

USER MANUAL

**_AUDIOFUSE CONTROL
CENTER**

ARTURIA

_The sound explorers

Special Thanks

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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.

Thank you for purchasing an AudioFuse!

Each member of the AudioFuse family is a cutting-edge, pro audio interface with stellar sonic quality, an intuitive workflow, and a high return on your investment. They provide the superior sound of high-end analog studio consoles with all of the flexibility and connectivity you need for any recording or performance.

At the core of each device is Arturia's proprietary DiscretePRO® technology, which set new standards in audio excellence and affordability. For the technically-minded, there's a comprehensive description of the DiscretePRO® specifications [here](#).

This manual covers the features and operation of Arturia's **AudioFuse Control Center**, the companion software for the AudioFuse family. For additional information about the hardware, please read the owner's manual for your device.

Introduction

Dear musician,

We'd like to thank you for purchasing one of the members of our AudioFuse family! These audio interfaces are anything but ordinary; they have been constructed using components of the utmost quality so as to achieve recordings of the utmost quality. This level of crystal clarity is unprecedented in their price range!

This manual will help you make the most of your AudioFuse device by using the AudioFuse Control Center, the powerful companion software we designed to work with the entire AudioFuse series.

The AudioFuse Control Center does much more than simply give you another way to tweak the front panel controls; it also provides access to parameters and routing options that are not available from the front panel.

If you are reading this manual and have not already downloaded the AudioFuse Control Center, you can find it here: [AudioFuse Control Center](#).

Be sure to visit the 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.

Musically yours,

The Arturia team

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1. WELCOME TO AUDIOFUSE CONTROL CENTER!

Arturia has a long history of developing highly sought-after hardware products, while also crafting supplementary software that enhances the capabilities of the hardware many times over.

The AudioFuse Control Center (AFCC) is software that was specifically designed to complement the already impressive series of AudioFuse interfaces. It provides access to features that are not available directly on the physical units, in addition to the features that are. The AFCC runs on Windows and macOS systems.

These feature-packed devices, combined with the power and flexibility of the AudioFuse Control Center, will help you capture and control any musical magic that you can imagine.

Features of AudioFuse Control Center

- Control most of the front-panel features of your AudioFuse device remotely
- Configure hidden parameters such as Word Clock impedance and other device-specific features
- Visual representation of signal routing, input/output levels, channel status, etc.
- View device settings such as sample rate, sync lock
- Quick selection between multiple AudioFuse devices
- Notifies you of firmware upgrades
- Window size can be optimized for your display monitor
- Runs on Windows and MacOS systems

2. OVERVIEW

2.1. The Main window

In keeping with the "everything you need at your fingertips" design of the AudioFuse series, there is one main window for the AudioFuse Control Center (AFCC). Other than the basic setup options found in the Menu bar, everything the selected unit can do is right before your eyes; there are no additional menus or alternate pages. And if you have more than one unit attached to your computer you can switch back and forth between them easily.

2.1.1. Two-way communication

You'll love the way your AudioFuse device interacts with its Control Center software: when you push a button on the unit, the equivalent control inside the AFCC will do the same thing. The buttons work both ways: they light up when pressed on the unit or clicked in the software.

Most of the physical knobs are analog controls, so they do not have an equivalent control in the AFCC. The one exception to that rule is the big Output Level knob on the AudioFuse; when it is moved, the value changes in the AFCC and its virtual twin also will turn in the AFCC. The physical knob won't move when the AFCC knob is moved, though.

2.1.2. Basic operations

It's obvious how to use some features, like pushing a button, selecting a menu, or moving a knob or slider. But there are some other great features and operational tips we should mention as you are beginning to learn to use the AFCC.

2.1.2.1. Tool tips



The AFCC window displays values of the controls as they are being edited. You can also hover over a control with the cursor if you'd like to see its current value before you edit it. Quick description of functions and controls can also be displayed in the bottom status bar of the AFCC.

2.1.2.2. Reset Parameters to Default

We've made it easy to return a parameter to its default value, such as re-centering the pan value for a channel, etc. To do this, either double-click the related control or use a combination of Option + Click (macOS) or Alt + Click (Windows).

2.1.2.3. Fine adjustments [0.1 dB increments]

Some parameters have a very wide range, such as the level faders or the pan knobs. You can move these controls quickly to get close to the value you want, and then fine-tune the value by doing the following:

- macOS: Right click + drag the cursor, or hold Ctrl + drag the cursor.
- Windows: Right click + drag the cursor, or hold Ctrl + drag the cursor.

2.2. The AudioFuse window

The number of controls you see in the main AudioFuse window will change automatically to match your setup. We'll discuss the various configurations in the following chapters.



The AudioFuse Control Center interface

Number	Section	Function
1	Settings [p.21]	Sample rate, int/ext clock, digital i/o routing, speaker B options
2	Main Inputs/outputs [p.26]	Input settings (1 & 2), master level, analog audio routing options
3	Phono Line 3/4 [p.30]	Input settings (3 & 4)
4	Direct Monitoring Mix [p.32]	Pan, gain, solo/mute, and stereo link for all visible inputs (varies)
5	Mix Routing [p.34]	Select destination(s) for direct monitoring mix
6	Talkback [p.35]	Set gain and destination for built-in talkback microphone
7	Menu bar [p.10]	Device selection, preferences, window resizing, firmware updates

As you can see in the table above, most of the sections of the main window have multiple functions and settings. We'll go over each of those in greater detail in the appropriate chapters.

2.2.1. Front panel AudioFuse controls not in AFCC

All of the buttons on the front panel of the AudioFuse will toggle their counterparts in the AFCC window. This happens mostly inside the Main inputs/outputs section, though when the physical Talkback button is pressed you will see its LED light up inside the AFCC Talkback section.

