desired timbres.

We are very excited to share this fourth volume in the Symphobia Series with you. The Symphobia Series are very dear to us, with so many composers embracing its concept and sound over the years. It set the bar high, which is why we have worked long and hard on S4Pandora, starting with initial ideas and prototyping two years ago. We believe we have created a particularly inspiring and useful cinematic tool and hope these sounds and ideas will find their way into your orchestral template shortly!

This reference manual will guide you through the S4Pandora's library structure, user interface, specific features and controls. If reading manuals is not your thing, we recommend at least skimming through the User Interface section of this document, to get a initial understanding of the library's different user interfaces.

Let's delve right in, shall we?

Yours truly,

The SAM Team

Maarten, Vincent, Marco, Colin, Wytse and Joep

THE RECORDINGS

ENSEMBLE RECORDING

Symphobia 4: Pandora is part of ProjectSAM's Symphobia Series. One of the Symphobia Series' main concepts is its focus on ensemble recording: samples recorded with multiple instruments and sections, performing together on the same stage at the same time. This results in a lush and hyper realistic sound that is hard to beat with individually sampled instruments.

For example, the strings pulses in S4Pandora have been recorded in two different ensemble setups:

- Low strings: cellos and basses performing together in octaves
- Mid strings: 2nd violins and violas performing together in unison

This means that pressing a single C1 note using the low strings pulses will result in a C1 + C2 octave sounding, with basses playing C1 and cellos playing C2.

SAMPLE POOL SIZE

S4Pandora's sample pool is about 140 GB in size and consists of over 85,000 samples.

Using Kontakt's lossless file compression, the library takes up about 70 GB on disk.

SAMPLE RATE

All of S4Pandora's audio files have a sample rate of 48 kHz 24 bit.

LIBRARY STRUCTURE

This reference manual is based on library version 1.0.5 of Symphobia 4: Pandora.

Symphobia 4: Pandora packs a particularly wide range of orchestral recordings, from playable staccatos to pre-recorded risers and looped pulses. The main Instruments folder is structured by category. You will find all playable, tonal articulations in one folder, all pre-recorded clusters in another, and so on.

THE INSTRUMENTS FOLDER

1 Combos	Layered combinations of individual Instruments from the other folders
2 Effects	Dissonant effects and textures
3 Clusters	Separately grouped: pre-recorded clusters
4 Tonal	Playable articulations, such as staccatos and crescendos in unison or octaves
5 Pulses	Rhythmic, tempo-sync pulses, recorded as clusters and tonal notes
6 Risers	Recorded string risers & downers
7 Percussion	Timpani, gran cassa, toms, cymbals and more

NAMING CONVENTIONS

All Instrument names include a category (e.g. *Effects*), orchestral section (e.g. *Brass*) and, usually, an instrument name (e.g. *Horns*).

Instruments that progress dynamically (e.g. a crescendo from piano to forte) are grouped using the label *Dynamic*.

Instruments that have **ADAPTIVE SYNC** controls available – and can be easily matched up with your tempo and track – have a *[Sync]* label at the very end of the Instrument name.

A typical S4Pandora Instrument name is:

Tonal - Tutti - Orchestra - Dynamic - Cresc [Sync].nki

COMBOS

Combos are layered combinations of the individual Instruments from the other six folders. They are inspiring starting points for a new track, but are also great to get an initial feel of the scope of S4Pandora. The Combos are covered more in-depth further down in this reference manual.

SNAPSHOTS

For most Instruments, Snapshots are available. Snapshots offer inspiring presets that utilize the entire range of real-time effects and controls. This can really turn an Instrument upside down. Make sure to check them out!

INTERFACE OVERVIEW

The majority of S4Pandora's controls and features are the same for all Instruments. For example, every Instrument has controls for the microphone channels, attack/release envelopes and general settings.

However, there are a number of distinct Instrument features that require dedicated controls.

The S4Pandora user interface is divided into **MODULES**. Some of these are **VARIABLE MODULES**. This is where Instrument-specific features are displayed. For example, a *crescendo* Instrument displays the controls for **ADAPTIVE SYNC** here, whereas a *staccato* Instrument uses this space for **ARTICULATION** controls. Also, a Horns Instrument will display a selection of featured effects in the **EFFECTS** module, while the Tutti Orchestra Instruments offer a set of optional percussion layers here.

MAIN VIEW VS. EXPANDED VIEW

When you load an S4Pandora Instrument, you will be presented with the **MAIN VIEW** by default. In this view, the most relevant controls are displayed for each module.

SWITCHING TO THE EXPANDED VIEW

By clicking one of the *Expand Icons*, you are taken to the **EXPANDED VIEW** of the module in question. For example, the **EXPANDED VIEW** of the **ADAPTIVE SYNC** module offers additional settings to tweak synchronization, such as timing offset and tempo interpretation.

THE INFO BAR

At the bottom-left, the *Info Bar* is displayed. This bar shows you "tool tip"-style information when changing a control or clicking a button in the S4Pandora user interface. For **ADAPTIVE SYNC** Instruments, it shows you a summary of the synchronization setup.

After loading an Instrument, the *Info Bar* displays useful information such as the mapping on the keyboard or the currently assigned dynamic controller.

The *Info Bar* is also visible in the **EXPANDED VIEW**.

ANIMATIONS

S4Pandora features a number of user interface animations, such as a streamer moving along the top of the interface during the length of a crescendo sample. You can turn off these animations by clicking the “S4” cube in the Pandora logo at the top. Please note that this will only disable animations for the instrument in question. It is not a library-wide setting.

We will first cover the different modules available in the **MAIN VIEW**.

MAIN VIEW: MODULES

The S4Pandora user interface is divided into 4 modules horizontally. In the **MAIN VIEW**, the most relevant controls are displayed for each module. Clicking the **EXPAND ICON** takes you to the **EXPANDED VIEW** of that module, offering additional controls and settings. You can also go here by clicking the headers themselves (e.g. “Effects” or “Controls”).

MODULE 1: **Variable:** Adaptive Sync **or** Articulation **or** Sound Design Mode
MODULE 2: **Fixed:** Microphone Channels
MODULE 3: **Variable:** Effects **or** Optional Layers
MODULE 4: **Fixed:** Controls & Toggles

MAIN VIEW: VARIABLE MODULES

There are 4 different alterations of the module 1, the **VARIABLE MODULE**. Below is a summarized overview of these. Further down in this reference manual we will go over each of them in more detail.

IN SHORT: ADAPTIVE SYNC

S4Pandora packs a massive amount of recorded crescendos, rolls and risers. These can be easily synchronized to your track. Instruments that offer this feature, display the **ADAPTIVE SYNC** module on the left side of the interface. This module allow you to simply select the number of beats or seconds you need, or choose to sync to the next downbeat.

IN SHORT: ARTICULATION

Instruments that do not have synchronization options, but do offer multiple articulations or variations, display **ARTICULATION** module on the left side of the user interface. The different slots are assignable to keyswitches or MIDI controllers in the module's **EXPANDED VIEW**.

IN SHORT: PULSES

Pulses are rhythmic, looped patterns for strings, brass and woodwinds. The **PULSES** module looks similar to those of the **ARTICULATION** module above. The main difference is that the displayed note units represent quarter, eighth and sixteenth *patterns*, not single notes.

Cluster Pulses display the standard set of controls in the **EFFECTS** module.

Tonal Pulses display a dedicated set of **SYNTH LAYER CONTROLS** in the Effects module, to mix in with the orchestral pulse patterns.

Pulse Patterns

Optional Synth Layers

IN SHORT: SOUND DESIGN MODE

Clicking the *Triangle icon* on the left side of the interface takes you to **SOUND DESIGN MODE**. This Mode allows you to directly manipulate a selection of the mapped samples using waveform controls. Clicking the triangle icon again takes you back to **ORCHESTRAL MODE**.

