Update Summary

Table of Contents

Introduction

Thank you for using AudioRealism Bass Line 2 (ABL2)! The ABL2 update contains a number of usability improvements as well as updates to the sound engine making it sound more authentic than ever. To summarize the sound has been improved in the following areas:

- The bass response has less muddiness
- The filter has been updated to incorporate subtle non linear effects
- 'Trimpots' have been added to customize the emulation for individual taste
- The accent has been improved to include the 'accent ducking' effect
- The infamous VCA clicks are now optional and more accurate to the original

Furthermore the sound engine has been completely overhauled, every digital artifact was cleaned out to ensure a clean smooth sound.

In the usability corner:

- Pattern library for quickly accessing and saving patterns
- Pattern analyzer with Audio detection
- Copy/Paste patterns to system clipboard
- Load/Save multiple patterns in one go
- MIDI assignable pattern section buttons
- Preferences setup dialog

Additionally there are now more than 150 example patterns included and two new 3D skins rendered with AudioRealism's imaging tool mray++.

Installation

PC

1. Locate the executable **Install_ABL2_PC.exe** and run.
2. The installer will suggest a path to install the plug-in into.
3. If the path is correct, select <Install> else browse to the path where you keep your VST plug-ins and then select <Install>.
4. ABL2 will show up under AudioRealism/ABL2 in your host's VST plug-ins menu.

Mac

1. Locate the executable **Install_ABL2_AU.zip** or **Install_ABL2_VST.zip** depending on which version you wish to install.
2. Extract the file by double clicking on it and run the installer package
3. ABL2 will show up under AudioRealism/ABL2 in your host's VST plug-ins menu.

Authorizing your plug-in

Before you can start using the plug-in you need to enter the authorization information that you have received from AudioRealism. When this information has been completed you will not be asked for it again unless you reinstall the plug-in. If you have trouble completing the information contact support@audiorealism.se.

MIDI Learn

MIDI Learn been extended to the pattern section buttons. For example you may map the keyboard pitch buttons to any buttons on your MIDI Controller that send MIDI CC.

Import and Export Patterns

It is possible to import and export the whole pattern bank using the Import and Export Patterns selections in the Pattern Menu.

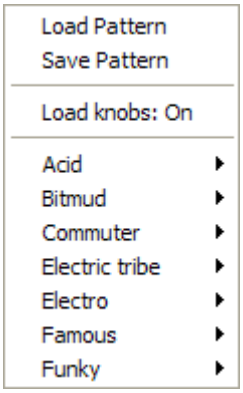
Default Pattern Bank

When the plug-in is started it can loads a default pattern bank. The default pattern bank resides in the plug-in installation directory under the name DefaultPatternBank.pat. It is possible to replace this bank with your own by using Export Patterns in the Pattern menu.

Automatic load of the default pattern bank can be shut off in the Preferences dialog.

Pattern Library

The pattern library is a quick way of accessing and saving your patterns in an organized fashion.



The menu consists of three selections: *Load Pattern, Save Pattern* and *Load Knobs On/Off.* After these three entries the patterns follow sorted into categories.

