VST-AU Pulse Editor™ 2.0.0 User Manual

2000, XP, Vista, Windows 7

OSX 10.5

Universal Binary

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Introduction

Thank you for choosing the reKon audio™ VST-AU Pulse Editor™. The VST-AU Pulse Editor™ is a real-time MIDI synth editor that allows you full control of every parameter of the sound on the Waldorf Pulse™and Pulse™ synthesizers. Now you can utilize your Pulse to its full potential and build lasting and meaningful patches that will bring new life to your music. You can manage, view and edit all your patches on the computer itself without the hassle of manual dumps. All parameters are fully automatable and you can even use your favorite VST or AU host, or use it stand-alone, giving you the ability to visually program the Pulse to your music via the host sequencer, or just manage the patches in standalone mode. This ability to model your synth patches in realtime, inside your main music production environment is part of what makes the VST-AU Pulse Editor™ unique when compared to other hardware synth editors. You may also

use the standalone application if you do not need to work inside the host or if your host is not supported.

Advanced Patch Librarian

The VST-AU Pulse Editor™ includes an advanced Patch Manager view that allows you to rename patches, and even drag and drop patches from one slot to another. Now you can provide meaningful naming to your patches and organize them efficiently and save them as standard .fxp/.fxb files.

Patch Randomizer

The VST-AU Pulse Editor™ also includes a Patch Randomizer that allows you to create patches randomly.

MIDI Input and Output Monitoring

The Midi Monitor view allows you to view all MIDI data coming into and out of the VST-AU Pulse Editor™. Easily switch between Input and Output views. You can even copy the data from the event logs for pasting and saving into standard text editors or other applications.

MIDI Setup

The VST-AU Pulse Editor™ is based on an entirely new framework that allows you to select the MIDI input and output ports directly from within the editor itself. This allows you to send and receive MIDI system exclusive data, a feature not found in most VST-AU hosts or our previous product offerings. You are no longer limited by host MIDI incapabilities. MIDI ports that are already in use by the host will show as 'Not Available', so it's easy to avoid MIDI port selection mistakes and crashes. MIDI Setup also allows you to filter out specific MIDI data or toggle MIDI In and Out operations.

The Waldorf Pulse™ synthesizer...

The Waldorf Pulse™ is a rack mountable, monophonic analog synthesizer built in Germany. It sports three oscillators, two with pulse width, two LFOs, two assignable envelopes, a filter and amp section and an advanced arpeggiator. There is also a matrix of four modulation routings that are assignable by source and destination. This in part, is what gives the Pulse a unique sound characteristic. Later came the Waldorf Pulse Plus™, the same great synth, but fitted with the added capability of utilizing MIDI CV control and the ability to route external signals through the Pulse's filter and amp sections.

Installation

This product includes an installer which will help you with the installation of the product. Please follow the detailed instructions below to install and register your license to begin using this product.

WINDOWS USERS:

1. Be sure to read the provided PDF manual before you begin using this product. It contains detailed information regarding the MIDI Setup procedures required to successfully connect to your computer and synthesizer.

2. Run the VST-AU_Pulse_Editor.msi installer file. This will install the VST and Standalone application and related files to the following folders on your computer:

For 32-bit Windows operating systems:
VST: c:/Program Files/Common Files/VST2/reKon audio/VST-AU Pulse Editor/
Standalone: c:/Program Files/reKon audio/VST-AU Pulse Editor/

For 64-bit Windows operating systems:
VST: c:/Program Files (x86)/Common Files/VST2/reKon audio/VST-AU Pulse Editor/
Standalone: c:/Program Files (x86)/reKon audio/VST-AU Pulse Editor/

Note that this product is a 32-bit product and is not designed to run natively in 64-bit DAW hosts.

3. **Place your provided license key (.rkl file) into each of the folders from step 2 to begin using the product.**

MAC OSX USERS:

1. Be sure to read the provided PDF manual before you begin using this product. It contains detailed information regarding the MIDI Setup procedures required to successfully connect to your computer and synthesizer.

