

# ROUNDS

Manual



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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.

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# 1 Welcome to ROUNDS

## 1.1 Basic Information

Thank you very much for downloading this REAKTOR ensemble from Native Instruments. This new and exciting synthesizer can be used either with the free REAKTOR PLAYER, or the full version of REAKTOR 5.9.2 (or above). On behalf of the entire NATIVE INSTRUMENTS team, we hope this product will inspire you.



To get the best from this instrument please read the manual in its entirety.

## 1.2 Manual Conventions

This manual uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information is to be expected:

Whenever this exclamation mark icon appears, you should read the corresponding note carefully and follow the instructions and hints given there if applicable.



This light bulb icon indicates that a note contains useful extra information. This information may often help you to solve a task more efficiently, but does not necessarily apply to the setup or operating system you are using; however, it's always worth a look.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) and paths to locations on your hard drive or other storage devices is printed in *italics*.
- Text appearing elsewhere (labels of buttons, controls, text next to checkboxes, etc.) is printed in **light blue**. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.
- Important names and concepts are printed in **bold**.

- ▶ Single instructions are introduced by this play button type arrow.
- Results of actions are introduced by this smaller arrow.

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## 2 What is ROUNDS?

A REAKTOR-based synthesizer that combines digital and analog synthesizer sounds with complex, sequenced sound shifting capabilities. A near-limitless array of new sound and texture.

ROUNDS is a groundbreaking instrument, blurring the lines between cutting-edge sound design and advanced sequencing techniques. Play melodies, chords, and arpeggios while sequencing and morphing your sound palette in real time. An inspiring performance machine of undeniable power and the evolution of software synthesis.

ROUNDS comes with one analog and one digital synthesizer engine. Both give you every essential parameter in a stripped-down, no-fuss layout. Design up to eight sounds per engine—each with its own independent parameter settings—then sequence them with the Voice Programmer. The analog engine is inspired by a classic, two-oscillator synthesizer. The sound is warm and harmonically rich—the revered analog sound courtesy of NI's synthesizer expertise. The digital side of ROUNDS is an FM engine with three oscillators and a 2-pole filter. Get a range of sounds from sparkling and clean to metallic and dissonant.

The Voice Programmer gives ROUNDS its magic. It contains eight blocks with four cells each. Each cell hosts one sound. Set these 32 sound slots in motion to create your own rhythmic sound sequence. Five different voicing modes determine the sound distribution on different cells. An additional modifier lets you adjust each voicing mode even further.

Perform stunning, on-the-fly sequence shifts in real time. The Remote Octave feature maps on/off assignments for blocks to the white keys on your keyboard. Cells get mapped to black keys and you can turn them on and off in any combination and in real time. Assign up to eight macros and tweak parameters from your hardware. You can also use the Multi-Edit view to easily edit one parameter across all sounds at once.

ROUNDS has high-quality delay and reverb effects on board. Choose from classic or grain delays, and use the dedicated LFO to create flanging and chorus effects. The reverb is a new algorithm exclusive to ROUNDS. The effects are integrated in the synthesizer, so you can sequence each effect per sound for bursts of rhythmic echo and space.

## 3 Installation and Activation

### 3.1 Installing ROUNDS

The following section explains how to install and activate ROUNDS. Although this process is straightforward, please take a minute to read these instructions, as doing so might prevent some common problems.

- To install ROUNDS, double-click the installer application and follow the instructions on the screen. The installer application automatically places the new ensemble file into a REAKTOR PLAYER directory. Alternatively, during the installation process, choose the directory where you would like to have ROUNDS installed.

The full version of REAKTOR (5.9.2 or later) or the free REAKTOR PLAYER is required to play REAKTOR Instruments and Effects. You can download the free REAKTOR PLAYER from the Native Instruments website.

### 3.2 Activating ROUNDS

When installation is finished, start the Service Center application, which was installed with ROUNDS. It will connect your computer to the Internet and activate your ROUNDS installation. In order to activate your copy of ROUNDS, you have to perform the following steps within the Service Center:

**Log in:** Enter your Native Instruments user account name and password on the initial page. This is the same account information you used in the Native Instruments Online Shop, where you bought your REAKTOR Instrument, and for other Native Instruments product activations.

**Select products:** The Service Center detects all products that have not yet been activated and lists them. You can activate multiple products at once—for example, several REAKTOR Instruments.

**Activate:** After proceeding to the next page, the Service Center connects to the Native Instruments server and activates your products.

**Download updates:** When the server has confirmed the activation, the Service Center automatically displays the Update Manager with a list of all available updates for your installed products. Please make sure that you always use the latest version of your Native Instruments products to ensure they function correctly.



Downloading updates is optional. After activation is complete, you can always quit the Service Center.

## 4 Using ROUNDS in REAKTOR

The following sections will give you a brief overview over some basic operations: you will learn how to open ROUNDS, how to explore the factory-set Snapshots and how to load and play ROUNDS Snapshots from the Header and the Sidepane.

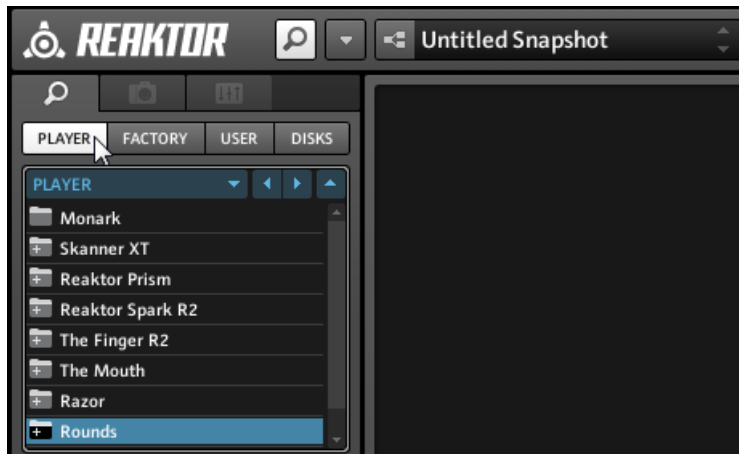


For the latest information on REAKTOR PLAYER files and using Snapshots please refer to the REAKTOR Getting Started Guide.

### 4.1 How to Open ROUNDS

This is how to open ROUNDS in REAKTOR or REAKTOR PLAYER:

1. Start REAKTOR or REAKTOR PLAYER respectively.
2. In the Browser on the left side of the REAKTOR / REAKTOR PLAYER window, click the **PLAYER** button to show the REAKTOR PLAYER files (you can open the browser with the (F5) key from your keyboard).

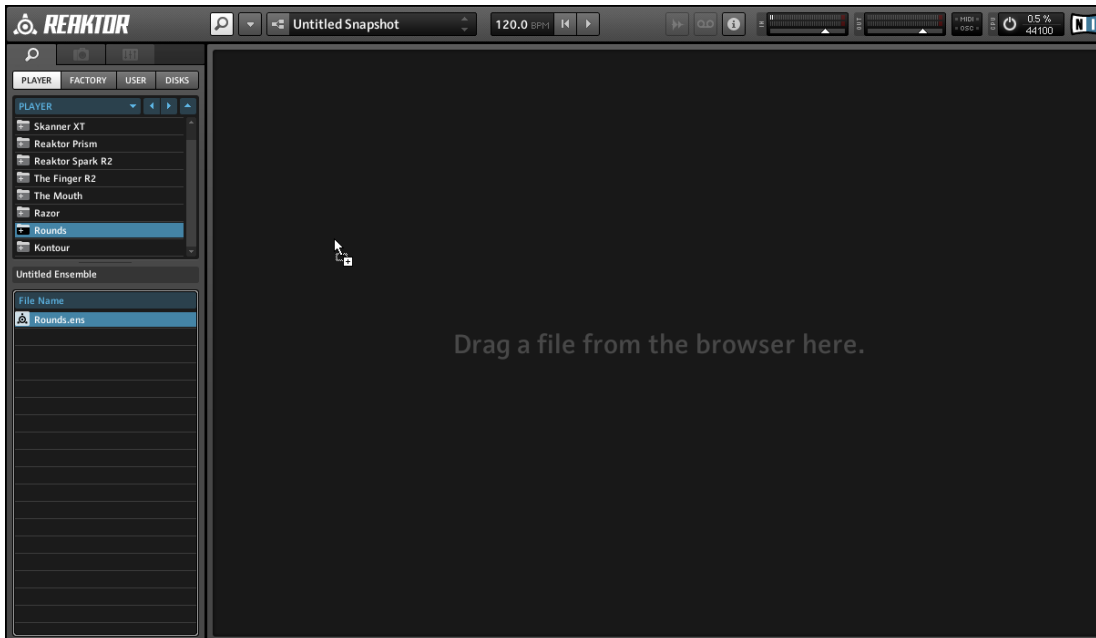




- Click the **ROUNDS** folder. The content of the folder will be displayed in the lower section of the browser.



- Double-click the **ROUNDS.ens** file, or drag it into the main screen.



5. ROUNDS will be loaded in REAKTOR / REAKTOR PLAYER:



## 4.2 Exploring Factory-set Snapshots

Play some notes on your MIDI keyboard to get an idea of how the ensemble sounds.



Please refer to the REAKTOR manual for details on configuring your Audio and MIDI settings.

Now, let's change the sound completely by loading a different Snapshot.



A Snapshot is REAKTOR's notion for a sound, preset, or patch. ROUNDS can hold banks of Snapshots, and loading any of these Snapshots will set each control of the Instrument to a specific value, and re-create a particular sound.

The Snapshots of ROUNDS are accessible from the drop-down menu in REAKTOR PLAYER's Header (Main Bar) or from the Sidepane.



ROUNDS interface with Snapshot list in the Sidepane.

- (1) Sidepane button
- (2) Snapshot drop-down menu
- (3) Snapshot tab
- (4) Snapshot Banks
- (5) Snapshots

#### 4.2.1 Loading a Snapshot from the Sidepane

If it is not already visible after startup, you need to open the Sidepane. The Sidepane holds a full overview of the Snapshot Banks and Snapshots from ROUNDS.

1. Click the Sidepane button (1) in the Header to open the Sidepane.

2. Click the Snapshot tab to display Snapshots **(3)**.
  3. Select a Snapshot Bank **(4)**.
  4. Select the name of a Snapshot entry **(5)** and double-click it with your mouse to load it.
- The Snapshot is loaded and ready to play.

### 4.2.2 Loading a Snapshot from the Header

Loading a Snapshot from the REAKTOR PLAYER drop-down menu in the Header is the simplest way to interact with Snapshots.

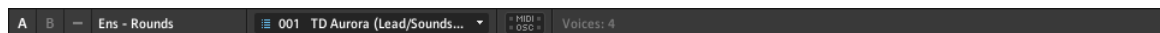
1. Click the Snapshot drop-down menu **(2)**. The menu holds all Snapshots and Banks of the Instrument.
  2. Click an entry to select it.
- The Snapshot is loaded and ready to play.

## 4.3 Saving a Snapshot

Snapshots can be saved using REAKTOR and REAKTOR PLAYER. However, all parameter settings made in ROUNDS will conveniently be saved as part of your DAW project. Please read the REAKTOR documentation for more information on plug-in mode and saving Snapshots.

## 4.4 Selecting ROUNDS A and B Panel Views

REAKTOR allows for each ensemble to have two separate Panel layouts, A and B. You can switch between the A and B Panel Views by clicking on the View A and View B buttons in the Instrument Header or by right-clicking on the Instrument Panel and clicking on the *View A* or *View B* menu entry. The View A and View B buttons in the Instrument Header are labeled (on the far left-hand side) with an **A** and **B**, respectively.



The Instrument Panel View Buttons.

## View A



ROUNDS View A—full layout with the Voice Programmer and access to all subpages and parameters.

**View B**

ROUNDS View B—compact layout with the Voice Programmer and eight macro knobs.

## 5 Overview of ROUNDS

ROUNDS is a four-voice polyphonic instrument comprising sixteen sounds that can be sequenced or layered in various ways. There are two separate sound engines: one based on a subtractive analog engine, inspired by a classic, two-oscillator synthesizer, and an FM engine with three oscillators and a 2-pole filter. These synthesis models provide up to sixteen sounds, and the essence of ROUNDS is to place these sounds into the Voice Programmer to create new complex layers, unusual tones, textures and rhythms.

ROUNDS has two separate panel layouts: A and B. View A provides full access to all controls and subpages. View B is the compact view of the instrument streamlined to be used to play with already set up snapshots.

In both panel views the main area of ROUNDS displays the Voice Programmer. The Voice Programmer is the “heart” of the instrument and can be used to place sounds in context to create sequences or massive layers of sound.

In combination with its morphing capabilities and integrated FX section there is no doubt that Rounds is an inspiring instrument with a vast palette of sound.



## 5.1 View A

View A is the full view of ROUNDS and provides access to all pages and parameters. In View A it is possible to assign macros to be used in View B.



View A—Overview showing the ANALOG voice panel.

(1) **Volume:** Use the volume knob to adjust the output volume.



(2) **Voice Programmer:** This is the center element of the ensemble and determines how sounds and voices are allocated to incoming note events. For more information about the Voice Programmer see section [↑5.3, Voice Programmer](#).

(3) **Synth Engine Editing Panel:** The synthesizer panels hold all sound parameters of the [ANALOG](#) and [DIGITAL](#) synthesis engines. For detailed parameter descriptions of the [ANALOG](#) synthesizer please read [↑5.4, Analog Synthesizer—Edit Panel](#). For detailed parameter descriptions of the [DIGITAL](#) synthesizer please read [↑5.5, Digital Synthesizer—Edit Panel](#).

## 5.2 View B

View B is a streamlined compact version of ROUNDS that provides easy access to the macro controls. This view is great for performing and playing with the included Snapshots.



View A—Overview of Compact User Interface.

(1) **Volume:** Use the volume knob to adjust the output volume in View A or View B. The Master level is at the end of the signal flow and controls the overall volume of ROUNDS.

(2) **Voice Programmer:** Use the Voice Programmer in View A or View B to determine how sounds and voices are allocated to incoming note events. It contains Sound Blocks and Sound Cells, voice modes and Progress modes. For more information about the Voice Programmer see the description in View B section [↑5.3, Voice Programmer](#).

(3) **Macro knobs:** Use the eight Macro knobs in View B to access to selected parameters. The macro assignments are made per Snapshot, which enables quick recall and control over favored parameters. They can also be automated and controlled using your DAW (Digital Audio Workstation).

It is possible to assign parameters to macro knobs using View A. For more information on assigning macros please read [↑5.7.1, Macros Page](#).

## 5.3 Voice Programmer

The main area of ROUNDS displays the Voice Programmer. The Voice Programmer is used to place sounds on to the Sound Cells of the eight Sound Blocks. In contrast to a traditional synthesizer ROUNDS is capable of playing various sounds as a response to simple keyboard playing. This can be used in a subtle way to mimic the behavior of classic analog synths or to create complex sequences that were previously only possible to create using a number of plug-ins in combination with extensive parameter automation.

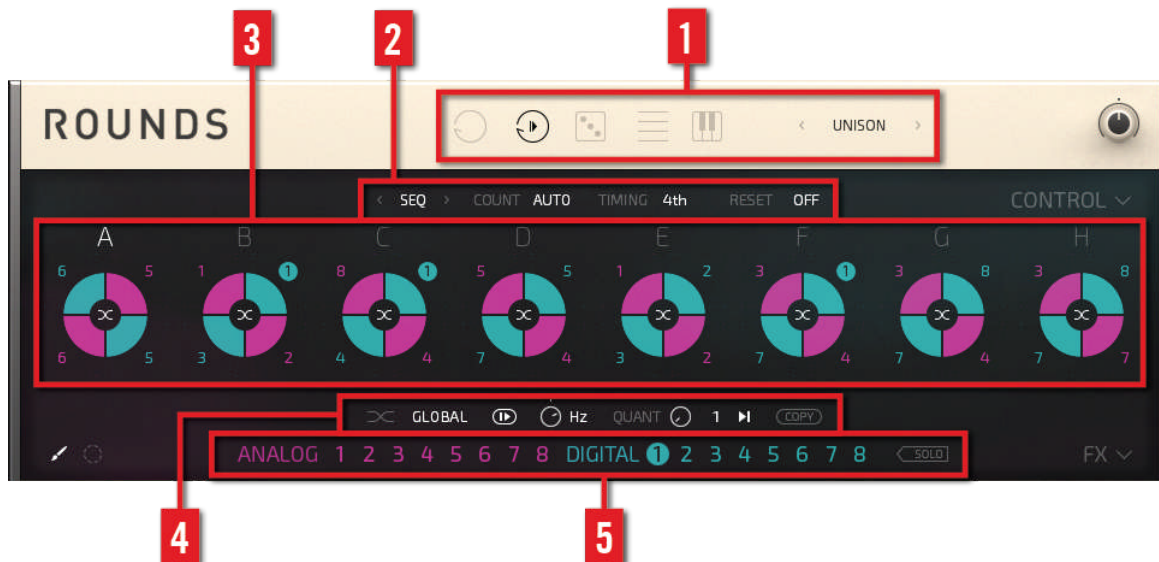
The Voice Programmer features eight Sound Blocks named [A–H](#). Each Sound Block consists of four Sound Cells that are each associated to one sound from one of the synthesis engines ([ANALOG 1–8](#), and [DIGITAL 1–8](#)).