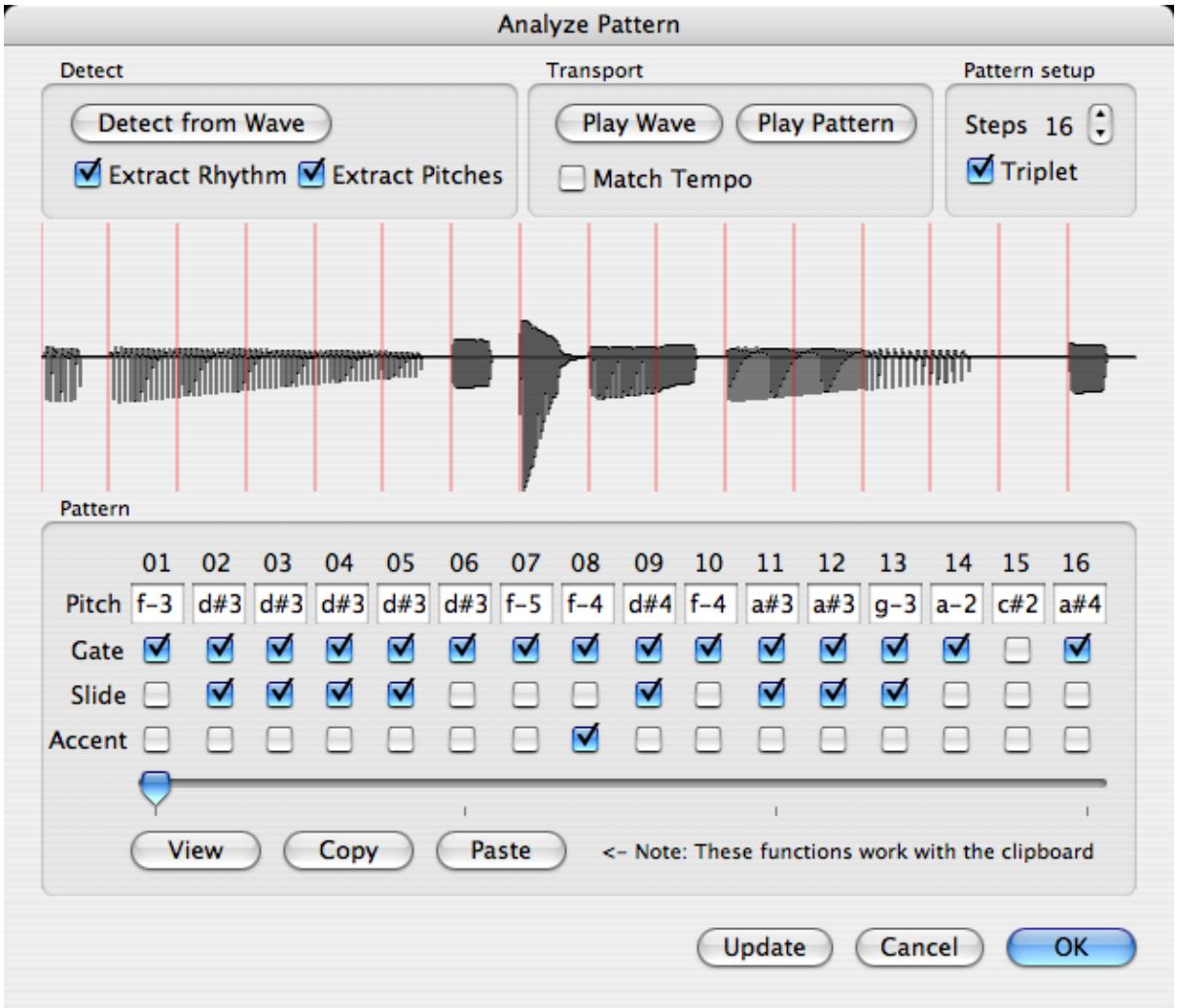
- *Load Pattern*: It is possible to select several patterns by holding <Shift> and selecting several files. The patterns will be loaded in the same order in which they are selected.
- *Save Pattern*: Brings up the standard save dialog.
- *Load Knobs On/Off:* Determines whether the knob settings (including the switches and tempo) should be recalled when loading a pattern or not. If ABL2 is in Internal Sync mode the tempo will not be changed. Not all patterns are save with knob information, in which case this setting has no effect.

It is possible to load and save the whole pattern bank (128 patterns) using the *Import-* and *Export patterns* function in the Pattern menu.

Note: When loading multiple patterns, make sure ABL2 is set on a pattern slot that allows room for all the patterns to be loaded, for example if you are on pattern slot 100 and attempt to load 32 patterns only 27 will be loaded.