2. Run the VST-AU_Pulse_Editor.pkg installer file. This will install the VST, AU and Standalone application and related files to the following folders on your computer:

AU: [installed location]/Library/Audio/Plug-Ins/Components/reKon audio/VST-AU Pulse Editor/
VST: [installed location]/Library/Audio/Plug-Ins/VST/reKon audio/VST-AU Pulse Editor/
Standalone: [installed location]/Applications/reKon audio/VST-AU Pulse Editor/

Note that you may need to copy the VST and Component folder files to your [User/Library/ Audio/Plug-Ins/ folder for your host to be able to find them.

3. **Place your provided license key (.rkl file) into each of the folders from step 2 to begin using the product.**

MIDI Setup

Assumptions
It is assumed that the user is familiar with the basic functionality of the hardware synthesizer, it's operators manual and the basic concept of MIDI itself. Without this knowledge, utilizing the editor may be a bit more challenging to set up and use properly. By familiarizing yourself with the operators manual and the MIDI standards, and following the instructions in this manual, you should be able to get up and running in a short amount of time.

STEP 1: Setting Up the Pulse
Make sure you have your midi ports and channels set up and matching properly and that all cables are working and connected properly.

STEP 2: Setting Up the Plug-in for Your Host (DAW)
The setup procedure will vary from host. Each host may support plug-ins differently. Please refer to the 'Supported Hosts' list on the rekon audio web site at www.rekonaudio.com. Also, please refer to the setup instructions provided with your host application for setting up a plug-in.

IMPORTANT NOTE: When using the plug-in in a host application, you must first disable the MIDI port that you will be using the hardware synth/ editor on in the host's MIDI setup. This will then make that port available for use within the plug-ins MIDI setup. Failing to do this will not allow you to select the MIDI port in the plug-in and the sodtware will not be able to communicate with the hardware.

Setup Example for Cubase SX 1-3
To setup the reKon™ VST-AU Pulse Editor™ for Cubase SX 2-3 or Cubase 4-5:

1. Be sure to check your VST Instrument plug-ins folder to make sure the editor was installed.
2. Open Cubase.
3. Create a new project.
4. Open your 'VST Instruments' panel and then select the 'reKon audio™ VST-AU Pulse Editor™' VST in a VST slot.
5. Click the MIDI Setup button inside the editor and select the MIDI Input and Output port your Pulse is attached to.

*NOTES- *Setup for other hosts is similar. Please see the Host Setup page on the reKon audio web site for more information.*

How to load a Pulse patch into the editor
Once you have completed the MIDI input steps above <u>AND you have the latest Pulse OS 2.0.1</u>, you can now receive a 'Single Controller Dump' from the Pulse to 'recreate' the patch in the editor.

Here's how:
1. Select the patch on the Pulse that you wish to save into the editor.
2. Press the 'Shift+Dump' button.
3. The editor will update all parameters to the values of the dumped patch.
4. Rename the patch in the editor to the name of the hardware patch. Save the patch as an .fxp file.

The Graphical User Interface

Using The Graphical User Interface
The graphical user interface of the VST-AU Pulse Editor™ is designed for maximum ease of use, giving you easy access to all of the Roland Pulse™ controls right on one screen. You are also able to rename, modify and browse the patches right inside the editor itself. All control elements are handled via either a Slider, Knob, Combo Box, Button or Text Edit Box.

The User Interface
The following screen shot will help familiarize the controls of the VST-AU Pulse Editor™.

The Patch Manager

To access the Patch Manager view, click the 'Patch Manager' button. The Patch manager contains 100 patch slots and allows you to rename and organize your patches by simply drag and dropping them to another slot. To do this, click on the patch number box (with red numbers) and while holding down the mouse button drag this patch to another location by dropping it on the patch name box (with white letters). A valid drop target will be indicated by a red outline. You can also double click on a patch number to go to that patch.

The patch manager also allows you to switch between 16 different banks. Each bank hold 100 patches. Only the selected bank is available in the editor itself. You can Load and Save bank files to the currently selected bank number.

By default, banks 1-8 contain the default reKon audio patches. Banks 9-16 contain blank patch data for creating news banks.

IMPORTANT NOTE: *Only Bank 1 data is remembered in the editor during the pulg-in reloading process. Be sure to save any additional bank data you create as an .fxb file before you close the editor!*

The Patch Randomizer

The Patch randomizer allows you to create patches randomly. Click the 'RAND' button to generate a new random patch. Randomization applies to the currently selected patch and will overwrite the existing patch data.