Note that **SOUND DESIGN MODE** is not available for all Instruments. If you see a *Triangle icon*, Sound Design Mode is available. If you don't see a *Triangle icon*, it is not.

There are also a small number of Instruments that are locked inside **SOUND DESIGN MODE**. In this case, the triangle icon is just shown as an outline.

Click triangle to leave Sound Design Mode
and return to **Orchestral Mode**

Sound Design Mode

EXPANDED VIEW

We will end this chapter with an example of one of the **EXPANDED VIEWS**. Below is the **EXPANDED VIEW** for the *Controls* module. As you can see, this view offers additional controls to enable/disable round robin and release trails, and tweak velocity and mapping settings.

To go back to the **MAIN VIEW**, click the *X* icon on the right side or anywhere in the top bar of the **EXPANDED VIEW**.

The **EXPANDED VIEW** of the *Controls* module, specifically, also shows you the *library version number* in the top-right corner. This is good to know when checking for library updates.

IN-DEPTH: ADAPTIVE SYNC

This chapter will go over the different modules and their features in more detail.

Pre-recorded crescendos and rolls sound great. But they used to have a disadvantage: they were not very flexible. Any composer will recognize the trial-and-error process of nudging a crescendo note around until it ends in the right spot. It's a tedious task that most of us would rather skip if we could.

This is why we developed **ADAPTIVE SYNC**.

Symphobia 4: Pandora is packed with transitional samples – sounds that progress dynamically or directionally over time. These range from powerful brass crescendos to dissonant string risers. They all have one thing in common: a distinct, musical ending or climax.

For simplicity's sake, we will use the term "crescendo" for all types of transitional samples from this point on.

With **ADAPTIVE SYNC**, you can simply set the number of beats or seconds your track needs. There is no need to manually nudge around the start of a MIDI note to try and time the end of the sample correctly. Tapping from a vast orchestral pool, **ADAPTIVE SYNC** picks the closest recorded crescendo length available and intelligently tweaks it to match your **HIT POINT** exactly.

Similarly, you can very quickly time a crescendo with the next downbeat. If you move a note backwards or forward, the engine will automatically switch to a better matching recording if there is one.

The **ADAPTIVE SYNC** module offers 4 different modes to choose from:

1.	Sync to the next **downbeat**	Relative length	Tempo-dependent
2.	Sync in **bars**	Absolute length	Tempo-dependent
3.	Sync in **seconds**	Absolute length	Tempo-independent
4.	Sync **off**	Manual length selection	Tempo-independent

With **ADAPTIVE SYNC** enabled, a lot of decisions are being made under the hood, depending on the selected mode (see above), sample content and tempo. For each incoming note, the engine decides which of the following methods it will use to match lengths:

- Time-stretching
- Jumping into the sample
- Delaying the start of the sample
- A combination of the three

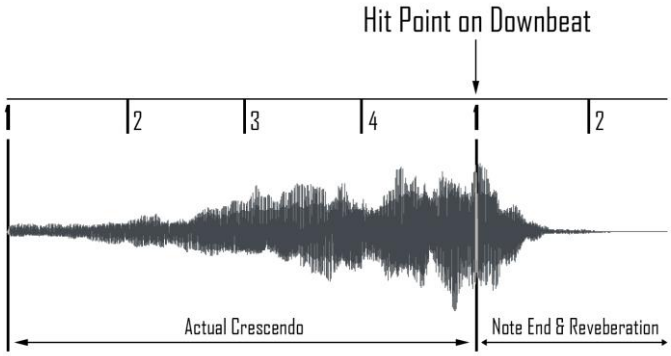
You can also customize **ADAPTIVE SYNC** in the **EXPANDED VIEW**. For example, you can force it to only use one of the synchronization methods listed above, or set a timing offset. More on this later.

ABOUT HIT POINTS

A **HIT POINT** is a specific spot in your track that you want to "hit" musically. This can be anything from a simply accent after your intro to, in the case of film scoring, a dramatic event such as a ghost suddenly walking by the camera.

In S4Pandora, we use the term **HIT POINT** to refer to the climax of a crescendo sample. This is usually not the end of the audio file, as the file also includes the natural ending of the note as well as the reverberation tail of the concert hall.

This is why we entered the actual, musical ending of each and every crescendo sample into a database. **ADAPTIVE SYNC** uses this database to work its magic and pick the right crescendo sample for your music. To adjust it further, it uses a variety of techniques. More on this later.



In the image above, you see a waveform of a crescendo sample. As you can see, the crescendo is aligned in such as way that, musically, it ends on the first beat of the next bar (the downbeat). This means that, for this situation, the crescendo needs to be 4 beats in length.

RELATIVE LENGTH VS. ABSOLUTE LENGTH

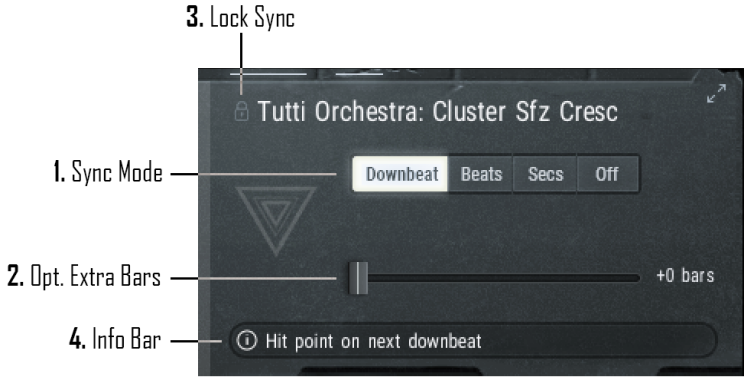
With **ADAPTIVE SYNC** set to *Sync to Downbeat*, the engine will make sure that the crescendo *always* hits the first beat of the next bar, as illustrated in the image above. If you would trigger a note at beat 2, the engine will play a crescendo that is 3 beats in length instead. We call this *relative crescendo length*.

With **ADAPTIVE SYNC** is set to *Sync in Beats* or *Sync in Secs*, the resulting crescendo length will always be the same. In the image above, if we had started the note on beat 2 of the first bar, the crescendo would have ended on beat 2 of the second bar. We call this *absolute crescendo length*. Note that this synchronization mode is still tempo-dependent. If you change your track's tempo, the crescendo length will automatically adjust.

We will now cover the 4 different synchronization modes in greater detail.

SYNC TO DOWNBEAT

Sync to Downbeat calculates the amount of time left until the next bar, with an option to add additional bars for longer sounds. The crescendo length will vary based on the start of your note as well as your host's tempo. If you move the start of your note, **ADAPTIVE SYNC** will automatically choose a different crescendo length. Powered by a large pool of recorded lengths, this makes *Sync to Downbeat* in particular quite a magical feature to use!



Sync to Downbeat requires your host software to be either playing back or recording. If your host is paused or not running at all, a preview crescendo will be played instead.

1. *Sync Mode*
   Select which way you want to match crescendo lengths. Currently set to *Sync to Downbeat*.
2. *Optional Extra Bars*
   Optionally add additional bars before the **HIT POINT** occurs. For example: sync to the next downbeat, but only

after two extra bars. This is very useful for longer sounds such as string risers.

Note:

This setting is unavailable for particularly short crescendo sounds (e.g. “Low Strings Growls”).

3. *Lock Sync*

   Save RAM! Click the icon to lock **ADAPTIVE SYNC** to the *last used length*. All other available lengths will be purged from RAM. This is very useful if you only need a few particular crescendos in your track. In this case it would be unnecessary to keep all the other lengths loaded and available.

