amoenus externus



#### Foreword

amoenus externus is a stand-alone app or an audio plugin (AU or VST3) for use on Apple Mac or Windows PC.

The unique algorithm generates a sound image on headphones that corresponds to that of the speakers in the stereo triangle.

This not only produces the original sound on the headphones, but also creates a pleasant and fatigue-free listening experience.

Enjoy a new quality of music playback on headphones.

# System requirements

A **64-bit operating system** is required for both Mac and PC.

# Installation

#### Read the installation instructions in full before continuing.

This applies in particular when using the stand-alone app, as the additional <u>VB Cable</u> software is required for operation.

#### Stand-alone app

With the stand-alone app, the normal audio output of the PC is redirected via amoenus externus.

To do this, the additional **VB Cable** software must first be installed.

This is a **donation software** and can be paid directly to the creator if you like and use it:

https://shop.vb-audio.com/en/



### Installation Mac

Open the dmg file VBCable\_MACDriver\_Pack in the VB Cable folder and start the installation by double-clicking on vb-cable-installer.pkg.

After installation, the audio output of the operating system must be switched to **VB-Cable**.

Start the Audio-MIDI-Setup app in the Utilities folder and select the VB-Cable entry with the right mouse button in the pop-down menu Use This Device For Sound Output. The small loudspeaker appears in the VB-Cable field.

		Audio Devices	
<ul> <li>Nuforce Icon HDP DAC 0 ins / 2 outs</li> <li>MacBook Air Microphone 1 in / 0 outs</li> <li>MacBook Air Speakers 0 ins / 2 outs</li> <li>VB-Cable 2 ins / 2 outs</li> </ul>	€ (A)	VB-Cable Clock Source: Default Source: Default Format: 2 ch 32-bit Float 48.0 kHz Channel Volume Primary Stream Primary 1 2	Value     dB     Mute
+ - • •			Configure Speakers

Now you can also reduce the **format** in the right-hand column to 2 channels (stereo).

If the audio signal has to be reconnected to another output (e.g. internal speakers), this must be done in this window.

If you can **directly** determine the audio output in the settings of a program (e.g. streaming app), you must select **VB-Cable**.

The **amoenus externus** app is installed by double-clicking on the **amoenus externus.pkg** icon in the Application folder using the normal installation procedure.



## Operation amoenus externus on Mac

Access to the microphone must be allowed at the first start.



Also the audio path is interrupted for safety reasons.

Press the Settings button to open the Audio Settings... window.

Options amoenus externus	- ×			
Audio input is muted to avoid feedback loop	Settings		Audio/MIDI Settings	
Version: 1 Audio @ 44.1 kHz		Feedback Loop:	Mute audio input	
		Output:	amoenus audio ASM 6-3 SP 🛛 🗸	Test
		Input:	VB-Cable 🗸	
	2	Active output channels:	Output 1 + 2	
		Active input channels:	✓ Input 1 + 2	
		Sample rate:	44100 Hz	~
		Audio buffer size:	512 samples (11.6 ms)	~
Balance	0.0 dB			



Make the following adjustments:

Feedback Loop:	switch off
Output:	select output to headphones, amplifier or DAC
Input:	VB-Cable
Active output / inp	out channels must be switched on
Sample rate:	does not need to be set (adjusts automatically)
Audio buffer size:	an increased value can be set in the event of interference during playback
Test:	a click trigger a short control tone at the output
Indicator bar:	indicates when there is an audio signal at the input

Now you can start any program with an audio output and enjoy the pleasant sound of **amoenus** externus on your headphones.

Switching between **unprocessed** and **amoenus externus** is done with a click in the program window.

The **Balance control** is used to equalize the audio level if the sensitivity of the ears differs (the setting is not saved).



### **Installation PC**

Open the folder VBCABLE\_Driver\_Pack.

Now start the installation program **VBCABLE\_Setup\_x64.exe** in administration mode (right mouse button **Start As Administrator**) and follow the instructions.



#### A restart is required after installation.

Now a new output appears in Settings / System / Sound : CABLE Input (VB-Audio Virtual Cable).

This entry must be selected for **amoenus** externus to work.

← Settings	
命 Home	Sound
Find a setting	Output
System	Choose your output device
다 Display (사) Sound	CABLE Input (VB-Audio Virtual Cable) Certain apps may be set up to use different sound devices than the one selected here. Customise app volumes and devices in advanced sound options.
Notifications & actions	Device properties
J Focus assist	dッ) <u>100</u>

By starting the installer **amoenus audio.msi**, you will be guided through the installation of **amoenus externus**.



## Operating amoenus externus on PC

After installation, the program icon appears on the desktop. Double click to start.



The audio path is interrupted at the first start for safety reasons.

Options amoenus externus - ×	The Audio Settings	×
Audio input is muted to avoid feedback loop Settings	Feedback Loop:	Mute audio input
Version: 1 Audio @ 44.1 kHz	Audio device type:	Windows Audio (Exclusive Mode)
	Output:	SPDIF-Schnittstelle (3- amoenus audio A 🗸 Test
	Input:	CABLE Output (VB-Audio Virtual Cable) 🗸
	Active output channels:	Output channel 1 + 2
	Active input channels:	✓ Input channel 1 + 2
	Sample rate:	44100 Hz 🗸
	Audio buffer size:	1024 samples (23.2 ms) ~
Balance 0.0 dB		

In **Settings...** make the following adjustments:

Feedback Loop: switch off

Audio device type: the audio engine used is selected here

Try different settings if interference occurs during playback (see also Audio buffer size).

1	7	
Output:	select the output to headphones, amplifier or DAC	
Input:	CABLE Input (VB-Audio Virtual Cable) 🗥	
Active output / input channels must be switched on.		
Sample rate:	set to the same sample rate as the audio source (otherwise VB Cable will adapt the sample rate)	
Audio buffer size:	an increased value can be set in the event of interference	
Test:	a click trigger a short control tone at the output	
Indicator bar:	indicates when there is an audio signal at the input	



⚠️ If the following window appears when selecting the input



access to the microphone must be enabled in Settings / Privacy / Microphone.

← Settings	
1 Home	Microphone
Find a setting $\wp$	Allow access to the microphone on this device
Privacy Windows permissions	If you allow access, people using this device will be able to choose if their apps have microphone access by using the settings on this page. Denying access blocks Windows features, Microsoft Store apps and most desktop apps from accessing the microphone.
	Microphone access for this device is on
App permissions	Change
Å Location	
O Camera	Allow apps to access your microphone
D Microphone	If you allow access, you can choose which apps can access your microphone by using the settings on this page. Denying access blocks apps from accessing your microphone.
Voice activation	On
Notifications	Some desktop apps may still be able to access your microphone when settings on this page are off. Find out why



Now you can start any program with an audio output and enjoy the pleasant sound of **amoenus** externus on your headphones.

Switching between **unprocessed** and **amoenus externus** is done with a click in the program window.

The **Balance control** is used to equalize the audio level if the sensitivity of the ears differs (the setting is not saved).

If you want to switch the audio output back to another output (e.g. internal speaker), you can do this in **Settings / System / Sound**, or more simply in the taskbar by the speaker symbol.



If you can **directly** determine the audio output in the settings of a program (e.g. streaming app), you must select **CABLE Input (VB-Audio Virtual Cable).** 

## **Technical data**

To prevent clipping, the volume is reduced by 3 dB.		
Balance control range:	-10dB	
internal resolution:	32-bit float	
Supported sample rate:	44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz	

amoenus externus was developed on the JUCE audio platform.





# Functional diagram of amoenus externus