The MIDI Setup Dialog

The MIDI Setup dialog allows you to connect and control the MIDI data coming into and out of the editor. You will need to open this view directly after instantiating the software in order to setup up communication between the hardware and software. Select the MIDI Input Port and Channel and MIDI Output Port and Channel that is connected to your hardware. You can toggle receiving and sending of certain MIDI data as well as the MIDI LED's and MIDI Echo In. The MIDI Echo allows MIDI In data to be passed through the editor and on to the MIDI Out port. Typically you will not need to use this feature, however.

The MIDI Monitor

The MIDI Monitor allows you to view all MIDI data that is coming into or out of the editor. By default the view will show MIDI Out data from the editor. To switch between MIDI In and MIDI Out views, click the 'Show MIDI In' or 'Show MIDI Out' buttons. The' Clear' button will clear the data in the log view. The log view will show up to 500 messages before clearing itself automatically. You can copy the data in the log view to other applications if necessary.

Working With the VST-AU Pulse Editor™

About Sound
The VST-AU Pulse Editor™ is a plug-in that deals only with MIDI data. <u>As a result it makes no sound of its own</u>. The sound comes from the actual hardware synth itself, which is what you want (pure analog hardware generated sound, but with plug-in control).

Using the Controls
Most controls on the VST-AU Pulse Editor™ are self explanatory as to their use. There are two types of knobs, those that have their 'zero' or lowest value set to the far left, and the other has the 'zero' position set in the absolute middle. The display readouts will vary based on the related ranges and values for that particular control.

Mousewheel Support
You can use the mousewheel to move sliders up and down.

Double Click Support
Controls that are set to the 'center' position by default can be double-clicked to return to the default 'center' position.

Receiving MIDI Data
The VST-AU Pulse Editor™ can receive and interpret MIDI pitchwheel, modulation and control change data. All controls respond to their correlated MIDI messages from the hardware itself. All controls respond to their correlated MIDI CC number as listed in the MIDI Continuous Controller Chart of this manual.

The MIDI LED Indicators
When the VST-AU Pulse Editor™ receives or transmits MIDI data, the corresponding MIDI LED will blink to notify you. You can turn off the MIDI LED's in the MIDI Setup dialog view.

The About Screen
To view the About screen, click on the VST-AU Pulse Editor™ logo button. The about screen shows your registered name and serial number as well as the product version.

Working With Presets

Using the Patch Manager
The Patch Manager is the easiest way to work with presets. For more information refer to the 'Patch Manager' section of this manual.

Changing the Current Preset
Use the inc/dec buttons to the right of the display to change the currently selected preset.

Renaming the Current Patch
To rename your preset, simply click on the name in the display readout and type the new name of your patch, then hit the 'Enter' key. Patch names are limited to 24 characters.

Using the Copy/Paste Button
You can easily copy and paste presets to and from the currently selected preset to another location. First select the preset you wish to copy by navigating to it with the preset select arrow buttons. Now, click the 'Copy' button (you will notice the 'Copy' button light up). Next, navigate to the preset you wish to paste to. Now click the 'Paste' button (the 'Copy' button will turn off). This tool is invaluable for creating variations of your favorite presets and allows you to quickly build your preset library up.

Working With Sysex Patches and Banks

Sysex Patches and Banks
The VST-AU Pulse Editor™ can load and save standard sysex (system exclusive) patch and bank files. This makes importing, exporting and sharing your existing patch libraries very easy. Use the Sysex menu to select either a patch or bank load or save method. Once you have loaded a sysex patch or bank, the editor will update with the loaded settings. You should give the patch(es) a unique name and then save them as an .fxb/.fxp file.

Sysex and Patch-Bank Names.
Note that the native Waldorf Pulse sysex program format does not include parameters for a patch name. This is normal, as the synth itself has no way to display this information. As such, no name will be stored or loaded when you are working with sysex bank files. The VST native .fxb/.fxp format can store the patch names, and therefore these will be preseved while loading and saving presets in the .fxb/.fxp format.When loading sysex patches, the name of the sysex file will be used as the patch name when loading sysex patches.

