

# USER MANUAL

# AUDIOFUSE 8 PRE

ADVANCED AUDIO INTERFACE

**ARTURIA**<sup>®</sup>  
YOUR EXPERIENCE • YOUR SOUND

# Special Thanks

---

## DIRECTION

---

Frederic BRUN	Nicolas DUBOIS	Jean-Gabriel
Philippe CAVENEL	Kévin MOLCARD	SCHOENHENZ

---

## ENGINEERING

---

Baptiste AUBRY	Claire BOUVET	Pierre DEMOUVEAUX	Pierre PFISTER
Marc ANTIGNY	Simon CONAN	Thierry HAUSER	Léonard SAUGET
Timothée BEHETY	Corentin COMTE	Jérôme LAURENT	

---

## DESIGN

---

Martin DUTASTA	Axel HARTMANN	Morgan PERRIER
----------------	---------------	----------------

---

## TESTING

---

Arnaud BARBIER	Matthieu COUROUBLE	Germain MARZIN
----------------	--------------------	----------------

---

## BETA TESTING

---

Marco CORREIA	Jay JANSSEN	Terry MARSDEN
Ben EGGEHORN	Randall LEE	Ken Flux PIERCE
Boele GERKES	Luca LEFEVRE	Chuck ZWICKY

---

## MANUAL

---

Randall LEE (author)	Vincent LE HEN	Jose RENDON	Jack VAN
Minoru KOIKE	Charlotte METAIS	Holger STEINBRINK	

© ARTURIA SA - 2019 - All rights reserved.  
26 avenue Jean Kuntzmann  
38330 Montbonnot-Saint-Martin  
FRANCE  
<http://www.arturia.com>

Information contained in this manual is subject to change without notice and does not represent a commitment on the part of Arturia. The software described in this manual is provided under the terms of a license agreement or non-disclosure agreement. The software license agreement specifies the terms and conditions for its lawful use. No part of this manual may be reproduced or transmitted in any form or by any purpose other than purchaser's personal use, without the express written permission of ARTURIA S.A.

All other products, logos or company names quoted in this manual are trademarks or registered trademarks of their respective owners.

**Product version: 1.0.0**

**Revision date: 19 July 2019**

## Thank you for purchasing AudioFuse 8Pre!

AudioFuse 8Pre is an invaluable addition to the Arturia audio interface family, with the same superior sound quality that made the original AudioFuse a production powerhouse – plus additional connectivity that allows the AudioFuse 8Pre to function on its own or as an expansion to any existing setup.

For the technically-minded, there's a comprehensive description of our proprietary DiscretePRO® technology [here](#).

This manual covers the features and operation of the AudioFuse 8Pre. For additional information about Arturia's **AudioFuse Control Center**, the companion software for the AudioFuse 8Pre, please read the owner's manual for that software.

# Important Safety Instructions

## PRECAUTIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. Read and understand all the instructions.
2. Always follow the instructions on the device.
3. Before cleaning the device, always remove the USB and DC cable. When cleaning, use a soft and dry cloth. Do not use gasoline, alcohol, acetone, turpentine or any other organic solutions; do not use a liquid cleaner, spray or cloth that's too wet.
4. Do not use the device near water or moisture, such as a bathtub, sink, swimming pool or similar place.
5. Do not place the device in an unstable position where it might accidentally fall over.
6. Do not place heavy objects on the device. Do not block openings or vents of the device; these locations are used for air circulation to prevent the device from overheating. Do not place the device near a heat vent at any location with poor air circulation.
7. Do not open or insert anything into the device that may cause a fire or electrical shock.
8. Do not spill any kind of liquid onto the device.
9. Always take the device to a qualified service center. You will invalidate your warranty if you open and remove the cover, and improper assembly may cause electrical shock or other malfunctions.
10. Do not use the device with thunder and lightning present; it may cause electrical shock.
11. Do not expose the device to hot sunlight.
12. Do not use the device when there is a gas leak nearby.
13. Arturia is not responsible for any damage or data loss caused by improper operation of the device.

## Specifications subject to change:

The information contained in this manual is believed to be correct at the time of printing. However, Arturia reserves the right to change or modify any of the specifications without notice or obligation to update the hardware that has been purchased.

## IMPORTANT:

The product and its software, when used in combination with an amplifier, headphones or speakers, may be able to produce sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high level or at a level that is uncomfortable. If you encounter any hearing loss or ringing in the ears, you should consult an audiologist.

## NOTICE:

Service charges incurred due to a lack of knowledge relating to how a function or feature works (when the product is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owner's responsibility. Please study this manual carefully and consult your dealer before requesting service.

# Introduction

Dear musician,

We'd like to thank you for purchasing AudioFuse 8Pre, one of the most versatile, affordable pro audio interfaces on the market. The AudioFuse 8Pre can be configured for tabletop operation or mounted in a rack, so whether you are just starting to build a music workspace or want to expand using only the best equipment, there is a place for the AudioFuse 8Pre in your creative process.

As with its older brother the AudioFuse, the AudioFuse 8Pre has been constructed using components of the utmost quality so as to achieve recordings of the utmost quality. And we made it a point to ensure maximum flexibility and transparency, no matter how you might want to use it:

- Direct-access, "one button per function" design
- Pristine audio quality from the universally acclaimed DiscretePRO® Preamps
- Plug-and-play with macOS, one-time driver installation for Windows PCs
- USB type C connection: great latency, superb bandwidth, and backward compatibility with USB 2.0 (Arturia driver required for Windows systems)

This manual will help you make the most of the AudioFuse 8Pre. It will also refer occasionally to the AudioFuse Control Center (AFCC), the powerful companion software we designed to work with the AudioFuse family of audio interfaces.

You can use the AFCC to adjust the front panel controls of the AudioFuse 8Pre if you like, and you will also find parameters and routing options that are not available from the front panel.

If you are reading this manual and have not already downloaded the AFCC, you can find it on the [Downloads & Manuals page](#) of the Arturia support site. Select the "AudioFuse Control Center" link on the left side of the page and download the appropriate version for your computer.

Be sure to visit the [www.arturia.com](http://www.arturia.com) website for information about all of our other great hardware and software instruments. They have proven time and again to be the go-to solutions for musicians around the world.

Wishing you all the best in your musical endeavors,

**The Arturia team**

# Table Of Contents

1. Welcome to AudioFuse 8Pre!	3
2. Overview	5
2.1. The front panel	5
2.1.1. Channels 1 and 2	5
2.1.2. Channels 3 through 8	7
2.1.3. Output controls	8
2.1.4. Clock, Sync, Power, and Mode buttons	10
2.2. The rear panel	12
2.2.1. ADAT, Word clock, USB, and power	12
2.2.2. Output connectors	15
2.2.3. Input channels 1 and 2	15
2.2.4. Input connectors 3-8	16
2.2.5. Virtual loopback channels 17 and 18	17
3. Registration	18
3.1. What's in the box?	18
3.1.1. DiscretePRO® certificate	18
3.1.2. Register your AudioFuse 8Pre	18
3.1.3. AudioFuse Creative Suite	19
3.1.4. AudioFuse Control Center	19
4. Setting up the AudioFuse 8Pre	20
4.1. Attaching the rack ears	20
4.1.1. Rackmount configuration	20
4.1.2. Tabletop configuration	21
4.2. Computer setup	22
4.2.1. macOS	22
4.2.2. Windows	22
5. The USB and ADAT modes	24
5.1. A quick contrast of each mode	24
5.1.1. In ADAT Mode	24
5.1.2. In USB Mode	24
5.2. How to switch modes	25
5.3. Audio routing of each mode and clock rate	25
5.3.1. Channel routing in ADAT mode	25
5.3.2. Channel routing in USB mode	26
5.4. Additional information	27
5.4.1. With a computer	27
5.4.2. Without a computer	27
5.5. Chaining two AudioFuse 8Pre units	27
5.5.1. Method 1: Direct USB connections	27
5.5.2. Method 2: One USB connection	28
5.5.3. USB channel assignments	28
6. Using the AudioFuse 8Pre	29
6.1. Connection overview	29
6.2. About the USB and ADAT modes	29
6.3. Real-world examples	30
6.3.1. System 1: Record a band	30
6.3.2. System 2: Expand an existing system	31
6.3.3. System 3: Record live drums	32
6.3.4. System 4: 16 audio inputs, one USB cable	33
6.3.5. System 5: 16 audio inputs, 2 USB cables	34
7. Synchronization	35
7.1. Sync while in USB mode	35
7.1.1. As master (Sync = INT)	35
7.1.2. As slave	36
7.2. Sync while in ADAT mode	36
7.2.1. As master clock (Sync = INT)	36
7.2.2. As slave device	36
7.3. Word Clock setup	37
7.3.1. Two devices	37
7.3.2. Three devices	37

7.3.3. Word Clock summary .....	38
8. Frequently asked questions .....	39
9. Specifications .....	40
9.1. System requirements .....	40
9.2. Audio specifications.....	40
9.3. Synchronization options .....	42
9.4. Signal Level LEDs.....	42
10. Software License Agreement .....	43
11. Declaration of Conformity .....	45

# 1. WELCOME TO AUDIOFUSE 8PRE!

Arturia has a long history of developing hardware and software products that are popular throughout the music industry due to their innovative, powerful features, high quality, and affordability.

Our first USB audio interface, the AudioFuse, was introduced in 2017. It boasts some of the finest microphone preamps the world has ever seen: Arturia's DiscretePRO® Preamps, with precision analog circuitry, high-quality AKM premium A/D converters, and +24dBu pro-audio level compatibility. In a feat of engineering genius, all of these components were housed in a compact design at a cost-to-benefit ratio that rivals devices with a much higher price tag.

