BLOCKS WIRED

MANUAL

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Document authored by: Native Instruments GmbH

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NATIVE INSTRUMENTS GmbH
Schlesische Str. 29-30
D-10997 Berlin
Germany
www.native-instruments.de

NATIVE INSTRUMENTS North America, Inc.
6725 Sunset Boulevard
5th Floor
Los Angeles, CA 90028
USA
www.native-instruments.com

NATIVE INSTRUMENTS K.K.
YO Building 3F
Jingumae 6-7-15, Shibuya-ku,
Tokyo 150-0001
Japan
www.native-instruments.co.jp

NATIVE INSTRUMENTS UK Limited
18 Phipp Street
London EC2A 4NU
UK
www.native-instruments.com

NATIVE INSTRUMENTS

Table of Contents

1   Welcome to BLOCKS WIRED

BLOCKS WIRED takes you on a tour to new modular grounds: tweak and play three pre-patched REAKTOR Blocks Ensembles showcasing the power of the REAKTOR Blocks framework. Experience unique ways of creating sounds only available in modular synthesis, and explore new and unheard sequences, percussion, and textures.

1.1   About the BLOCKS WIRED Documentation

This manual gives an overview over the basic workflows in BLOCKS WIRED.

While most of the instructions in this manual do not require prior knowledge about REAKTOR, it is recommended to read the REAKTOR 6 Getting Started document to get a better understanding of the underlying concepts and features.

►   To access the REAKTOR 6 Getting Started document, open the *Help* menu in the REAKTOR menu bar:
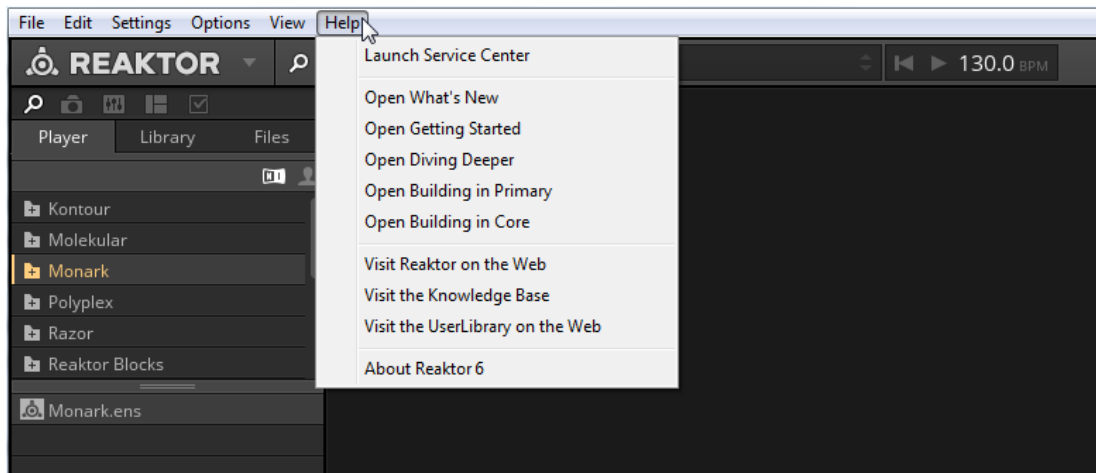
1.1.1   Document Conventions

This section introduces you to the signage and text highlighting used in this manual.

- Text appearing in (drop-down) menus (such as *Open…*, *Save as…* etc.) and paths to locations on your hard disk or other storage devices is printed in *italics.*

- Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) is printed in 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**.

- References to keys on your computer's keyboard you'll find put in square brackets (e.g., "Press [Shift] + [Enter]").

▶   Single instructions are introduced by this play button type arrow.

→   Results of actions are introduced by this smaller arrow.

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

The speech bubble icon indicates a useful tip that may often help you to solve a task more efficiently.

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

The red cross icon warns you of serious issues and potential risks that require your full attention.

1.1.2 Info Hints

Blocks features comprehensive information about the Blocks, their parameters and inputs and outputs in the application. You can view this information in the form of tooltips (called Info Hints in REAKTOR).

► To show the Info Hints in REAKTOR, enable the Show Info Hints option in the Toolbar.
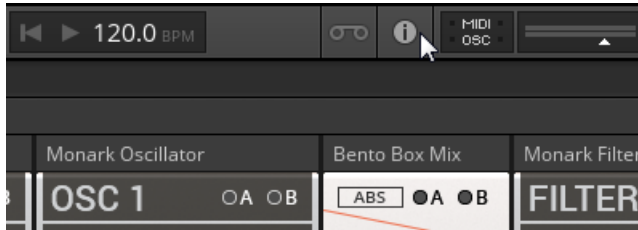
Info Hints are available for each entire Block, the individual parameters, as well as the inputs and outputs.

► To view the Info Hint for a Block, place the mouse over its header:
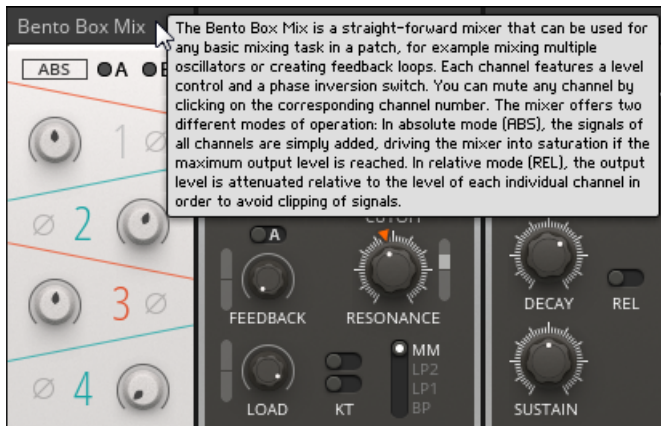
▶ To view the Info Hint for a parameter, place the mouse over its Panel control:

▶ To view the Info Hint for an input or output, place the mouse over the port in the Structure.