A valid Waldorf Pulse Sysex patch file is 77 bytes and is formatted according to the sysex specification found in the Waldorf Pulse User Manual. The editor will only accept .syx files that are formatted specifically for the Waldorf Pulse.

You can load or save a sysex bank to/from preset slots 0-39 or 40-79. TheVST-AU Pulse Editor™ recognizes a valid Waldorf Pulse Sysex bank file as either a 3092 byte or 3100 byte sized file, and is formatted according to the sysex specification found in the Waldorf Pulse User Manual. A Waldorf Pulse bank consists of 40 patches (P.1-P.40 on the Pulse.), each at 77 bytes in size, with a 12 byte header. The editor will only accept .syx files that are formatted specifically for the Waldorf Pulse. If you are having problems loading a patch or bank from a file you are certain was created by your Waldorf Pulse, First check the file size. If it is not at a byte size specified above, then you need to examine the sysex data and remove any extra sysex messages from the beginning of the file. Sometimes, utilty programs may add or append additional sysex messages that were used to call the synths bank dump, and this data may be saved in your file.

An Example of the start of a sysex bank file:

 <u>F0 3E 0B 00 08 26 40 13 00 00 79 F7</u> **F0** 3E 0B 00 01 00 10 31 02 40 70 4E 00 28 00 01 10 40 02 29 28 42 7F 73 00 16 06 66 7F 00 00 63 03 00 29 00 32 40 03 6F 01 00 01 02 0B 7F 03 01 7F 03 06 7F 02 00 40 0A 02 03 0E 16 00 4A 40 40 1F 7F 04 49 7F 40 40 00 00 40 00 37 **F7 F0** 3E 0B 00 01 01 40 41 01 16 40 40 00 53 01 01 40 40 00 7F 7F 47 56 00 04 00 08 5F 13 25 1F 65 03 00 2D 54 00 21 03 53 0A 00 02 02 03 7F 07 04 32 06 0F 5D 05 06 50 0C 02 01 10 2D 06 38 50 1C 28 66 0C 6B 5C 49 4D 0B 04 48 00 08 **F7** ...

The <u>underlined</u> portion is the 12byte header that defines a program bulk dump. Following this we see patch 1 defined between the first **'F0'** and **'F7'** tags in bold. Followed by patch 2, and so on, until we have filled 40 patches. (12byte header + (77 byte patch * 40 patches)) = 3092 bytes.

Sysex Utilities to work with your synth offline.
Sysex (Sytem Exclusive) data from a VSTi to the host is not widely supported by most DAW manufactures. Also, Sysex data is typically not real-time data, so incorporating sysex data transmission into a VSTi is not exactly an elegant or feasible solution. Instead, we can import and export this data from the VST-AU Pulse Editor™ and then use these files when we are offline from our DAW, to transfer the data to and from the hardware with other utilities such as MIDI-OX for PC, or SysEx Librarian for Mac, or any other common MIDI System Exclusive data utility.

MIDI Continuous Controller (CC) Messages

The following MIDI Continuous Controller messages are transmitted (Tx) and Received (Rx) by the editor to set the patch.

CC	Parameter	Range
45	OSC 1 Level	0-127
32	OSC 1 Semi	-48 to +48
33	OSC 1 Tune	-32 to +31
34	OSC 1 Shape	Pulse, Saw, Triangle
35	OSC 1 Pulse Width	0-50
46	OSC 2 Level	0-127
36	OSC 2 Semi	-48 to +48
37	OSC 2 Tune	-64 to +63
38	OSC 2 Shape	Pulse, Saw, Triangle, CrossMod
39	OSC 2 Pulse Width	0-50
40	OSC 2 Keytracking	0-1 (on/off)
41	OSC 2 Sync	0-1 (on/off)
47	OSC 3 Level	0-127
42	OSC 3 Semi	-48 to +48
43	OSC 3 Tune	-32 to +31
44	OSC 3 Shape	Pulse, Saw, Triangle
57	MAIN Level	0-127
10	MAIN Panning	-64 to +63
48	MAIN Noise	0-127
58	MAIN Velocity	-64 to +63
61	PITCH Amount	-64 to +63
63	PITCH Scale	0-24
60	PITCH Source	0-15 (See MOD Source Chart)
5	PORTA Time	0-127
62	PORTA Mode	0-1 (on/off)
64	Hold	0-1 (on-off)
24	LFO 1 Speed	0-127
25	LFO 1 Shape	0-6
26	LFO 2 Speed	0-127
27	LFO 2 Delay	0-127
50	FILTER Cutoff	0-127
56	FILTER Resonance	0-127
51	FILTER Keytracking	-64 to +63
53	FILTER Velocity	-64 to +63
52	FILTER ENV 1 Amount	-64 to +63
55	FILTER MOD Amount	-64 to +63