A Sound Block can contain any combination of four [ANALOG](#) or [DIGITAL](#) voices which are assigned to Sound Cells using the Sound Bar. Sound Cells are colored to match the color of the synthesis engine (magenta for [ANALOG](#) and cyan for [DIGITAL](#)) and each Sound Cell may be switched off to be excluded from receiving note events. The morph parameters can be adjusted globally or individually for each Sound Block. This provides a unique morph effect for each single Sound Block.

The morph action is controlled by a low frequency oscillator (LFO) that is set up to morph the Sound Cells of a block sequentially in a clockwise or counterclockwise fashion. The outer rings around the played Sound Blocks visualize the active number of voices, morph direction and tempo of the morphing rotation.

In addition, the programmed state of Sound Blocks can be overruled by the Remote Octave. The Remote Octave is a special key zone that allows for real time manipulation of Sound Blocks and Sound Cells in the Voice Programmer. This can be useful when playing live to change the running order of Sound Cells on the fly.

### Voice Programmer Parameters



View A and B—Voice Programmer.

(1) **Voice modes:** These determine how notes are allocated to Sound Cells within a Sound Block. Only one Sound Block can receive notes at a time but held notes or chords may result in Sound Cells being triggered on more than one Sound Block depending which Voice mode has been selected. For more information on voice mode refer to [↑5.3.1, Voice Modes](#).

(2) **Progress modes:** Use Progress modes to define how sound progresses from one Sound Block to another. There are three Progress modes, defining how sound progresses from one Sound Block to another. These modes are either dependant on: the number of notes played, defined by a timeframe, or set by the retriggering and counting of note events. For more information on Progress mode please refer to [↑5.3.2, Progress Modes](#).

(3) **Sound Blocks and Sound Cells:** This area features eight Sound Blocks named A-H. Each Sound Block consists of four Sound Cells. Each Sound Cell is associated to a sound from one of the synthesis engines ([ANALOG 1–8](#) and [DIGITAL 1–8](#)). Use Sound Blocks and Sound Cells to create layered sounds or sequences. For more information on this please refer to [↑5.3.1, Voice Modes](#).

(4) **Morph controls:** ROUNDS has the ability to morph between Sound Cells of the same synthesizer engine type while a sequence is played or when MIDI note information is received. Use the Morph controls to configure how Sound Cells and Sound Blocks morph into each other. For more information on this please refer to [↑5.3.4, Morph Controls](#).

(5) **Sound Bar:** Use the Sound Bar to select a sound for edit, or change the sound edit mode. For more information on this please refer to [↑5.3.5, Sound Bar](#).

### 5.3.1 Voice Modes

ROUNDS has five voice modes which determine how notes (MIDI pitch information) are allocated to Sound Cells and Sound Blocks. There is only one Sound Block actively receiving notes at a time, however, sustained notes or chords may result in Sound Cells being triggered on more than one Sound Block depending which Voice mode has been selected. The Voice modes are represented in the header of ROUNDS by five icons and a Poly option ([MONOCHORD](#), [MULTICHORD](#), [UNISON](#)) that defines how ROUNDS deals with incoming chords.



View A and B—Voice mode section with rotate reset mode selected.

## Voice Mode parameters

(1) **Rotate** Incoming note events are assigned in a clockwise rotation to Sound Cells that are enabled. The position of the rotation is carried over when the sequence progresses to the next Sound Block. In Rotate mode the Poly modes act in the following way:

- **MONOCHORD**: When a chord is played all notes will use the same sound cell.
- **MULTICHORD**: Notes of a chord are spread over multiple Sound Cells resulting in chords with up to four sounds. If less than the required amount of Sound Cells are available to play the chord in the current Sound Block notes will spill over to the next active Sound Block. For example, if a triad chord (a chord made of three notes) is played and only two Sound Cells are active in a Sound Block, the sound will progress to the next Sound Block to play the remaining note.
- **UNISON**: When a note is played all four voices sound simultaneously (in unison) within one Sound Cell. The voices are slightly detuned and panned in correspondence to each other, which makes the sound fatter. As a result of using all four voices at once polyphony is reduced to monophonic.

(2) **Rotate Reset** Incoming note events are assigned in a clockwise rotation to the enabled cells (like Rotate), however, in Rotate Reset mode the position is reset to always start from the first (active) cell when progressing to next Sound Block. In Rotate Reset mode the three Poly modes act in the following ways:

- **MONOCHORD**: When a chord is played all notes will use the same sound cell.
- **MULTICHORD**: Notes of chords are spread over multiple Sound Cells allowing chords with multiple sounds confined to the active Sound Block.
- **UNISON**: When a note is played all four voices sound simultaneously (in unison) within one Sound Cell. The voices are slightly detuned and panned in correspondence to each other, which makes the sound fatter. As a result of using all four voices polyphony is reduced to one note making the sound monophonic.

(3) **Random** Incoming notes are randomly assigned to enabled Sound Cells. In Random mode the three Poly modes act in the following ways:

- **MONOCHORD**: When a chord is played all notes will use the same sound cell.

- **MULTICHORD:** Notes of a chord are spread over multiple Sound Cells resulting in chords with up to four sounds. If less than the required amount of Sound Cells are available to play the chord in the current Sound Block notes will spill over to the next active Sound Block.
- **UNISON:** When a note is played all four voices sound simultaneously (in unison) within one Sound Cell. The voices are slightly detuned and panned in correspondence to each other, which makes the sound fatter. As a result of using all four voices polyphony is reduced to one note making the sound monophonic.

(4) **Layer** Incoming note events play all enabled Sound Cells of a Sound Block simultaneously. In Layer mode the three Poly modes act in the following ways:

- **MONOCHORD:** All enabled Block Cells will be played with monophonic pitch.
- **MULTICHORD:** if there are more notes in a chord played than there are enabled Sound Cells in a Sound Block, the notes spill over to the next enabled Sound Block.
- **UNISON:** All enabled Block Cells will be played using all 4 voices with slight detune and extreme panning.

(5) **Zone** The Sound Cells of each Sound Block are confined to individual key zones and can be played as individual monophonic instruments. The range of zone 2 and 3 is one octave. The range of 1 and 4 use the upper and lower limit of the keyboard. Disabled Sound Cells will use the assigned sounds of the neighboring Sound Cells. In Zone mode the three Poly modes act in the following ways:

- **MONOCHORD:** The key zones behave in a monophonic fashion.
- **MULTICHORD:** Chords can be played in a inside a key zone.
- **UNISON:** When a note is played all four voices sound simultaneously (in unison) within one Sound Cell. The voices are slightly detuned and panned in correspondence to each other, which makes the sound fatter. As a result of using all four voices polyphony is reduced to one note making the sound monophonic.



In Zone mode Remote Octave settings need to be taken into consideration. For more information on Remote Octave please see [↑5.7.2.3, Remote Octave](#).

### 5.3.2 Progress Modes

The Progress parameters define how Sound Block activity is switched to the next block. There are three Progress modes: **NOTE**, **CLOCK**, and **SEQ** and each mode has the following attributes:

- **NOTE** mode: The block progress is controlled by the count of notes being played.
- **TIME** mode: Block progress is clocked by the user defined Timing.
- **SEQ** mode: Sequence uses note repeat to create a step sequencer like experience. The block progress is controlled by the number of notes being played and repeated.

The parameters for each Progress mode are defined as follows:

#### 5.3.2.1 Note Mode Parameters

**NOTE** mode: sounds progress through active Sound Cells and Sound Blocks relative to the number of notes played and the **COUNT** setting.



View A and B—Progress with NOTE mode selected.

(1) **Progress mode selector:** Selects the progress mode: Note, Time or Seq:

- Click a pointer at the side of the current Progress mode to select **NOTE** Progress mode.
- The **NOTE** Progress mode will recall the **COUNT**, and **RESET** menus.

(2) **COUNT:** Sets the number of notes to be played before progressing to the next block.

- To select a **COUNT** value drag the mouse up or down while pressing the left mouse button.

The values for **COUNT** are as follows:

- **OFF**: Automatic progress is disabled. Manual progress can be controlled using the Remote Octave. For more information on how to use Remote Octave please refer to [↑5.7.2.3, Remote Octave](#).
- **1–8**: Set the number of notes to be played before progressing to the next block, unless interrupted by **RESET (3)**.
- **AUTO**: The number of individual enabled Sound Cells defines the count before moving from one Sound Block to another, unless interrupted by **RESET (3)**.

(3) **RESET**: Defines at which host timeline positions the progress is reset to start from the beginning.

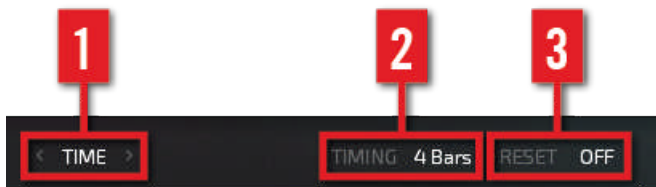
- To select a **RESET** value drag the mouse up or down while pressing the left mouse button.

The values for **RESET** are as follows:

- **1 Bar–8 Bars**: Set the number of counts from **1 Bar** to **8 Bars** before the sound resets to the start of the sequence.
- **OFF**: Disables the automatic progress reset.

### 5.3.2.2 Time Mode Parameters

**TIME** mode: sound progress defined by a timeframe. Set a timeframe after which sound progresses automatically to the next Sound Block. The timing intervals range from a half note to a full eight bars.



View A and B—Progress with TIME mode selected.

(1) **Progress mode selector**: Use the Progress mode selector to select the **TIME** Progress mode.

- Click a pointer at the side of the current Progress mode to select **TIME** Progress mode.
- The **TIME** Progress mode will recall the **TIMING** and **RESET** menus.



(2) **TIMING**: Sets the timing for the automatically clocked block progress.

- To select a **TIMING** value drag the mouse up or down while pressing the left mouse button.

The values for **TIMING** are as follows:

- **Half, Quarter, 1–8 Bars**: Set the timing from a **Half** note to **8 Bars** before the sound moves from one Sound Block to the next.

(3) **RESET**: Defines at which host timeline positions the progress is reset to start from the beginning.

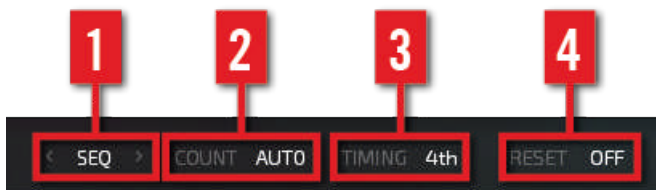
- To select a **RESET** value drag the mouse up or down while pressing the left mouse button.

The values for **RESET** are as follows:

- **1 Bar–8 Bars**: Set the number of counts from **1 Bar** to **8 Bars** before the sound resets to the start of the sequence.
- **OFF**: Set to **OFF** to stop the Progress mode from restarting.

### 5.3.2.3 Seq Mode Parameters

**SEQ** mode: Sequence uses note repeat to create a step sequencer like experience. The block progress is controlled by the number of notes being played and repeated.



View A and B—Progress with SEQ mode selected.

(1) **Progress mode selector**: Use the Progress mode selector to select one of three Progress modes.

- Click a pointer at the side of the current Progress mode to select **SEQ** Progress mode.
- The **SEQ** Progress mode will recall the **COUNT**, **TIMING** and **RESET** menus.

(2) **COUNT**: Sets the number of notes to be played before progressing to the next block.

- ▶ To select a **COUNT** value drag the mouse up or down while pressing the left mouse button.

The values for **COUNT** are as follows:

- **OFF**: Automatic progress is disabled. Manual progress can be controlled using the Remote Octave. For more information on how to use Remote Octave please refer to [↑5.7.2.3, Remote Octave](#).
- **1–8**: Set the number of notes to be played before progressing to the next block, unless interrupted by **RESET (3)**.
- **AUTO**: The number of individual enabled Sound Cells defines the count before moving from one Sound Block to another, unless interrupted by **RESET (3)**.

(3) **TIMING**: Sets the note repeat timing (in notes or bars) for held MIDI notes or chords.

- ▶ To select a **TIMING** value drag the mouse up or down while pressing the left mouse button.

The values for **TIMING** are as follows:

- **Half, Quarter, 1–8 Bars**: Set the note repeat timing from **32nd** notes to **1 Bar**.

(4) **RESET**: Defines at which host timeline positions the progress is reset to start from the beginning.

- ▶ To select a **RESET** value drag the mouse up or down while pressing the left mouse button.

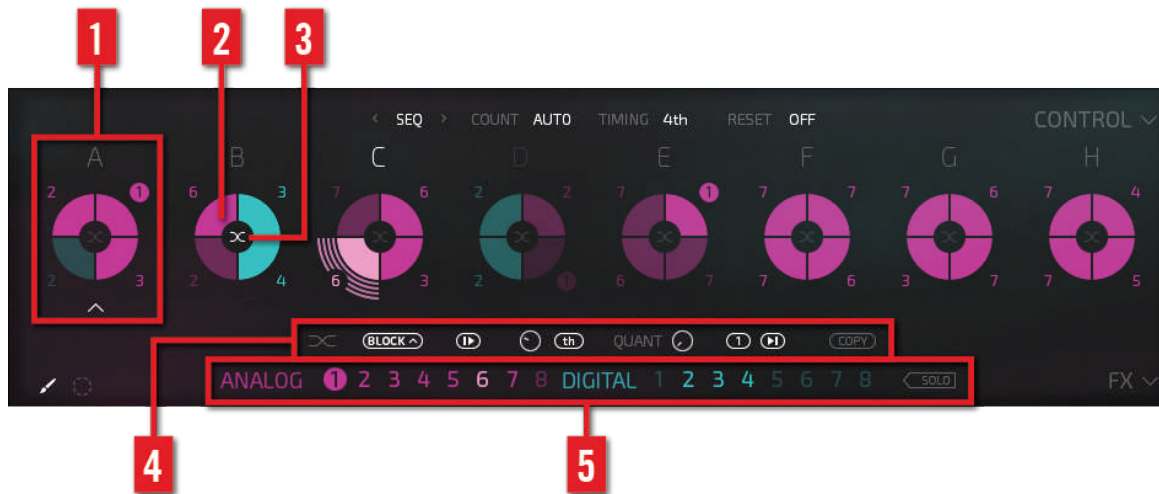
The values for **RESET** are as follows:

- **1 Bar–8 Bars**: Set the number of counts from **1 Bar** to **8 Bars** before the sound resets to the start of the sequence.
- **OFF**: Set to **OFF** to stop the Progress mode from restarting.

### 5.3.3 Sound Blocks and Sound Cells

The Voice Programmer contains eight Sound Blocks each with four Sound Cells. Each Sound Cell hosts one sound. The thirty-two Sound Cells can be used to create layers or sound sequences.

#### Sound Block and Sound Cell Parameters



View A and B—Sound Blocks and Sound Cells.

(1) **Sound Block:** There are eight Sound Blocks each with four Sound Cells. Only one Sound Block is active at a time and able to receive note events. Each Sound Block represents a stage in a sequence as they play from left to right. A block can play all four Sound Cells in unison or play them individually depending on the Progress mode and Voice mode selected. Click the letter A-H above a Sound Block to enable or disable it within a sequence. A right click on a letter will disable all other Sound Blocks with a single click.

(2) **Sound Cell:** Each Sound Cell represents a sound from the **ANALOG** or **DIGITAL** synthesizers. The synthesizers are color coded: Magenta represents **ANALOG** sounds 1–8, and cyan represents **DIGITAL** sounds 1–8. Each of these sixteen sounds can be assigned to an individual Sound Cell using the Sound Bar (5). Click a Sound Cell to enable or disable it within a sequence. For more information on programming Sound Cells please refer to [↑5.3.5, Sound Bar](#).

(3) **Morph switch:** In the middle of each Sound Block is a morph switch, when this is enabled Sound Cells of the same type ([ANALOG](#) or [DIGITAL](#)) morph into each other. Use the morph switch to enable or disable morphing. Use the Morph Controls (4) to configure how morphing works for each Sound Block. For more information on Morph controls please refer to [↑5.3.4, Morph Controls](#).

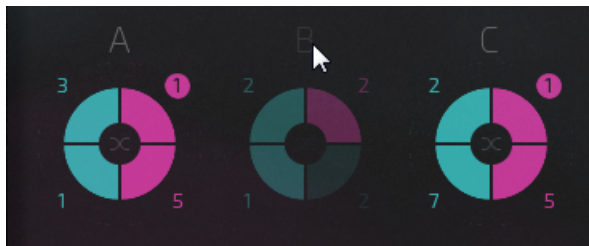
### 5.3.3.1 Disabling a Sound Block

Each Sound Block can be disabled. When a Sound Block is disabled you will not hear its Sound Cells as a sequence is played.