2   Installation and Activation

2.1   Installing BLOCKS WIRED

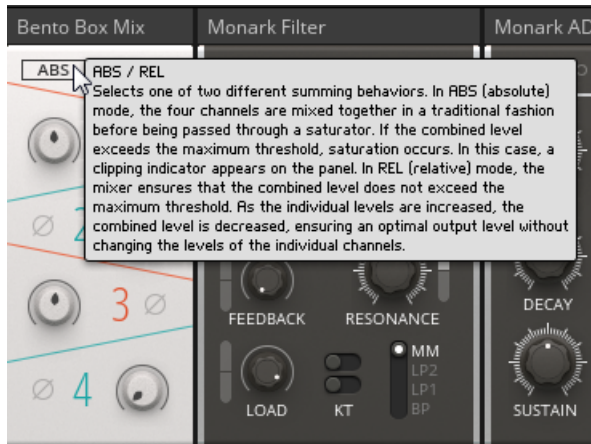The following section explains how to install and activate BLOCKS WIRED. Although this process is straightforward, please take a minute to read these instructions, as doing so might prevent some common problems.

► To install BLOCKS WIRED, 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 BLOCKS WIRED installed.

A full version of REAKTOR 6.0.1 or the free REAKTOR PLAYER 6.0.1 (or subsequent versions) is required to use BLOCKS WIRED. You can download the free REAKTOR PLAYER from the Native Instruments website.

2.2   Activating BLOCKS WIRED

When installation is finished, start the Service Center application, which was installed with BLOCKS WIRED. It will connect your computer to the Internet and activate your BLOCKS WIRED installation. In order to activate your copy of BLOCKS WIRED, 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.

3　How to Use BLOCKS WIRED

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

> 💬　For the latest information on REAKTOR PLAYER files and using Snapshots please refer to the REAKTOR Getting Started Guide, available from the REAKTOR *Help* menu.

3.1　How to Open BLOCKS WIRED

This is how to open BLOCKS WIRED in REAKTOR or REAKTOR PLAYER:

1.　Start REAKTOR or REAKTOR PLAYER.
2.　Click the Browser icon to open the Browser
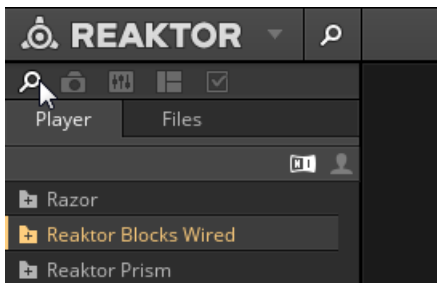
3.　Click the Player tab to show the REAKTOR PLAYER files (or you can open the Browser with the [F1] key from your keyboard).
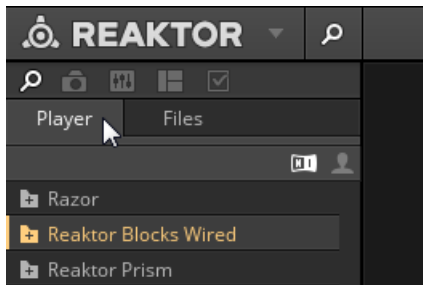
4.   Click the Blocks Wired folder. The content of the folder will be displayed in the lower sec-
      tion of the Browser.
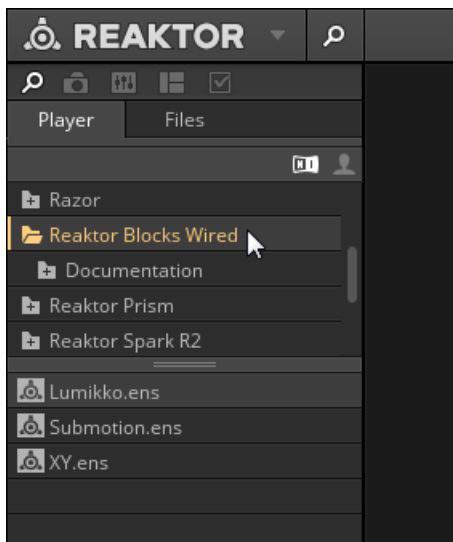
5.   Double-click either the XY.ens, the Lumikko.ens, or the Submotion.ens file, or drag it into
      the main screen.
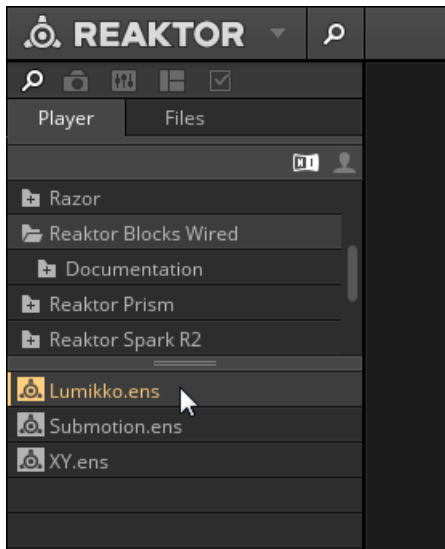
⇨ The Ensemble will be loaded in REAKTOR/REAKTOR PLAYER:

3.2   Exploring Factory-set Snapshots

All three BLOCKS WIRED Ensembles come with a wide selection of preset sounds, ready to be used in your music. Exploring and tweaking the presets is useful for learning the Ensembles before creating your own sounds from scratch.

> A Snapshot is REAKTOR's notion for a sound, preset, or patch. BLOCKS WIRED 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.