That tradition continues with the AudioFuse 8Pre, the second in our family of professional-grade USB audio interfaces. It offers not two, but *eight* DiscretePRO® Preamps in a single rack space, along with 8 pristine analog outputs, 8 channels of ADAT audio inputs and outputs, flexible clocking options, rock-solid synchronization, and a single-button-per-function user interface that sacrifices nothing but complicated menus (there aren't any!).

Oh yeah, there's also our way-cool rackmount ear design that allows you to rotate the ears 90°, add rubber feet, and stand the AudioFuse 8Pre on a desktop at a very useful and ergonomic position. Plus you can link two AudioFuse 8Pre units together and they can present themselves to a computer as a single, 16-channel unit, rather than needing to be recognized as two independent devices.

We've also expanded the feature set of the AudioFuse Control Center software to complement the new capabilities of this awesome series of audio interfaces. Be sure to download the AFCC from the [Downloads & Manuals page](#) of the Arturia support site.

We predict that you and your AudioFuse 8Pre will become inseparable friends in the very near future.

## Features of AudioFuse 8Pre:

- 16 input channels / 20 output channels
- 8 microphone preamps with DiscretePRO® technology
- Independent 48V / phantom power capability for all mic preamps
- XLR combo jacks for all inputs
- Channels 1 & 2 have a Hi-Z setting for instrument-level inputs
- Independent balanced insert connections for channels 1 & 2
- Channels 1 & 2 offer auto-switching front panel access for instant connectivity
- LED metering for analog input channels
- Individual gain pot, phase invert, pad settings for analog input channels
- Built-in audio loopback feature, configurable via AudioFuse Control Center
- 8 independent line outputs on balanced TRS connectors
- Speaker outputs on balanced TRS connectors
- 1 stereo headphone output (6.35 and 3.5mm TRS), designed for headphones up to 600 Ohms
- Selectable monitoring section with individual level control for speakers and phones
- Direct monitoring via ultra-low latency internal mixer
- Double ADAT connectivity for 8 channels I/O at 96kHz
- Word clock input, output/thru on BNC
- DiscretePRO® Individual audio performance certificate delivered with each unit
- USB-C interface compatible with PC, macOS, & Linux, fully USB 2.0 compatible
- Robust metal chassis in a single-space rack form factor
- Rack ears can be mounted at 90° angle for tabletop use
- Combines with other audio interfaces such as [AudioFuse](#) for even more flexibility.

## 2. OVERVIEW

### 2.1. The front panel

The AudioFuse 8Pre follows the design philosophy of the entire AudioFuse series: it's easy to use. Almost everything the unit can do is right before your eyes; there are no additional menus or alternate pages. Each button has a single function; if its label says what you want the AudioFuse 8Pre to do, press it and it happens. It's that simple.



#### 2.1.1. Channels 1 and 2



You know how it goes: you have everything wired just right in your studio and then someone shows up with a new piece of gear that you just HAVE to check out right away. What do you do: unplug something somewhere and leave its cables dangling? Wouldn't it be great to have a quick, high-quality way to listen to that new microphone, guitar, or synth without disrupting your work flow?

Yes, it would. That's why we put these two connectors on the front panel: they access the same DiscretePRO® preamps, inserts, and controls as the connectors on the back, and even have another front-panel button (INST) that gives you even more flexibility. Now you're ready for anything the musical world can throw at you. Bring it on!

**i** Channels 1 and 2 have auto-switching circuitry. That means that when you plug a cable into one of the front connectors, AudioFuse 8Pre will switch the connection automatically from back to front. Likewise, when the front cable is unplugged, the connection will switch automatically from front to back.

##### 2.1.1.1. Channel 1 and 2 XLR combo inputs (front panel)

You can plug a microphone or an instrument into these combo connectors; they'll accept either type of cable. Once the connection is made you can use the buttons and the gain control knob to dial in the perfect input level.

If the rear connectors are being used for input channels 1 and 2 and you connect something to one of the front panel connectors, the connection will switch automatically. The rear-panel connection will be restored after the front panel cable is removed.

## 2.1.1.2. Channel controls

### Status LEDs

Channels 1 and 2 have three LEDs located at the top of the front panel, above the gain controls. They let you know that a connection has been made, and which type (XLR or 1/4"). You may need to press the INST button to make the distinction between standard line impedance (medium impedance) and instrument impedance (high impedance).

### Gain controls

Use this knob to fine-tune the input level to make sure you're getting the optimal range. Ideally the incoming signal should peak between the -10 and -6dB LEDs. If you are seeing the Clip LED light up then you should lower the input gain to prevent unwanted distortion.

Depending on the input device, you also may need to try a different Pad setting. We'll explain the Clip LED and the PAD button a little later.

 The channel gain knobs are analog controls that do not communicate their movements to the computer, and so there is no equivalent control in the AudioFuse Control Center.

### 48V

Some microphones need what is often referred to as "phantom power". If that's the case, engage the 48V button. You can tell phantom power is active when the button is lit.

### PAD

There are two or three settings available using the Pad button, depending on what you have plugged into the jack.

- **MIC** has three settings: PAD off (unlit), PAD on (lit white), and BOOST (lit red)
- **LINE/INST** has two settings: PAD off (unlit) and PAD on (lit white)

Each setting selects a different range in which the channel gain controls will operate. The details are listed in [Audio specifications \[p.40\]](#).

Here's a chart that describes how to switch the settings using the PAD button.

Input	Short press	Long press
Mic	Toggles between off (unlit) and on (lit white)	Boost (lit red)
Line/Inst	Toggles between off (unlit) and on (lit white)	(not available)

 If a cable is disconnected the AudioFuse 8Pre remembers the PAD setting for that channel and will restore it the next time you plug in the same type of cable.

### INST (Instrument)

This button is one of the differences between the first two input channels and the other six: Channels 3-8 do not have an INST button.

The INST button changes the impedance of the input channel to Hi-Z (high impedance). This is designed to be used with instruments that have passive pickups, such as electric guitars and basses, stringed instruments (mandolin, violin, etc.), and electric pianos (reed or tine-based). So if you're connecting an instrument like one of those directly, activate the INST button.

**i** If you're already using a pre-amp for your instrument, such as the output of an effects unit, you probably don't need to use the INST button.

## Phase

This button inverts the phase of the incoming signal. This is very useful in certain situations, such as when you are using two microphones to record the output of a guitar amplifier.

For example, let's say you want to record the sound of a microphone that is close to the speaker and another microphone that is placed further away to capture the sound of the room. If there is a certain frequency that is being overemphasized by the distance between the microphones (i.e., there's a harmonic node), try using the Phase button. The inversion of the signal of one of the microphones might cancel out the problem frequencies. (If not, move the room mic to a slightly different location.)

## Level meters

The function of these LEDs is fairly obvious: they let you know if the signal level is too low, too high, or just right. One important detail is that CLIP will light up when the signal level reaches -1 dBFS. This means you should lower the input gain. Set your levels so that the peaks of the incoming signal are between the -10 and -6dB LEDs most of the time. This will help to prevent unwanted distortion.

### 2.1.2. Channels 3 through 8



Everything that was described for [channels 1 and 2](#) [p.5] is also true for input channels 3 through 8, with the following exceptions:

- There are only two Input Source LEDs (Mic and Line).
- Channels 3-8 don't have an INST button.
- Connections for these channels are always made on the rear panel.
- Input channels 3-8 don't have insert jacks.

### 2.1.3. Output controls



#	Control name
1	Level control for the Speakers
2	Level control for the Headphones
3	Mono button
4	Monitor selection button

**i**: The knobs in the Output control section are analog controls, and they do not communicate their movements to the computer. This is why the Master control fader does not change in the AudioFuse Control Center when you turn the Speakers knob on the AudioFuse 8Pre. However, when you press the Mono and Cue/Main 1-2 buttons their status does change in the AFCC.

#### 2.1.3.1. Speaker output level

This knob controls the volume of the mix being sent to your monitor speakers. The output source can be toggled between the Main Outputs and the Cue mix using the Cue / Main 1-2 button.

The Cue mix is an ultra-low latency monitoring mixer that can be defined using the AudioFuse Control Center. By default all analog inputs are set to unity gain and panned to center, and the Main 1-2 outputs are hard-panned left and right (i.e., stereo).

The advantage of being able to set up a different mix for the Cue send is that the person in the recording booth can be listening to a different mix than what is playing back in the control room. That way the producer/engineer can monitor the overall mix while the person in the booth hears only the tracks that are needed for reference.

### 2.1.3.2. Headphones output level

This knob provides independent level control for the headphones. Both headphone jacks always share the same mix and level control. By default the headphone output will match the output of the Speakers when the Cue / Main 1-2 button is toggled unless you specify otherwise in the AFCC.

### 2.1.3.3. Mono button

It's a good idea to check your mix occasionally by pressing the Mono button; that will help you identify problem areas such as too much bass, phase cancellation issues, etc.

It's also a good way to anticipate situations a listener might encounter. For example, sometimes people listen to their music through a small mono speaker, so they will set the output of their device to Mono temporarily. If you're relying too heavily on stereo effects for your guitar, the effects (or the guitar) might completely disappear in Mono. We've made it easy for you to prevent issues like that with the Mono button.

### 2.1.3.4. Monitoring source selector

The Cue / Main 1-2 button will toggle both the speakers and the headphones between those two sources. What you will hear from the Main 1-2 source depends on which mode you've selected for the AudioFuse 8Pre:

- **USB Mode:** The audio from USB outputs 1 and 2 (i.e., the stereo mix of your DAW, etc.), or
- **ADAT Mode:** The audio from ADAT inputs 1 and 2.

The Cue mix can be any combination of incoming audio sources, as defined in the no-latency monitoring mixer of the AudioFuse Control Center.