#### Disabling a Sound Block

To disable a Sound Block:

- Click the letter [A-H](#) above the Sound Block you want to disable in the sequence.

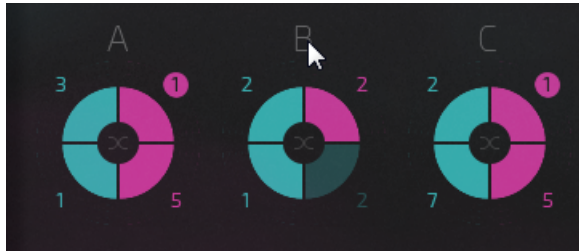


- The Sound Block will be disabled and dimmed from the Voice Programmer until it is added back to the sequence.

## Enabling a Sound Block

To enable a Sound Block:

- Click the letter **A-H** above a disabled Sound Block to enable it and add it back to the sequence.



→ The Sound Block will be added back to the sequence and become active in the Voice Programmer.

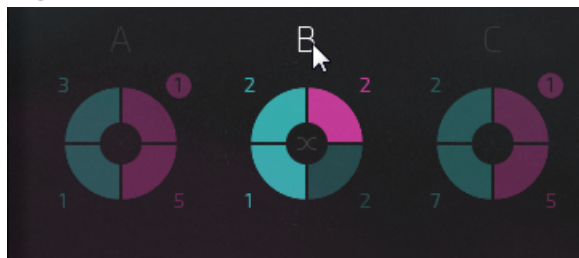
### 5.3.3.2 Soloing a Sound Block

Each Sound Block can be set to solo to isolate it from the sequence. This is particularly useful as a shortcut when fine tuning the sounds of a block.

## Soloing a Sound Block

To solo a Sound Block:

1. Right click the letter **A-H** above the Sound Block you want to solo in the sequence.



2. Left mouse click the letter **A-H** above the Sound Block(s) you want to add back to the sequence.

- Only the Sound Block in solo will be heard and all other Sound Blocks will be muted and dimmed from the Voice Programmer until they are manually added back to the sequence one by one by clicking the letter above them.

### 5.3.3.3 Disabling and Enabling a Sound Cell

Each Sound Cell can be disabled or enabled. When a Sound Cell is disabled you will not hear the Sound Cell as the sequence is played. All other Sound cells will play as normal. Enable a Sound Cell to return it back to the sequence.

#### Disabling a Sound Cell

To disable a Sound Cell:

- Click the Sound Cell you want to disable in the sequence.



- The Sound Cell will be disabled and dimmed from the Voice Programmer until it is added back to the sequence.



## Enabling a Sound Cell

To enable a Sound Cell:

- ▶ Click a disabled Sound Cell to add it back to the sequence.



- The Sound Cell will be enabled and will become active in the Voice Programmer.





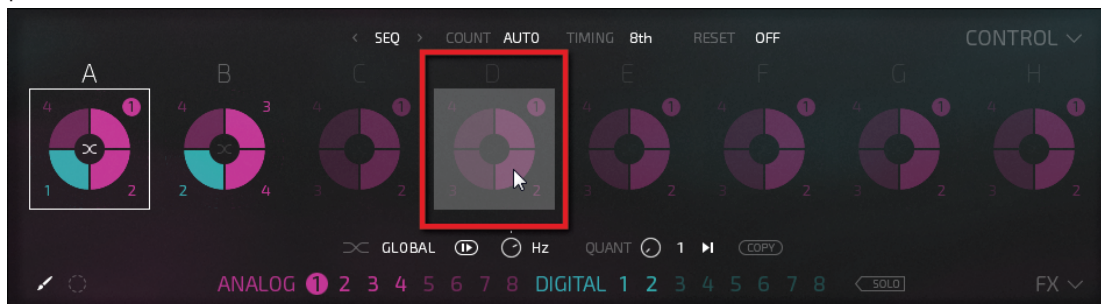
### 5.3.3.4 Copying and Pasting Sound Blocks

Sound Blocks can be copied and pasted from one location to another:

1. Right-click and hold the Sound Block you want to copy. As soon the mouse is moved a white frame will appear around the selected Sound Block as it is dragged indicating it is ready to be copied.



2. Drag the mouse onto another Sound Block, then release the mouse button. As the mouse is moved to another Sound Block it is grayed out indicating this it has been chosen as the paste destination.



- When the right mouse button is released the Sound Block is copied and pasted to the selected Sound Block replacing it.



### 5.3.3.5 Reordering Sound Blocks

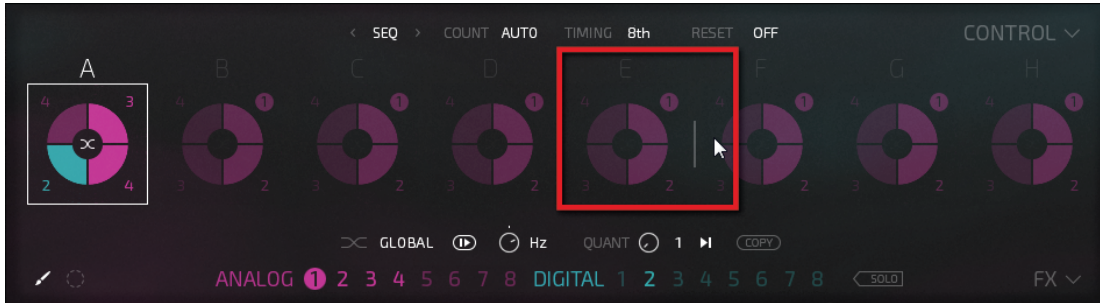
Sound Blocks can be reordered in the sequence to quickly change the sequence and add variation.

#### To reorder a Sound Block:

1. Right-click and hold the Sound Block you want to copy. As soon the mouse is moved a white frame will appear around the selected Sound Block as it is dragged, indicating is ready to be moved.



2. Drag the mouse behind or in front of the Sound Block where you want to place it. When the mouse is dragged next to another Sound Block, a short vertical grey line will appear indicating the paste destination.



3. Release the mouse button to place the sound at its new location.



- When the right mouse button is released the Sound Block is moved to the new location and all other Sound Blocks left of the new location will move one position to the left.

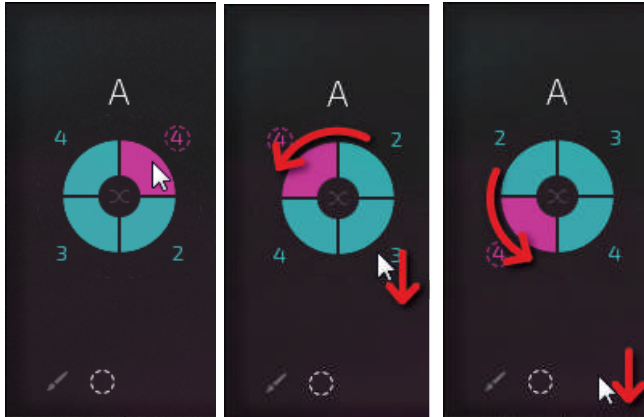
### 5.3.3.6 Rotating Sound Cells within a Sound Block

Sound Cells can be rotated clockwise or counterclockwise within a Sound Block to change the order of Sound Cells.

#### To rotate Sound Cells:

1. Right-click the Sound Block you want to rotate.

2. Hold the right mouse button and drag the mouse upwards to rotate Sound Cells clockwise or drag the mouse downwards to rotate Sound Cells counterclockwise.



### 5.3.4 Morph Controls

ROUNDS features the ability to morph sounds on block level. The morphing is restricted to synthesis engine type. **ANALOG** Sound Cells can be morphed into other **ANALOG** Sound Cells and **DIGITAL** Sound Cells into other **DIGITAL** Sound Cells. In the center of each Sound Block is a switch that enables/disables morphing.

The Morph Controls are situated below the Sound Blocks inside the Voice Programmer. The Morph Controls can be adjusted globally for all Sound Blocks or individually per Sound Block.

The speed of the morph is controlled by an LFO and works either clockwise or counterclockwise on a Sound Block in sequential order. As voices are played morphing is visualized by the up to four outer rings spinning around the Sound Blocks.

### Morph Control Parameters



View A and B—Morph controls.

(1) **GLOBAL/BLOCK**: Switches between Global and per Block morphing modes. When per **BLOCK** mode is active the arrow below one of the sound blocks indicates which Sound Block the morph controls will currently affect. When **GLOBAL** is selected the Morph Controls affect all Sound Blocks. For more information on using **GLOBAL** mode please read [↑5.3.4.2, Applying Morphing using Global Mode](#). For more information on using **BLOCK** mode please read [↑5.3.4.3, Applying Morphing using Sound Block Mode](#).



(2) **LFO Phase Reset**: Resets the phase of the **LFO** every time a new note is received.

(3) **RATE**: Adjusts tempo for clockwise or counterclockwise morphing. Display style changes from knob (Hz) to digits (Note) when using tempo synced mode.

(4) **Hz/Sync**: Switches rate control from **Hz** (hertz) to tempo synced note values.

(5) **QUANT** (Quantize): Changes the quantization value of the morph action. Low values provide a smooth transition between sounds. High values will progressively jump through the morphing action creating a possible jitter in the transition which can be used for good effect.

(6) **1/N**: Defines the number of sounds to be morphed. In position **1** the morph will only move into the next Sound Cell (clockwise or counterclockwise) on a Sound Block. When **N** is selected the morph includes all the Sound Cells of the same type (**ANALOG/DIGITAL**) in a Sound Block and will be morphed back into the starting sound again at the end of the cycle.

(7)  /  : The infinity icon defines if the morph will be stopped after one iteration or if it will be repeated as long as the note is played. The step forward icon stops the morph action at the end of one cycle.

(8) **COPY**: The style of the copy action is dependant on the operating mode: **GLOBAL** or **BLOCK**. In **GLOBAL** mode the copy action pastes the global morph parameter set into the eight individual morph parameter sets. In **BLOCK** mode the morph parameter set of the selected Sound Block is copied into the Global morph section.

#### 5.3.4.1 Enabling and Disabling Morphing within a Sequence

Morphing can be enabled per Sound Block by clicking the symbol in the center of each Sound Block.



Sound Block—Morphing symbol disabled.

### To enable morphing per Sound Block:

- Click the dimmed morph symbol in the center of the Sound Block to enable morphing for the selected Sound Block.



- Edit the Morph Controls to change settings.

### To disable morphing per Sound Block:

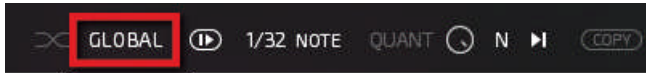
- Click the highlight morph symbol in the center of the Sound Block to disable the morphing for the selected Sound Block.

#### 5.3.4.2 Applying Morphing using Global Mode

In Global mode morphing can be controlled globally for all eight Sound Blocks. This is useful for a consistent morphing effect over all Sound Blocks, although this will only be heard where morphing has been enabled.

To apply Morphing using **GLOBAL** mode:

1. Select **GLOBAL** mode from the Morph Controls.



2. Make necessary changes using the Morph Controls.

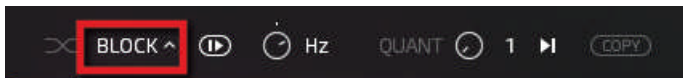
→ The morphing for all eight Sound Blocks will be edited.


### 5.3.4.3 Applying Morphing using Sound Block Mode

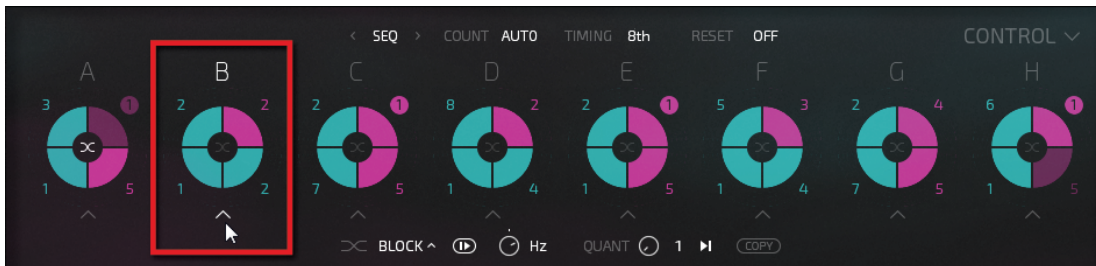
In Block mode morphing can be adjusted individually per Sound Block. This is useful for adding morph variation to Sound Blocks where morphing has been enabled.

To apply Morphing using **BLOCK** mode:

1. Select **BLOCK** mode from the Morph Controls.



2. Move the mouse below the Sound Block you want to edit and a  symbol will appear to indicate any changes made using the Morph Controls will affect this Sound Block only.



3. Make necessary changes using the Morph Controls for the select Sound Block.
4. Repeat these instructions to change the Morph Controls for each Sound Block.

→ The morphing for each selected Sound Block will be edited.



### 5.3.5 Sound Bar

At the bottom of the Voice Programmer is the Sound Bar. Use the Sound Bar to switch the sound panel of the synthesizer to edit, or select the sound to be painted on to the Sound Cells. There are different editing modes to assign the sounds to the Sound Cells.

#### Sound Bar Parameters



View A and B—Sound Bar overview.

(1) **Sound Assignment Modes:** Use the Paint and Replace modes to assign sounds to Sound Cells in the following ways:

- Paint Mode (Paint brush symbol): Use Paint mode to assign a sound to a cell by clicking on the sound number next to a cell. For more information on Paint mode please read [↑5.3.5.2, Assigning Sounds to Sound Cells](#).
- Replace mode (Dotted circle symbol): Use Replace mode to replace one sound with another on all sound cells at once. For more information on Replace mode please read [↑5.3.5.2, Assigning Sounds to Sound Cells](#).

(2) **ANALOG 1–8:** Selects one of the **ANALOG** sounds for editing.

► Click on the magenta numbers 1–8 in the Sound Bar.

→ This will recall the edit panel of the selected sound to the lower part of the interface.

(3) **DIGITAL 1–8:** Selects one of the **DIGITAL** sounds for editing.

► Click on the cyan numbers 1–8 in the Sound Bar.

→ This will recall the edit panel of the selected sound to the lower part of the interface.

(4) **SOLO:** Use to hear only the selected sound in a sound sequence. All other sounds are muted.



### 5.3.5.1 Selecting Sounds for Edit

To edit a sound click a number in the Sound Bar. This will recall the edit panel of the selected sound to the lower part of the instrument.



View A and B—Selecting sounds for edit.

The **ANALOG** synthesizer sounds are represented by magenta colored numbers 1–8 and the **DIGITAL** synthesizer sounds are represented by cyan colored numbers 1–8.



Sound preset number 1 of each engine is fixed as Master for parameter-linking in the Multi-edit-page (For more details about the Multi-edit page, see [↑5.7.1, Macros Page](#)).

The Sound Bar has two modes to assist the process of assigning sounds to Sound Cells.

### 5.3.5.2 Assigning Sounds to Sound Cells

There are two modes available to assist the assignment of sounds to Sound Cells.

#### Using Paint Mode to Assign Sounds to Sound Cells

Use Paint mode to assign a sound to a Sound Cell by clicking on the number next to it.

To add a sound from the Sound Bar to a Sound Cell using Paint mode:

1. Select Paint Mode from the Sound Bar



- Click the sound you want to add on the Sound Bar (ANALOG 1–8 or DIGITAL 1–8).



- Click the number next to the Sound Cell where you want to place the sound.



- The number next to the Sound Cell will change to the same sound number selected from the Sound Bar. The number will have a circle around it, indicating you can still undo your action. Click on the number to undo the sound placement.



Undo only works as long as no other sound is selected using the Sound Bar.



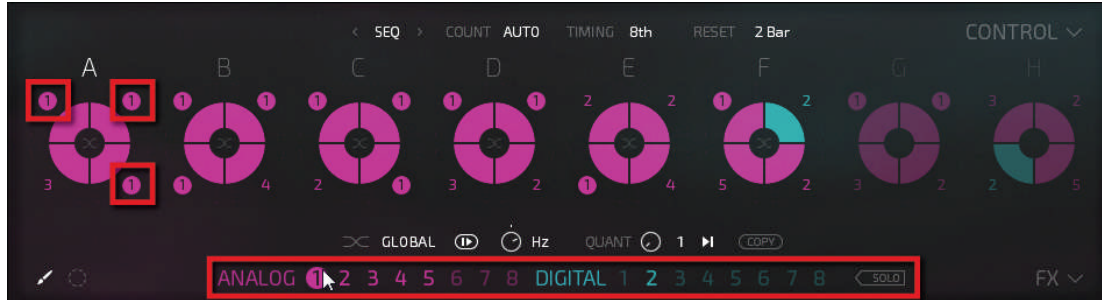
The existing placements of the selected sound will be highlighted with a color filled circle when selected from the Sound Bar.