Pattern Analyzer

The pattern analyzer is a tool for editing and analyzing patterns. It also features an audio detection algorithm which can be used to transcribe patterns or create new patterns in sync with an audio file. While the audio import feature was designed to work on monophonic and clean signals recorded under certain conditions (explained below) it can also produce interesting results when fed other types of audio, for example a rhythm beat from a drum machine.



The pattern analyzer dialog is split into four panes: *Detect*, *Transport*, *Setup* and *Pattern.* There is also a waveform view near the center of the dialog.

Detect

- *Detect from Wave:* Brings up a file selection dialog where audio files of the

type WAV or AIF may be selected. When a file has been selected the waveform will be displayed in the waveform view (in middle of the dialog). The note boundaries are shown as vertical red lines. These indicate where the audio detector will try to detect notes. For best results the red lines should match the start of the notes as closely as possible. When the pattern length or timing is changed the number of red lines and their spacing will increase or decrease.

- *Extract Rhythm* and *Extract Pitches*. When Extract Rhythm is selected the detector will affect the gate, slide and accent flags of the pattern. When Extract Pitches is selected it will affect the pitches of the pattern. If only Extract Rhythm is selected then the pitches of the current pattern will be unaffected. If you wish only to load a waveform without affecting the current pattern, disable both Extract Rhythm and Extract Pitches.

If any changes are made to the options or the pattern length the detector can be invoked again by selecting the *Update* button near the bottom of the dialog.

Transport

The transport is used to play the waveform and pattern. A click on either play button will start the playing and another click will stop. When the *Match Tempo* option is selected the tempo of ABL2 will be set so that when the wave loops around the pattern will loop around simultaneously. When the wave loops around the pattern will always be triggered from the start regardless of the Match Tempo setting in order for the pattern and wave to sync up.

Note: If the wave is playing it will continue to play after the dialog is closed.

Pattern setup

The number of steps in the pattern and the timing mode (triplet or non triplet) can be set here.

Pattern

The pattern pane displays up to 16 steps of the pattern in five rows: *Step number*, *Pitch*, *Gate*, *Slide* and *Accent*. At the bottom of the pane there is a slider which lets you scroll in the pattern to access any of the 64 steps. It is possible to directly edit the Pitch and the other flags by clicking on their boxes. When editing a pitch, click in the box and navigate the cursor and type a new pitch to make your changes. The format in which pitches are entered is note+accent+octave ([CDEFGAB][#|-][2-6]), for example C#4 or A-3. Any valid changes are audible directly in the pattern. If an invalid pitch is entered the last properly entered pitch will sound. If you are unsure whether the entered pitch is valid or not click on the slider and move it; if the pitch was invalid it will change back to pitch in the pattern.

There are three buttons near the bottom of the pattern pane: *View, Copy* and *Paste.* View displays the pattern in a text editor. Copy copies the pattern to the clipboard and Paste pastes from the clipboard to the pattern. The copy and paste functions work with the system clipboard and are useful when sharing patterns on-line or via e-mail. If you wish to share a pattern simply select Copy and then switch to your Internet browser or e-mail program and select Edit->Paste. If you wish to copy a pattern from an e-mail or Internet page you select the text containing the pattern (make sure you select all of the text, including the meta tag), then switch to ABL2 with the pattern analyzer open and click Paste.

Tip: The pattern can be edited with a text editor after clicking View. When your changes are complete select all of the text and select Paste in the dialog.