ⓘ The headphones receive the same mix as the speakers unless you specify otherwise in the AFCC.

## 2.1.4. Clock, Sync, Power, and Mode buttons



### 2.1.4.1. Clock selector button

The Clock button works differently depending on which mode you have selected for the AudioFuse 8Pre: [ADAT mode](#) or [USB mode](#) [p.24].

#### ADAT mode

The clock rate can only be changed from the front panel when the AudioFuse 8Pre is in ADAT mode, and when it is using its internal clock (i.e., Sync = INT). As the Clock button is pressed, the clock rate LEDs will indicate which clock rate has been selected.

The AudioFuse 8Pre might wait 2 seconds between presses of the Clock button under certain circumstances. For additional information see the [Synchronization chapter](#) [p.35].

If Sync is set to ADAT or WORD the clock rate must be changed from the external device. The clock rate LEDs will indicate which clock rate is being received, and the LOCK LED will confirm that the two devices are synchronized.

#### USB mode

When the AudioFuse 8Pre is the master clock (Internal clock) and also in USB mode:

1. if you're connected to a MacOS computer you must use the Audio Midi Setup application to change the clock sample rate
2. if you're connected to a Windows PC you can either use the AFCC or your audio application if it allows this setting.

It cannot be changed from the front panel.

When the AudioFuse 8Pre is slaved to an external device (i.e., Sync = ADAT or WORD) the clock rate must be changed from the external device. The clock rate LEDs will indicate which clock rate is being received, and the LOCK LED will confirm that the two devices are synchronized.

However, when the 8Pre is in USB mode and you switch to Sync = ADAT or WORD there will not be an immediate change if the internal and external clock rates do not match. For additional information see the [Synchronization chapter](#) [p.35].

### 2.1.4.2. Sync selector button

Use the Sync button to select which of the three sources you want to use as the clock source for the 8Pre. If one of the external Sync sources is not connected, the Sync selector button will skip over that choice.

- **INT** is the internal clock of the AudioFuse 8Pre
- **WORD** is a Word Clock signal received through the WCLOCK IN connector
- **ADAT** is the clock rate received through the ADAT In 1 connector

The LOCK LED will light to let you know when the AudioFuse 8Pre has locked on to an external clock.



ADAT In 1 must be used as the ADAT clock source, not ADAT In 2.

For a chart that lists all of the various states of the Clock and Sync LEDs, see the [Synchronization chapter \[p.35\]](#).

### 2.1.4.3. The Arturia button

In the upper right corner of the front panel is a button that displays the Arturia logo. We'll call that the "Arturia button." This is the button that will power on / off the AudioFuse 8Pre. Hold it for 5 seconds and the unit will shut down; press it briefly and the unit will power up.

This button serves a second purpose: if the AudioFuse 8Pre is connected to a computer, a short press of the Arturia button will open or close the AudioFuse Control Center software on your computer.

### 2.1.4.4. Mode selector button

The button in the lower right corner of the front panel switches between the two main operational modes of the AudioFuse 8Pre: USB and ADAT. The front panel controls work the same way no matter which mode you select; the difference is what happens to audio that is passing through the AudioFuse 8Pre.

For a full description see the [USB and ADAT modes chapter \[p.24\]](#).

## 2.2. The rear panel

This is where all the fancy hardware is located that gives the AudioFuse 8Pre its power. It's sort of like looking under the hood of a fine car, or going backstage at Disneyland to see what makes all of the magic happen out front.



We'll go through each section of the rear panel from left to right.

### 2.2.1. ADAT, Word clock, USB, and power



#	Connector name
1	Power
2	ADAT inputs and outputs
3	USB Type-C
4	Word Clock input and output

#### 2.2.1.1. Power connector

Plug in the power connector and tighten its threaded nut snugly into position.

**i**: Use only the power supply provided by Arturia (15V DC, 2A, positive to ground).

### 2.2.1.2. ADAT inputs and outputs

This is where to connect the ADAT "light pipe" cables (also known as digital optical cables). They have a Toslink connector on each end. Plug one end into the AudioFuse 8Pre and the other end into an ADAT-equipped device (Out -> In, In -> Out). This can be another member of the AudioFuse family such as an AudioFuse, a second AudioFuse 8Pre, or any other audio device that uses the ADAT protocol to transmit digital audio.

But the coolest part is that no matter which clock rate you select (44.1kHz to 96kHz), you'll always have 8 digital inputs and 8 digital outputs available with the AudioFuse 8Pre, because we have two sets of Toslink connectors for input and output.

The clock rate determines whether you need to use both sets of ADAT i/o connections or only one.

Clock rate	ADAT connectors to use	Data carried
44.1k or 48k	ADAT In / Out 1	Tracks 1-8
88.2k or 96k	ADAT In / Out 1 and ADAT In / Out 2	Tracks 1-4 (ADAT In / Out 1) Tracks 5-8 (ADAT In / Out 2)

If the other ADAT-equipped device will be the master clock, be sure to connect its first ADAT optical output to the ADAT In 1 connector of the AudioFuse 8Pre. Remember: Only ADAT In 1 can receive the ADAT clock source, not ADAT In 2.

 It's important to connect each ADAT output to the corresponding input on the other device (1->1, 2->2). This will help avoid confusion as to which track is showing up on each device.

### 2.2.1.3. USB Type-C connector

The USB connector is only used to connect the AudioFuse 8Pre to the AFCC; it does not supply power to the unit. You will need to connect the power supply that shipped with the unit in order to use it.

Plug the AudioFuse 8Pre into your computer and it will be available immediately as an audio input/output device, whether you're using Windows or macOS. But for a Windows computer you'll need to [install the Arturia USB audio drivers \[p.22\]](#) in order to access all of the features of the AudioFuse 8Pre.

Whether you're using a Mac or a PC you'll want to [install the AFCC \[p.19\]](#), because it provides access to even more features than are available from the front panel.

 The AudioFuse Control Center software is available for Mac and Windows computers.

There are some important points to remember when using multiple USB audio devices with the same computer:

- Whenever possible, connect the AudioFuse 8Pre directly to your computer.
- It's okay to use a USB hub to connect the AudioFuse 8Pre, but **we do not recommend** using the USB hub of another audio device such as the AudioFuse. This can lead to channel identification issues.
- Use the same master Word Clock source for all devices, if possible. The AudioFuse 8Pre has rock-solid sync and can be the Word Clock master for your system.

 A pair of AudioFuse 8Pre interfaces can be connected to the same computer in two different ways, depending on what you are trying to do. For details see [Chaining two AudioFuse 8Pre units \[p.27\]](#) in the [USB and ADAT modes chapter \[p.24\]](#).

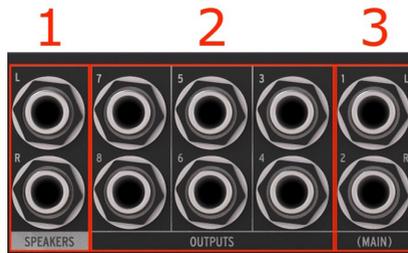
#### 2.2.1.4. Word Clock input and output

AudioFuse 8Pre can be the Word Clock master source for your system, or it can be slaved to another device that generates Word Clock. These are often used in studios to ensure sample-accurate transmission of digital audio when multiple devices and systems are involved.

The AudioFuse Control Center has an option that allows the AudioFuse 8Pre to engage its 75 Ohm / Hi-Z termination circuit as needed. The [Synchronization chapter \[p.37\]](#) will help you to determine which of the two Impedance settings to use (75 Ohm or Hi-Z).

The AFCC also allows you to use the WCLOCK OUT of the AudioFuse 8Pre as a "Pass-Thru". This hardwires the Word Clock input directly to the output so the AudioFuse 8Pre can pass the signal instantly to another device. This is a very handy setting to have when you want to clock multiple units in a larger system. It helps avoid the need for additional T-connectors.

## 2.2.2. Output connectors



#	Connector name
1	Stereo speaker outputs
2	Output channels 1-8

### 2.2.2.1. Stereo speaker outputs

Adjust these outputs directly with the large control knob on the front panel. They are designed to send audio to your studio monitors, and can be switched between the Main 1-2 output and the Cue mix as defined by the front panel controls or the AFCC.

### 2.2.2.2. Output channels 1-8

These outputs can be freely assigned in USB mode using the AFCC. You can set them up as additional stereo pairs, individual outputs for particular instruments such as a monosynth, or use them as additional speakers with a DAW that has surround-sound mixdown capabilities.

## 2.2.3. Input channels 1 and 2

We're going to jump over channels 3-8, but we'll describe them in [the next section \[p.16\]](#).

Input channels 1 and 2 are shared with the front panel connectors. The connection will switch automatically to the front panel when something is plugged in there. But as soon as you disconnect the cable on the front panel, the connection to the rear panel will be restored.



### 2.2.3.1. Channel 1 and 2 XLR combo inputs (rear panel)

You can plug a microphone or an instrument into these combo connectors; they'll accept either type of cable. Once the connection is made you can use the front-panel buttons and gain control knob to dial in the perfect input level.

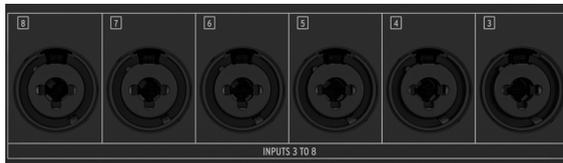
### 2.2.3.2. Inserts 1 and 2

The insert send/return connectors are one of the major differences between input channels 1 and 2 and the other six input channels. They allow you to use an external device such as a compressor to process the signal before it is converted into digital audio and sent to your computer or another ADAT-equipped device.

- **SND** takes the incoming audio signal from the XLR combo input connector and sends it to the external device.
- **RET** receives the audio that is returning from the external device.