## Using Replace Mode to Assign Sounds to Sound Cells

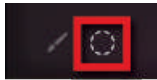
Use Replace mode to replace multiple sounds at once. This mode is useful when you want to experiment by replacing one sound in a sequence with another.

To add a sound from the **ANALOG** or **DIGITAL** synthesizer to a Sound Cell using Replace mode:

1. Select the sound that you want to be replaced with another. The sound is highlighted where it is currently assigned.



2. Switch to Replacement mode.



The highlighted sounds change from a filled circle to dashed outline to show Replacement mode is active.

3. Select the sound from the Sound Bar you would like to replace your selection(s) with. It is possible to manually edit the selection by clicking on the cell numbers to add or delete cells from the selection.



- The sound assignments to the selected Sound Cell(s) are replaced with the new sound from the Sound Bar. The Sounds Cells selected for replacement will retain the segmented circle around them, allowing another sound to be selected from the Sound Bar until the most suitable sound has been found for the sequence. After using Replace Mode do not forget to switch back to paint mode.

### 5.3.5.3 Copying and Pasting Sounds in the Sound Bar

Sound Blocks can be copied and pasted from one location to another:

1. Right-click and hold a sound in the Sound Bar. The sound is highlighted by a white frame.



2. Drag the sound to the another sound, then release the mouse button.



- The sound is copied and pasted to a new location in the Sound Bar.



Sound number 1 for both synthesizers is not a paste destination.

### 5.3.5.4 Soloing a Sound in the Sound Bar

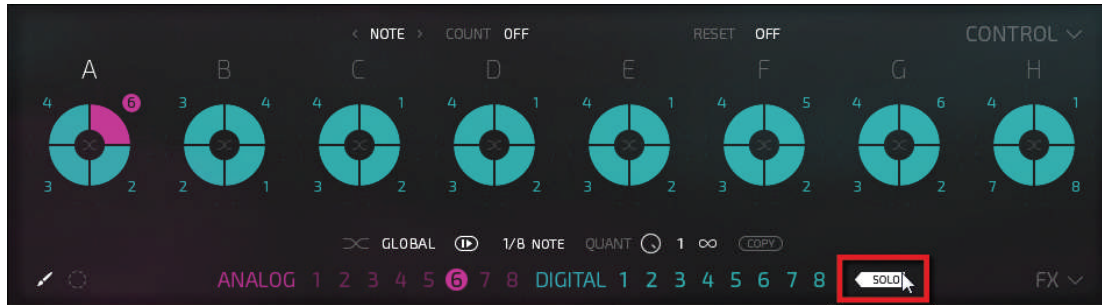
To the right of the Sound Bar is the **SOLO** switch. This can be used to hear the selected sound in place by automatically muting all other sounds. This is especially useful for isolating a sound from the Sound Bar while editing a sequence.

### To solo a Sound Cell within a sequence:

1. Select the sound in the Sound Bar you want to solo by clicking it. here sound number 6 is selected.



2. Click the **SOLO** switch to solo the selected sound. The **SOLO** button will become high-lighted.



3. Click the **SOLO** switch again to switch back to the sequence of all assigned sounds.  
→ The selected sound will be heard in isolation until the **SOLO** switch is clicked again.

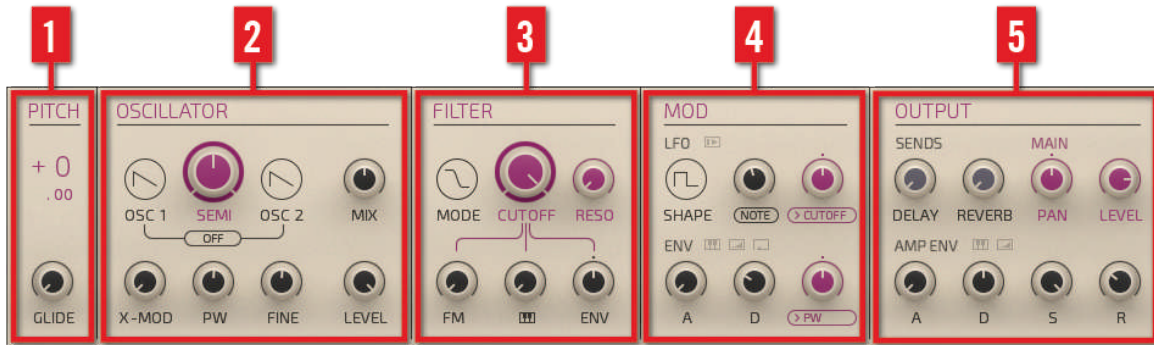
## 5.4 Analog Synthesizer—Edit Panel

The analog side of ROUNDS is based on a subtractive analog engine, inspired by a classic, two-oscillator synthesizer. There are eight instances of the **ANALOG** synthesizer each producing one sound selectable from the Sound Bar. Selecting a sound from the Sound bar will load the edit panel for that instance and make available its parameters for editing.

Once a sound has been created assign it to Sound Cells using the Sound Bar in order to build a sequence or layered sound using both [ANALOG](#) and [DIGITAL](#) synthesizers.

## Overview of the Analog Edit Panel

The signal flow of the [ANALOG](#) synthesizer is divided into five sections:



View A— ANALOG synthesizer edit panel.

(1) [PITCH](#) section: This section contains settings for coarse and fine tuning of the selected sound. It also contains the [GLIDE](#) (portamento) parameter. For more information please read [↑5.4.1, Pitch](#)

(2) [OSCILLATOR](#) section: This section contains two oscillators with cross modulation ([X-MOD](#)) and an output mixer ([LEVEL](#)) to the multimode filter. Use this section to set the characteristic of the sound by selecting waveforms, setting cross modulation, as well as, syncing for Oscillator 1 and 2 including sub oscillators. For more information please read [↑5.4.2, Oscillator](#).

(3) [FILTER](#) section: This section contains a 4-pole multimode filter with modulation amounts. Use this section to select the filter-type ([MODE](#)) and make filter settings. For more information please read [↑5.4.3, Filter](#).

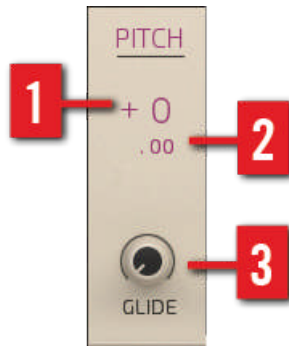
(4) [MOD](#) section: This section contains one [LFO](#) and one [A D](#) envelope with a modulation amount. Use this section to make modulation settings and assignments to selectable modulation destinations. [↑5.4.4, Mod](#).

(5) [OUTPUT](#) section: This section contains the [ADSR](#) from the [AMP](#) envelope plus the effect-sends to the two global effects, [PAN](#), and [LEVEL](#) knobs. For more information please read [↑5.4.5, Output](#)

### 5.4.1 Pitch

The PITCH section contains settings for coarse and fine tuning of the selected sound, and a Glide (portamento) parameter.

#### PITCH parameters



View A—ANALOG synthesizer engine PITCH section.

- (1) **PITCH Coarse:** Specify coarse tuning of the sound. The range is +/-24 semitones.
- (2) **PITCH Fine:** Specify fine tuning of the sound. The range is +/-50 cents.
- (3) **GLIDE:** Set the duration to smooth the change in pitch between one note and the next.



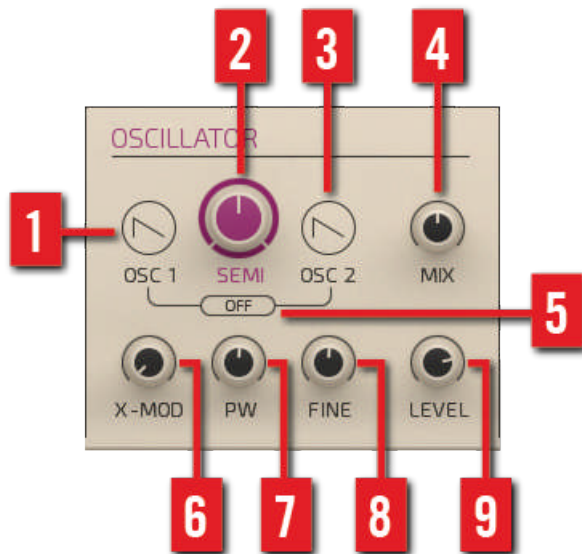
To achieve a similar Glide time for all sounds in Unison or Layer- mode, set the same Glide time for all sounds. This is best achieved using Multi-edit. For more information on Multi-Edit please read [↑5.7.1, Macros Page](#).

### 5.4.2 Oscillator

The **ANALOG** engine offers two independent oscillators which can be use to determine the character of the sound. Each provides classic analog waveforms and a noise generator for Oscillator 1. Waveforms can be selected by clicking on the waveform displays. The two oscillators have cross-modulation, and an output mixer to the multimode filter. Oscillator 2 can be used as a modulation source for the filter cutoff (**FM**) and the pitch of oscillator 1 (**X-MOD**). It can also be synced to Oscillator 1 and used as sub-oscillator.



## OSCILLATOR parameters



View A— ANALOG synthesizer engine OSCILLATOR section.

(1) **OSC 1** (Oscillator 1): Select one of three fundamental waveforms or the noise generator. The following selection is available for Oscillator 1: Triangle, Saw, Pulse, and Noise.



(2) **SEMI**: (Semitone) Set the pitch offset of Oscillator 2 in semitones. The bipolar range of this knob is: +/- 60 semitones.

(3) **OSC 2** (Oscillator 2): Select one of three fundamental waveforms for Oscillator 2. Use in combination with the sync selector (5). The following waveforms are available for Oscillator 2: Triangle, Saw, Pulse, and Square.





(4) **MIX**: Change the mix balance of Oscillator 1 and Oscillator 2. Turn the knob to the left to hear Oscillator 1, turn the knob to the right to hear Oscillator 2. In the centre position both waveforms can be heard equally.

(5) **Sync selector**: Generate a more complex waveform by forcibly resetting Oscillator 2 to the beginning of its cycle in synchronization with the frequency of Oscillator 1. Select one of four different modes for Oscillator sync:

- **OFF**: The waveform of Oscillator 2 is not synchronized to Oscillator 1.
- **SYNC**: The waveform of Oscillator 2 is synchronized to the wave of Oscillator 1.
- **SUB 1**: Oscillator 2 is synced to every second cycle of Oscillator 1, and the pitch is one octave below Oscillator 1.
- **SUB 2**: Oscillator 2 is synced to every fourth cycle of Oscillator 1, and the pitch is two octaves below Oscillator 1.

(6) **X-MOD**: Modulate the pitch of Oscillator 1 with Oscillator 2. Turning the knob toward the right creates a more complex overtones, allowing you to create metallic sounds or sound effects.

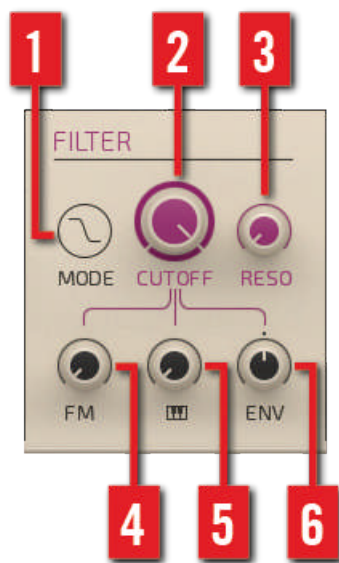
(7) **PW**: Set the pulse width of both Oscillators. The width of the pulse waveform (the 'Pulse Width') can be altered dynamically by a modulator, which results in the harmonic content of the waveform constantly changing. This can give the waveform a very 'fat' quality when the pulse width is altered at a moderate rate.

(8) **FINE**: Fine tune the offset of Oscillator 2 in cents. The bipolar range is +/- 50 cents.

(9) **LEVEL**: Set the output level of the Oscillator section before it enters into the Filter section.

### 5.4.3 Filter

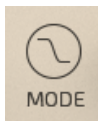
The Filter contains a 4-pole multimode filter with modulation amounts. These settings determine the brightness and thickness of the sound. Here you can also specify the time-varying change (envelope) for the filter and the amount of frequency modulation applied to the filter by Oscillator 2.

**FILTER parameters**

View A— ANALOG synthesizer engine FILTER section.

(1) **MODE**: Select the filter type from low-pass, bandpass or high-pass.

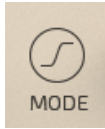
- Use the low-pass filter to cut frequency components above the cutoff frequency.



- Use the bandpass filter to cut frequency components above and below the cutoff frequency.



- Use the hi-pass filter to cut frequency components below the cutoff frequency.



(2) **CUTOFF**: Specifies the cutoff frequency of the selected filter type: low-pass, bandpass or high-pass.

(3) **RESO** (Resonance): Boosts the sound in the region of the filter's cutoff frequency. Higher settings produce stronger emphasis, creating a more distinctive sound.

(4) **FM**: Sets the frequency modulation amount to filter frequency by OSC2.

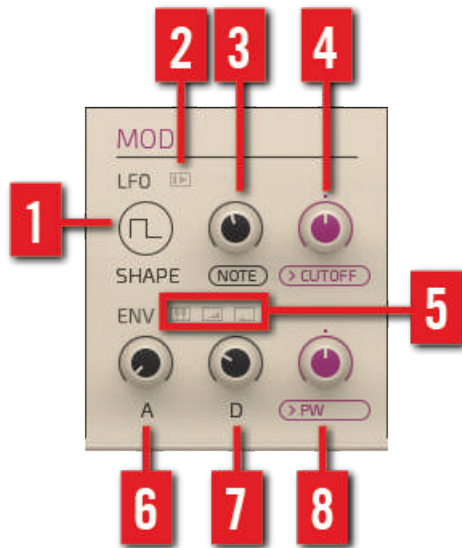
(5) **Key tracking**: Specifies the level of key tracking of the Filter. This allows the filter cutoff frequency to vary according to the key that is played. If the key tracking knob is turned toward the right, the cutoff frequency becomes higher as you play higher notes. If the key tracking knob is turned toward the left, the cutoff frequency becomes lower as you play lower notes.

(6) **ENV** (A / D envelope): Specifies the depth and direction of the cutoff frequency modulation. If the **ENV** knob is turned toward the right, the intensity of the cutoff frequency modulation is increased. If the knob is turned toward the left, the intensity of the cutoff frequency modulation is decreased. This parameter is relative to the **A** and **D** envelope stage settings in the **MOD** section.

#### 5.4.4 Mod

The Mod (Modulation) section contains one LFO and one A / D envelope with modulation amounts. Use this section to make modulation settings and assignments to selectable modulation destinations.

## MOD parameters



View A— ANALOG synthesizer engine MOD section Parameters.

(1) **LFO SHAPE**: Selects the **LFO** modulation waveform. The following waveforms are available: Triangle, Saw, Square, and Random.



(2) **LFO Key Reset**: Specifies whether the **LFO** cycle will be synchronized to begin when a key is pressed.

(3) **LFO rate/speed control**: Controls the **LFO** speed. Switch between displaying the rate in Hz or synced note divisions.

(4) **LFO Modulation**: Sets the LFO modulation amount with destination selector, bipolar (positive or negative modulation) available destinations are:

- **CUTOFF**
- **PAN**

- LEVEL
- PITCH
- SEMI (detuning of Oscillator 2)
- PW (Pulse width)
- MIX (Oscillator mix).

(5) **ENV switches:** Sets keyboard tracking, velocity sensitivity and looping of the A / D envelope.

(6) **A:** Specifies the attack time of the A / D envelope. This is from the moment you press a key until the maximum level is reached.

(7) **D:** Specifies the decay time of the A / D envelope. When the envelope has reached its maximum level, the envelope will fade to zero level during the time set by this control.

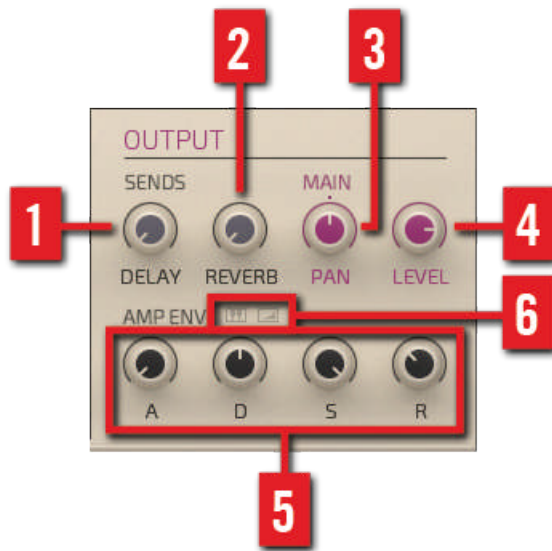
(8) **A / D envelope modulation:** Select a modulation destination and use the knob to increase or decrease the amount of modulation applied. The additional modulator and A / D envelope can be used to dynamically alter other sections of the synthesizer during the lifetime of each note. Click the destination selector to choose one the following parameters:

- **FM:** changes the Frequency Modulation by Oscillator 2 over time.
- **PITCH:** changes the Pitch over time.
- **SEMI:** changes the pitch offset of Oscillator 2 over time.
- **PW:** changes the Pulse Width of Oscillators over time.
- **X-MOD:** changes cross modulation of both Oscillators over time.
- **MIX:** changes the Mix of the Oscillators over time.