► Play some notes on your MIDI keyboard to verify if REAKTOR PLAYER is set up correctly and to get a first impression of how BLOCKS WIRED sounds.

> Please refer to the REAKTOR Getting Started for details on configuring your Audio and MIDI settings, available from the *Help* Menu.

The Snapshots of BLOCKS WIRED are accessible from the drop-down menu in REAKTOR PLAYER's header (called the Toolbar) or from the Side Pane.

BLOCKS WIRED interface with Snapshot list in the Side Pane.

(**1**) Side Pane button

(**2**) Snapshot drop-down menu

(**3**) Snapshot button

(**4**) Snapshot Banks

(**5**) Snapshots

3.2.1 Loading a Snapshot from the Toolbar

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

1. Click on 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.

3.2.2   Loading a Snapshot from the Side Pane

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

1. Click the Side Pane button (**1**) in the Header to open the Side Pane.
2. Click the Snapshot button 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.

3.3   Saving a Snapshot

Snapshots can only be saved when using the full version of REAKTOR. However, all parameter settings made in BLOCKS WIRED are conveniently saved as part of your host software. If you are using the full version of REAKTOR, please read the REAKTOR Getting Started for more information on plug-in mode and saving Snapshots.

4   Lumikko Ensemble

Featuring two of the new West Coast Blocks (see section ↑7.19, West Coast DWG and ↑7.20, West Coast LPG), Lumikko brings the classic West Coast mono-synth voice to REAKTOR. While using only a small selection of Blocks, Lumikko is capable of producing a wide array of unusual and exciting sounds thanks to the powerful modulation possibilities within the Dual Waveform Generator (DWG), the unique character of the Low Pass Gates (LPGs), and extensive modulation and feedback patching.


Lumikko overview

(**1**) **Util Note In**: For more information on this Block, refer to section ↑7.18, UTIL NOTE IN in the Block Reference chapter.

(**2**) **West Coast DWG**: For more information on this Block, refer to section ↑7.19, West Coast DWG in the Block Reference chapter.

(**3**) **Bento Box Mix**: For more information on this Block, refer to section ↑7.4, Bento Box Mix in the Block Reference chapter.

(**4**) **LPG West Coast**: For more information on this Block, refer to section ↑7.20, West Coast LPG in the Block Reference chapter.

(**5**) **LFO** – **Rounds LFO**: For more information on this Block, refer to section ↑7.14, ROUNDS LFO in the Block Reference chapter.

(**6**) **Bento Box XFade**: For more information on this Block, refer to section ↑7.7, Bento Box Xfade in the Block Reference chapter.

(**7**) **Bento Box LFO**: For more information on this Block, refer to section ↑7.3, Bento Box LFO in the Block Reference chapter.

(**8**) **Bento Box Envelope**: For more information on this Block, refer to section ↑7.2, Bento Box Envelope in the Block Reference chapter.

(**9**) **ROUNDS REVERB**: For more information on this Block, refer to section ↑7.15, ROUNDS REVERB in the Block Reference chapter.

(**10**) **LEVEL S**: For more information on this Block, refer to section ↑7.10, LEVEL S in the Block Reference chapter.

Lumikko Audio and Modulation Signal Flow
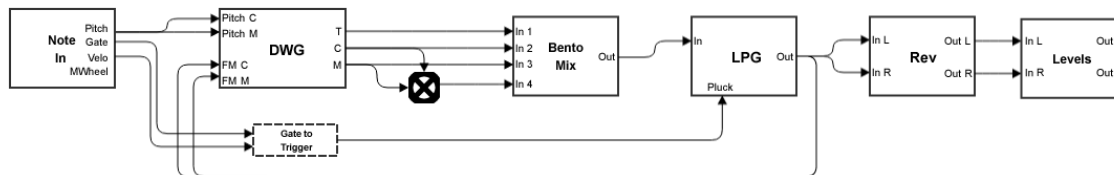
Signal flow diagram of the Lumikko Ensemble

The Dual Waveform Generator (DWG) receives pitch information from the Note In Block. The DWG's MOD (Modulator), CARRIER and TIMBRE outputs as well as a product of the MOD and CARRIER signals are mixed by a Bento Box Mix, and then filtered by a Low Pass Gate (LPG). This LPG gets triggered by the Note In (by way of a velocity-to-gate length conversion taking place 'behind the scenes'). The LPG's output feeds both of the DWG's FM inputs, and is then forwarded to a Reverb. Modulation is generated by a Rounds LFO and a Bento Box LFO (one of

which can be synchronized and used as a clock), and a Bento Box ADSR (triggered by the note-in Gate). The LFOs' output signals are crossfaded and sent to Mod A inputs (so can also cross-modulate), while the ADSR output signal is sent to all Mod B inputs.

Mixer Channel Assignment

Bento Box Mix

1: TIMBRE

2: CARRIER

3: MOD

4: [MOD × CARRIER]

5   XY Ensemble

Utilizing the West Coast XYS Sequencer in conjunction with the DWG, XY is capable of creating generative melodies and sonic textures. Numerous routings are possible via the modulation buses that, combined with the sequenced triggering of three LPGs, allow for the creation of complex layered sequences and interesting polyrhythms. The Comb Filter, fed by the timbre output of the DWG via the crossfader for adjustable external feedback via the LPG, is particularly useful for stringy drones and noise textures.

From melodic rhythmic sequences to noisy soundscapes, XY can meet a variety of needs.

> ⚠ The XY Ensemble needs both Clock and MIDI note input in order to produce sound. Make sure that XY is receiving a clock signal either from REAKTOR's built-in clock, or from an external sequencer or host software. Otherwise, you will not hear any audio from the XY Ensemble.