   Notes:

   - If *Lock Sync* is enabled, the **ADAPTIVE SYNC** controls are unavailable.
   - Because *Lock Sync* is based on the length that was last calculated, the lock icon only appears after you play your first note. This means that if you load an Instrument from scratch, it won’t display the *Lock Sync* icon yet.
   - After using *Lock Sync*, click the icon again to load all recorded lengths back into RAM. The **ADAPTIVE SYNC** controls will be available again.

4. *Info Bar*

   Shows a summary of how **ADAPTIVE SYNC** is currently setup. The bar also displays information for other controls and features in the user interface.

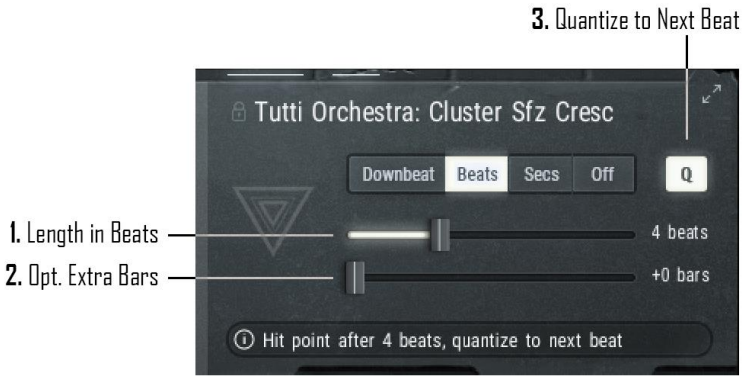
A note about Sync to Downbeat:

Because of technical limitations in the communication between Kontakt/KSP and host software, the *Sync to Downbeat* mode currently calculates the crescendo length based on the time signature active at the moment of your note. If your track has time signature changes, you may find that **ADAPTIVE SYNC** incorrectly synchronizes to the downbeat (there will be an offset of 1 beat or more). Example: If your track is initially in 4/4 and changes to 3/4 in bar 20, **ADAPTIVE SYNC** has no choice but to assume the entire track is in 3/4 if you play a crescendo note from bar 20 onward. In this case, please use the *Sync in Beats* mode instead.

As soon as it becomes technically possible, we will update the *Sync to Downbeat* mode to support time signature changes successfully.

SYNC IN BEATS

By choosing to *Sync in Beats*, you can set the exact number of beats you want your crescendo length to be. This mode is tempo-dependent (after all, the same number of beats in a lower tempo results in a longer crescendo), but otherwise provides an absolute crescendo length; the length will be the same, regardless of when you start your note.



1. *Length in Beats*

   Set the crescendo length in beats. Drag the slider all the way down for 1/2 beat length (eighth note in /4 signature).

2. *Optional Extra Bars*

   Add an additional number of bars to the length in beats. This way, you can set the crescendo length to, e.g., 2 bars + 2 beats. This setting is particularly useful for longer sounds such as string risers.

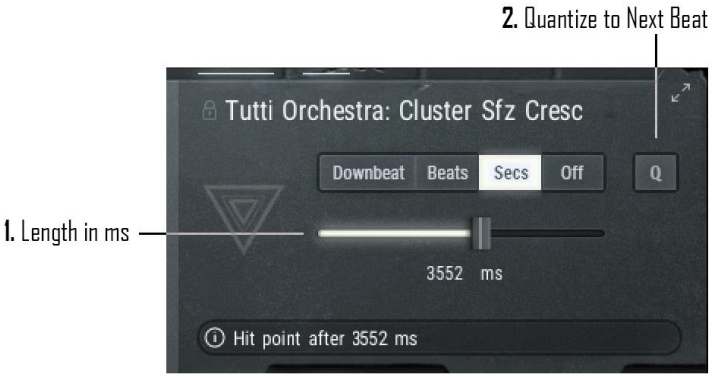
   Notes:

   For very short crescendo sounds, this setting is unavailable.

3. *Quantize to Next Beat*

   Enable this to make sure your crescendo always ends exactly on a beat. **ADAPTIVE SYNC** does this by adjusting the set *Length in Beats* slightly. This is a useful feature if you want your crescendos to end musically, but you’re not quantizing your note starts, e.g. in a live setting.

SYNC IN SECONDS



You can also set the crescendo length in milliseconds. Note that even though this mode is not tempo-dependent, the *Quantize to Next Beat* option is still available.

1. *Length in ms*
   Set the crescendo length in milliseconds. You can drag the slider or double-click the value underneath to edit the amount using the keyboard.
2. *Quantize to Next Beat*
   Enable this to make sure your crescendo always ends exactly on a beat. **ADAPTIVE SYNC** does this by adjusting the set *Length in ms* slightly. This is a useful feature if you want your crescendos to end musically, but you're not quantizing your note starts, e.g. in a live setting.

SYNC OFF

If you wish to manually synchronize S4Pandora's crescendos, rolls and risers, like the good ol' days, choose the *Off* mode. You can now manually select one of the recorded lengths that **ADAPTIVE SYNC** taps into using the other *Sync Modes*.

In this mode, there is no further manipulation of the samples. Playback is always from the start and time-stretching is disabled.

1. *Manual Length*
   Select one of the recorded crescendo lengths available.

COLOR-CODING

With normal use, the sliders displayed in the Adaptive Sync module have a whitish tint.

If you set the crescendo to more extreme lengths, this tint will change.

Orange:
The selected length is longer than the longest length recorded. Time-stretching will be used, regardless of the sync settings in **EXPANDED VIEW**.

Red:
The selected length is longer than the longest length recorded, but also requires more than 25% time-stretching. Time-stretching will be used, regardless of the sync settings in **EXPANDED VIEW**. You may also hear some time-stretching artefacts.

SYNC AUTOMATION

It is likely that your music requires different crescendo lengths for one Instrument. You might need a 1-bar crescendo for the intro, and a 2-bar crescendo into the climax of your piece. While it is possible to load multiple S4Pandora crescendo Instruments on different tracks, each with a different length selected, it makes more sense to automate **ADAPTIVE SYNC**. You can automate any of the following sync-related settings right from your host:

- Sync Mode (switch between the 4 different sync modes)
- Sync to Downbeat: Opt. Extra Bars
- Sync in Beats: Length in Beats
- Sync in Beats: Opt. Extra Bars
- Sync in Secs: Length in Secs
- Sync Off: Manual Length

If any of the above parameters are touched/changed, the related *Sync Mode* will automatically be selected. For example, if the *Sync Mode* is set to *Sync to Downbeat*, but the *Length in Beats* value is changed, the *Sync Mode* will change to *Sync in Beats*.

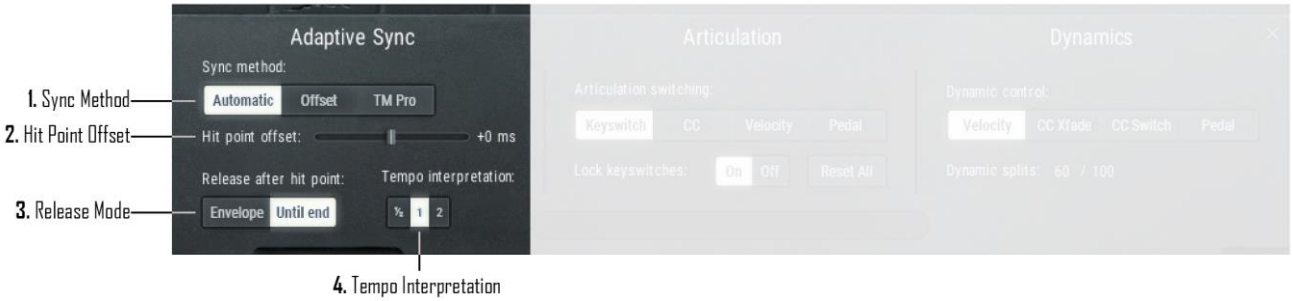
The above automation controls are also accessible on Native Instruments Komplete Kontrol.