### 5.4.5 Output

The OUTPUT section contains the ADSR Amplitude Envelope plus the effect-sends to the two global effects, pan and level-knobs.

## OUTPUT Parameters



View A—ANALOG synthesizer engine OUTPUT section parameters.

(1) **DELAY**: Adjusts the send level of the delay effect. Turn the knob to the right to increase the send level of the delay effect.

(2) **REVERB**: Adjusts the send level of the reverb effect. Turn the knob to the right to increase the send level of the reverb effect.

(3) **PAN**: Adjusts the panorama of selected sound. Turn the knob to the left to pan the selected sound the left side. Turn the knob to the right to pan the selected sound the right side. In the centre position the sound is centered.

(4) **LEVEL**: Adjusts the level of the selected sound.

(5) **A D S R**: Sets the amp (amplitude) envelope generator to control the overall loudness of the sound over time. The amp envelope has four stages which control the attack, decay, sustain and release of the sound:

- **A**: (Attack): Adjusts the time it takes after a key is pressed for the volume to climb from zero to full volume. It can be used to create a sound with a slow fade-in.

- **D:** (Decay): Adjusts the time it takes for the volume to fall from its initial full volume to the level set by the Sustain knob while a key is held down.
- **S:** (Sustain): Sets the volume level that the envelope remains at while the key is held down, after the Decay time has expired.
- **R:** (Release): Adjusts the time it takes for the volume to fall from the Sustain level to zero once the key is released. It can be used to create sounds that have a long fade out.

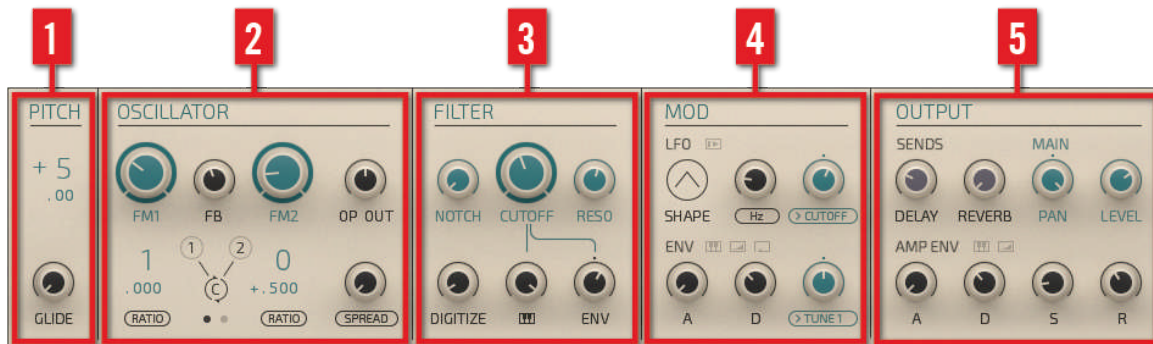
(6) **AMP ENV switches:** Sets keyboard tracking and velocity sensitivity of the Amp (amplitude) envelope.

## 5.5 Digital Synthesizer—Edit Panel

The digital side of ROUNDS is an FM engine using three oscillators and a 2-pole filter. There are eight instances of the digital synthesizer each producing one sound selectable from the Sound Bar. Selecting a sound from the Sound bar will load the edit panel for that instance and make available its parameters for editing.

Once a sound has been created assign it to Sound Cells using the Sound Bar in order to build a sequence or layered sound using both **ANALOG** and **DIGITAL** synthesizers.

### Overview of the Digital Edit Panel



View A—DIGITAL synthesizer edit panel.

(1) **PITCH** section: This section contains parameters for coarse and fine tuning of the selected sound, and also a Glide (portamento) parameter. For more information please read [↑5.5.1, Pitch](#).

(2) **OSCILLATOR** section: This section contains three FM-oscillators (two modulators and one carrier) and an output mixer with spread. These are the sound generators of the **DIGITAL** engine. Also switch between two FM algorithms and assign Ratio or Interval mode to the two modulators/operators here. For more information please read [↑5.5.2, Oscillator](#).

(3) **FILTER** section: This section contains a 2-pole multimode filter with modulation amounts. Select Filter-Type and make settings here. For more information please read [↑5.5.3, Filter](#).

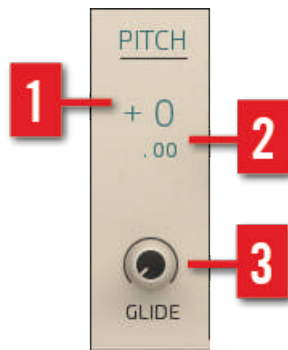
(4) **MOD** section: This section contains one **LFO** and one **A D** envelope with mod amounts. Use this section to make modulation settings and assignments to selectable modulation destinations. For more information please read [↑5.5.4, Mod](#).

(5) **OUTPUT** section: This section contains the **ADSR** from the **AMP** envelope plus the effect-sends to the two global effects, **PAN**, and **LEVEL** knobs. For more information please read [↑5.5.5, Output](#).

## 5.5.1 Pitch

This section contains parameters for setting pitch and glide.

### PITCH Parameters



View A— DIGITAL synthesizer engine PITCH section parameters.



- (1) **PITCH Coarse**: Specifies coarse tuning of the sound. The range is +/-24 semitones.
- (2) **PITCH Fine**: Specifies fine tuning of the sound. The range is +/-50 cents.
- (3) **GLIDE**: Sets the duration to smooth the change in pitch between one note and the next.

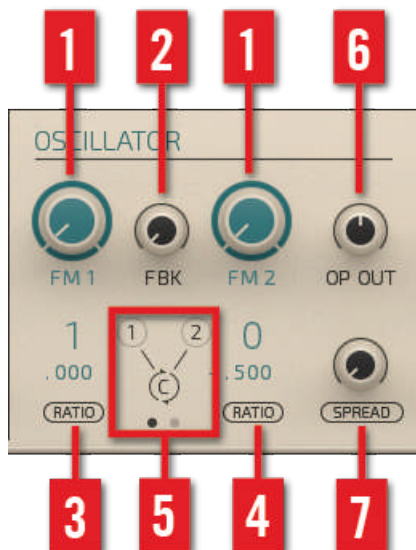


To achieve a similar Glide time for all sounds in Unison or Layer- mode, set the same Glide time for all sounds. This is best achieved using Multi-edit. For more information on Multi-Edit please read [↑5.7.1, Macros Page](#).

### 5.5.2 Oscillator

The digital engine offers three FM oscillators with sine wave and selectable feedback. Two of them work as modulators and one as a carrier. The sound outputs of the operators/modulators can be mixed to the carriers output signal. Switch between two FM Algorithms (serial/parallel).

#### OSCILLATOR Parameters



View A— DIGITAL synthesizer engine OSCILLATOR section parameters.

- (1) **FM1, FM2**: Sets the frequency modulation amounts of modulator 1 and 2.

(2) **FBK** (Feedback): Specify the frequency modulation feedback amount. This adds feedback to the Oscillator selected by the feedback knob. In effect, the selected oscillator modulates itself. Increasing feedback adds more overtones.

(3) **Frequency of operator/modulator 1**: Switch this to be shown as **RATIO** or **INTERVAL**. In Ratio Mode, the display shows a multiplication value. e.g. Oscillator 1, Ratio 2 meaning Oscillator 1 Frequency is double the frequency of the carrier. In Interval mode, the Frequency of the selected Oscillator will be set in Semitones (and cents), relative to the carriers frequency.

- Ratio Mode Coarse 0-10 (Fine +/- 0,500).
- Interval Mode Coarse +/- 24 Semitones (Fine +/- 50 cents).

(4) **Frequency of operator/modulator 2**: Switch this to be shown as **RATIO** or **INTERVAL**.

(5) **Algorithm and Feedback switch**: choices are serial or parallel configuration. Feedback switchable between modulator 1, modulator 2 or carrier.

- Algorithm Serial: Oscillator 1 modulates Oscillator 2 which then modulates the Carrier.
- Algorithm Parallel: Oscillator 1 and Oscillator 2 which modulates the Carrier.

(6) **OP OUT**: Mix the output of FM operators 1 and 2 to the carrier output.

(7) **SPREAD**: Define the level and fine tuning of two additional FM oscillators.

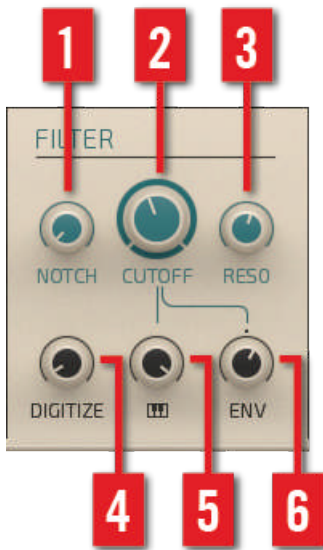
The choices are

- Spread (detunes at the same coarse pitch = Unison Spread).
- Spread 1 (one Octave below and above)
- Spread 2 (two Octaves below and above)

### 5.5.3 Filter

This section determines the brightness and thickness of the sound. Here you can also specify the time-varying change (envelope) for the Filter, and set Filter key tracking and sample rate reduction at Filter input.

## FILTER Parameters



View A— DIGITAL synthesizer engine FILTER section parameters.

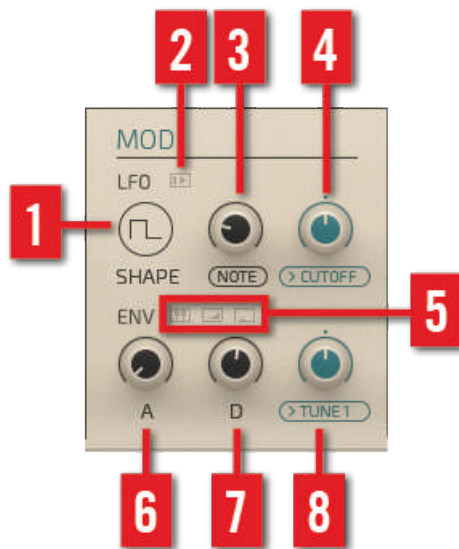
- (1) **NOTCH**: This filter blends continuously from its (Left) Lowpass-Filter to (Right) Highpass Filter outputs. In the middle position it becomes a Notch Filter.
- (2) **CUTOFF**: Specifies the cutoff frequency of the Filter.
- (3) **RESO**: Specifies the Resonance boosts the sound in the region of the filter's cutoff frequency. Higher settings produce stronger emphasis, creating a more distinctive sound.
- (4) **DIGITIZE**: Specifies the sample rate reduction of the oscillator signal at the filter input stage.
- (5) **Key tracking**: Specifies the level of key tracking. This allows the filter cutoff frequency to vary according to the key that you play. If the knob is turned toward the right, the cutoff frequency becomes higher as you play higher notes. If the knob is turned toward the left, the cutoff frequency becomes lower as you play lower notes.

(6) **ENV** (A / D envelope): Specifies the depth and direction of the cutoff frequency change produced by the **A**, and **D** knobs envelope in the **MOD** section. If the **ENV** knob is turned toward the right, the intensity of the cutoff frequency is increased. If the knob is turned toward the left, the intensity of the cutoff frequency is decreased relative the to the **A** and **D** envelope stage settings in the **MOD** section.

### 5.5.4 Mod

The Mod (Modulation) section contains one LFO and one A / D envelope with modulation amounts. Use this section to make modulation settings and assignments to selectable modulation destinations.

#### MOD Parameters



View A— DIGITAL synthesizer engine MOD section parameters.

## MOD Parameters

(1) **LFO SHAPE**: Selects the **LFO** modulation waveform. The following waveforms are available: Triangle, Saw, Square, and Random.



(2) **LFO Key Reset**: Specifies whether the **LFO** cycle will be synchronized to begin when a key is pressed.

**LFO rate/speed control**: Controls the **LFO** speed. Switch between displaying the rate in Hz or synced note divisions.

(4) **LFO modulation** Sets the LFO modulation amount with destination selector, bipolar (positive or negative modulation) available destinations are:

- **CUTOFF**
- **PAN**
- **LEVEL**
- **PITCH**
- **FM1**
- **FM2**
- **FEEDBACK**

(5) **ENV switches**: Sets keyboard tracking, velocity sensitivity and looping of the **A / D** envelope.

**A**: Specifies the attack time of the **A / D** envelope. This is from the moment you press a key until the maximum level is reached.

(6) **A**: Specifies the attack time of the **A / D** envelope. This is from the moment you press a key until the maximum level is reached.

(7) **D**: Specifies the decay time of the **A / D** envelope. When the envelope has reached its maximum level, the envelope will fade to zero level during the time set by this control.

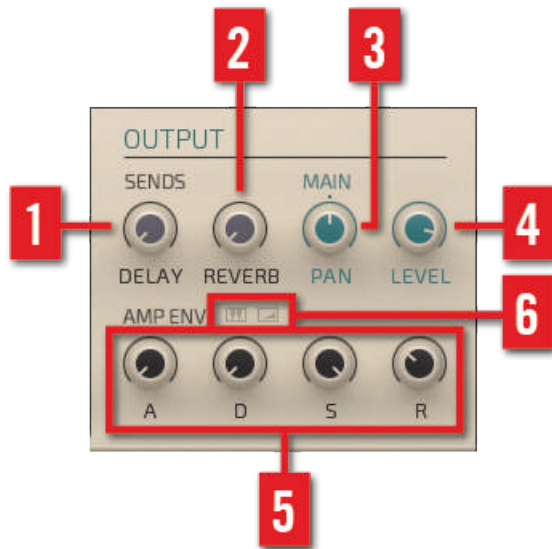
(8) **A / D envelope modulation**: Select a modulation destination and use the knob to increase or decrease the amount of modulation applied. The additional modulator and **A / D** envelope can be used to dynamically alter other sections of the synthesizer during the lifetime of each note. Click the destination selector to choose one the following parameters:

- **PITCH**: changes the master pitch over time.
- **TUNE 1**: changes the tuning of FM modulator 1.
- **TUNE 2**: changes the tuning of FM modulator 2.
- **FM1**: changes the modulation of level of FM modulator 1.
- **FM2**: changes the modulation of level of FM modulator 2.
- **FB**: changes the Feedback level.

### 5.5.5 Output

#### OUTPUT Parameters

This section provides controls for the main effects sends, panorama, and volume level. The bottom row of controls includes the key tracking, and velocity sensitivity switches, and the amplitude envelope, which controls the overall loudness of the sound over time.



View A— DIGITAL synthesizer engine OUTPUT section parameters.

(1) **DELAY**: Adjusts the send level of the delay effect. Turn the knob to the right to increase the send level of the delay effect.

(2) **REVERB**: Adjusts the send level of the reverb effect. Turn the knob to the right to increase the send level of the reverb effect.

(3) **PAN**: Adjusts the panorama of the selected sound. Turn the knob to the left to pan the selected sound the left side. Turn the knob to the right to pan the selected sound the right side. In the centre position the sound is centered.

(4) **LEVEL**: Adjusts the volume level of the selected sound.

(5) **A D S R**: Set the amp envelope generator to control the overall loudness of the sound over time. The amplitude envelope has four stages which control the attack, decay, sustain and release of the sound:

- **A**: (Attack): Adjusts the time it takes after a key is pressed for the volume to climb from zero to full volume. It can be used to create a sound with a slow fade-in.
- **D**: (Decay): Adjusts the time it takes for the volume to fall from its initial full volume to the level set by the Sustain knob while a key is held down.

- **S:** (Sustain): This is unlike the other envelope controls in that it sets a level rather than a period of time. It sets the volume level that the envelope remains at while the key is held down, after the Decay time has expired.
- **R:** (Release): Adjusts the time it takes for the volume to fall from the Sustain level to zero once the key is released. It can be used to create sounds that have a long fade out.

(6) **AMP ENV switches** for keyboard tracking and velocity sensitivity of the Amp envelope.

## 5.6 FX Edit Panel—View A

ROUNDS offers two global effect processors which are used as send effects. Their input levels are controlled by the two effect send controls of each sound setting. The output signals of the effects are mixed to the master output. Each effect has a set of parameter controls, including a control for output level and an input mute switch. Each snapshot has its own global effects setting.

### Accessing the FX Edit Panel

- ▶ To access the FX Edit panel click **FX**.



- ▶ Click **FX** again to return to the Voice Programmer.
- The Control page will reveal the FX Edit panel.