XY ensemble overview

(**1**) **Util Clock**: For more information on this Block, refer to section ↑7.17, UTIL CIOCK in the Block Reference chapter.

(**2**) **West Coast XYS**: For more information on this Block, refer to section ↑7.21, West Coast XYS in the Block Reference chapter.

(**3**) **West Coast DWG**: For more information on this Block, refer to section ↑7.19, West Coast DWG in the Block Reference chapter.

(**4**) **Clock Divider**: For more information on this Block, refer to section ↑7.8, CLK DIV in the Block Reference chapter.

(5), **(7)**, **(9)** **LPG– Mod / Carr/ Timbre**: For more information on this Block, refer to section ↑7.20, West Coast LPG in the Block Reference chapter.

(6), **(8)**, **(11)**, **(17)** **LEVEL S– Mod / Carr / TimbreMod / Carr / Timbre**: For more information on this Block, refer to section ↑7.10, LEVEL S in the Block Reference chapter.

(10) **COMB**: For more information on this Block, refer to section ↑7.9, COMB in the Block Reference chapter.

(12) **Util Note In**: For more information on this Block, refer to section ↑7.18, UTIL NOTE IN in the Block Reference chapter.

(13) **ROUNDS LFO**: For more information on this Block, refer to section ↑7.14, ROUNDS LFO in the Block Reference chapter.

(14) **Bento Box Envelope**: For more information on this Block, refer to section ↑7.2, Bento Box Envelope in the Block Reference chapter.

(15) **SCOPE**: For more information on this Block, refer to section ↑7.16, SCOPE in the Block Reference chapter.

(16) **ROUNDS DELAY**: For more information on this Block, refer to section ↑7.13, ROUNDS Delay in the Block Reference chapter.

XY Audio and Modulation Signal Flow
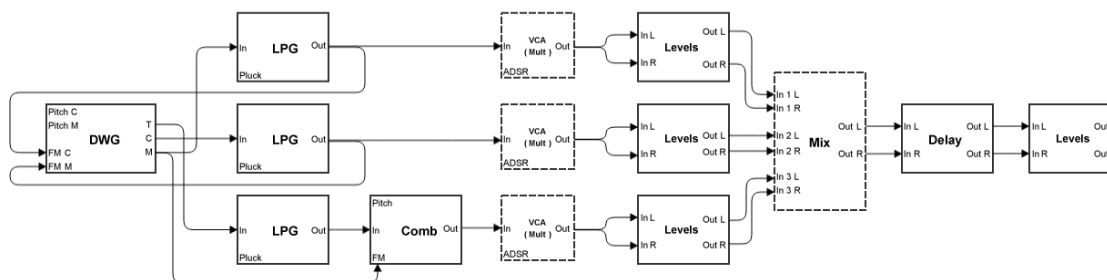
Signal Flow Diagram of the XY Ensemble

At the core of its synthesis engine XY features the Dual Waveform Generator (DWG), with each of its three outputs assigned to an LPG: the MOD (Modulator), the CARRIER, and the TIMBRE output. The Modulator LPG is plucked by XYS Gate X and is fed back into the DWG external

FM input to modulate the Carrier signal. The Carrier LPG is plucked by XYS Gate Y, and is fed back into the Modulator FM. The Timbre LPG is plucked by Clock Divider (CLK DIV) Gate 3, and then processed by a Comb Filter that uses DWG Carrier Output as an FM source. All three voices are dynamically controlled by the ADSR before the Stereo level controls. The signal passes through the master Stereo Level (Level S) before going through the Rounds Delay.

The main sequencing routings of the West Coast XYS feature the X gates of the XYS triggering the Pluck of the Modulator LPG, the Y gates triggering the Pluck of the Carrier LPG, whilst the 3rd output of the Clock Divider plucks the Timbre LPG. The XYS (Modulation) Out is summed with the Note In Pitch to control Pitch transposition of the DWG's Modulator Oscillator. The Logic Out is summed with Note In to transpose the Carrier Pitch, and is also used as a Modulation Source to the Clock Divider. This is particularly useful for creating generative rhythms.

The Clock Divider is controlled by the main Clock module and drives the XYS X Gate with Gate 1. The Y-Gate is driven by Clock Gate 2, whilst Gate 3 is used as a pluck source for the LPG 3 Pluck. Gate 4 is connected to the LFO Reset input. Gate 5 triggers the master ADSR, which helps create interesting rhythmical structures. When set to a low clock division, you can use this combination to sustain the instrument permanently. Note that, Muting CLK div 5 will turn off the permanent sustain, useful for switching off the Free Running sequences.

All Modulation A ports are receiving the LFO (except the LFO itself) which can act as an expressive sound shaper as well as add rhythmical textures.

Module	Mod A Source	Mod B Source	Other
DWG	LFO	XYS Out Logic	Ext FM M <- LPG Mod Ext FM C <-LPG Carr Mod Pitch <- XYS Out + Note In Carr Pitch <- XYS Logic Out + Note In.
LPG (Mod)	LFO	ADSR	Pluck <- XYS Gate X (<-- Clock Div Gate 1)
LPG (Car)	LFO	ADSR	Pluck <- XYS Gate Y (<-- Clock Div Gate 2)
LPG (Tim)	LFO	ADSR	Pluck <-- Clock Div Gate 3)
Comb	LFO	XYS Out Logic	Pitch <- Note In Pitch, FM <-- DWG Out C
ADSR	LFO	ModWheel	GATE <-- (Note In Gate || Clock Div Gate 5) (merged)