**i** **!** The insert send uses an impedance balanced output and the insert return input is electronically balanced. Both asymmetrical and symmetrical devices are supported. The maximum audio level is +18dBu.

### 2.2.4. Input connectors 3-8



These channels do not have insert connectors but they still shine with all the purity and clarity of the DiscretePRO® Preamp circuitry of channels 1 and 2.

You can plug a microphone or a line-level instrument into these combo connectors; they'll accept either type of cable. Once the connection is made you can use the front-panel buttons and gain control knob to dial in the perfect input level.

**i** **!** Use channels 1 or 2 to connect an electric guitar, bass, or any instrument that has pickups or needs a high-impedance (Hi-Z) input. Channels 1 and 2 have dedicated circuits designed for this purpose (the INST button).

## 2.2.5. Virtual loopback channels 17 and 18

There are two additional input channels that are not accessed through the front or rear panels. They will show up in your computer or DAW as inputs 17 and 18. They are connected to a dedicated USB record stream, so the output of another application can be recorded directly by the DAW.

If you like to produce your own karaoke tracks, for example, you can tap into the output of your favorite playback application. This will enable you to record your voice into one track on your DAW and the "minus one" file into a stereo track simultaneously.

The sources for the Loopback channels can be the Main mix or the Cue mix of the AudioFuse 8Pre. By default there is no input selected. Use the AFCC to activate the loopback channels and to select which mix they will receive.



⚠: The loopback feature is only available when the AudioFuse 8Pre is in USB mode.

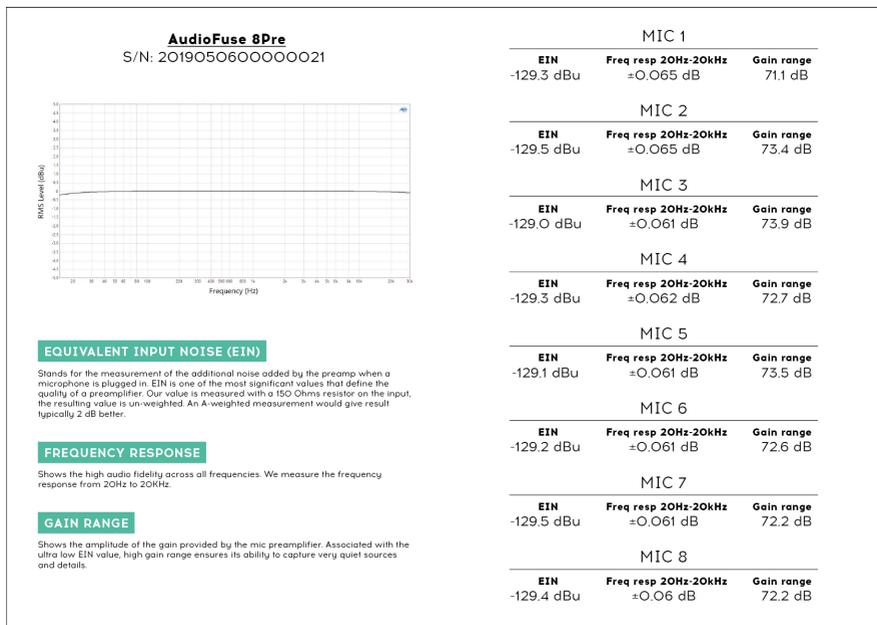
## 3. REGISTRATION

### 3.1. What's in the box?

- AudioFuse 8Pre
- Power supply + worldwide adapters
- USB cable: Type C to Type C
- USB cable: Type C to Type A
- Registration card with serial number and Unlock Code
- DiscretePro® certificate

#### 3.1.1. DiscretePRO® certificate

The AudioFuse 8Pre contains 8 pre-amplifiers that use DiscretePRO® technology to ensure the utmost in audio quality when recording. Your AudioFuse 8Pre is unique, and therefore it comes with its own Audio Precision certificate as a guarantee of its performance.



A more detailed version of this certificate is available after you complete the registration process.

#### 3.1.2. Register your AudioFuse 8Pre

To gain access to the AudioFuse Control Center software and other benefits, register your unit at [www.arturia.com/register](http://www.arturia.com/register). Be sure to have your registration card available.



## 4. SETTING UP THE AUDIOFUSE 8PRE

The AudioFuse 8Pre is more than just another pretty face in your rack; it can be configured to crouch on your desk like a sure-footed tiger, ready to spring into action. The difference is in how you attach the rack ears.

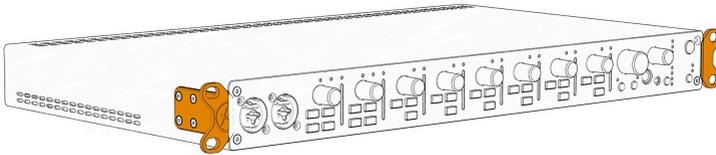
### 4.1. Attaching the rack ears

Each rack ear can only be mounted on the correct side or else the screw holes won't line up properly. The easiest way to remember which ear goes where, so you can get it right on the first try, is that the rack ear with the Arturia logo belongs on the left side of the unit. This is true whether you mount them as forward-facing or downward-facing.



Use only the screws provided by Arturia to ensure proper mounting of the hardware.

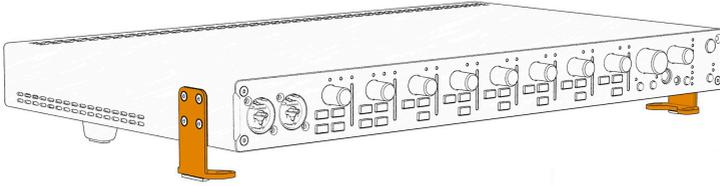
#### 4.1.1. Rackmount configuration



*AudioFuse 8Pre with rack ears facing forward*

Mount the rack ears as shown in the illustration above, with the Arturia logo on the left side of the AudioFuse 8Pre. In this configuration the rubber pads and feet are not needed.

## 4.1.2. Tabletop configuration



*AudioFuse 8Pre with rack ears facing downward and rear feet installed*

Mount the rack ears as shown in the illustration above, with the Arturia logo on the left side of the AudioFuse 8Pre. Before you do, though, read the following instructions.

1. Two semi-circular rubber pads are included. Stick these onto the rack ears at the spot that will become the "feet". This will help prevent scratches on the surface where you place the AudioFuse 8Pre.
2. Attach the rubber pads so that the straight edge aligns with the 90° bend in the rack ear, and then press the circular portion of the pad firmly onto the rack ear in the direction of the two large screw holes.
3. Be sure to mount the rack ears so they are pointing *under* the AudioFuse 8Pre (toward its center), not pointing away.
4. Also included are two "feet" made of plastic and rubber that should be mounted to the rear of the bottom panel. They will enhance the physical stability of the AudioFuse 8Pre when it is placed on a flat surface.
5. These feet have small plastic guide pins that help them seat properly on the bottom panel. Once you line those up it will be easy to fasten them into place with the provided screws.
6. When the feet are properly installed the AudioFuse 8Pre will be supported in four places: the left and right rack ears (under the front) and the left and right feet (under the back).
7. The AudioFuse 8Pre will now be completely elevated above the surface where it will be placed.



It's okay to place a laptop, a monitor, or another rack unit on top of the AudioFuse 8Pre if needed.

## 4.2. Computer setup

Whichever platform you use (macOS or Windows), be sure to download and install the AudioFuse Control Center. Among other advantages the AFCC provides, it will notify you when there is a new version of firmware for the AudioFuse 8Pre.

### 4.2.1. macOS

Connect your AudioFuse 8Pre to its power supply, connect it to the Mac with one of the provided USB cables, and then power it up. The AudioFuse 8Pre will appear in *Audio MIDI Setup* immediately.

To make the AudioFuse 8Pre your default audio device:

- Select the AudioFuse 8Pre in the left panel of Audio MIDI Settings.
- Right-click and select "Use This Device For Sound Output".
- Right-click again and select "Use This Device For Sound Input".

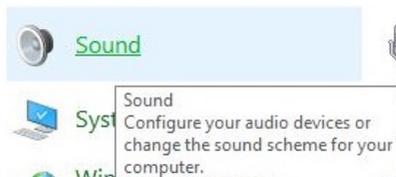


### 4.2.2. Windows

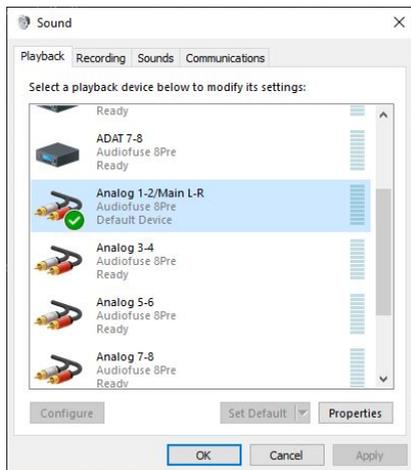
If you plan to use a Windows computer with the AudioFuse 8Pre then it's important to [download and install the AudioFuse Control Center \[p.18\]](#) software. The installation process for that software will also install the Arturia USB Audio drivers on your computer. And as mentioned earlier, the AFCC will let you know when a new version of firmware is available for your unit.

After downloading the AFCC installer, double-click the icon to begin the process. After the installation is complete the AudioFuse 8Pre will appear in your list of audio devices whenever it is attached.

If you would like to use the AudioFuse 8Pre as your default audio device, open the Control Panel and click "Sound."



If the AudioFuse 8Pre is not already selected as the default device, click the Set Default button at the bottom of the window.



## 5. THE USB AND ADAT MODES

The AudioFuse 8Pre has two main operational modes: USB and ADAT. A front panel button can toggle between the modes, which enables a single AudioFuse 8Pre to be used in two very different ways:

- as a complete 16-input / 20-output USB audio interface, or
- as a bidirectional ADAT expander with 8 preamps and 10 analog outputs.