## Overview of the Effects Panel



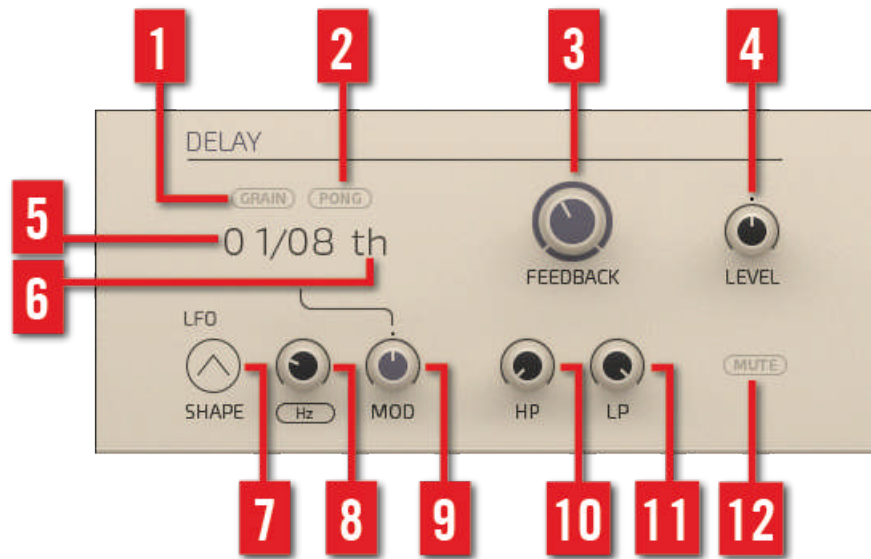
View A—FX edit panel overview.

- (1) **DELAY**: This section contains parameters for the global delay effect.
- (2) **REVERB**: This section contains parameters for the global reverb effect.

### 5.6.1 Delay

The global delay can be switched from grain to ping-pong style. The delay time can be synced to the master tempo. It is switchable from mono to stereo (parallel/pong) operation. It includes a dedicated LFO, containing a syncable rate parameter for delay time modulation, which can be used for creating flanger and chorus effects.

## DELAY Parameters



View A—FX—DELAY section overview.

- (1) **GRAIN**: Switches between two delay-styles. When **GRAIN** is off, the delay will be pitch modulated when the delay time is changing. When Grain is on the delays will be time stretch-ed instead.
- (2) **PONG**: Switches between Stereo-Ping Pong Delay and Mono Delay.
- (3) **FEEDBACK**: Feedback: changes the Level of the Delay Feedback. The higher the level , the longer the decay of the delay repeats.
- (4) **LEVEL**: Controls the output level of the delay effect.
- (5) **Delay Time**: Select delay time (by clicking and/or dragging you can change the delay time)
- (6) **Sync Switch**: Select time mode (ms) or synced mode (th) for the delay. In time mode (ms) the delay time will be displayed in milliseconds and in synced mode (th) it will be synced to the global tempo and the delay time will be displayed in note divisions (e.g.  $\frac{1}{8}$ ,  $\frac{1}{4}$ , etc.).

(7) **LFO SHAPE**: Change the waveform of the modulation LFO (Triangle, Saw, Square and Random).



(8) **LFO Rate**: Controls the speed of the Modulation LFO. Can be switched from free running mode (Hz) to synced mode (Note).

(9) **MOD**: Controls bipolar depth of the delay time modulation by the modulation LFO.

(10) **HP** (high-pass filter): Adjusts the damping of the high frequencies in the delay signal.

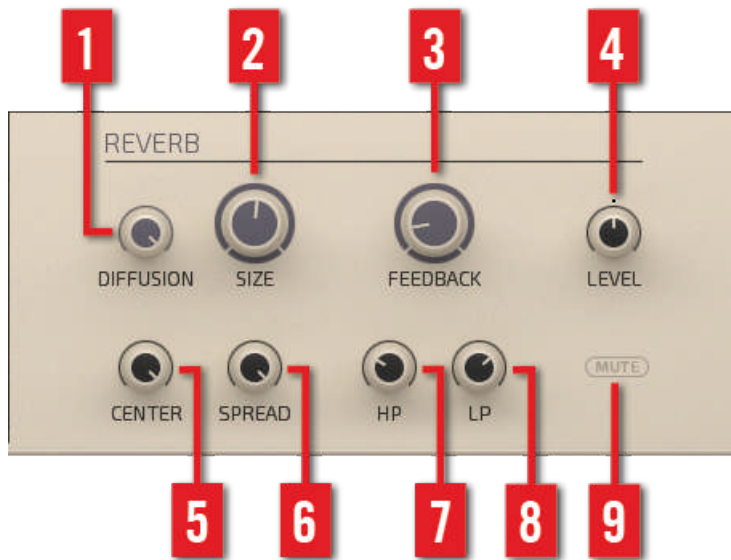
(11) **LP** (low-pass filter): Controls the low-frequency content in the delay signal.

(12) **MUTE**: Switches muting on or off for the input of the delay effect.

## 5.6.2 Reverb

Based on eight delay taps with inbuilt modulation, diffusion and feedback. The reverb processor can produce a wide range of effects: big, deep and sophisticated cloudy reverbs and also small, metallic sounding, resonant and grainy delay reflections.

## Reverb Parameters



View A—FX—REVERB section overview.

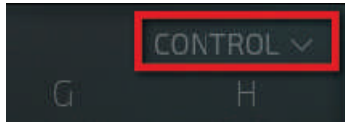
- (1) **DIFFUSION**: Adjust the density of reverb reflections.
- (2) **SIZE**: Adjust the size of the reverb room.
- (3) **FEEDBACK**: Controls the decay time of the reverb reflections.
- (4) **LEVEL**: Output level control and input mute switch.
- (5) **CENTER**: Controls the delay time at the center of eight delay taps for all at once. This adds density and depth.
- (6) **SPREAD**: Spreads the delay times between the eight delay-taps. This is good for resonant and metallic sounds when **SIZE** and **SPREAD** are at low levels).
- (7) **HP** (high-pass filter): Adjusts the damping of the high frequencies in the reverberated signal.
- (8) **LP** (low-pass filter): Controls the low-frequency content in the reverberated signal.
- (9) **MUTE**: Switches muting on or off for the input of the reverb effect.

## 5.7 Control Page—View A

The Control page provides access to Multi-Edit, Macro and MIDI sections. Use the Control page to make Macro assignments, configure MIDI preferences, Remote Octave settings and use Multi-Edit to access the same parameter across all instances of the [ANALOG](#) or [DIGITAL](#) synthesizers.

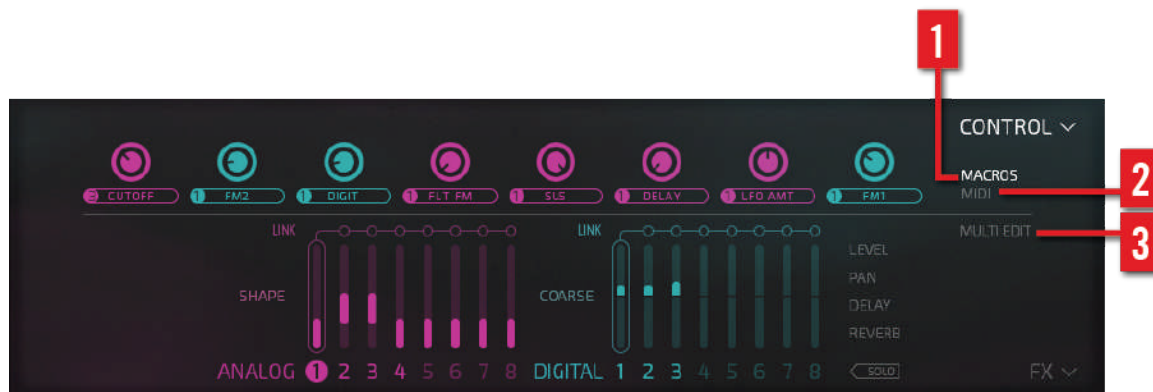
### Accessing the Control Page

- ▶ To access the Control page click [CONTROL](#).



- ▶ Click [CONTROL](#) again to return to the Voice Programmer.
- The Control page will reveal the Multi-Edit view, and access to the Macro and MIDI pages.

### Overview of the Control page



View A—CONTROL Page overview with Multi-edit, and the Macros sub-page selected.

- (1) **MACROS**: Use the Macros page to assign parameters to the eight Macro knobs which can be conveniently used in View B when performing.
- (2) **MIDI**: Use the MIDI page to adjust Pitch Bend and Mod Wheel settings, and configure Remote Octave for use.
- (3) **MULTI-EDIT**: Use Multi-Edit to access a manually selected parameter across all instances of the **ANALOG** or **DIGITAL** synthesizers.

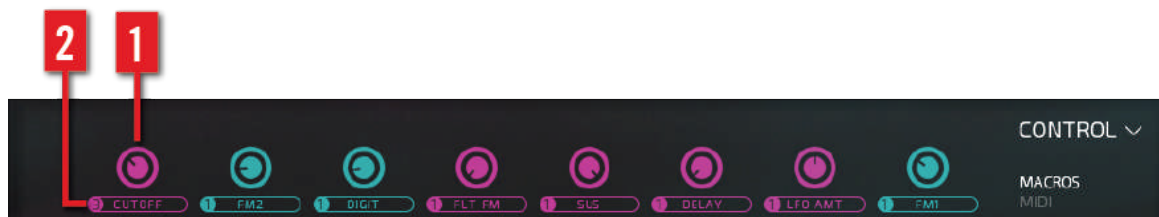
### 5.7.1 Macros Page

Use the Macros page in View A to assign Macros for use in View B. The eight Macro knobs in View B provide quick access to selected parameters. The macro assignments are made per Snapshot, which enables quick recall and control over favored parameters. This is especially useful in live performance situations where quick access to certain controls are required. They can also be controlled via automation parameters within your DAW (Digital Audio Workstation).

Macro controls are easy to assign, simply click on a learn button below any Macro knob to enable learn mode, and then click on the parameter to be assigned. The name of the macro updates accordingly with the name of the parameter the color of the engine Analog/Digital/Global (FX and Morph) and the number of the sound (if it's an **ANALOG/DIGITAL** parameter).

Macros can be assigned to synthesizer and effect parameters using the panel controls or their multi edit slider representation. The morph parameters may also be macro controlled as the learn mode stays active when switching back to the Voice Programmer using the Control view button.

#### Macros Page Parameters



View A—Macros Page overview.

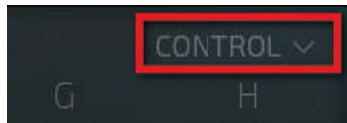
- (1) **Macro knob**: Turn a Macro knob to control the assigned parameter.

(2) **Learn Button / Assigned parameter:** Click the learn button to assign a parameter. The learn button will display the name of the assigned parameter and change the color of the knob. Magenta reflects the parameters from **ANALOG** sounds 1-8, Cyan represents the parameters from **DIGITAL** sounds 1-8 and grey represents global parameters such as FX and Morph.

### 5.7.1.1 Assigning a Parameter to a Macro Knob

To assign parameters to Macro knobs:

1. Select **View A** in REAKTOR.
2. Select **CONTROL**.



3. Select **MACROS**.



- Click the Learn button of the Macro you want to assign a parameter.



- Select a Sound 1-8 from the Sound Bar to open the synthesizer edit panel containing the parameter to be assigned, or open the **FX** page to select an effect parameter. Alternatively, select a slider from the **MULTI EDIT** page or Morph controls.



6. Click the parameter.



→ The selected parameter will be assigned to the Macro knob.





To use all the power of a Macro Control, link parameters in the Multi-edit page and assign parameter 1 to the macro. For more details on Multi-edit please read [↑5.7.1, Macros Page](#).

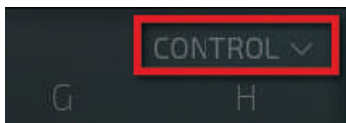


Clicking a Macro knob update the parameter selection of the Multi Edit display.

### 5.7.1.2 Reassigning Macros

It is possible to reassign the parameter of one Macro to another:

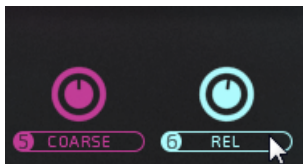
1. Select [View A](#) in REAKTOR.
2. Select [CONTROL](#).



3. Select [MACROS](#).



4. Click the Learn button of the Macro where you want to move a parameter to. The Macro will be highlighted, indicating it is in learn mode.



5. Click the Macro knob containing the parameter to be moved to the new location. Here the **COURSE** parameter from **ANALOG** sound 5 has replaced the **REL** (Release) parameter of **DIGITAL** sound 6.

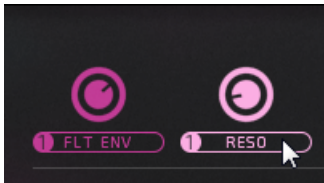


- The parameter will be moved to the new location, and the Macro the parameter was moved from will turn grey to indicate it is now empty.

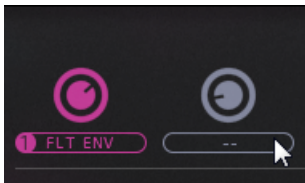
### 5.7.1.3 Clearing a Macro Assignment

To clear a Macro assignment:

- ▶ Click and hold on the Learn button to clear a parameter assignment.



- The assignment name is removed and the Macro knob is set to grey.

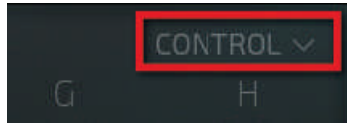


## 5.7.2 MIDI Page

Clicking on the MIDI page tab reveals the options regarding Mod Wheel, Pitch Bend and Remote Octave.

## Accessing the MIDI page

1. Select **View A** in REAKTOR.
2. Select **CONTROL**.



3. Select **MIDI**.



4. The MIDI page will appear at the top of the screen and display Mod Wheel, Pitch Bend and Remote Octave sections.

## MIDI Page Parameters



View A—Macros Page overview.

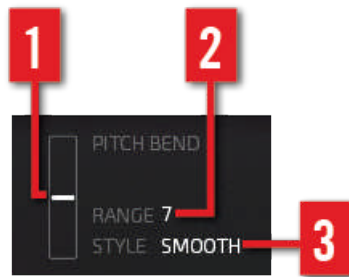
- (1) **PITCH BEND**: Set the Pitch bend Range and Style.
- (2) **MOD WHEEL**: Make parameter assignments to the Mod wheel.
- (3) **REMOTE OCTAVE**: Configure Remote Octave settings.

### 5.7.2.1 Pitch Bend

Pitch bend is used to bend the pitch of notes during a performance to introduce expressive nuances. To use pitch bend depress a key, and move the pitch bender, wheel or slider on your connected controller keyboard.

Use the Pitch bend section to monitor pitch bend activity, set the range, and style of the pitch bend.

#### Pitch Bend Parameters



View A—Pitch Bend parameters.

(1) **PITCH BEND**: Provides visualization of pitch bend activity.

(2) **RANGE**: Set the pitch bend range +/-24 semitones.

The available range is: 1-24.

(3) **STYLE**: Select one of seven pitch bend styles which are set to certain predefined scales.

The available pitch bend styles are:

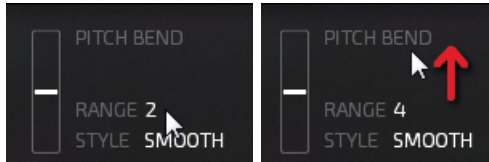
- **Smooth**: classic pitch bend with no mapping applied.
- **Semi**: pitch bend is quantized to semitone steps.
- **Maj**: pitch bend is quantized to the major scale.
- **Min**: pitch bend is quantized to the minor scale.
- **Dim**: pitch bend is quantized to 3 semitone steps.
- **Aug**: pitch bend is quantized to 4 semitone steps.

- **Octave:** pitch bend is quantized to octaves.

## Setting the Pitch Bend Range

To select a new pitch bend range in semitones:

- ▶ Drag the mouse up or down over the **RANGE** parameter.



## Setting the Pitch Bend Style—View A

To select a new pitch bend range:

- ▶ Drag the mouse up or down over the **STYLE** parameter.



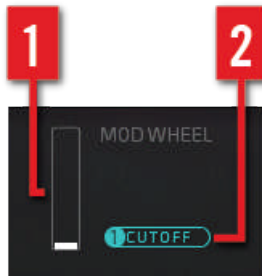
### 5.7.2.2 Mod Wheel

Mod wheel (modulation wheel) can be used to control one parameter from ROUNDS. Assign the parameter of your choice using the Mod-wheel macro.



To use all the power of macro control, link parameters in the Multi-edit page and assign slider 1 to the Mod wheel macro. For more details on Multi-edit please read [↑5.7.3, Multi-Edit](#).

## Mod Wheel Parameters



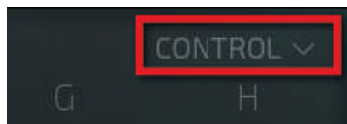
View A—Mod Wheel parameters.