CRESCENDO MAPPING

Most **ADAPTIVE SYNC** Instruments in S4Pandora have an extra yellow region mapped next to the blue region on the keyboard. This yellow region holds soft, looped sustain samples to match the **ADAPTIVE SYNC** samples in the blue region.

These sustain samples work well to delay the start of a crescendo (e.g. hold the sustain for 2 bars, then start the crescendo) or, vice versa, extend a swell or diminuendo (e.g. trigger the sustain at the end of the transitional sample).

ADAPTIVE SYNC: EXPANDED VIEW



By clicking the *Expand Icon* in the **ADAPTIVE SYNC** module, you will switch to the **EXPANDED VIEW**. Here, you will find additional controls and settings for the way S4Pandora synchronizes its crescendos, rolls and risers. The settings for **ADAPTIVE SYNC** are displayed in the left column, shown here.

1. *Sync Method*
   The *Sync Method* gives you control over the technique that **ADAPTIVE SYNC** uses to match the library's crescendo lengths. This is different from the *Sync Mode* in the sense that *Sync Mode* is a musical feature, whereas *Sync Method* is an audio-related/technical one.
   - *Automatic:* **ADAPTIVE SYNC** will decide which technique to apply, using a mix of sample start offset (jumping into the sample), time-stretching and, if needed, delaying.
   - *Offset:* Force **ADAPTIVE SYNC** to only use sample start offset to match lengths. This only works if a recording is available that is equal or longer in length than the selected length. Benefit: no time-stretching artefacts.
   - *TM Pro:* Force **ADAPTIVE SYNC** to only use Kontakt's Time Machine Pro time-stretching algorithm to match lengths. Benefit: no jumping into the sample, so the beginning won't be lost.
2. *Hit Point Offset*
   Nudge the **HIT POINT** timing backwards or forward in milliseconds. This allows for more anticipated or laid-back timing of the crescendo. For example: setting the *Hit Point Offset* slider to -80 ms means that the musical ending of the crescendo will be at 80 ms *before* the beat. The setting is instrument-wide.
3. *Release Mode*
   Choose here what happens when you release a note *after* the **HIT POINT**.
   Envelope: the sample fades out following the release envelope set in the **MAIN VIEW**.
   Until end: the sample plays out until the end.
   For all crescendos and risers, *Release Mode* is set to play out until the end by default. This way, the reverberation tail of the concert hall can ring out naturally, even if you release the note right after the hit point. This saves the trouble of dragging out your crescendo notes in the piano roll or matrix to not have them cut off abruptly.
   For all swell samples (crescendo <> diminuendo performances), *Release Mode* is set to fade out following the release envelope. This is because the hit point for swell samples is set to the middle of the performance: after the crescendo, but before the diminuendo.
4. *Tempo Interpretation*
   Change here how **ADAPTIVE SYNC** should interpret your host tempo. If your music has been sequenced in half-time or double-time, the *Sync in Beats* setting in the **ADAPTIVE SYNC** module may feel counter-intuitive. Use the *Tempo Interpretation* option to compensate for this.

IN-DEPTH: ARTICULATION

S4Pandora Instruments that do not have **ADAPTIVE SYNC**, but do hold multiple articulations or performance variations to choose from, display the **ARTICULATION** module on the left.

ARTICULATION: MAIN VIEW

1. *Select Articulation*
   The available articulations are displayed as slots in the **ARTICULATION** module. Click a slot to switch to that articulation.
2. *Articulation Control*
   Articulations can also be selected using keyswitches or a MIDI controller. The assigned controller is displayed here.
   Most articulation Instruments in S4Pandora have keyswitches assigned. These are locked by default.
   Notes:
   - You can change the *Articulation Controller* by going into the **EXPANDED MODE** of the **ARTICULATION** module.
   - You can unlock the keyswitches by going into the **EXPANDED MODE** of the **ARTICULATION** module.

TIP: STACKING ALL ARTICULATIONS

Tip: Shift-click any of the slots to stack all articulations together. Click a slot without holding down the Shift key to select a single articulation again.

ASSIGNING NEW KEYSWITCHES

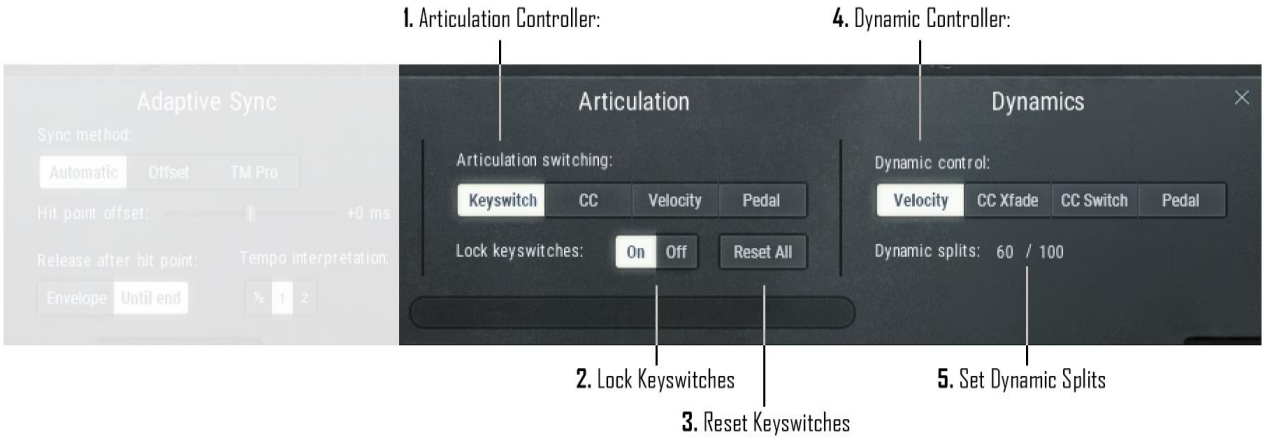
When the keyswitches are unlocked, they will have an asterisk (*) at the end of the displayed keyswitch. To assign a new keyswitch, click the currently assigned one. The slot in question will start blinking. Now press a new keyswitch on your MIDI controller. The slot will stop blinking and the new keyswitch will be displayed.

DELETING KEYSWITCHES

To delete a currently assigned keyswitch without assigning a new one, click the currently assigned keyswitch *twice*.

ARTICULATION: EXPANDED VIEW

By clicking the *Expand Icon* in the **ARTICULATION** module, you will switch to the **EXPANDED VIEW**. Here, you will find additional controls and settings for articulation and dynamic control of the sounds.



1. *Articulation Controller*
   The available articulations are listed in slots in the **ARTICULATION** module. Click a slot to switch to that articulation. Shift-click any slot to stack all articulations together.
2. *Lock Keyswitches*
   By default, the assigned keyswitches are locked. This helps you avoid to accidentally assign an unwanted keyswitch. By turning off *Lock Keyswitches* here, they will become assignable in the **MAIN VIEW**, displayed with an asterisk (*) at the end.
3. *Reset Keyswitches*
   Click here to reset all currently assigned keyswitches. They will reset to the keyswitches that were assigned when you originally loaded the Instrument.
4. *Dynamic Controller*
   This section of the **ARTICULATION** module's **EXPANDED VIEW** allows you to change the way the Instrument is controlled dynamically. You can set dynamic control to either:
   - Velocity
   - CC Cross-fade, to smoothly transition through the different dynamic layers using a CC controller
   - CC Switch: to use a CC controller to *scroll* through the different dynamic layers
   - Pedal: to use the sustain pedal (CC64) to toggle between the loudest and softest dynamic layers
5. *Set Dynamic Splits*
   When the Dynamic Controller is set to Velocity, the available dynamic velocity splits are shown here. They can be edited by dragging the values up and down, or by double-clicking them and entering a new value using the keyboard. The dynamic split points are listed from soft to loud.
   For example: In the above screenshot, the two dynamic split points are at 60 and 100. This means there are 3 dynamic layers: the softest, which will trigger between velocities 1-59, the middle dynamic layer, which will trigger between velocities 60-99, and the loudest, which will trigger between velocities 100-127.
   If the *Dynamic Controller* is set to CC Cross-fade or CC Switch, this space is used to assign a MIDI CC number.