Module	Mod A Source	Mod B Source	Other
LFO	XYS Out	ModWheel	Gate <-- Clock out | RESET <-- Clock Div Gate 4
ClockDiv	LFO	XYS Out Logic	RESET <- Clock Reset, GATE <-- Clock Gate
XYS	LFO	ModWheel	RESET <- Clock Reset, Gate X <-- Clock Div Gate 1, Gate Y <-- Clock Div Gate

6   Submotion Ensemble

Submotion produces a wide range of step-modulated sounds, bass sequences, and dark sequenced sounds with rhythmically animated overtone structures.
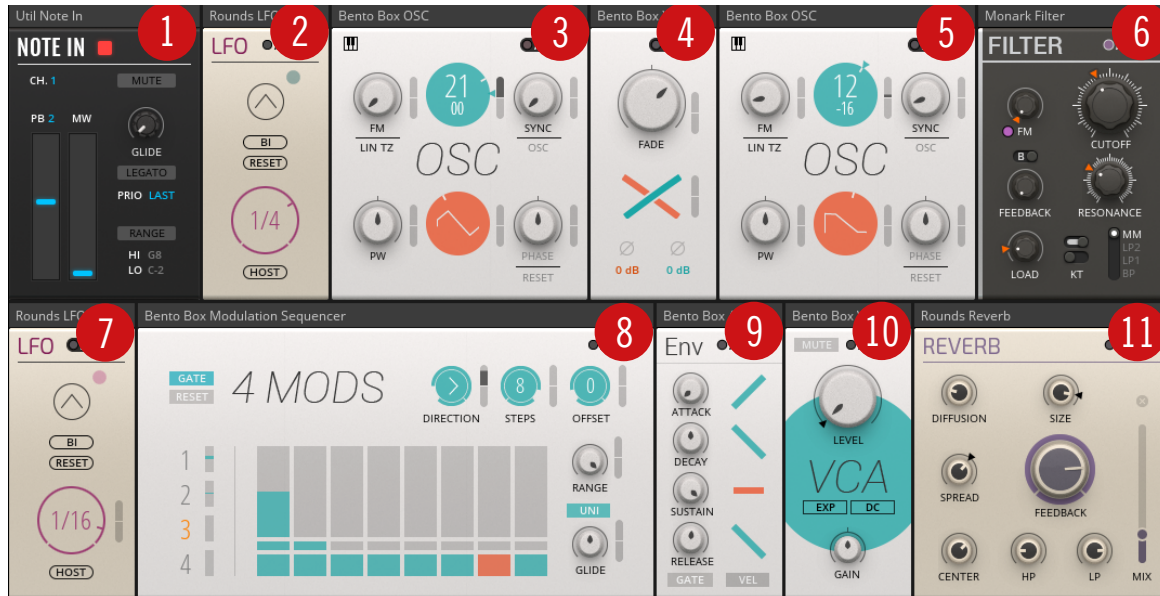
Submotion Overview

(**1**) **NOTE IN**: For more information on this Block, refer to section ↑7.18, UTIL NOTE IN in the Block Reference chapter.

(**2**), (**7**) **ROUNDS LFO**: For more information on this Block, refer to section ↑7.14, ROUNDS LFO in the Block Reference chapter.

(**3**), (**5**) **Bento Box OSC**: For more information on this Block, refer to section ↑7.5, Bento Box OSC in the Block Reference chapter.

(**4**) **Bento Box Xfade**: For more information on this Block, refer to section ↑7.7, Bento Box Xfade in the Block Reference chapter.

(**6**) **Monark Filter**: For more information on this Block, refer to section ↑7.11, Monark Filter in the Block Reference chapter.

(**8**) **Bento Box 4 Mods Sequencer**: For more information on this Block, refer to section ↑7.1, Bento Box 4 Mods in the Block Reference chapter.

(**9**) **Bento Box Envelope**: For more information on this Block, refer to section ↑7.2, Bento Box Envelope in the Block Reference chapter.

(**10**) **Bento Box VCA**: For more information on this Block, refer to section ↑7.6, Bento Box VCA in the Block Reference chapter.

(**11**) **ROUNDS REVERB**: For more information on this Block, refer to section ↑7.15, ROUNDS RE-VERB in the Block Reference chapter.

Submotion Audio and Modulation Signal Flow Diagram
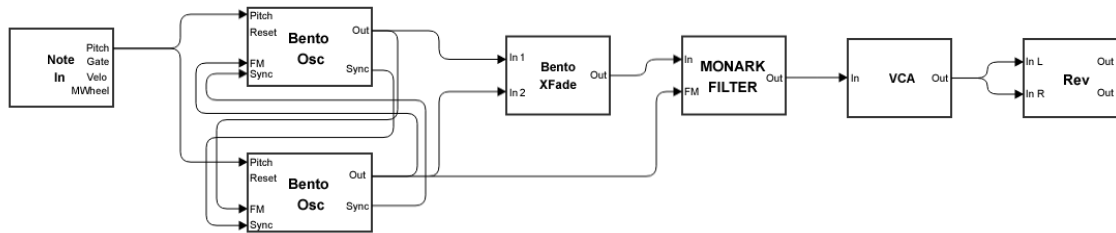
Signal Flow Diagram of the Submotion Ensemble

