Baby Audio Atoms

Physical Modelling Synthesizer

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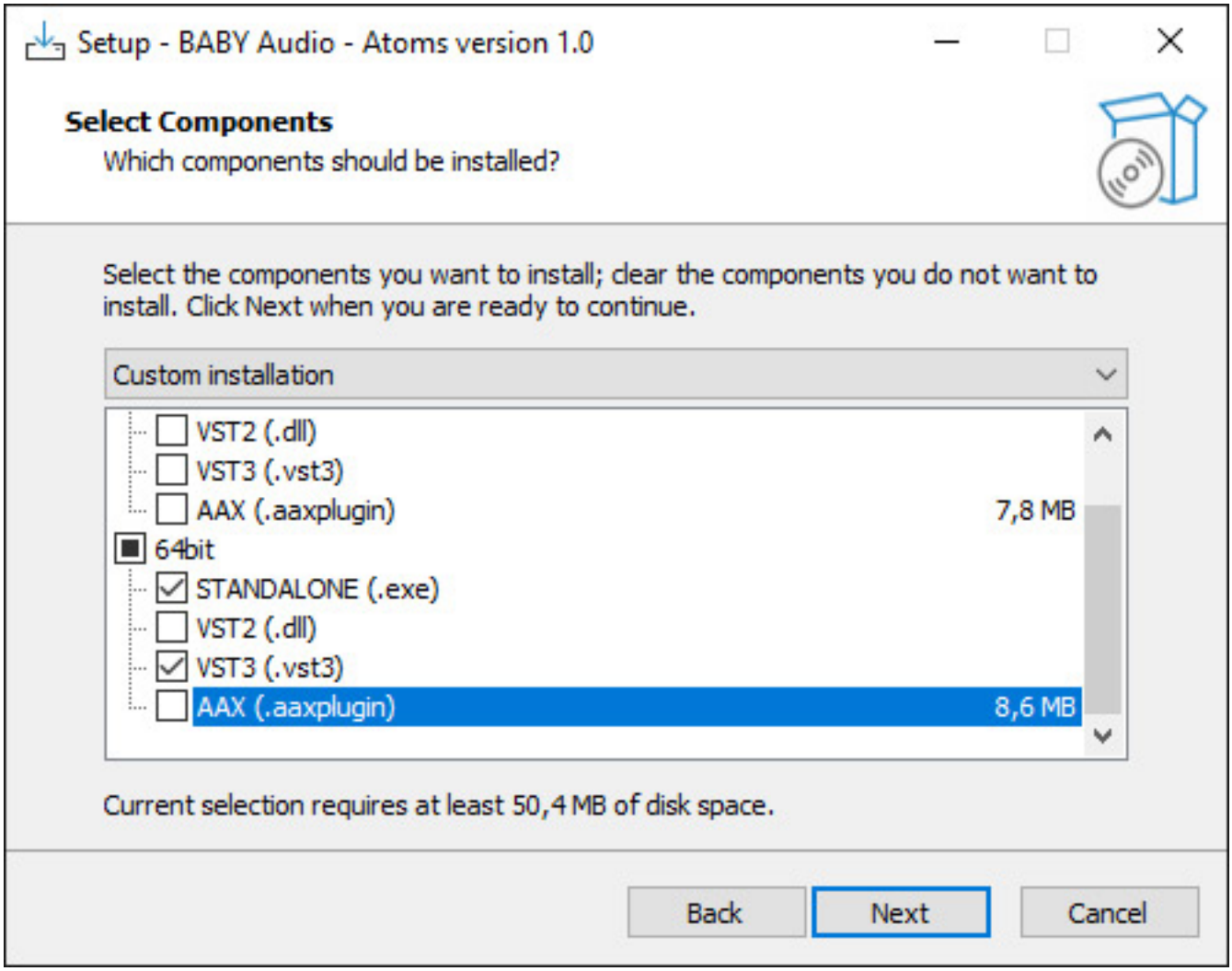
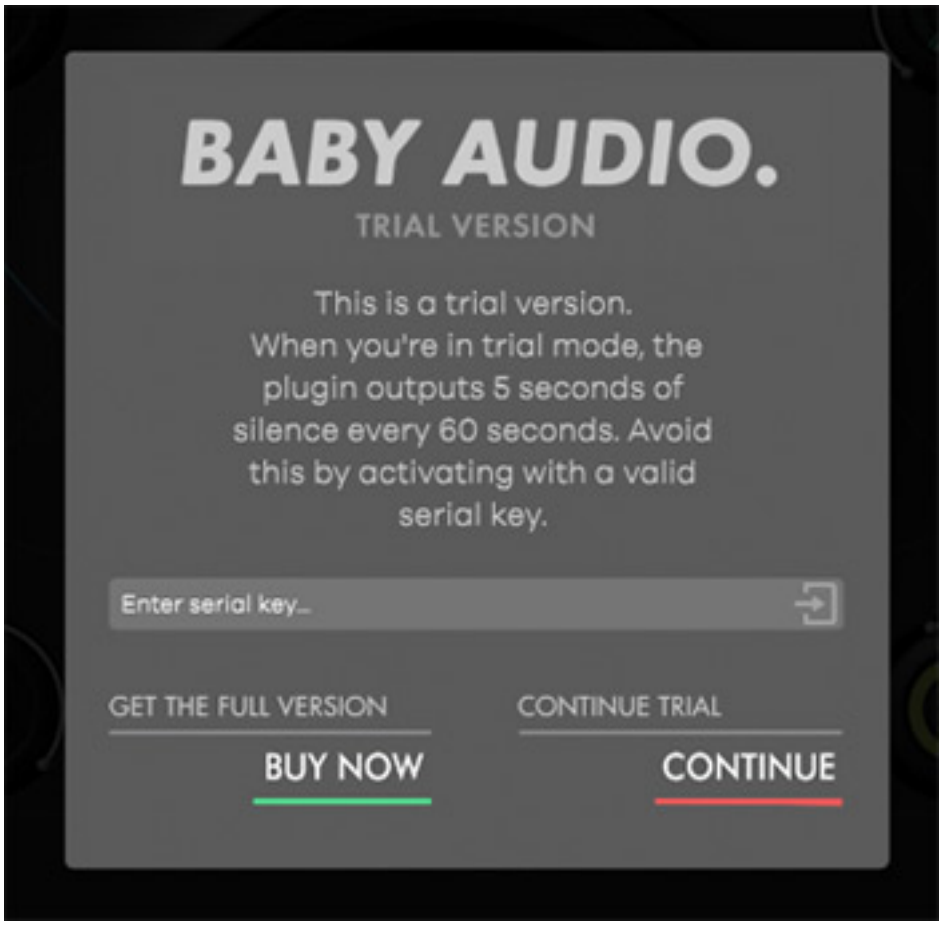
Baby Audio is a young manufacturer that offers plug-ins such as I Heart NY, Audio Parallel Aggressor, Spaced Out, Comeback Kid Delay, Crystalline, and IHNY-2, as well as virtual instruments. With "Atoms", Baby Audio has now introduced its second virtual synthesizer instrument after the BA-1.