IN-DEPTH: PULSES

The S4Pandora Instruments from the Pulses category offer rhythmic, looped patterns for strings, brass and woodwinds. The **PULSES** module look very similar to those of the **ARTICULATION** module. The main difference is that the displayed note units represent quarter, eighth and sixteenth *patterns*, not single notes.

In total, there are 4 different types of Pulses in S4Pandora:

Cluster Pulse	$4^{ths}/8^{ths}/16^{ths}$ repeating staccato
Cluster Pulse	2 / 4 / 6 beats crescendo
Cluster Pulse	2 / 4 / 6 beats staccatos crescendo

Tonal Pulse $4^{ths}/8^{ths}/16^{ths}$ Repeating staccato

CLUSTER PULSES

Cluster Pulses are pre-recorded, idiomatic note combinations that add a lot of cinematic drive to your track. Each note on the keyboard holds a different note cluster. For each repeating Cluster Pulse, a matching (staccato) crescendo Pulse is available. These work great as intros and outros.

Cluster Pulses display the standard set of controls in the **EFFECTS** module.

TONAL PULSES

Tonal Pulses are pre-recorded note repetitions in unison (violins & violas) or in octaves (cellos & basses). Musically less steering than the Cluster Pulses, they work great as a driving basis for higher tempo tracks.

Tonal Pulses display a dedicated set of synth layer controls in the **EFFECTS** module, to mix in with the orchestral samples. Be sure to try this out with the Low Strings Pulses!

PULSE MAPPING

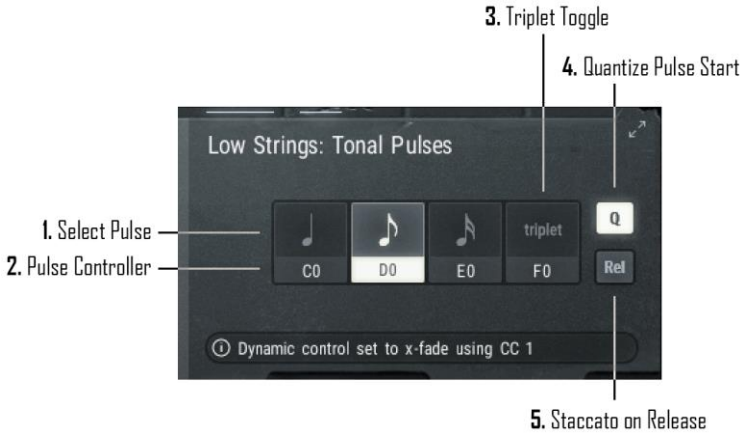
All Pulses in S4Pandora share the same mapping on the keyboard. There are two regions: a blue one and a yellow one. The blue region holds the Pulses. The yellow region holds single staccato samples. These staccato samples can be used to add accents to a Pulse, or to create a musical ending.

PULSE SWITCHING

Similar as in the **ARTICULATION** module, you can switch Pulses by clicking the slots or using any assigned controllers. With Pulse Instruments, however, you can switch Pulses mid-note, which allows you to make musical phrases. The Pulse will stay in sync when you do this.

PULSE MODULE: REPEATING

The **PULSE** module has a number of unique controls. These are the controls for the repeated Pulses.



1. *Select Pulse*
   Select between quarter, eighth and sixteenth patterns.
2. *Pulse Controller*
   Pulses can be selected using keyswitches or a MIDI controller. The assigned controller is displayed here. See the **ARTICULATION** chapter above for more information.
3. *Triplet Toggle*
   Enables/disables triplet playback of the selected Pulse. Clicking the *Triplet Toggle* button in the interface makes the toggle latch: you have to click it again to disable triplet playback. If you use the assigned keyswitch, however (F0 in the above screenshot), triplet playback is only enabled while you hold down the keyswitch in question. Releasing the keyswitch on your MIDI controller will disable triplet playback again.
4. *Quantize Pulse Start*
   When enabled, Pulses will only start from the next beat. This means there may be a short delay between the moment you press down a key and the start of a Pulse.
5. *Staccato Release*
   When enabled, a single staccato will be triggered when you release a key. This way the Pulse ends more naturally. *Quantize Pulse Start* (see above) also applies to Staccato Release.

PULSE MODULE: CRESCENDO

The **PULSE** module for the crescendo and staccatos crescendo Pulses is very similar to above. However, the Pulse slots have a slightly meaning. Instead of the note unit of a repetition, it is the pattern length that you select.

1. *Select Length*
   Select between a 2-beats, 4-beats or 6-beats crescendo length.

TIP: STACKING ALL PATTERNS

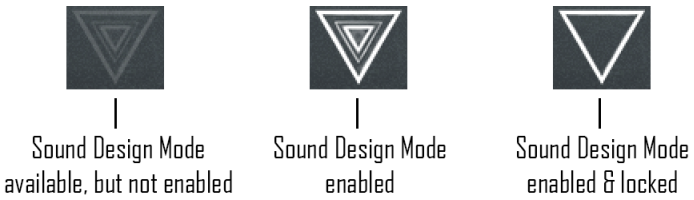
Tip: Shift-click any of the Pulse slots to stack all them together. This creates an exciting, out-of-the-box rhythm. Click a Pulse slot without holding down the Shift key to select a single Pulse again.

PULSES: EXPANDED VIEW

The **EXPANDED VIEW** of the **PULSE** module displays the *Tempo Interpretation* control as described in the **ARTICULATION** chapter. This allows you to switch the tempo interpretation to half-time or double-time.

IN-DEPTH: SOUND DESIGN MODE

Clicking the *Triangle* icon in the S4Pandora interface activates **SOUND DESIGN MODE**. This gives you the power to turn the orchestral sample pool upside down and create unique, new sounds and textures. You can time-stretch, set sample start positions, reverse playback and reverse sync to the downbeat.



SOUND DESIGN MODE will be further expanded with additional features and controls in future updates.

SOUND DESIGN MODE & THE EFFECTS MODULE

SOUND DESIGN MODE shows its full potential when used in conjunction with S4Pandora's dedicated **EFFECTS** module. Here you will find a range of carefully tuned real-time effects, such a synchronized stutter and an ominous pitch envelope. More information about this can be found in the **EFFECTS** module chapter.

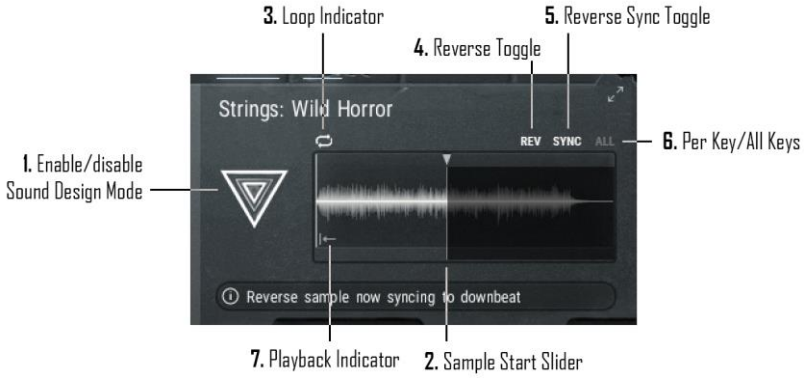
ENABLING SOUND DESIGN MODE

SOUND DESIGN MODE is available for most Instruments in S4Pandora. In the 1.0, the Instruments in the Tonal category do not yet support **SOUND DESIGN MODE**. Support for this will be added in an update. There are also a number of Instruments that are locked into **SOUND DESIGN MODE**. This means the mode is always enabled and clicking the *Triangle* icon does not take you to **ORCHESTRAL MODE**. In this case, the triangle icon is shown as an outline.