Using the detector to transcribe 303 patterns

The detector was designed to aid users in moving their patterns from the analog unit to ABL2. For best results follow these steps:

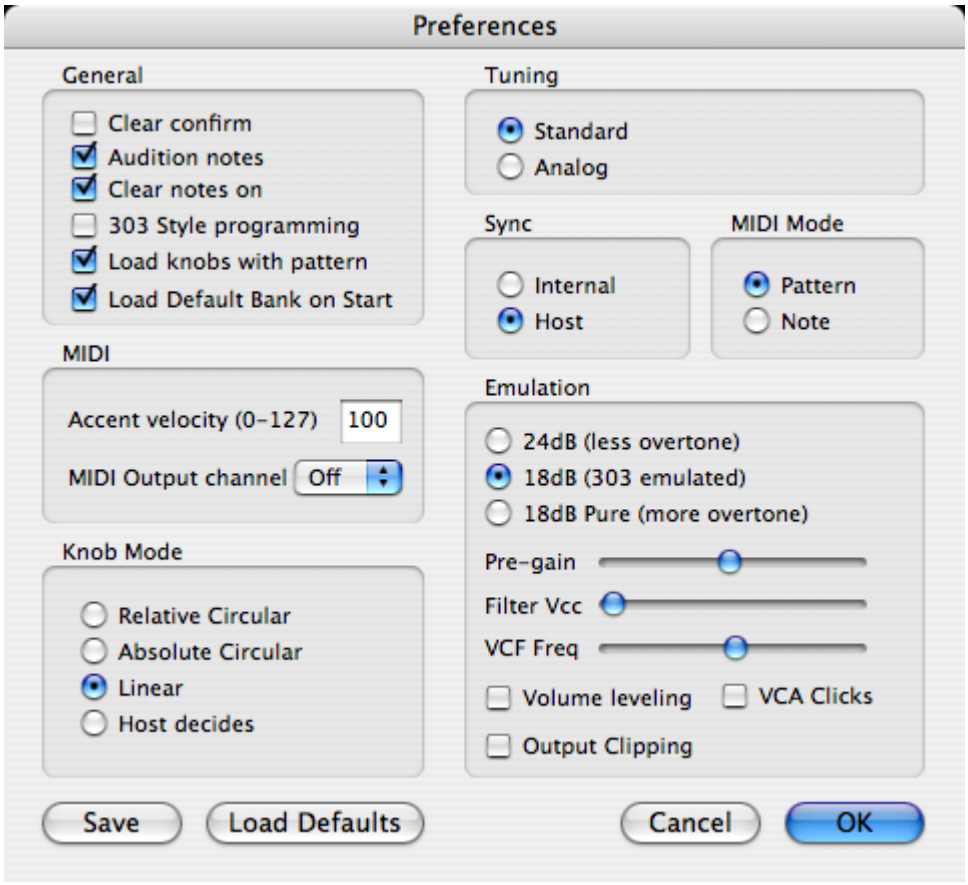
1. Center tuning knob or (preferably) tune the analog unit for A-220Hz.
2. Set Cutoff max, Resonance min, Envmod max, Decay max, Accent max
3. Set the sawtooth waveform
4. Set volume to about 30%. Make sure there is **no** clipping, especially at the accents.
5. Set tempo to 50-60 BPM
6. Record the pattern
7. Isolate the pattern length (usually 16 steps) and trim any excess before and after the pattern so that the wave file starts and stops flush with the notes (the whole last note must be included).
8. Use the pattern detect function and browse to the saved pattern
9. Play the original wave and the detected pattern and fix any false notes with the pattern pane

Due to this function operating within the limits of audio detection there is a bit of hit or miss involved, so the results may vary depending on the pattern.

Example audio patterns can be downloaded from http://www.audiorealism.se.

Hint: The detection algorithm has no idea about the structure of the wave file (how many bars or note steps there are or the timing). In order to improve the detection clues can be given in the filename. For example, if the wave is an 8 step pattern the filename can be set to 'Pattern_8steps.wav' (without the quotes). This will hint to the detection algorithm that the pattern is 8 steps long. If the word 'triplet' (without quotes) is in the filename the pattern will be set as triplet (example '12steps_triplet.pat').

Preferences



The preferences dialog is split into eight panes: General, MIDI, Graphics, Knob Mode, Tuning, Sync, MIDI Mode, and Emulation. In order for ABL2 to recall your preferences when it starts click the *Save* button after your adjustments. To recall the factory defaults click the *Set Defaults* button.