This chapter will describe each mode in detail.

### 5.1. A quick contrast of each mode

We'll start with a simple summary and dive into the details later.

#### 5.1.1. In ADAT Mode

- All analog inputs are routed to ADAT outputs.
- All ADAT inputs are routed to analog outputs.
- The speaker/headphone outputs can be set either to ADAT inputs 1-2 or set to internal Cue mixer
- The AudioFuse 8Pre will not be shown in your computer's audio device lists. It is only shown when the unit is in USB mode.
- You can still use the AFCC when the AudioFuse 8Pre is in ADAT mode; simply connect the USB cable.

#### 5.1.2. In USB Mode

- All analog inputs are routed to USB input channels 1-8.
- All ADAT inputs are routed to USB input channels 9-16.
- USB output channels 1-8 are routed to analog outputs 1-8.
- USB output channels 9-16 are routed to ADAT outputs 1-8. Note: The AFCC allows you to alter the routing of the output channels.
- USB input channels 17 and 18 can be used as a virtual loopback input for the Main 1-2 or Cue mix
- The speaker/headphone outputs can be set either to USB output 1-2 or set to internal Cue mixer



At clock rates of 88.2k and 96k the ADAT input/output channels are split between ADAT ports 1 and 2.

## 5.2. How to switch modes

If the AudioFuse 8Pre is connected to a computer you can use the AFCC to switch between USB and ADAT modes.

But if you are using the AudioFuse 8Pre in a different room, you can still switch modes easily:

- Press the Mode button and hold it for 3 seconds.
- The LED of the current mode will begin to flash.
- When the LED of the target mode becomes lit solid, the AudioFuse 8Pre has switched modes.

**i** : It is not necessary to connect the AudioFuse 8Pre to a computer; you can set up a multi-channel mix using the AFCC and take only the AudioFuse 8Pre with you. You can also use it as a stand-alone ADAT converter without a computer. !: If the AudioFuse 8Pre is connected to the computer via USB but the audio inputs and outputs don't show up in your computer's audio settings, make sure that the MODE button has been switched to the USB setting.

## 5.3. Audio routing of each mode and clock rate

### 5.3.1. Channel routing in ADAT mode

#### 5.3.1.1. At 44.1 and 48kHz

These input channels...	...are routed to these output channels
Analog input channels 1-8 -->	ADAT Out #1, channels 1-8
ADAT In #1, channels 1-8 -->	Analog output channels 1-8

#### 5.3.1.2. At 88.2 and 96kHz

These input channels...	...are routed to these output channels
Analog input channels 1-4 -->	ADAT Out #1, channels 1-4
Analog input channels 5-8 -->	ADAT Out #2, channels 5-8
ADAT In #1, channels 1-4 -->	Analog output channels 1-4
ADAT In #2, channels 5-8 -->	Analog output channels 5-8

**i** : In ADAT mode you will not be able to hear anything coming back from the computer, at least when using only one AudioFuse 8Pre. When two units are cascaded, the first AudioFuse 8Pre stays in USB mode so it will be the source of the USB audio for DAW playback, your music app, etc.

## 5.3.2. Channel routing in USB mode

### 5.3.2.1. At the 44.1 and 48kHz rates

These AudioFuse 8Pre input channels...	...are routed to these USB recording channels
Analog inputs 1-8 -->	USB channels 1-8
ADAT In #1, channels 1-8 -->	USB channels 9-16
Loopback inputs 17 and 18 -->	USB channels 17 and 18

These USB playback channels...	...are routed to these AudioFuse 8Pre playback channels
USB channels 1-8 -->	Analog outputs 1-8
USB channels 9-16 -->	ADAT Out port #1, channels 1-8

### 5.3.2.2. At the 88.2 and 96kHz rates

These AudioFuse 8Pre input channels...	...are routed to these USB recording channels
Analog inputs 1-8 -->	USB channels 1-8
ADAT In #1, channels 1-4 -->	USB channels 9-12
ADAT In #2, channels 5-8 -->	USB channels 13-16
Loopback inputs 17 and 18 -->	USB channels 17 and 18

These USB playback channels...	...are routed to these AudioFuse 8Pre playback channels
USB channels 1-8 -->	Analog outputs 1-8
USB channels 9-12 -->	ADAT Out port #1, channels 1-4
USB channels 13-16 -->	ADAT Out port #2, channels 5-8



In USB mode you are able to edit the output routing using the AFCC.

## 5.4. Additional information

### 5.4.1. With a computer

1. The AFCC can control the AudioFuse 8Pre in either mode if a USB cable is connected. For example, you can [force the AudioFuse 8Pre into ADAT mode \[p.25\]](#) even when USB is present. This enables the AFCC to continue controlling the AudioFuse 8Pre while maintaining the ADAT audio routing.
2. While it is in ADAT mode the AudioFuse 8Pre is not visible in your computer's audio device lists. It only appears in these lists when the unit is in USB mode.
3. If the AudioFuse 8Pre is in USB mode and the USB connection is interrupted for some reason (such as when the computer goes to sleep), the USB mode LED will blink until the connection is restored (i.e., when the computer wakes up). The AudioFuse 8Pre remains in USB mode during this time; it won't switch to ADAT mode automatically, even if an ADAT input signal is present.

### 5.4.2. Without a computer

1. If the Mode button is pressed when the device is in ADAT mode but a USB cable is not plugged in, the ADAT LED will stay lit and the USB LED will blink 3 times and then turn off. This is how the AudioFuse 8Pre indicates that USB mode is not available.
2. If the device is in ADAT mode and then a USB cable is plugged in, the AudioFuse 8Pre will stay in ADAT mode. If you want to put the AudioFuse 8Pre into USB mode you must switch modes manually (hold down the Mode button for 3 seconds).

## 5.5. Chaining two AudioFuse 8Pre units

Chaining two AudioFuse 8Pre units using the ADAT connections provides you with a complete, 16-channel analog input system. There are two ways to set this up, depending on what you want to do.

### 5.5.1. Method 1: Direct USB connections

The advantage of this arrangement is that both devices can be controlled by the computer using the AFCC. They will be seen by the computer as a single USB audio interface in most cases.

- Connect the number of optical cables required by the clock rate
  - 44.1k and 48k use ADAT In/Out #1, so you'll need a pair of cables
  - 88.2k and 96k use ADAT In/Out #1 and ADAT In/Out #2, and require two sets of cables
- Connect both AudioFuse 8Pre units to the computer via USB
- Put one AudioFuse 8Pre into USB mode and the other AudioFuse 8Pre into ADAT mode. [Here's how. \[p.25\]](#)
- Select Sync = ADAT for the AudioFuse 8Pre unit that is in ADAT mode.

## 5.5.2. Method 2: One USB connection

This configuration is ideal for operating systems that will not recognize an aggregate device, such as a Windows PC using the ASIO driver. It's also a great solution if you are running short on USB inputs: you can connect two AudioFuse 8Pre units to a computer using this method whether it can recognize an aggregate device or not.

- Connect the number of optical cables required by the clock rate
  - 44.1k and 48k use ADAT In/Out #1, so you'll need a pair of cables
  - 88.2k and 96k use ADAT In/Out #1 and ADAT In/Out #2, and require two sets of cables
- Connect the first AudioFuse 8Pre to the computer via USB
- Do not connect the second AudioFuse 8Pre to the computer
- The first AudioFuse 8Pre must be in USB mode and the second must be in ADAT mode. [Here's how.](#) [p.25]
- Change the Sync source of the second AudioFuse 8Pre to ADAT.

The disadvantage of this arrangement is that the AFCC will see the second AudioFuse 8Pre only as a set of ADAT channels coming into the computer through the first AudioFuse 8Pre. You will not be able to select the second AudioFuse 8Pre in the AFCC Device Selection menu or configure it (change Modes, etc.). But both units will be seen by the computer as a single, 16-channel USB audio interface.

## 5.5.3. USB channel assignments

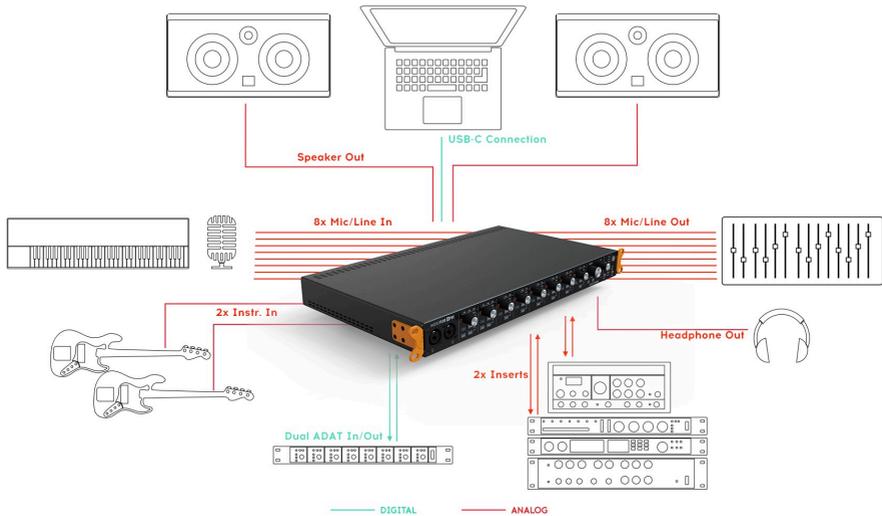
Whether you are using Method 1 or Method 2 to chain two AudioFuse 8Pre units, here's how the input and output channels will show up on your computer:

USB channels	AudioFuse 8Pre channels
USB inputs 1-8	Analog inputs 1-8 of the first (master) unit
USB inputs 9-16	Analog inputs 1-8 of the second (slave) unit
USB outputs 1-8	Analog outputs 1-8 of the first (master) unit
USB outputs 9-16	Analog outputs 1-8 of the second (slave) unit

## 6. USING THE AUDIOFUSE 8PRE

### 6.1. Connection overview

This diagram shows all of the different types of connections the AudioFuse 8Pre offers. There are a total of 16 inputs and 20 outputs available.