When you enable **SOUND DESIGN MODE**, the following things happens:

- The longest length/articulation is automatically selected.
- The loudest dynamic layer is automatically selected.
- Samples are loaded into RAM to allow for time-stretching and sample start offsetting.

SOUND DESIGN MODE MODULE



1. *Enable/disable SD Mode*
   Click the *Triangle* icon to switch between **ORCHESTRAL MODE** and **SOUND DESIGN MODE**.
2. *Sample Start Slider*
   Drag this slider to set the start position of this sample. You can do this within the full height of the waveform display.
   Note:
   This setting is applied *per key*.
3. *Loop Indicator*
   This icon indicates whether a sample is looped or not. It is not a button.
4. *Reverse Toggle*
   Toggle forward/reverse playback. If the *Per Key/All Keys Toggle* (see 6.) is set to *Per Key*, this setting is saved per

key. Reversed keys will then have a purple color on the keyboard. If the *Per Key/All Keys Toggle* is set to *All Keys*, the *Reverse Toggle* affects the entire Instrument.

5. *Reverse Sync Toggle*
   Enable this toggle to reverse sync *to the next downbeat*. The engine will start reverse playing the sample, in such a way that it reaches the start exactly of the on the downbeat. This works great for sounds like reversed cymbals and rolls.
   Note:
   - This option is only available if the *Reverse Toggle* is set to reverse playback.
   - This option only work if your host is either playing back or recording.
6. *Per Key/All Keys Toggle*
   Use this toggle to determine whether you want to set the *Reverse Toggle* and *Reverse Sync Toggle* per key individually, or for all keys at once.
7. *Playback Indicator*
   This icon indicates if the shown sample will play forward or in reverse. In the screenshot above, the icon also indicates that *Reverse Sync* is enabled, indicated by the reverse arrow hitting vertical line.

SOUND DESIGN MODE MODULE: EXPANDED VIEW

1. *Reverse Sync Offset*
   Use this slider to set a millisecond offset to the *Reverse Sync* feature found in the **MAIN VIEW**.
2. *Reset to Defaults*
   Reset all waveform controls to their defaults. This will set all sample start positions to 0 and set all *Reverse Toggles* to forward playback.

IN-DEPTH: MICROPHONE CHANNELS

Symphobia 4: Pandora offers 5 microphone sets for all Instruments: 4 individual stereo microphone channels as well as a cinematic sounding, 5th *Mix Mic*.

ABOUT THE MIX MIC

All Instruments load up with the *Mix Mic* enabled and the individual 4 mics disabled by default. This is to minimize loading times and limit RAM usage.

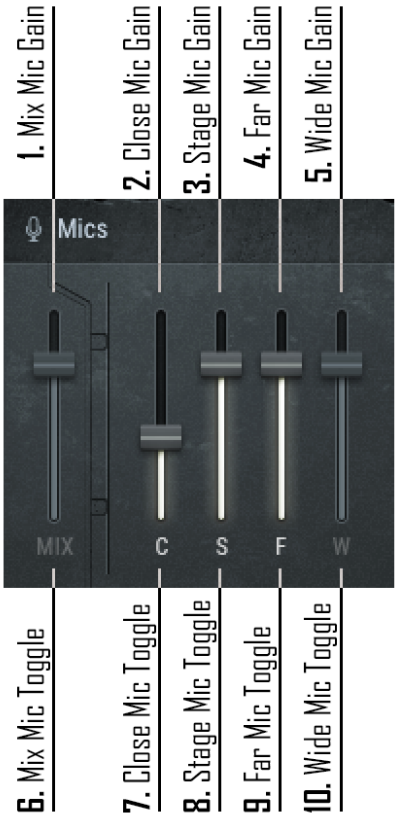
The *Mix Mic* is a lush and cinematic sounding audio mixdown of the 4 individual mics.

The *Mix Mic* cannot be enabled at the same time as the individual mics. If you enable, say, the *Close Mic*, the *Mix Mic* will automatically disable and vice versa.

MICROPHONES MODULE

Module 2 in the **MAIN VIEW** is the **MICROPHONE** module. This is a fixed module, so it is the same for all Instruments.

The **MICROPHONE** module consists of 5 vertical sliders and 5 clickable toggles underneath.



1-5. *Microphone Gains*
Change the volume/gain of a microphone set. Touching a slider of a disabled microphone automatically enables it.

6-10. *Microphone Toggles*
Enable/disable a microphone set. This also loads/purges the related into/from RAM.

A WORD ABOUT RAM

Please note that enabling multiple microphone sets can take up a considerable amount of RAM. This is particularly the case with **ADAPTIVE SYNC** Instruments and Instruments in **SOUND DESIGN MODE**. Unless RAM is no issue on your system, we recommend enabling no more than 2 microphone sets per Instrument.

MICROPHONES: EXPANDED VIEW

The Microphone module currently has no Expanded View.

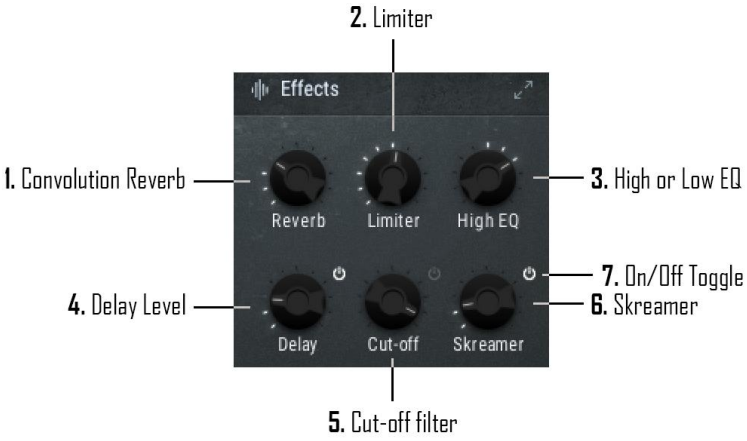
IN-DEPTH: EFFECTS MODULE

Symphobia 4: Pandora offers a range of carefully tuned real-time effects such a synchronized stutter effect and an ominous pitch envelope. This chapter covers the different alterations of the **EFFECTS** module.

The **EFFECTS** module is also used to display optional percussion or synth layers for specific Instruments.

SELECTED EFFECTS IN THE MAIN VIEW

All Instruments that do not feature specific effects or synth layers display a selection of effects in the **EFFECTS** module. This is a selection from the full range of the effects available in the **EXPANDED VIEW**.



1. *Convolution Reverb*
   Change the wet level of the convolution reverb. The reverb's IR size can be changed in the Expanded View.
2. *Limiter*
   Change the input of the limiter.
3. *High or Low EQ*
   Depending on the Instrument, change the high or low gain of the master EQ. The Expanded View always displays both controls.
4. *Delay Level*
   Change the delay level. Delay time and feedback can be changed in the Expanded View.
5. *Cut-off filter*
   Change the cut-off frequency of the *Pro Filter*.
6. *Skreamer*
   Change the intensity of the *Skreamer* effect.
7. *On/Off Toggle*
   Delay, Cut-off and Skreamer have a dedicated *On/Off Toggle*. This is to avoid accidentally hitting the "off" value while automating the effect, often resulting in a small audio tick. Changing an effect's value automatically enables it.