Submotion's classic synth structure uses two Bento Box Oscillators, which can sync and frequency-modulate each other. A Bento Box XFade (crossfade) Block balances the levels of the oscillators. This mix signal is sent to a Monark Filter that receives an FM input from the second oscillator, and is finally passed to a Rounds Reverb.
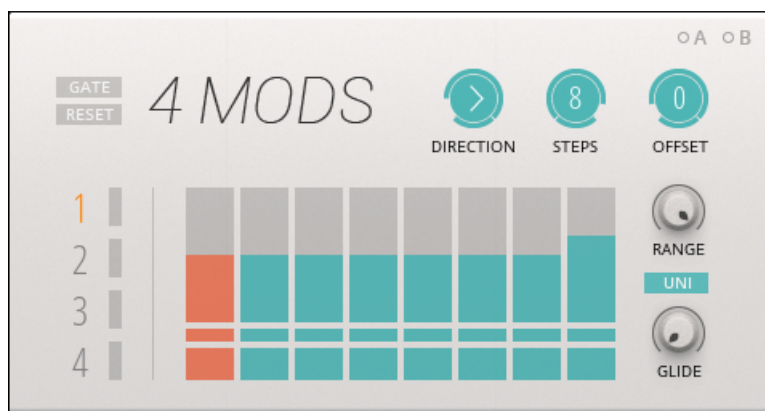
The Bento Box 4 MODS modulation sequencer is hard-wired to certain modulation destinations, as detailed in the table below. Rounds LFO 1 is providing the clock for triggering the 4 MODS. LFO 1 can be modulated by LFO 2 that generates cyclic modulation. Both LFOs are connected to sequencer track 3 of the 4 MODS Sequencers. This allows for unusual rhythmic variations.

Module	Mod A Source	Mod B Source	Other
LFO (1)	4Mods 3	LFO (2)	Reset < NOTE IN GATE
LFO (2)	ModWheel	4Mods 3	Reset < NOTE IN GATE
4Mods	ModWheel	LFO (2)	Reset < NOTE IN GATE, !! GATE < -LFO (1) !!
OSC 1	4Mods 1	LFO (2)	Pitch < Note In Pitch
OSC2	4Mods 2	LFO (2)	Pitch < Note In Pitch
XFade	4Mods 3	LFO (2)	
Filter	4Mods 4	ADSR	Pitch < Note In Pitch
ADSR	4Mods 3	LFO (2)	
VCA	ADSR	LFO (2)	
Reverb	4Mods 3	LFO (2)	

7   Block Reference

This chapter covers the reference of the included blocks in Blocks Wired.

7.1   Bento Box 4 Mods

Bento Box 4 Mods

Complementing the 8 Steps sequencer, Bento Box 4 Mods provides four sequences for modulation purposes. Each sequence consists of a set of 8 freely adjustable values, with selectable glide for smooth transitions between steps. In addition to using 4 Mods as a modulation source, its outputs can also be sent to the Digilog QUANT quantizer for creating note sequences. All global parameters (DIRECTION, STEPS, OFFSET) can be modulated, which makes 4 Mods an incredibly powerful tool for creating complex and evolving sequences.

7.2   Bento Box Envelope

Bento Box Envelope

The Bento Box Env is an envelope generator with four stages: ATTACK, DECAY, SUSTAIN, and RELEASE. The ATTACK, DECAY and RELEASE stages can be individually switched to linear, logarithmic or exponential shapes by clicking on the icons on the right side of the module. This allows you to customize the envelope for specific needs. Each stage has an additional gate output that goes high when the corresponding stage is active. You can use these gate signals to trigger other events in a patch.

7.3   Bento Box LFO

Bento Box LFO

The Bento Box LFO is a fully featured low frequency oscillator for modulation purposes. Its straight-forward interface allows you to quickly find the right settings for any basic modulation task, but it also offers advanced features that can be creatively exploited to create very complex modulation signals, especially when modulated by another LFO. Six basic waveforms can be bent into unusual shapes with the SHAPE control. The additional options at the top allow you to switch between bipolar and unipolar operation, manually reset the waveform, and hold the current output value. The Hold parameter can be modulated, which makes it possible to stop and hold the LFO with a gate signal, or slice the waveform up in interesting ways by using another LFO.

7.4   Bento Box Mix

Bento Box Mix

The Bento Box Mix is a straight-forward mixer that can be used for any basic mixing task in a patch, for example mixing multiple oscillators or creating feedback loops. Each channel features a level control and a phase inversion switch. You can mute any channel by clicking on the corresponding channel number. The mixer offers two different modes of operation: In absolute mode (ABS), the signals of all channels are simply added, driving the mixer into saturation if the maximum output level is reached. In relative mode (REL), the output level is attenuated relative to the level of each individual channel in order to avoid clipping of signals.

7.5   Bento Box OSC

Bento Box OSC

The Bento Box OSC is a versatile oscillator that is suitable for a wide range of different synthesis methods. Its features make it particularly useful for FM (frequency modulation) synthesis. The linear thru-zero FM mode (LIN TZ) allows for very deep and stable FM sounds. The Bento Box OSC's Sync input can be freely adjusted from soft sync to hard sync, with the option to accept dedicated OSC Sync signals from other Blocks oscillators (e.g. Bento Box OSC, Boutique Multiwave OSC) for best audio quality. Syncing oscillators is useful for a number of different applications: adding stability to complex FM patches with multiple operators, patching classic oscillator sync sounds, and creating interesting new waveforms by mixing signals from multiple synced oscillators.

7.6   Bento Box VCA
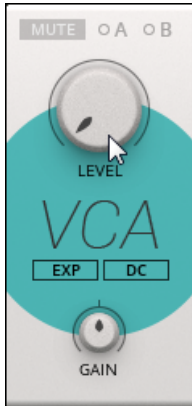
Bento Box VCA

The Bento Box VCA is essentially a simple volume control. As one of the basic building blocks in modular synthesis, it is used whenever the level of a signal needs to be controlled dynamically. For example, it is commonly patched as the final stage in a synthesizer patch, modulated by an envelope to shape the amplitude of the sound over time. If used for audio signals, the AC / DC switch should be set to AC, enabling the DC offset filter. If used for modulation signals, it needs to be set to DC, disabling the DC offset filter. Further controls include a switch to select either an exponential (EXP) or a linear (LIN) response to modulation signals, as well as an additional GAIN control that can be used to attenuate or amplify the signal independent from the main level control.