Eight of those inputs and outputs can be provided through optical cables by another ADAT-equipped device, such as another member of the AudioFuse family.

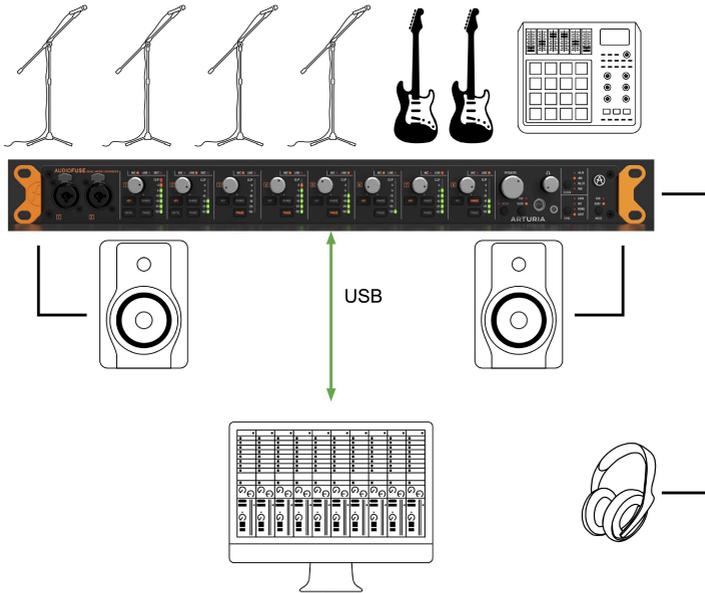
### 6.2. About the USB and ADAT modes

The rest of the system examples involve one or the other of the two main modes of the AudioFuse 8Pre: USB mode or ADAT mode. There's a [separate chapter \[p.24\]](#) where you can learn about the differences between them.

## 6.3. Real-world examples

Now we'll show a few ways to take advantage of all of the features of the AudioFuse 8Pre, both on its own and with another audio interface.

### 6.3.1. System 1: Record a band



In this scenario the AudioFuse 8Pre is the only audio interface. Its eight analog inputs are being used several ways:

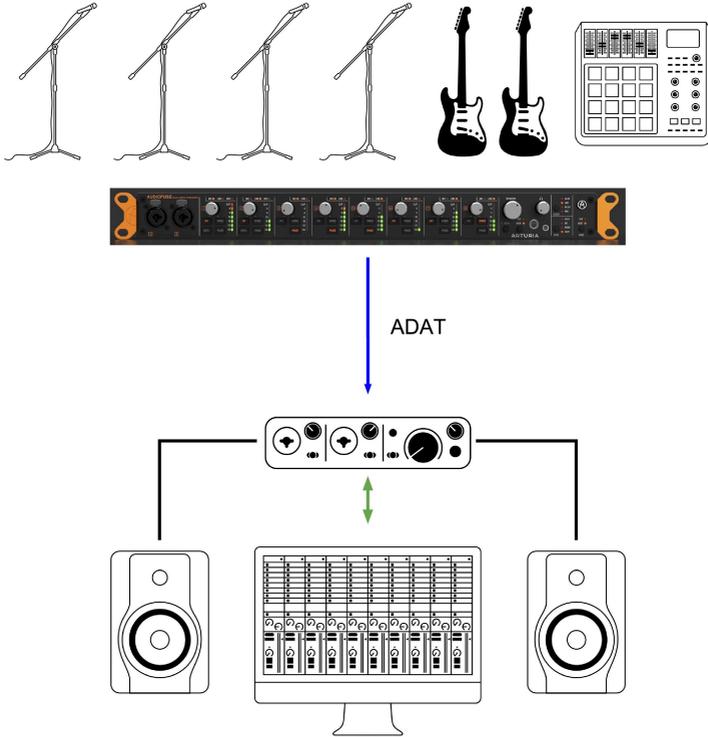
- to capture the sound from four vocal microphones (some need phantom power; 48V is being supplied)
- two guitars that have their own pre-amps, and
- the stereo output of a drum machine (line level).

The audio is being sent to three different places:

- Incoming audio is being sent to a computer over the USB connection
- the mixdown is being played back through stereo speakers, and
- the engineer is listening to the Main or Cue mixes over headphones.

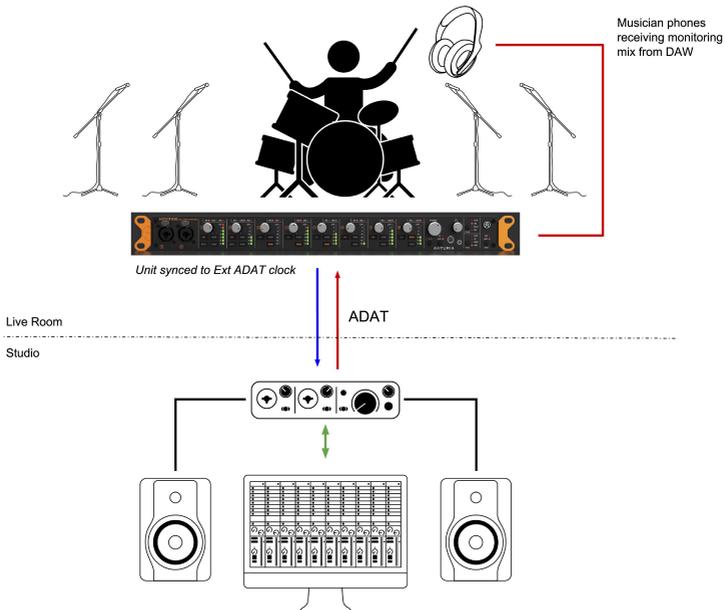
Pretty fancy for a recording that is being made in a living room!

### 6.3.2. System 2: Expand an existing system



This home studio started out with a smaller, 2-channel audio interface and then added the AudioFuse 8Pre. The flexibility and quality added through a single purchase has multiplied the capabilities of this studio many times over.

### 6.3.3. System 3: Record live drums

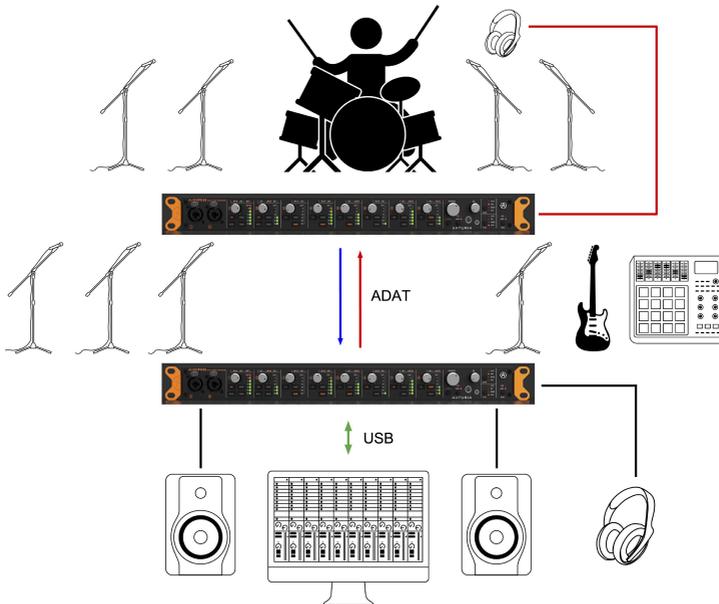


This is how larger recording studios are set up: the recording engineer is in one room and one or more musicians are in another room, on the other side of a window. The AudioFuse 8Pre is being used as a multi-channel direct box, a high-quality A/D converter, and also as a headphone monitoring system for the drummer.

A pair of 10-meter optical cables are carrying the independent audio channels to an ADAT-equipped USB audio interface that is connected to a computer in the control room. The drummer put the AudioFuse 8Pre in ADAT mode and selected the Main 1-2 setting for the AudioFuse 8Pre monitor section, which enables him to listen to the audio the engineer has sent to ADAT Input channels 1 and 2 of the AudioFuse 8Pre through the audio interface. For more details see [Channel routing in ADAT mode \[p.25\]](#).

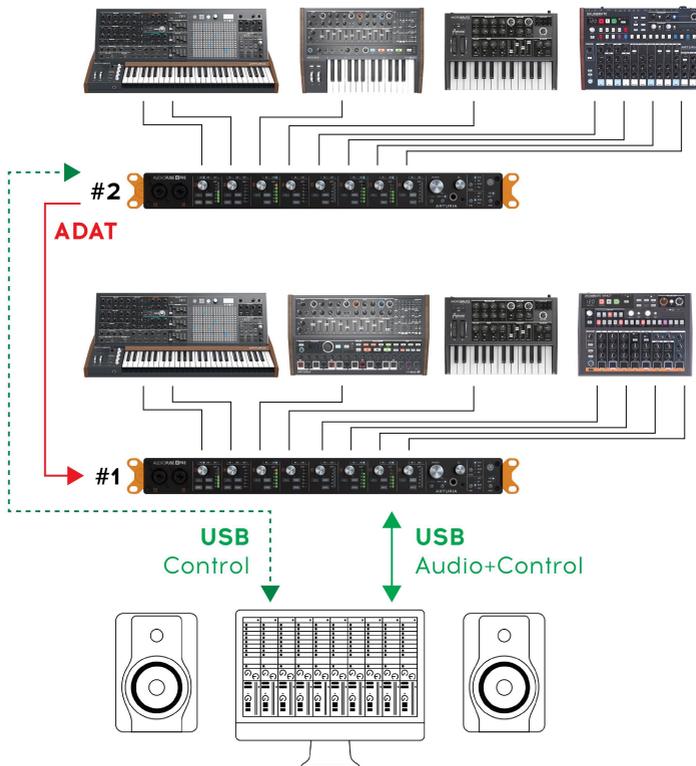
If the drummer wants work on something while the engineer listens to the master mix in the control room, the AudioFuse 8Pre next to the drummer can be placed in Cue mode. This way the drummer will hear only the drum kit through the headphones, and the engineer can mute the incoming drum channels until it is time to record another drum part.