- (1) **MOD WHEEL**: Provides visualization of mod wheel activity.
- (2) **MOD WHEEL Macro Learn button**: Displays the parameter assigned to the Mod wheel macro. Use the Learn button to assign a parameter.

## Assigning a Parameter to the Mod Wheel Macro

To assign a parameter to the mod wheel macro:

1. Select **View A** in REAKTOR.
2. Select **CONTROL**.



3. Select **MIDI**.



4. Click the mod Wheel macro learn button.





5. For example, select a Sound 1-8 from the Sound Bar to open a synthesizer edit panel and select a parameter to be assigned. Alternatively you could open the **FX** page to select an effect parameter, or a slider from the **MULTI-EDIT** page. Here Sound 7 is selected.



- Click the parameter you want to assign. In this example, **CUTOFF** from the filter section is selected.



→ The selected parameter will be assigned to the mod wheel macro.

### 5.7.2.3 Remote Octave

Remote Octave provides a special key zone that allows for real time manipulation of the Voice Programmer. It's possible to think of it as a remote control on your keyboard controller to change the on/off state of Sound Blocks and Sound Cells. This can be used in a performances to change a sequence on the fly to add variation or for precise control when programming sequences in your favorite DAW.

The key zone of the Remote Octave area can be shifted up and down octaves and it is possible to switch the Remote Octave input to another MIDI channel. This is useful when ROUNDS is used with an external arpeggiator.

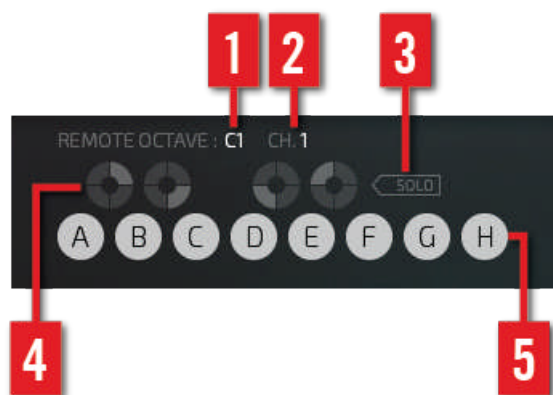
Here's a guide to using Remote Octave:

- The white keys control the activity state of the eight Sound Blocks **A–H**.
- The black keys **C#, D# F#, G#** override the On/Off state of the Sound Cells on all blocks.

- The fifth black key A# is used in conjunction with the other four and switches between two behaviors. The default mode works as if the resulting states would be programmed (meaning the change of the sound sequence can be dramatic). The secondary mode works like a Solo mode on the Cells and keeps the running sequence intact.
- The MIDI Channel for the Remote Octave can be changed to allow the usage of an external arpeggiator (with KOMplete CONTROL S-SERIES keyboards the setting should be kept at channel 1).
- The base key of the Remote Octave can be set to start from -C-2 and transposed through to C7.

There is strong visual feedback of the Voice Programmer to the actions of the Remote Octave.

### Remote Octave Parameters



View A—Remote Octave parameters.

- (1) **Remote Octave Base Key:** Set the base key for the range of the Remote Octave. This can be set to start from -C-2 and transposed through to C7.
- (2) **MIDI Channel:** Set the MIDI channel for the Remote Octave.
- (3) **SOLO Remote Control:** Indicates when solo mode is activated using the A# key within the Remote Octave range.

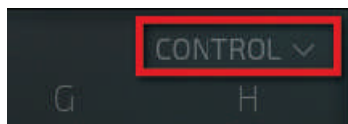
(4) **Sound Cell Remote Control:** Provides visual feedback regarding the activity of Sound Cells being manipulated by Remote Octave on your controller keyboard or MIDI device. Press black keys C#, D#, F#, G# within the Remote Octave range to play only the selected Sound Cell across all Sound Blocks.

(5) **Sound Block Remote Control:** Provides visual feedback regarding the activity of Sound Blocks A-H being manipulated on your controller keyboard or MIDI device. Press white keys C, D, E, F, G, A, B and C within the Remote Octave range to play only the selected Sound Blocks.

### Controlling Sound Blocks and Sound Cells using Remote Octave

To control Sound Blocks and Sound Cells remotely using Remote Octave:

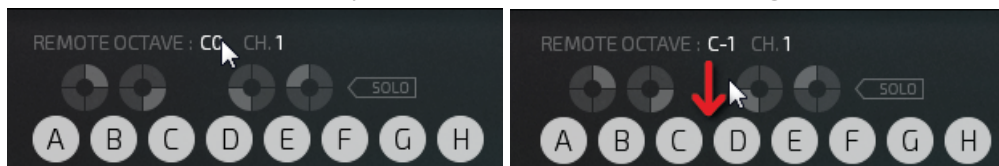
1. Select **View A** in REAKTOR.
2. Select **CONTROL**.



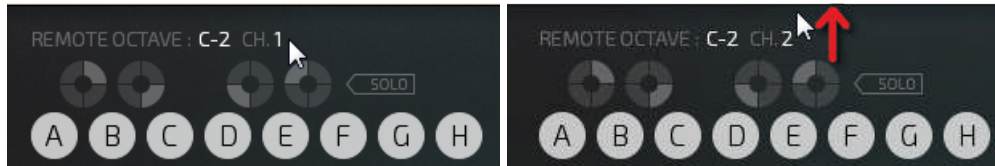
3. Select **MIDI**.



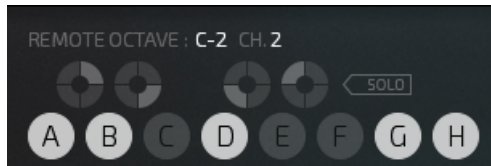
4. Drag the mouse up or down over the **REMOTE OCTAVE** parameter to set the Remote Octave base key. The base key dictates which octave of the controller keyboard is used to control the Sound Block and Sound Cells remotely. By default the base key is set to key C1, however, it can be transposed to start from note C-2 through to C7.



5. Drag the mouse up or down over the **CH.** parameter to set the MIDI channel.



6. Use the white keys within the set Remote Octave range on your controller keyboard to override the on/off state of the Sound Blocks.



7. Use the four black keys C#, D# F#, G# within the Remote Octave range on your controller keyboard to override the on/off state of the Sound Cells on all Sound Blocks.
8. Use the fifth black key within the Remote Octave range on your controller keyboard to override the on/off state of the **SOLO** button.

### 5.7.3 Multi-Edit

Multi-Edit view eases the editing of different sounds in context. The two banks of sliders above the Sound Bar selection numbers represent the parameter value for the selected parameter across all instances of the **ANALOG** or **DIGITAL** synthesizers. The name of the selected parameter is displayed to the left of each slider bank, along with the value of the parameter when a slider is moved.

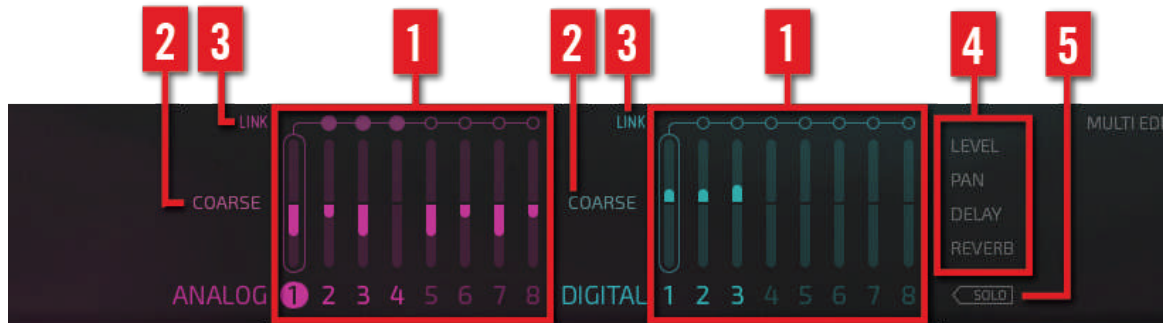
The buttons above the sliders enable relative linking and inversed linking to the same parameter of sound 1. Sound 1 (**ANALOG** and **DIGITAL**) can therefore be used as the control master for the subsequent sliders (sounds 2-8).

The buttons to the right of the slider banks **LEVEL**, **PAN**, **DELAY** and **REVERB** are shortcuts. By selecting a shortcut this parameter is selected for the **ANALOG** and **DIGITAL** engine. Enabling the use of the Multi-Edit sliders for quick mixing tasks. The shortcuts make these parameters also accessible when the **FX** panel is shown below and the synthesizer parameters are hidden.



To use all the power of a Macro control, link parameters in the Multi-Edit page and assign parameter 1 to a macro. For more details on Multi-edit please read [↑5.7.1, Macros Page](#).

## Multi-Edit Parameters—View A



View A—MULTI-EDIT section overview.

(1) **Sliders:** There are two slider banks, each containing eight individual sliders that represent the same selected parameter (2) for each instance of the **DIGITAL 1-8** and **DIGITAL 1-8** synthesizers. Sound 1 for the **ANALOG** and **DIGITAL** slider bank can be used as the control master for the subsequent sounds 2-8 when they are linked using the link buttons (3).

(2) **Parameter:** To the left of each slider bank is the name of the selected parameter for edit. As a slider is adjusted the parameter value will be displayed below the parameter name for the selected sound.

(3) **LINK:** Link sliders to control multiple sounds at once using the slider of sound 1. The buttons above the sliders enable relative linking and inversed linking to the same parameter.

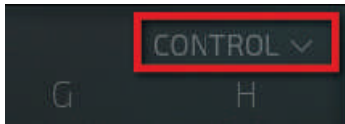
(4) **FX Shortcuts:** The buttons to the right of the slider banks **LEVEL**, **PAN**, **DELAY** and **REVERB** are shortcuts. By selecting a shortcut, the named parameter can be quickly edited using the Multi-Edit sliders of both slider banks.

(5) **SOLO:** Click to hear the selected sound in place and mute all other sounds. Click again to switch back to hear the sequence of all assigned sounds.

### 5.7.3.1 Selecting and Editing Parameters in Multi-Edit

To select sound sliders for editing:

1. Select **View A** in REAKTOR.
2. Select **CONTROL**.



3. Select Sound **1-8** from the Sound Bar to display the synthesizer panel containing the parameters that can be selected. Alternatively, select a shortcut (**LEVEL**, **PAN**, **DELAY** or **REVERB**) to the right of Multi-Edit sliders or parameter from the Morph controls in the Voice Programmer. Use **CONTROL** to switch views if necessary.





4. Click the parameter or shortcut to select them for use with the sliders. For example, here the Filter **CUTOFF** of **ANALOG** sound 4 has been selected.



5. Drag the slider up to increase the value of the selected parameter. Drag the slider down to decrease the value of the selected parameter. In this example, the **ANALOG** Multi-Edit bank is conveniently providing an overview of the **CUTOFF** parameter for all eight instances of the **ANALOG** synthesizer.



- The selected parameter/shortcut can be changed across the each instance of the synthesizer using the Multi-Edit sliders. Linked parameters will change simultaneously when moving Sound 1.





Reset the value of a slider by double clicking it.

### 5.7.3.2 Linking Sliders in Multi-Edit View

Link sliders within Multi-Edit view and control them using the sound 1 slider of each slider bank.

- The slider for Sound 1 is the master slider for all linked sliders and can be used to control the assigned parameter level.  
The button will become filled to indicate it is linked to sound slider 1 or display the minus sign to indicate that it is linked inversely.

- Unlinked button:



- Linked button:



- Inversed button:



### Linking Sliders

1. Click the round button above each slider to link them to sound 1 slider. The button will become filled to indicate it is linked to sound slider.

- Click the buttons above the sliders to enable relative or inversed linking of parameters.



- Drag the slider 1 value to increase or decrease the values of the linked parameters.



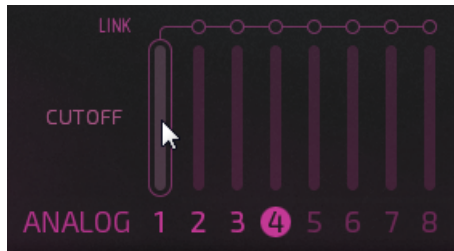


Link all sliders at once by clicking the LINK button.

## Changing Multiple Slider Levels

To quickly change multiple slider parameter levels:

1. Hold the right mouse button in the sliders area.



2. Drag the mouse left or right across the sliders.



→ Parameter values will change in accordance with movement of the mouse.



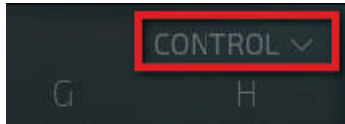
Reset the value of sliders by double clicking them.

## 5.8 Control Page—View B

From View B the Control page provides access to Multi-Edit and MIDI controls. Use the Control page to make Macro assignments, configure MIDI preferences, Remote Octave settings and use Multi-Edit to access multiple assigned parameters across the synthesizers and effects.

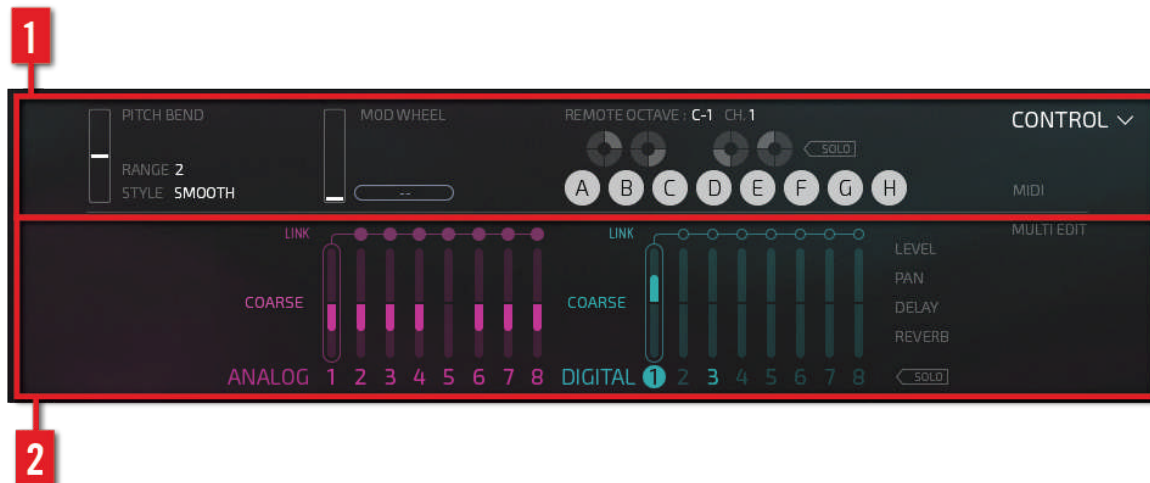
## Accessing the Control Page

- ▶ To access the Control page click **CONTROL**.



- ▶ Click **CONTROL** again to return to the Voice Programmer.
- The Control page will reveal the Multi-Edit view, and MIDI pages.

## Overview of the Control page—View B



View B—**CONTROL** Page overview with Multi-edit, and the Macros sub-page selected.

- (1) **MIDI**: Use the MIDI controls to make Pitch Bend and Mod Wheel settings, and configure Remote Octave for use. For more information please read [↑5.8.1, Multi-Edit](#).
- (2) **MULTI-EDIT**: Use Multi-Edit to access multiple manually assigned parameters from the synthesizers and effects. For more information please read [↑5.8.2, MIDI Parameters](#).

### 5.8.1 Multi-Edit

Multi-Edit view eases the editing of different sounds in context. The two banks of sliders above the Sound Bar represent the value for the selected parameter across all instances of the **ANALOG** or **DIGITAL** synthesizers, including morph controls and effects. The name of the selected parameter is also displayed to the left of each slider bank, along with the value of the parameter when a slider is moved.

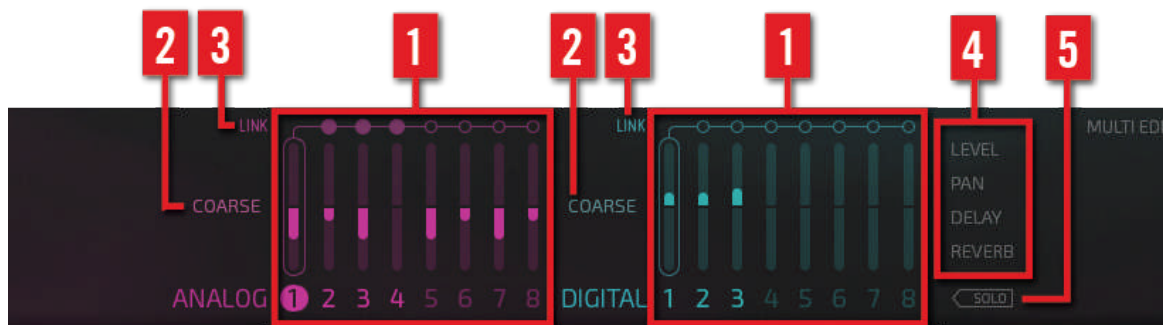
The buttons above the sliders enable relative linking and inversed linking to the same parameter of sound 1. Sound 1 (**ANALOG** and **DIGITAL**) can be used as the control master for the subsequent sliders (sounds 2-8).