7.7   Bento Box Xfade

Bento Box Xfade

Bento Box Xfade allows you to create a blend between two input signals with a single FADE control. For example, it can be used to smoothly morph from one sound to the other, to combine waveform outputs from oscillators for additional wave shaping, or as a simple dry / wet control when routing effect signals. The Curve control changes the FADE response from linear to constant-power, allowing you to compensate for volume drops at the center position.

7.8   CLK DIV
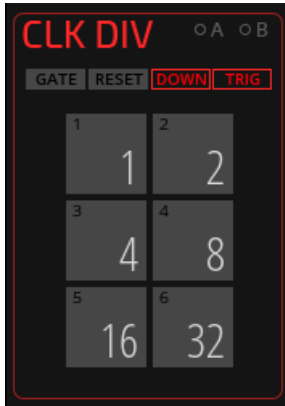
CLK DIV

The CLK DIV is an essential building block for sequencing. It takes any Gate signal, for example a clock, and provides six user-definable timing divisions of this signal for further distribution in a patch. This allows you to create a set of related timing signals that are all based on the same tempo, but with a different amount of beats in the same time interval, similar to note divisions. It can be used to run sequencers at different but related speeds, or to set up interesting rhythmical structures within a patch. The ability to modulate the Divisions for each output makes it possible to create very complex polyrhythms.

7.9   COMB

COMB

The Comb delays the input signal and feeds it back onto itself, similar to an echo effect. However, the Comb is optimized for very short delay times, causing interferences in the audible range. It creates regularly spaced peaks and troughs in the frequency response, resembling the appearance of a comb. The effect gets more pronounced as the feedback is increased. Apart from filtering oscillator signals, the Comb can also be used to create effects like flanging and chorus, or serve as the basis for physical modelling sounds. If Key Tracking is turned up, it can be controlled with a Pitch signal arriving at the Pitch input, making it possible to play the Comb's frequency according to a musical scale.

7.10   LEVEL S
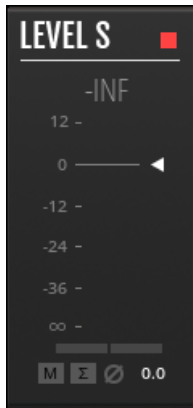
LEVEL S

LEVEL S is a stereo volume control including level metering, with additional switches for mute, mono summing and phase inversion. It is intended to be used as the first Block after an In module or the last Block before an Out module, however it may also be used to monitor and control signals at any point in a patch. The color selector in the upper right corner of the panel lets you assign distinct colors to different parts or signal chains in a patch.

7.11   Monark Filter

Monark Filter

Modelled after the classic 4-pole ladder low pass filter of an iconic monophonic synthesizer from the seventies, the MONARK Filter captures every nuance of the original circuit, including its rich saturation behaviour. This can be explored even more with the additional LOAD and FEEDBACK parameters, allowing you to overdrive the input and add nonlinear behaviour to the filter. The MONARK Filter offers four different filter modes, including three low pass modes and one band pass mode, all derived from the classic ladder structure. This filter is an excellent choice for huge sounding synth bass and lead sounds.

7.12   Paul

Paul

The Paul is a smooth sounding low pass filter, adapting the filter design of early polyphonic analog synthesizers. Its resonance behaviour has been optimized to provide a warm and full sound: as you turn up the RESONANCE, the bass is boosted. You can click on the F-clef icon in the bottom-right corner to deactivate the bass boost. This gives you an even bass response independent from the RESONANCE setting. Four filter modes allow you to change the overall sound of the filter, from bright (LP1) to boomy (LP4). This filter is particularly useful for all kinds of bass sounds, from rumbling sub-bass sounds to liquid sounding acid basslines.
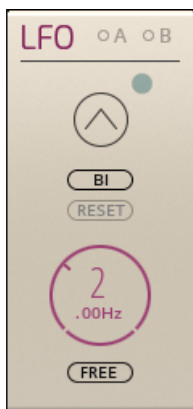
7.13   ROUNDS Delay

ROUNDS Delay

The ROUNDS Delay can produce a wide range of different echo, flanging and chorus effects. It offers two basic modes of operation, normal and GRAIN. In normal mode, changing the delay time momentarily alters the pitch of the signal, similar to tape echo effects. In GRAIN mode, the pitch is not altered. The PONG option lets the delay repetitions alternate between the left and right channel for a wide stereo effect. By clicking on the ms unit label next to the Delay Time, you can synchronize the ROUNDS Delay externally to REAKTOR's master tempo or internally to a sequence of gates from within the Blocks patch.

7.14   ROUNDS LFO

ROUNDS LFO

The ROUNDS LFO brings the LFO (Low Frequency Oscillator) from the Modulation section of the ROUNDS synthesizer to Blocks. Just like the ROUNDS Delay, it features a tempo-sync option. This lets you synchronize the LFO externally to REAKTOR's master tempo or internally to a sequence of gates from within the Blocks patch, making it possible to create modulation signals that are always locked to the beat of your music.

7.15   ROUNDS REVERB

ROUNDS REVERB

The ROUNDS Reverb is based on a feedback delay network with eight delay taps. It can produce a wide range of effects: from big, deep and cloudy halls to small, resonant rooms or grainy delays. All parameters have been optimized for modulation via the A and B modulation busses, so you can morph from one space into the other, create very animated textures, or add interesting rhythmical effects to the reverb sound. This makes the ROUNDS Reverb suitable not only for adding space to a sound, but also for inserting it at any point in your patch as part of the sound generation.