### 6.3.4. System 4: 16 audio inputs, one USB cable



Two AudioFuse 8Pre units are connected through a pair of optical cables. A USB cable connects the first unit to the computer, which sees the two units as if they were a single 16-channel input device. The drummer is listening to the master mix through the headphones, with the monitor section of the nearest AudioFuse 8Pre set to Main 1-2.

### 6.3.5. System 5: 16 audio inputs, 2 USB cables



Synth lovers, this one is for you! Here we have two AudioFuse 8Pre units, and each one is connected via USB to the same computer. A single ADAT optical cable connects the two AudioFuse 8Pre units, with AudioFuse 8Pre #1 in USB mode and AudioFuse 8Pre #2 in ADAT mode.

Audio cables are run from each synthesizer and drum machine: Stereo output from some synths (with built-in FX), mono outputs from the others, and your choice of main outputs and individual outputs from each drum machine.

All together there are 16 independent line outputs arriving at the computer, ready to be processed and mixed into the most awesome ambient dance track you can imagine.

Here's a shameless plug for the song-inspiring [Arturia synths](#) and [drum machines](#). You'll love them! And with a pair of AudioFuse 8Pre audio interfaces you'll love them even more.

## 7. SYNCHRONIZATION

The various clock sources, sample rates, and master / slave relationships are indicated by two front-panel LEDs. Sometimes two or three will be lit solid; other times there might be one blinking. Here's a reference chart to help you know what each situation means.

Sync source selected	Lock LED	Sync LED	Clock LED	Clock source
Internal	ON	INT = ON	Selected clock = ON	Internal clock
Word (input clock = selected clock)	ON	Word = ON	Selected clock = ON	Word clock
Word (input clock ≠ selected clock)	(not lit)	Word = flash	Selected clock = ON	Internal clock
ADAT (input clock = selected clock)	ON	ADAT = ON	Selected clock = ON	ADAT In clock
ADAT (input clock ≠ selected clock)	(not lit)	ADAT = flash	Selected clock = ON	Internal clock

 When Word Clock or ADAT sync is selected but a valid clock is not present, the AudioFuse 8Pre will revert to its Internal clock with the last known clock rate selected.

When the AudioFuse 8Pre is slaved to an external clock source, the following conditions will apply:

- The clock rate can only be changed on the device that is providing the master clock.
- You cannot switch the clock rate on the slaved unit using the AFCC or front panel when synced to an external clock
- If you press the Clock button on the slaved AudioFuse 8Pre, it will not respond.

 The AudioFuse 8Pre always sends sync signals from the Word Clock and ADAT output connectors, even when it is slaved to an external device.

### 7.1. Sync while in USB mode

#### 7.1.1. As master (Sync = INT)

When the AudioFuse 8Pre is in USB mode you must use the AFCC or the computer (if MacOS) to change the clock rate. It cannot be changed from the front panel. Sync signals are always sent at the selected rate from the Word Clock and ADAT output connectors.

### 7.1.2. As slave

When the 8Pre is in USB mode and you switch Sync to ADAT or WORD there are three possible responses:

1. If the external device is not connected, the SYNC LED will not change to that selection (or will skip over it).
2. If the external rate does not match the INT rate, the selected Sync LED blinks and the clock rate LED stays on the INT rate. To make the Sync LED stop blinking you must either
  - switch the external rate to match the INT rate, or
  - switch the INT rate to match the external rate using the AFCC.
3. If the external rate already matches the INT rate, you can switch back and forth between INT and external sync easily. The LOCK LED will confirm that the two devices are synchronized.



**i**: If the LOCK LED is not lit solid and all other conditions have been met, make sure the cables are securely connected and the master device is on.

## 7.2. Sync while in ADAT mode

### 7.2.1. As master clock (Sync = INT)

As the Clock button is pressed the clock rate LEDs will indicate which clock rate has been selected. Slaved devices will also receive the new clock rate, though the response may be different for each device. Please refer to the appropriate documentation for information.

The first time the Clock button is pressed the change is instant. But the AudioFuse 8Pre waits 2 seconds before allowing the second press, because this always involves switching from a 1x rate (44.1k or 48k) to 2x rate (88.2k or 96k) or vice versa. The momentary pause allows the AudioFuse 8Pre to mute the outputs before switching into "high gear" (or out of it).

### 7.2.2. As slave device

If Sync is set to ADAT or WORD the clock rate must be changed from the external device. When this happens the Clock LED on the AudioFuse 8Pre will switch immediately to the incoming rate. The LOCK LED will confirm that the two devices are synchronized.

If the LOCK LED is not lit solid and all other conditions have been met, make sure the cables are securely connected and the master device is on.

## 7.3. Word Clock setup

If you're using two or more digital audio devices in a setup and they have Word Clock connectors, you should consider using this feature. Word Clock offers time-proven results (pun intended) at keeping everything in sync.

### 7.3.1. Two devices



You don't have to do anything special to the AudioFuse 8Pre when it is the master Word Clock device; it is always generating rock-solid Word Clock. Simply connect a BNC cable to its WCLOCK OUT connector and run it to the slave device.

For this example we'll assume you're using a second AudioFuse 8Pre as the slave device (a wise choice!). In that case, connect the BNC cable from the master to its WCLOCK IN connector. Then use the front-panel button or the AFCC to set its Sync mode to WORD, and use the AFCC to set its Wordclock Impedance parameter to 75 Ohm.

It doesn't matter if the Pass Thru is set to Off or On in this case. But if a client brings a Word Clock-compatible device to your studio, you'll need use the AFCC to change a couple of settings (see the next section).

### 7.3.2. Three devices



In this scenario there is a third device that can slave to Word Clock. So as with a two-device setup, you don't have to do anything special to the master AudioFuse 8Pre: Simply connect a BNC cable to its WCLOCK OUT connector and run it to the first slave device.

But the settings on the slaved AudioFuse 8Pre will be different in this case:

- Set its Sync mode to WORD
- Set its Wordclock Impedance parameter to Hi-Z using the AFCC
- Set its Pass Thru to ON using the AFCC

The third device should also have Word Clock as its sync setting, and should have its internal Wordclock Impedance parameter set to 75 Ohm. If it doesn't have an internal setting for this, you'll need to use a combination of a BNC T-adaptor and a 75 Ohm termination plug to connect it.

If another device is being used as the Word Clock master, simply use the settings of Device 3 for the last AudioFuse 8Pre. You won't need the BNC adaptor or termination plug; just be sure to set the Wordclock Impedance parameter for that unit to 75 Ohm in the AFCC.

### 7.3.3. Word Clock summary

If you're a visual learner you may find these tables to be helpful.

#### 7.3.3.1. Settings for two devices

Master	Slave
Word Clock Out	Word Clock In
	Sync = WORD
	Impedance = 75 Ohm

#### 7.3.3.2. Settings for three devices

Master	Slave 1	Slave 2
Word Clock Out	Word Clock In	
	Word Clock Out (Pass Thru = On) ->	Word Clock In
	Sync = WORD	Sync = WORD
	Impedance = Hi-Z	Impedance = 75 Ohm



The last device in a Word Clock chain should always use a 75 Ohm termination circuit.

## 8. FREQUENTLY ASKED QUESTIONS

- 1. Does it matter what I plug into the front/rear connectors for channels 1 and 2?**  
No. Changes can be made quickly from the front panel or the AFCC, so you can connect any type of musical device to the front and/or the rear connectors using the appropriate cables.
- 2. Should I turn off phantom power before disconnecting a microphone?**  
Yes. When you do this, the switching logic of the AudioFuse 8Pre will automatically mute the channel for a few seconds to prevent any loud pops when you unplug the microphone. The same thing happens when switching on the phantom power: the AudioFuse 8Pre will mute the channel for a few seconds, long enough to stabilize the microphone's internal voltages and avoid loud pops through your monitor speakers.
- 3. Can I use phantom power with a ribbon microphone?**  
**Warning:** Do not use the 48V / phantom power button with a ribbon microphone unless you have confirmed with the manufacturer that it is OK to do so. There is danger that **your ribbon microphone could be damaged or destroyed** if you try to use it with phantom power.
- 4. Can I use the AudioFuse 8Pre with a USB hub?**  
It's okay to use a USB hub to connect the AudioFuse 8Pre to your computer, but we do **not** recommend using the embedded USB hub of another audio device such as the AudioFuse. This can lead to channel identification issues.
- 5. How do I turn off the AudioFuse 8Pre?**  
Hold down the A button for 5 seconds and the AudioFuse 8Pre will power down.
- 6. How do I reset the AudioFuse 8Pre?**  
To perform a factory reset, hold down the Mono button while powering up the unit.
- 7. Why is my AudioFuse 8Pre missing from my audio device list in my DAW and my computer?** This will happen when the AudioFuse 8Pre is in ADAT mode. It will reappear when the unit is in USB mode. **Note:** the AFCC can still control the AudioFuse 8Pre whether it is in USB mode or ADAT mode.