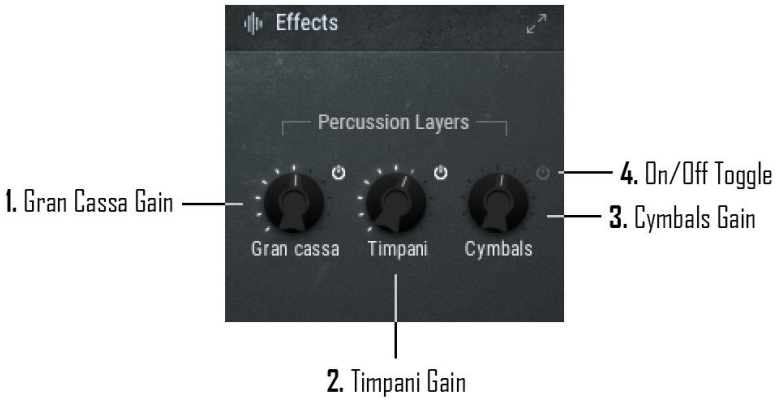
SOUND DESIGN MODE: TIME-STRETCH CONTROL

In **SOUND DESIGN MODE**, the same selection of effects is displayed as above, but with one difference: the EQ control makes place for the Time-stretch control.

1. *Time-stretch Control*
   Time-stretch the instrument between a range of 1% (100x longer) to 800% (8x shorter).
2. *On/Off Toggle*
   Enable/disable the time-stretch feature, regardless of the value of the *Time-stretch Control*. Note that changing the value of the *Time-stretch Control* automatically enables it.

TUTTI ORCHESTRA: PERCUSSION LAYERS

For most Tutti Orchestra Instruments, such as *Tonal - Tutti - Orchestra - Dynamic - Cresc [Sync].nki*, the **EFFECTS** module offers a set of optional percussion layers that can be mixed in with the main instrument on-the-fly. The gain of each percussion layer can be changed individually. Each layer also has a dedicated *On/Off Toggle*. Disabling a layer purges it from RAM, which is especially useful for the larger **ADAPTIVE SYNC** Instruments.



The following screenshot is an example. The types and number of percussion layers differ slightly per Instrument.

The percussion layer gains are relative to the microphone gains of the main instrument, to maintain a natural balance.

1. *Gran Cassa Gain*
   Change the gain of the Gran Cassa layer.
2. *Timpani Gain*
   Change the gain of the Timpani layer.
3. *Cymbals Gain*
   Change the gain of the Cymbals layer.
4. *On/Off Toggle*
   Enable/disable the percussion layer in question, regarding of the gain value. Disabling a layer also purges it from RAM.

PERCUSSION HITS: SUB SWEETENERS

A number of Percussion Instruments in S4Pandora offer sub sweetener controls in the Effects module. These are deep, low-end synth samples that you can mix in softly with the acoustic percussion hits. This works especially well with the gran cassa hits.

There are number of samples to choose from.

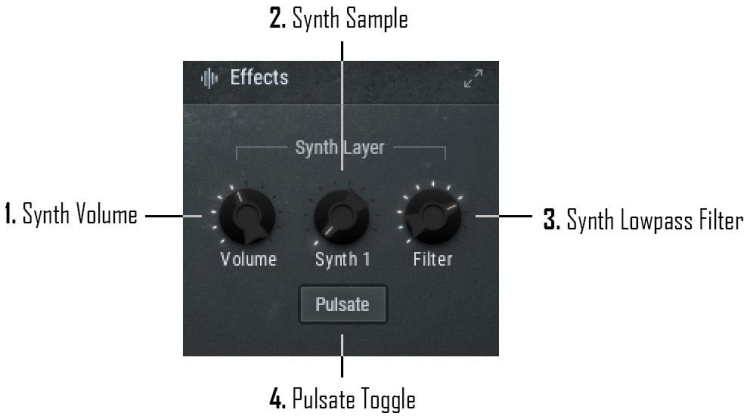
Since the samples of the sub sweetener are very small, there is no option to purge them.

1. *Sub Volume*
   Change the gain of the sub sweetener.
2. *Sub Sample*
   Select the synth sound used for the sub sweetener.
3. *Sub Pitch*
   Change the pitch of the sub sweetener.

TONAL PULSES: SYNTH LAYERS

The Low Strings and Mid Strings Pulses in S4Pandora offer optional synth layer controls in the **EFFECTS** module. These electronic pulses automatically synchronize with the orchestral 4ths/8ths/16ths pulse selected in the **PULSE** module.

1. *Synth Volume*
   Change the gain of the synth pulse.
2. *Synth Sample*
   Select the synth sound used for the pulse.
3. *Synth Lowpass Filter*
   Change the cut-off frequency of the synth pulse.
4. *Pulsate Toggle*
   Enable the *Pulsate Toggle* to have the synth layer perform an energetic, accented 16ths pattern, regardless of the orchestral pulse selected.



EFFECTS: EXPANDED VIEW

The **EXPANDED VIEW** of the **EFFECTS** module displays all of the available real-time effects that S4Pandora offers. We will now go over each of the effect sections.

1. *On/Off Toggle*
   A number of the effects have a dedicated *On/Off Toggle*. This is to avoid accidentally hitting the "off" value while automating the effect, often resulting in a small audio tick. Changing any of an effect's controls automatically enables the effect in question.
2. *Stutter*
   The *Stutter* effect applies an LFO to the volume of the Instrument (fading the volume in and out rhythmically). In film music, the most idiomatic use of the stutter effect is the *stutter string riser*. A number of the Snapshots in S4Pandora offer this well-known effect out-of-the-box.
   Intensity: Change the intensity of the *Stutter* effect. This is the amount that the LFO fades the volume in and out.
   Speed: Change the speed of the *Stutter* effect in note units, e.g. 4ths, 8ths or 8th triplets.
   Accel: Change the amount of acceleration of the *Stutter* effect. 0% means no acceleration, 100% means *a lot* of acceleration. The *Stutter* effect always starts out exactly at the speed set above.
   Shape Buttons: Change the shape of the *Stutter* effect. This is the *way* the effect fades in and out the volume of the sample. Please note that with larger Instruments, changing the shape may result in a small delay.
3. *Pitch Envelope*
   The *Pitch Envelope* effect makes the pitch of the Instrument go up or down over time. This effect can translate an otherwise classical sound into an ambient, ominous soundscape, particularly when combined with the reverb effect and pitch toggles (see **CONTROLS** module).
   Range: Set how far the pitch should go up or down in semitones.
   Hold: Set how much time should pass before the pitch goes up or down.

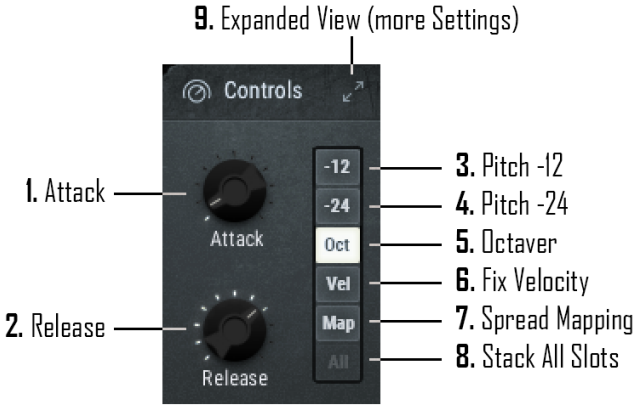
Speed: Set how fast the pitch should go up or down after the *Hold* time, in milliseconds.
Down/Up Button: Set whether the pitch should go up or down after the *Hold* time.