7.16   SCOPE
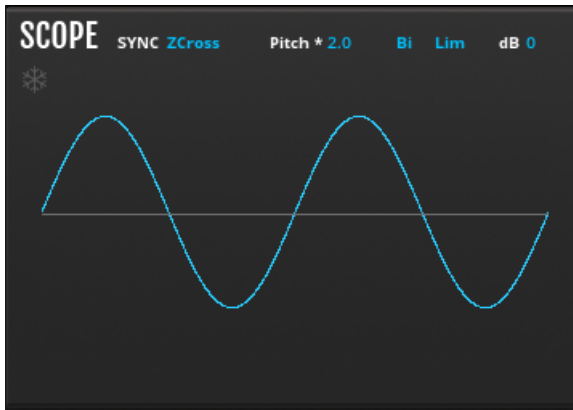
SCOPE

Scope allows you to monitor any signal in a Blocks patch. It shows how signals change over time: The vertical axis represents the amplitude of a signal and the horizontal axis represents time. You can use the Scope to visualize modulation signals or waveforms from oscillators, or to troubleshoot issues in complex patches by checking for the range and shape of a signal. Watching the signals change as you add modulation and processing to your patch is a great learning experience, too. The behaviour of the Scope can be adjusted with the controls at the top of the panel.

7.17 UTIL CIOCK
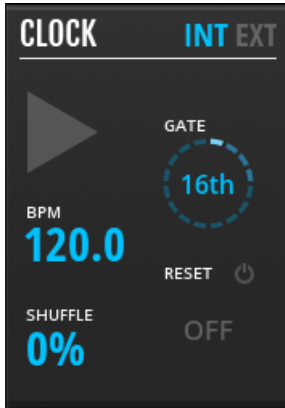
UTIL CLOCK

Clock provides a clock signal as a sequence of gates via its Gate output. It allows you to run Blocks that rely on external timing information, for example sequencers. For this, the Clock's Gate output is connected to the Gate input of a sequencer. The tempo is set in beats per minute (BPM), with a definable note division for the sequence of gates (4th, 8th, and so on). Additionally, you can add some groove by turning up SHUFFLE. The Reset output sends a gate every time Clock is activated. When the RESET function is enabled, reset gates are also sent while the clock is running, at an interval set by the Reset Interval control on the panel. Reset gates are useful for synchronizing multiple sequencers in a patch.

7.18   UTIL NOTE IN

UTIL NOTE IN

The Note In receives MIDI note data and converts it into control signals for use in your Blocks patch. It allows you to control the pitch of oscillators according to MIDI notes, trigger envelopes with note on messages, and modulate parameters with the modulation wheel or after touch. The Pitch output carries all pitch information including MIDI note, pitch bend and glide, while the Note output only carries the MIDI note information. In a similar fashion, the Gate output provides gates that combine note on and note off messages with velocity, while the Vel output only provides velocity information. Pitch bend is also available separately via the Pbend output, as are the modulation wheel (Mwheel) and after touch (Atouch).

7.19   West Coast DWG
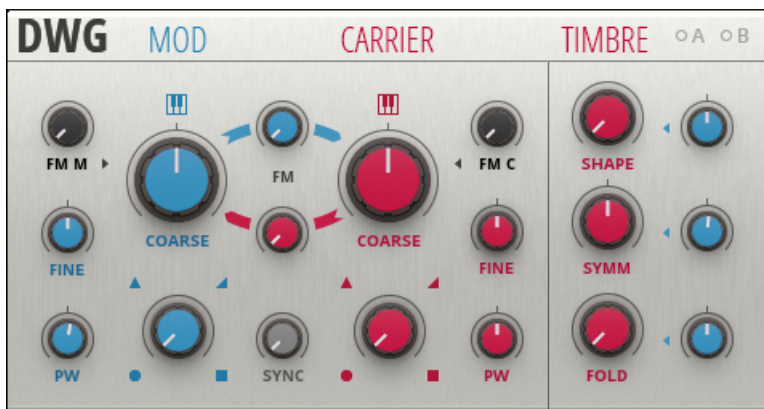
West Coast DWG

The West Coast DWG combines two oscillators (MOD, CARRIER) and additional waveshaping (TIMBRE) with extensive internal modulation possibilities, allowing you to intuitively explore complex timbres by means of frequency modulation synthesis (FM), blending of waveforms (SHAPE) as well as wavefolding (FOLD, SYMM).

7.20   West Coast LPG

West Coast LPG

The West Coast LPG represents the Blocks take on the low pass gate, a peculiar filter circuit originally designed by synthesizer legend Don Buchla for controlling the dynamic properties of a sound. It uses an optocoupler that smoothes the LPG's response to external control. When excited by a sharp-edged signal via its Pluck input, the LPG opens and closes in a natural sounding manner, giving sounds a plausible quality that is reminiscent of a drum hit or a plucked string.

7.21   West Coast XYS

West Coast XYS

The West Coast XYS is a storage system for values and triggers, which can be accessed in a lot of interesting ways. It can be used for generating complex modulation and gate signals as well as note sequences. It is based on a two-dimensional grid of 16 steps that can be accessed by a combination of two clock and two modulation signals, controlling both the direction and the tempo of the sequence. Even though it can be used as a basic 16 step sequencer, the XYS excels at creating evolving patterns and constantly shifting sequences.

8   Credits

BLOCKS WIRED Instrument

Product Design
Dave Forrester, André Estermann

Instrument Development
Dave Forrester, Julian Parker, Francisco Garcia, Alexander Potekhin

GUI Design
Efflam Le Bivic

Sound Design
Jamil Samad, Tommaso De Donatis, André Estermann

Quality Assurance
Frank Ellendt

Project Management
Eike Jonas, Marin Vrbica