Requirements and installation

Atoms is available for macOS operating systems (from 10.11 incl. Apple Silicon) and Windows (from Windows 10). The instrument is available as stand-alone software and in the plug-in formats VST2, VST3, AAX, and AudioUnit (macOS only).



The installation is carried out via an installer programme, in which you can specify the various installation paths, and the individual plug-in formats can be installed as 32 or 64-bit software.



After installation and the first startup of the software or plug-in, the serial number is requested for activation. Atoms can also be operated in demo mode, where a five-second mute is applied every minute.

Concept

There are different ways in which physical modelling canbe performed. With Atoms, the simulation is based on virtually connected masses and springs with variable properties and sizes, which form a vibration system excited by a virtual bow - similar to a real string instrument. This model offers a wide range of parameter changes and fluctuations. The six main parameters can be modulated in a wide variety of ways. Random variables that can be changed in their value ranges are also part of the Atmos concept.

Operation


01 - Atoms
AMBIENT - Maximum Overdrive*
Atoms
Chaos
MOTION
OFF
37
Order
MOTION
OFF
48
Force
MOTION
OFF
25
Overtones
MOTION
OFF
72
Drive
MOTION
OFF
21
Filter
MOTION
OFF
61
BABY AUDIO.
Root
Profile
Attack
70
Release
80
Movement
17
Modulation
28
Vibrato
13
Space
Output

The GUI is very well structured. There is a header, an area for synthesis with the display of masses and connections as well as the six main parameters, and a further section at the bottom for modifying the sound of the synthesis system.

In the left-hand header, you have the option of generating settings at random. The cube is used to select a random parameter setting. Note that this can be easily changed with the next icon, and the lock icon can be used to exclude the setting from a random change. The random selection can also be undone again with the arrow icon if the result does not meet your expectations.

There are global configuration options in the header on the right. MPE is also supported (if activated) , and the voicing can be switched to monophonic or polyphonic. The pitch can be changed in cent steps by +/-50 cents and the GUI design can be switched to light or dark. Further functions are activation of mouse-over tool tips and a reset of voices or playback.