4. *Delay*
   Mix: Set the wet level of the delay effect.
   Unit: Set the speed of the delay in note unit, e.g. 4ths, 8ths, 8th triplets.
   Feedback: Set the feedback level of the delay effect.
5. *Pro Filter*
   Cut-off: Set the cut-off frequency of the *Pro Filter* in Hz.
   Vel Button: Enable to use velocity as a modulator for the filter effect (the filter will open and close with the velocity input).
   Env Button: Enable to activate the envelope follower and have the amplitude of the sample modulate the filter effect (the filter will open and close with the amplitude of the sample).
   If both *Vel* and *Env* are disabled, the amount of filtering is fixed to the *Cut-off* value.
6. *Skreamer and Stereo*
   Skreamer: Change the intensity of the *Skreamer* effect, which is a more subtle form of distortion.
   Stereo: Set the stereo image of the Instrument. Turn the control all the way down for mono.
7. *Master EQ*
   High EQ: Adjust the high gain of the master EQ.
   Low EQ: Adjust the low gain of the master EQ.
8. *Convolution Reverb*
   Reverb Level: Change the wet level of the convolution reverb effect.
   IR Size: Change the size of the impulse response used for the *Convolution Reverb*. This determines the length of the reverberation tail. The default size is 50%. Please note that there is a small delay when changing the *IR Size*.
9. *Limiter*
   Limiter Input: Change the input level for the *Limiter*. A higher value means more limiting.
10. *Reset All*
    Reset all effects to their default values and disable them, if applicable.
11. *Feeling Lucky?*
    Hit the *Lucky* button to reset all effects to random values. The allowed values have been limited to a more musical range for each individual control. This way, the *Lucky* feature is actually a lot of fun to use! Be sure to give it a try.

IN-DEPTH: CONTROLS MODULE

The rightmost **CONTROLS** module displays the most relevant envelope controls (normally: Attack and Release) and a number of very useful quick Toggles to quickly pitch an Instrument or add an octaver. This module is also a fixed module, meaning it is the same for all Instruments.

CONTROLS: MAIN VIEW



1. *Attack*
   Change the attack time of the envelope (fade in).
2. *Release*
   Change the release time of the envelope (fade out). If the Instrument has *Release Trails* available and these are enabled in the **EXPANDED VIEW**, *Release* will make place for *Trail*, controlling the length of the release trail samples instead.
3. *Pitch -12 Toggle*
   This toggle pitches down the audio of the Instrument by an octave (-12 semitones). Simple as this may sound, this option works great for sound design purposes, particularly in conjunction with the **EFFECTS** module..
4. *Pitch -24 Toggle*
   This toggle pitches down the audio of the Instrument by 2 octaves (-24 semitones). Simple as this may sound, this option works great for sound design purposes, particularly in conjunction with the **EFFECTS** module.
5. *Octaver Toggle*
   This toggle enables/disables the octaver, adding an additional octave on top of all incoming notes. Note that this happens in the MIDI domain.
   Note:
   The *Octaver Toggle* is only available for Instruments that have at least 13 keys mapped in a row.
6. *Fix Velocity*
   Fix the velocity response to a specific velocity value. Click *Fix Velocity* and the button will start flashing to indicate that the engine is waiting for note input. The velocity of the first note you now play will be the velocity that all subsequent notes will be fixed at. This velocity value will be displayed in the *Info Bar*.
7. *Spread Mapping*
   Use this feature to quickly map a single key across the Instrument's range. Click Spread Mapping and the button will start flashing to indicate that the engine is waiting for note input. Now press the key that has the sound you wish to spread across the entire range of the Instrument. This sound is now mapped to all keys, ignoring the Instrument's original mapping. This is an especially useful feature for layering percussion Instruments, as these Instruments often have different playing techniques mapped to different keys.
8. *Stack All Slots*
   This option is the same as Shift-clicking a slot in the **ARTICULATION** or **PULSES** modules: it quickly stacks all of the available articulations/pulses together for a big and bold sound.
9. *Expanded View*
   Click here to open the **EXPANDED VIEW** of the **CONTROLS** module, offering additional controls and settings for this Instrument.

CONTROLS: EXPANDED VIEW

1. *Pitch Bend Range*
   Set the range of the pitch bend controller in semitones.
2. *Round Robin Mode*
   Set the round robin behavior: the way that multiple samples recorded for the same note are alternated.
   On: alternate the round robin samples in a round robin cycle.
   Stack: stack all round robin samples together. There will be no alternation.
   Off: turn off round robin and only use the first sample available.
3. *Release Trails Mode*
   Enable or disable release trails, if available.
   On: trigger release trail samples after a note for a natural reverberation tail of the concert hall.
   Off: do not trigger release trails.
4. *"From" Velocity*
   Set a "from" threshold to filter velocity input. For example: set this to 65 to only have the Instrument respond to velocity values of 65 and higher. The Instrument will not play for velocity values lower than 65.
5. *"To" Velocity*
   Set a "to" threshold to filter velocity input. For example: set this to 100 to only have the Instrument respond to velocity values of 100 and lower. The Instrument will not play for velocity values higher than 100.
6. *Velocity Offset*
   Offset all incoming velocity values by a positive or negative amount.
7. *Trim Range Left*
   Trim the lower side of the Instrument's range by x semitones.
8. *Trim Range Right*
   Trim the upper side of the Instrument's range by x semitones.
9. *Shift Range*
   Move the entire Instrument's range across the keyboard by x semitones.
10. *Reset All*
    Reset all Velocity *and* Range Trimming controls to their default values.
11. *Library Version Number*
    The **EXPANDED VIEW** of the **CONTROLS** module always shows S4Pandora's library version number in the top-right corner. This can be useful when you want to check for updates.

IN-DEPTH: COMBOS

Combos are layered combinations of the individual Instruments from the other six folders. They are inspiring starting points for a new track, but are also great to get an initial feel of the scope of S4Pandora.

Technically speaking, Combos are single Kontakt Instruments, not Multis. This way, the Instruments inside a Combo are able to directly communicate and share settings, allowing for musical wizardry such as the on-the-fly synchronization of a col legno hit to the climax of a brass crescendo. Or a big tutti diminuendo at the end of a riser.

The modules and controls for Combos are the same as for individual Instruments. However, Combos do offer two unique features that we will cover below.

COMBO: LINK SYNC

Combos that feature multiple **ADAPTIVE SYNC** Instruments offer the possibility to link sync settings. This way, adjusting, say, the *Sync Mode* or *Length in Beats* in the top Instrument has the other Instruments in the Combos match this automatically.

The top Instrument is always the master Instrument to which the other Instruments in the Combo can link.

To unlink, simply click the *Linked* icon once more. It is also possible to link or unlink all Instruments simultaneously by clicking the *Master* icon in the top Instrument.

COMBO: SYNC TO HIT POINT

Combos that feature an **ADAPTIVE SYNC** Instrument, as well as Instruments with a clear hit or other kind of attack, offer the possibility to have the “hit” Instruments automatically sync to the hit point of the **ADAPTIVE SYNC** Instrument.

In the example to the right, the start of the Low Brass and Cinematic Drums notes will be delayed until the hit point of the Timpani & Gran Cassa roll.

To disable this feature and have the “hit” Instruments trigger at the start of your note, simply click the *Sync* icon once more. It is also possible to sync or un-sync all Instruments simultaneously by clicking the *Master* icon in the top Instrument.

SUPPORT

If you have any questions left regarding Symphobia 4: Pandora's sounds, features or user interface, don't hesitate to contact. You can do so through our website:

https://projectsam.com/support/

Thank you for taking the time to read this manual. We hope it will help you get the most out of S4Pandora's vast potential and will save you precious time that you can spend on your music instead.

Happy composing!

The SAM Team

Maarten, Vincent, Marco, Colin, Wytse and Joep

CREDITS

ProjectSAM would like to thank the following people for their invaluable contribution to the realization of Symphobia 4: Pandora:

Jeroen Peter, Ash Foster, Joris Holtackers, Tibor den Held, Rolf van Kreeveld, Bernhard Joosten and George Dobrakov