54	FILTER Source	0-15 (See MOD Source Chart)
14	ENV 1 Attack	0-127
15	ENV 1 Decay	0-127
16	ENV 1 Sustain	0-127
17	ENV 1 Release	0-127
28	ENV 1 Keytracking	-64 to +63
29	ENV 1 Trigger	0-3 (Single T1, Single T2, Retrig 1, Retrig 2)
18	ENV 2 Attack	0-127
19	ENV 2 Decay	0-127
20	ENV 2 Sustain	0-127
21	ENV 2 Release	0-127
30	ENV 2 Keytracking	-64 to +63
31	ENV 2 Trigger	0-3 (Single T1, Single T2, Retrig 1, Retrig 2)
102	ARP On	0-2 (Off, On, Hold)
104	ARP Clock	0-31
106	ARP Mode	0-7 (Up, Down, Alt, Rand, Asgn Up, Asgn Down, Asgn Alt)
105	ARP BPM	Midi, 48-300 (bpm)
103	ARP Range	1-10
108	MOD 1 Source	0-15 (See MOD Source Chart)
110	MOD 1 Destination	0-15 (See MOD Destination Chart)
109	MOD 1 Amount	0-127
111	MOD 2 Source	0-15 (See MOD Source Chart)
113	MOD 2 Destination	0-15 (See MOD Destination Chart)
112	MOD 2 Amount	0-127
114	MOD 3 Source	0-15 (See MOD Source Chart)
116	MOD 3 Destination	0-15 (See MOD Destination Chart)
115	MOD 3 Amount	0-127
117	MOD 4 Source	0-15 (See MOD Source Chart)
119	MOD 4 Destination	0-15 (See MOD Destination Chart)
118	MOD 4 Amount	0-127
22	PLUS CV2 Source	0-15 (See MOD Source Chart)
23	PLUS External Amount	0-127
49	PLUS External Level	0-127

Modulation Routing Chart

The following options are available for the Pulse Modulation Matrix...

Value	Source	Destination
0	Off	Pitch
1	LFO 1	OSC 1 Pitch
2	LFO 1 Mod Width	OSC 2 Pitch
3	LFO Aftertouch	OSC 3 Pitch
4	LFO 2	PulseWidth 1
5	LFO 2 ENV 1 Amount	PulseWidth 2
6	ENV 1	OSC 1 Level
7	ENV 2	OSC 2 Level
8	Velocity	OSC 3 Level
9	Keytracking	Noise Level
10	Pitch Follow	Cutoff
11	Pitch Bend	Resonance
12	Mod Wheel	Volume
13	AfterTouch	Panning
14	Breath	LFO 1 Speed
15	Control X	Modulation 1 Amount

MIDI Implementation Chart

The following MIDI data is transmitted (Tx) and Received (Rx) from the editor...

Message	Tx	Rx	Notes
Channel	o	o	1-16
Mode	x	x	Omni mode
Note On/Off	o	o	note numbers 0-127
Velocity	o	o	0-127
Aftertouch	o	o	0-127
Poly Pressure	o	o	0-127
Pitchbend	o	o	0-127
Modulation	o	o	0-127
Continuous Controller	o	o	0-127
Program Change	o	o	0-127
System Common	x	x	
System Realtime	x	x	
System Exclusive	x	x	

x = no
o = yes

Legal Information

Disclaimer

By installing and using this product you agree to the terms and conditions set forth in the License Agreement as illustrated in the installation of the software.

This product is not affiliated or associated with Waldorf Music, Gmbh or the Pulse product itself.

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