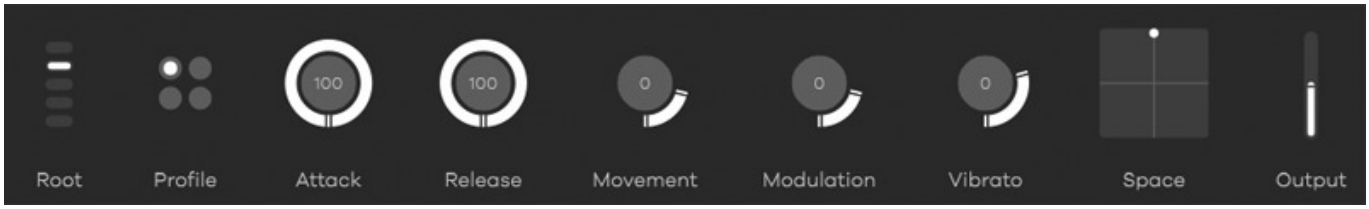
Presets can be switched in the middle of the top bar, and the preset browser (see illustration above) can be called up. Individual sound packages can be shown and hidden and you can also create your own packages. A name search is also possible. The MPE-capable presets are marked with corresponding symbols.

Instead of a favourites flag, you can assign one of three markers (yellow, orange and red) to each plug-in, for example, to assign importance, a sound character, or project affiliation (see illustration above). This gives you plentyof flexibility.

Now to the six main parameters. "Chaos" influences non-linearities in the virtual mass/spring system. If the Chaos value increases, the springs collide with each other, creating pitch fluctuations or glides. With "Order", the user can influence the damping behaviour of the mass/spring system. The system damping increases as the value increases. "Force" influences the force of the exciting virtual bow. Overtones" can be used to change the position at whichthe bow excites the springs

and thus influence the overtone behaviour. "Drive" is a parameter for harmonic clipping via waveshaping and can be used to create very complex harmonics. Finally, there is the "Filter" parameter, a modulatable low-pass filter with resonance.

Each of these parameters can be modulated using a sine or triangle waveform or a quasi-random signal (see illustration above). The modulation frequency can be fixed in hearts, beats or via host synchronisation. There are three LFO modes: free-running, note-retriggered or hold, with which the LFO stops after one cycle.



At the bottom of the section are further parameters, such as "Root" for the octave range (+/- 2 octaves), one of four "Profiles" for certain arrangements of the mass/spring system, the "Attack" which influences the virtual bowing, "Release" for the decay time of the oscillating system, "Movement" for the strength and speed of the bowing, "Modulation" for modulations in the oscillating system, "Vibrato" for pitch modulation, and "Reverb" in the form of an XY field for reverb strength and room size. The output level can be set via "Output".

Practise

Atoms comes with two sound packs: factory presets (almost 200 presets) and a free pack called "Radioactive" (over 60 presets).

I don’t really valuerandom functions that much, but the Atoms does produce quite useful basic sounds, which is due to the fact that there are relatively few parameters that have an influence, but these do make a wide range of sounds

possible. The predetermined synthesis concept based on physical modelling also tends to rule out "really weird" sounds. The Chaos parameter has a lot of influence on pitch changes. With many sounds in the predefined presets or random-generated settings, the glitches are a bit too much of a good thing for me. If you adjust this by reducing the value of the Chaos parameter, you can also obtainmore musical sounds. However, if you set the parameter to 0, it quickly becomes boring, because the sounds essentially live from the modulations.

The possible sounds are wide-ranging. You can create really unique basses, as well as interesting pads and everything from solo sounds to extreme effects, which should also appeal to many sound designers. Atoms is not only a synth for film music or sound design but can also be used for many other things.

In July 2024, the first optional sound packs were offered as a set called "Ambient Excursions". The first pack ""Atmospheres" contains 104 presets by composer, producer, and Grammy winner Paul Avgerinos. The second pack was developed by sound designer and co-founder of Synphaera Records Chris Bryant (aka "S1gns Of L1fe") and contains 50 presets, and the third is the sound pack "Alone in Kyoto" by Japanese composer Ryuichiro Yamaki with 64 presets, in which the Japanese cultural influence is unmistakeable. The packs offer drones, pads, effects, and percussive plug sounds, which are particularly impressive on Yamaki’s sound pack. With the three sound packs with a total of 218 presets, anyone who works with ambient sounds will definitely be happy.

Conclusion

The regular price is around 100 US$ / euros and the price for the Ambient Excursions Pack Set is 49 US$ / euros.

With Atoms, Baby Audio has developed a synthesizer that differs in sound from other synthesizers due to its very uniquesynthesis concept and is therefore an enrichment for your own synthesizer portfolio in the studio if such sounds are interesting in the genre in which you are active, which is no question in the field of film music or ambient. Thanks to the sophisticated operating concept, Atoms allows

you to create your own sounds very quickly and invites you to experiment.

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