## 9. SPECIFICATIONS

### 9.1. System requirements



- 4 GB RAM
- Intel i5 CPU or faster
- 1GB free hard disk space
- OpenGL 2.0 compatible GPU

### 9.2. Audio specifications

Line/Instrument inputs	Measured values
Line input impedance	20k Ohms (symmetric), 10k Ohms (asymmetric)
Instrument input impedance	1.1M Ohms (asymmetric)
Frequency response 20Hz/20kHz	+/- 0.04dB typical
Maximum input level	Line: +24dBu Instrument: +18dBu
Maximum input range	24dB typical
Pad mode settings	Off, -20dB
Dynamic range	118dB (A-weighted)
THD+N	107dB (A-weighted)

Microphone Preamps	Measured values
Input Impedance	3.4k Ohms
Frequency Response 20Hz/20kHz	< +/- 0.07dB
Maximum input gain	72db typical
Maximum input level	+11dBu
Pad mode settings	Off, -20dB, +10dB
Equivalent Input Noise (EIN) @ 72dB gain	-129dBu typical (un-weighted)

Inserts	Measured values
Output Impedance	240 Ohms (balanced), 120 Ohms (unbalanced)
Input Impedance	Balanced: 20k Ohms Unbalanced: 10k Ohms
Maximum output level	+18dBu
Maximum input level	+18dBu
Dynamic range	118dB (A-weighted) on return 128dB (A-weighted) on send
THD+N	-103dB (A-weighted) on return -105dB (A-weighted) on send

Speakers	Measured values
Output impedance	120 Ohms
Maximum output level	+24dBu
Frequency response 20Hz/20kHz	+/- 0,08dB
Dynamic range	119dB (A-weighted)
THD+N	-107dB (A-weighted)

Line outputs	Measured values
Output impedance	240 Ohms (balanced), 120 Ohms (unbalanced)
Maximum output level	+24dBu
Frequency response 20Hz/20kHz	+/- 0.04dB typical
Dynamic range	115dB (A-weighted)
THD+N	-104dB (A-weighted)

Headphones	Measured values
Optimal Headphones Impedance range	32-250 Ohms
Output impedance	33 Ohms
Maximum output level	+11dBu
Dynamic range	102dB (A-weighted)
THD+N	-92dB (A-weighted)

### 9.3. Synchronization options

Type	Description
ADAT input/output	Valid clock rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz
Word Clock	One clock signal per sample at the selected clock rate, whether master or slave



Word Clock Out is always synced with ADAT Out except in Word Clock PassThru Mode. In this case there is a direct hardware link (i.e., Word Clock Out = Word Clock In).

### 9.4. Signal Level LEDs

LED	Audio Level
Signal 1	-50 dBFS
Signal 2	-25 dBFS
Signal 3	-18 dBFS
Signal 4	-10 dBFS
Signal 5	-6 dBFS
Signal 6	-3 dBFS
Clip	-1 dBFS

## 10. SOFTWARE LICENSE AGREEMENT

In consideration of payment of the Licensee fee, which is a portion of the price you paid, Arturia, as Licensor, grants to you (hereinafter termed "Licensee") a nonexclusive right to use this copy of the SOFTWARE.

All intellectual property rights in the software belong to Arturia SA (hereinafter: "Arturia"). Arturia permits you only to copy, download, install and use the software in accordance with the terms and conditions of this Agreement.

The product contains product activation for protection against unlawful copying. The OEM software can be used only following registration.

Internet access is required for the activation process. The terms and conditions for use of the software by you, the end-user, appear below. By installing the software on your computer you agree to these terms and conditions. Please read the following text carefully in its entirety. If you do not approve these terms and conditions, you must not install this software. In this event give the product back to where you have purchased it (including all written material, the complete undamaged packing as well as the enclosed hardware) immediately but at the latest within 30 days in return for a refund of the purchase price.

**1. Software Ownership** Arturia shall retain full and complete title to the SOFTWARE recorded on the enclosed disks and all subsequent copies of the SOFTWARE, regardless of the media or form on or in which the original disks or copies may exist. The License is not a sale of the original SOFTWARE.

**2. Grant of License** Arturia grants you a non-exclusive license for the use of the software according to the terms and conditions of this Agreement. You may not lease, loan or sublicense the software.

The use of the software within a network is illegal where there is the possibility of a contemporaneous multiple use of the program.

You are entitled to prepare a backup copy of the software which will not be used for purposes other than storage purposes.

You shall have no further right or interest to use the software other than the limited rights as specified in this Agreement. Arturia reserves all rights not expressly granted.

**3. Activation of the Software** Arturia may use a compulsory activation of the software and a compulsory registration of the OEM software for license control to protect the software against unlawful copying. If you do not accept the terms and conditions of this Agreement, the software will not work.

In such a case the product including the software may only be returned within 30 days following acquisition of the product. Upon return a claim according to § 11 shall not apply.

**4. Support, Upgrades and Updates after Product Registration** You can only receive support, upgrades and updates following the personal product registration. Support is provided only for the current version and for the previous version during one year after publication of the new version. Arturia can modify and partly or completely adjust the nature of the support (hotline, forum on the website etc.), upgrades and updates at any time.

The product registration is possible during the activation process or at any time later through the Internet. In such a process you are asked to agree to the storage and use of your personal data (name, address, contact, email-address, and license data) for the purposes specified above. Arturia may also forward these data to engaged third parties, in particular distributors, for support purposes and for the verification of the upgrade or update right.

**5. No Unbundling** The software usually contains a variety of different files which in its configuration ensure the complete functionality of the software. The software may be used as one product only. It is not required that you use or install all components of the software. You must not arrange components of the software in a new way and develop a modified version of the software or a new product as a result. The configuration of the software may not be modified for the purpose of distribution, assignment or resale.

**6. Assignment of Rights** You may assign all your rights to use the software to another person subject to the conditions that (a) you assign to this other person (i) this Agreement and (ii) the software or hardware provided with the software, packed or preinstalled thereon, including all copies, upgrades, updates, backup copies and previous versions, which granted a right to an update or upgrade on this software, (b) you do not retain upgrades, updates, backup copies and previous versions of this software and (c) the recipient accepts the terms and conditions of this Agreement as well as other regulations pursuant to which you acquired a valid software license.

A return of the product due to a failure to accept the terms and conditions of this Agreement, e.g. the product activation, shall not be possible following the assignment of rights.

**7. Upgrades and Updates** You must have a valid license for the previous or more inferior version of the software in order to be allowed to use an upgrade or update for the software. Upon transferring this previous or more inferior version of the software to third parties the right to use the upgrade or update of the software shall expire.

The acquisition of an upgrade or update does not in itself confer any right to use the software.

The right of support for the previous or inferior version of the software expires upon the installation of an upgrade or update.

**8. Limited Warranty** Arturia warrants that the disks on which the software is furnished is free from defects in materials and workmanship under normal use for a period of thirty (30) days from the date of purchase. Your receipt shall be evidence of the date of purchase. Any implied warranties on the software are limited to thirty (30) days from the date of purchase. Some states do not allow limitations on duration of an implied warranty, so the above limitation may not apply to you. All programs and accompanying materials are provided "as is" without warranty of any kind. The complete risk as to the quality and performance of the programs is with you. Should the program prove defective, you assume the entire cost of all necessary servicing, repair or correction.

**9. Remedies** Arturia's entire liability and your exclusive remedy shall be at Arturia's option either (a) return of the purchase price or (b) replacement of the disk that does not meet the Limited Warranty and which is returned to Arturia with a copy of your receipt. This limited Warranty is void if failure of the software has resulted from accident, abuse, modification, or misapplication. Any replacement software will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer.

**10. No other Warranties** The above warranties are in lieu of all other warranties, expressed or implied, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. No oral or written information or advice given by Arturia, its dealers, distributors, agents or employees shall create a warranty or in any way increase the scope of this limited warranty.

**11. No Liability for Consequential Damages** Neither Arturia nor anyone else involved in the creation, production, or delivery of this product shall be liable for any direct, indirect, consequential, or incidental damages arising out of the use of, or inability to use this product (including without limitation, damages for loss of business profits, business interruption, loss of business information and the like) even if Arturia was previously advised of the possibility of such damages. Some states do not allow limitations on the length of an implied warranty or the exclusion or limitation of incidental or Oconsequential damages, so the above limitation or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## 11. DECLARATION OF CONFORMITY

### USA

#### **Important notice: DO NOT MODIFY THE UNIT!**

This product, when installed as indicate in the instructions contained in this manual, meets FCC requirement. Modifications not expressly approved by Arturia may avoid your authority, granted by the FCC, to use the product.

*IMPORTANT:* When connecting this product to accessories and/or another product, use only high quality shielded cables. Cable (s) supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

*NOTE:* This product has been tested and found to comply with the limit for a Class B Digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide a reasonable protection against harmful interference in a residential environment. This equipment generate, use and radiate radio frequency energy and, if not installed and used according to the instructions found in the users manual, may cause interferences harmful to the operation to other electronic devices. Compliance with FCC regulations does not guarantee that interferences will not occur in all the installations. If this product is found to be the source of interferences, witch can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

- Relocate either this product or the device that is affected by the interference.
- Use power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter(s).
- In the case of radio or TV interferences, relocate/ reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial cable.
- If these corrective measures do not bring any satisfied results, please the local retailer authorized to distribute this type of product. If you cannot locate the appropriate retailer, please contact Arturia.

The above statements apply **ONLY** to those products distributed in the USA.

### CANADA

*NOTICE:* This class B digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulation.

*AVIS:* Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

### EUROPE



This product complies with the requirements of European Directive 89/336/EEC

This product may not work correctly by the influence of electro-static discharge; if it happens, simply restart the product.