The buttons to the right of the slider banks **LEVEL**, **PAN**, **DELAY** and **REVERB** are shortcuts. By selecting a shortcut, the named parameter can be quickly added to the Multi-Edit sliders of both slider banks, allowing quick editing of effects for all synthesizers. This is very convenient as it negates the need to constantly switch to the FX panel view.



To add more than one parameter to a macro, link parameters in the Multi-Edit page in View B and assign parameter 1 to a macro. For more details on Multi-edit please read [↑5.8.1.2, Linking Sliders in Multi-Edit View](#).

### Multi-Edit Parameters



View B—Multi-Edit section overview.

(1) **Sliders:** There are two slider banks, each containing eight individual sliders that represent the selected parameter (2) for each instance of the **ANALOG 1-8** and **DIGITAL 1-8** synthesizers. Sound 1 (**ANALOG** and **DIGITAL**) can be used as the control master for the subsequent sliders (sounds 2-8) when the parameters are linked using (3).

(2) **Selected Parameter:** To the left of each slider bank is the name of the selected parameter for edit.

(3) **LINK:** Link sliders to change multiple sounds at once using the slider of sound 1. The buttons above the sliders enable relative linking and inversed linking to the same parameter of sound 1.

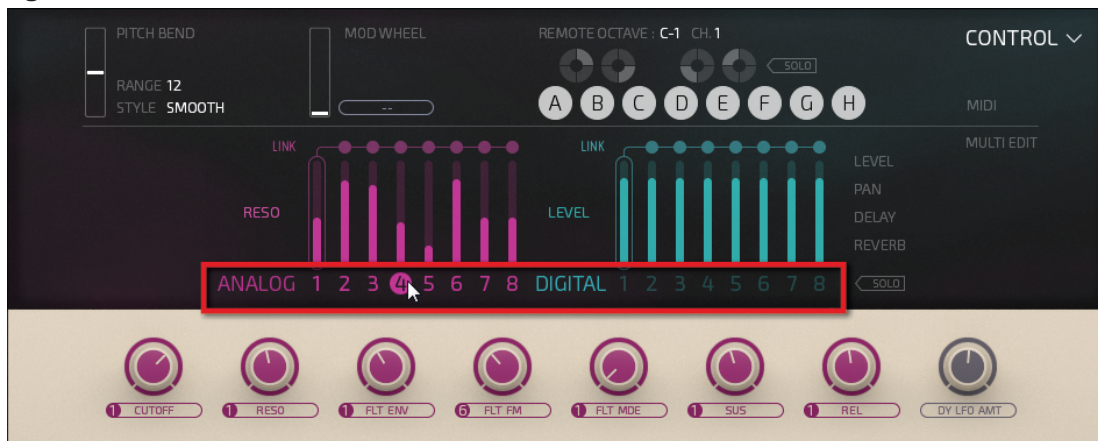
(4) **FX Shortcuts:** **LEVEL**, **PAN**, **DELAY** and **REVERB** are shortcuts to add the named parameter to the slider banks of both engines.

(5) **SOLO:** Click to hear the selected sound in place and mute all other sounds. Click again to switch back to hear the sequence of all assigned sounds.

### 5.8.1.1 Selecting and Editing Parameters

To select sound sliders for editing:

1. Select the Sound 1-8 you want to edit from the Sound Bar. Alternatively, you can also select a shortcut (**LEVEL**, **PAN**, **DELAY** or **REVERB**) by clicking a shortcut button to the right of Multi-Edit sliders.





- Click a Macro knob or shortcut to edit it using the sliders. For example, here we assign the Filter **CUTOFF** of **ANALOG** sound 4.



- Drag the slider up to increase the value of the selected parameter. Drag the slider down to decrease the value of the selected parameter. In this example, the **ANALOG** Multi-Edit bank is conveniently providing an overview of the **CUTOFF** parameter for all eight instances of the **ANALOG** synthesizer.



- The selected parameter/shortcut can be changed across the each instance of the synthesizer using the Multi-Edit sliders. Linked parameters will change simultaneously when moving Sound 1.



Reset the value of a slider by double clicking it.

### 5.8.1.2 Linking Sliders in Multi-Edit View

Link sliders within Multi-Edit view and control them using the sound 1 slider of each bank.

- The slider for Sound 1 is the master slider for all linked sliders and can be used to control the assigned parameter level.  
The button will become filled to indicate it is linked to sound slider 1.

- Unlinked button:



- Linked button:

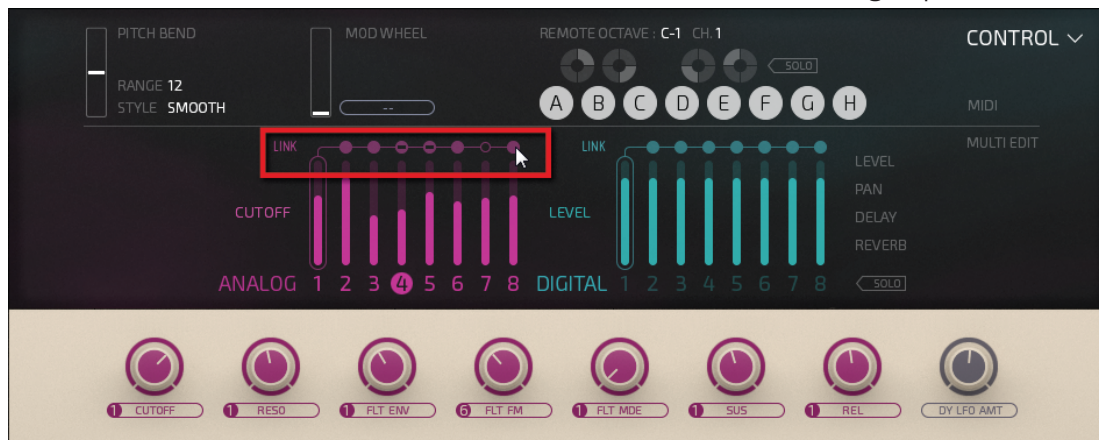


- Inversed button:



### Linking Sliders

1. Click the round button above each slider to link them to sound 1 slider. The button will become filled to indicate it is linked to sound slider.
2. Click the buttons above the sliders to enable relative or inversed linking of parameters.





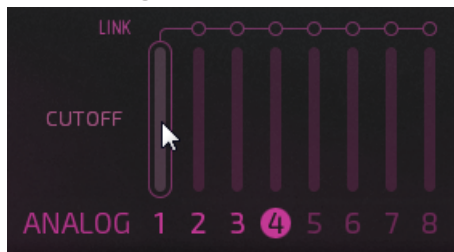
3. Drag the slider 1 value to increase or decrease the values of the linked parameters.



## Changing Multiple Slider Levels

To quickly change multiple slider parameter levels:

1. Hold the right mouse button in the sliders area.



2. Drag the mouse left or right across the sliders.



→ Parameter values will change in accordance with movement of the mouse.



Reset the value of sliders by double clicking them.

## 5.8.2 MIDI Parameters

Clicking on the MIDI page tab reveals the options regarding Mod Wheel, Pitch Bend and Remote Octave.



View B—Macros Page overview.

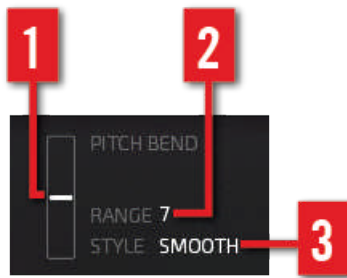
- (1) **PITCH BEND**: Set the Pitch bend Range and Style.
- (2) **MOD WHEEL**: Make parameter assignments to the Mod wheel.
- (3) **REMOTE OCTAVE**: Configure Remote Octave settings to control the Voice Programmer from a MIDI device.

### 5.8.2.1 Pitch Bend

Pitch bend is used to bend the pitch of notes during a performance to introduce expressive nuances. To use pitch bend depress a key, and move the pitch bender, wheel or slider on your connected controller keyboard.

Use the Pitch bend section to monitor pitch bend activity, set the range, and style of the pitch bend.

## Pitch Bend Parameters



View B—Pitch bend parameters.

(1) **PITCH BEND**: Provides visualization of pitch bend activity.

(2) **RANGE**: Set the pitch bend range +/-24 semitones.

The available range is: 1-24.

(3) **STYLE**: Select one of seven pitch bend styles which are set to certain predefined scales.

The available pitch bend styles are:

(1) **PITCH BEND**: Provides visualization of the pitch bend activity.

(2) **RANGE**: Set the pitch bend range +/-24 semitones.

The available range is: 1-24.

(3) **STYLE**: Select one of seven pitch bend styles which are set to certain predefined scales.

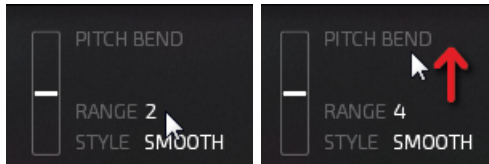
The available pitch bend styles are:

- **Smooth**: classic pitch bend with no mapping applied.
- **Semi**: pitch bend is quantized to semitone steps.
- **Maj**: pitch bend is quantized to the major scale.
- **Min**: pitch bend is quantized to the minor scale.
- **Dim**: pitch bend is quantized to 3 semitone steps.
- **Aug**: pitch bend is quantized to 4 semitone steps.
- **Octave**: pitch bend is quantized to octaves.

## Setting the Pitch Bend Range

To select a new pitch bend range in semitones:

- ▶ Drag the mouse up or down over the **RANGE** parameter.



## Setting the Pitch Bend Style

To select a new pitch bend range:

- ▶ Drag the mouse up or down over the **STYLE** parameter.



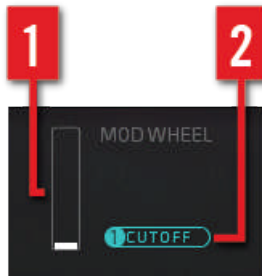
### 5.8.2.2 Mod Wheel

Mod wheel (modulation wheel) can be used to assign and control one or more parameters from ROUNDS. This includes parameters from the synthesizer, effects and Multi-Edit page. Assign the parameter of your choice using the Mod-wheel macro.



To control more than one parameter using the Mod wheel, link parameters in the Multi-edit page and assign parameter 1 to the Mod wheel macro. For more details on Multi-edit please read [↑5.8.1, Multi-Edit](#).

## Mod Wheel Parameters



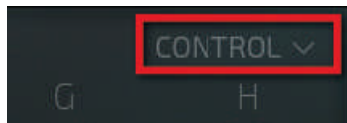
View B—Mod wheel parameters.

- (1) **MOD WHEEL:** Provides visualization of mod wheel activity.
- (2) **Mod wheel Macro:** Displays the parameter assigned to the mod wheel macro. Use the Learn button to assign a parameter.

## Assigning a Parameter to the Mod Wheel Macro

To assign a parameter to the mod wheel macro:

1. Select **View B** in REAKTOR.
2. Select **CONTROL**.



3. Click the mod Wheel macro learn button.



4. Click the Macro knob you want to assign. In this example, **RESO** is selected.



→ The selected parameter will be assigned to the mod wheel macro.

### 5.8.2.3 Remote Octave

Remote Octave provides a special key zone that allows for real time manipulation of the Voice Programmer. It's possible to think of it as a remote control on your keyboard controller to change the on/off state of Sound Blocks and Sound Cells. This can be used in a performances to change a sequence on the fly to add variation or for precise control when programming sequences in your favorite DAW.

The key zone of the Remote Octave area can be shifted up and down octaves and it is possible to switch the Remote Octave input to another MIDI channel. This is useful when ROUNDS is used with an external arpeggiator.

Here's a guide to using Remote Octave:

- The white keys control the activity state of the eight Sound Blocks [A–H](#).
- The black keys C#, D# F#, G# override the On/Off state of the Sound Cells on all blocks.
- The fifth black key A# is used in conjunction with the other four and switches between two behaviors. The default mode works as if the resulting states would be programmed (meaning the change of the sound sequence can be dramatic). The secondary mode works like a Solo mode on the Cells and keeps the running sequence intact.
- The MIDI Channel for the Remote Octave can be changed to allow the usage of an external arpeggiator (with KOMplete CONTROL the setting should be kept at channel 1).
- The location of the Remote Octave can be set to start from -C-2 through to C7.

There is strong visual feedback of the Voice Programmer to the actions of the Remote Octave.

## Remote Octave Parameters



View B—Remote octave parameters.

- (1) **Remote Octave Base Key:** Set the base key for the range of the Remote Octave.
- (2) **MIDI Channel:** Set the MIDI channel for the Remote Octave.
- (3) **SOLO Remote Control:** Indicates when solo mode is activated using the A# key within the Remote Octave range on a controller keyboard.
- (4) **Sound Cell Remote Control:** Provides visual feedback regarding the activity of Sound Cells being manipulated by Remote Octave on your controller keyboard or MIDI device. Press black keys C#, D#, F#, G# within the Remote Octave range to play only the selected Sound Cell across all Sound Blocks.
- (5) **Sound Block Remote Control:** Provides visual feedback regarding the activity of Sound Blocks A-H being manipulated on your controller keyboard or MIDI device. Press white keys C, D, E, F, G, A, B and C within the Remote Octave range to play only the selected Sound Blocks.

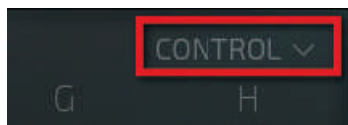
## Controlling Sound Blocks and Sound Cells Using Remote Octave

To control Sound Blocks and Sound Cells remotely using Remote Octave:

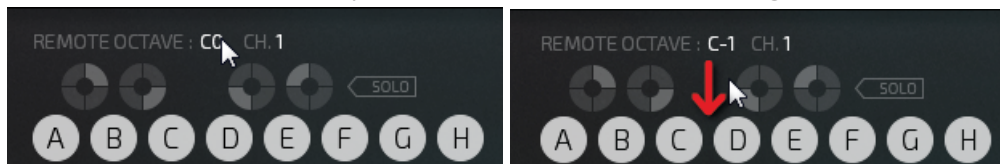
1. Select **View B** in REAKTOR.



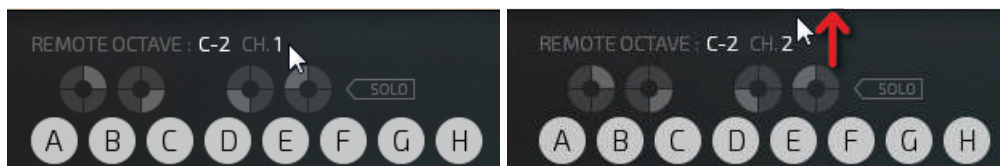
2. Select **CONTROL**.



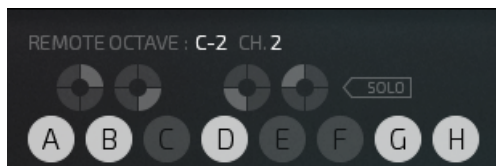
3. Drag the mouse up or down over the **REMOTE OCTAVE** parameter to set the Remote Octave base key. The base key dictates which octave of the controller keyboard is used to control the Sound Block and Sound Cells remotely. By default the base key is set to key C1, however, it can be transposed to start from note C-2 through to C7.



4. Drag the mouse up or down over the **CH.** parameter to set the MIDI channel.



5. Use the white keys within the set Remote Octave range on your controller keyboard to override the on/off state of the Sound Blocks.



6. Use the four black keys C#, D# F#, G# within the Remote Octave range on your controller keyboard to override the on/off state of the Sound Cells on all Sound Blocks.
7. Use the fifth black key within the Remote Octave range on your controller keyboard to override the on/off state of the **SOLO** button.

---

## 6 Credits

**Project Management**

Marin Vrbica.

**Product Concept**

Max Zagler and André Estermann.

**Instrument Development**

Max Zagler.

**Product Design**

André Estermann, and Tommaso De Donatis.

**Contributions / Additional Development**

Tommaso De Donatis, and Dietrich Pank.

**FX Development**

Dietrich Pank

**GUI Design**

Efflam Le Bivic.

**Sound Design**

Jamil Samad, Tommaso De Donatis, André Estermann, Antonio de Spirt, Robert Linke, Kevin Schröder, Frank Eikam, John Valasis, Noritaka Ubukata, Florina Speth, Nils Böttcher, Michael Fakesch, Niklas Klügel, Xenos Soundworks, Detlev Braun, Maximilian Spindler.

**Quality Assurance**

Bill Youngman, Scott Pearsall, Frank Ellendt, and Frank Stempka.

**Documentation**

David Gover, André Estermann, Tommaso De Donatis, and Christian Schulz.

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