Note: Certain options (like knob mode) are automatically saved when the plug-in is closed, or if another event occurs (for example switching skins).

General

- *Clear confirm*: When activated the clear button on the main GUI will be protected by a dialog confirming the action to avoid accidentally clearing a pattern.

- *Audition notes*: When activated a note will sound when pressing the pitch buttons on the main GUI.

- *Clear notes on*: Selects whether the gates should be set to on or off after clearing a pattern.

- *303 Style programming*: This function is described more closely under the specific topic in the manual.

- *Load Knobs with Pattern*: When selected any settings to the knobs and switches that affect sound will be loaded with the pattern. Not all patterns contain knob settings.

- *Load Default Bank on Start*: Selects if the plug-in should load the default pattern bank when started.

MIDI

- *Accent velocity:* The Velocity threshold which MIDI input notes create accented notes. When using MIDI output the accented notes are sent with full velocity (127) and unaccented notes are sent with velocity one below the selection (for example, if Accent velocity is set to 100, unaccented notes will be sent with velocity 99). If Accent velocity is set to 0 accented notes will not be distinguished from unaccented notes.

- *MIDI Output channel*: Selects the MIDI output channel when using ABL2 as a MIDI output device.

Note: On Mac Audio Units ABL2 will only create a MIDI port when the MIDI output channel is selected. If the MIDI channel is changed or set it may be required to restart plug-in for the changes to make effect.

Knob Mode

Here you may set your preferred knob behavior. The default behavior is linear.

Note: Knob behavior is host dependent. Linear mode works in all hosts, while in some hosts circular and relative circular behavior are the same.

Tuning

Selects the tuning: *Standard* (properly tuned) or *Analog* (detuned across the scale).

Sync

Selects the tempo sync mode: *Internal* or *Host*.

MIDI Mode

Selects the MIDI mode: *Pattern* or *Note.*

Emulation

The emulation can be set up for individual taste.

- *24dB (less overtone)*: The filter has less overtones (distortion) and sounds cleaner, though slightly darker due to the steeper roll-off.

- *18dB (emulated)*: Response is designed to be accurate to the 4-pole analog filter. The amount of resonance and drive are controlled by the sliders explained below.

- *18dB (Pure)*: Has a clean sound but a uniform 18dB/Octave roll-off which makes the filter sound brighter.

- *Pre-gain*: Controls the amount of pre-filter gain which affects the cleanness of the sound. Moving the slider knob to the right will increase the gain and hence the dirtiness. The factory default setting is in the center position.

- *Filter Vcc*: Controls the amount of simulated voltage that drives the filter. More voltage will increase the sharpness of the resonance. In the maximum setting the sound may be ear piercing. Each analog unit is set differently, for example listen to Josh Wink's Higher State of Consciousness. The factory setting is about 25%, which most units are set to or below. On the analog unit this setting corresponds to trimpot TM6. While TM6 also affects the filter and oscillator tuning on the analog unit it does not in ABL2.

- *VCF Freq*: The range of the filter can be adjusted. Decreasing the slider will decrease the maximum resonant frequency but allow to make low muffled sound. Increasing the slider will increase the lowest resonant frequency but open up the top. The corresponding trimpot on the analog unit is TM3. The factory default is set to 50%.

- *Volume leveling*: Checking the box will make the volume more even when using the cutoff and resonance controls. Due to the nature of the filter design increasing resonance also lowers the perceived volume (though the energy is constant). This option is off by default.

- *VCA Clicks*: When selected the sequencer will emit a series of low volume clicks in sync with the pattern. This also happens on the analog unit. ABL2 will emulate these clicks when this option is selected. This option is off by default.

- *Output Clipping*: When activated the output will be clipped in an analog way if

it exceeds a certain maximum amplitude.