Not every control on the AudioFuse is represented in the AFCC, though. Here's a list of the ones you won't find:

Control	Function
Gain 1	Set the level for input channel 1
Gain 2	Set the level for input channel 2
Phones 1	Provides control over the level for headphone 1
Phones 2	Provides control over the level for headphone 2
Computer/ direct balance	Controls the blend between the direct and computer signals sent to the monitors when one of the Mix Routing buttons is pressed in the AFCC

These are fully analog controls that do not communicate their movements to the computer, which is why there is no equivalent control in the AudioFuse Control Center.

2.3. The AudioFuse 8Pre window

This window has three main sub-sections. You'll always see the same basic items in the top and bottom sections, though their sizes and contents can be changed to match your needs. The middle window is the one that can change its appearance the most, depending on the Monitor mix you want to have available. It also can be hidden and revealed as needed to help maximize your screen space.



Section	Name	Function
1	Input zone [p.36]	Displays input types, button options, and LED level meters
2	Monitoring Mix [p.38]	Shows Cue Mix components, controls levels, pan, and solo/mute status, and allows adding, removing, naming and grouping of channels
3	Output zone [p.42]	Displays input/output assignments per output pair, allows editing of input assignments (USB mode only), provides Loopback feature (USB mode only), and has LED level meters

2.3.1. Front panel AudioFuse 8Pre controls not in AFCC

All of the buttons on the front panel of the AudioFuse 8Pre will toggle their counterparts in the AFCC window. This happens mostly inside the Analog Inputs section, where most of the front panel buttons reside.

However, the Mode, Clock, and Sync settings in the AFCC menu bar will only change under certain conditions when the physical buttons are pressed. Please refer to the AudioFuse 8Pre manual for a description of each of those settings.

There are some controls on the AudioFuse 8Pre front panel that are not available in the AFCC. Here's a list of the ones you won't find:

Control	Function
Channel 1-8 Gain	Use with the front-panel buttons to set the level for the analog input channels
Speakers	Provides level control for the main monitor speakers
Headphones	Provides level control for the headphones

These are fully analog controls that do not communicate their movements to the computer, which is why there is no equivalent control in the AudioFuse Control Center.

Likewise, all of the controls in the Monitoring Mix section have no equivalent on the front panel of the AudioFuse 8Pre. This includes the Master fader and the Group Track selectors. Each of those features are described in [the AudioFuse 8Pre chapter \[p.36\]](#).

3. THE MENU BAR

The strip along the top of the AudioFuse Control Center is called the Menu bar. Its contents may vary depending on which device you have selected.

3.1. The Arturia menu

Click the upper left-hand corner of the AFCC window to open the Arturia menu.

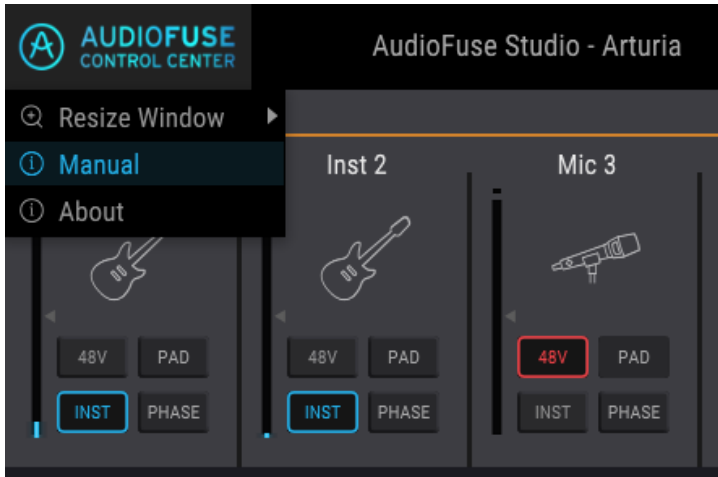


3.1.1. Resize Window



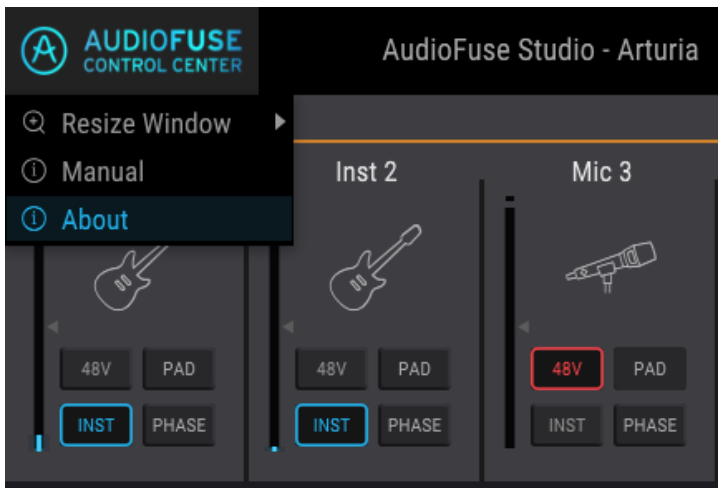
The AFCC automatically detects the size of your monitor and selects the optimal magnification value. But you can override this setting and it will be remembered the next time you launch the AFCC.

3.1.2. AFCC Manual



The AFCC has a built-in Help file (this manual). To open it, select the word 'Manual' from the drop-down menu.

3.1.3. About



This menu item provides information about the AudioFuse Control Center. It lists the engineering credits and displays the current version of the software you have installed.

3.2. Device selection



This window allows you to select between devices when more than one AudioFuse product is connected to the same computer. That way you can choose which one you want to modify with the AFCC.

3.3. Minimal view [AF 8Pre only]



These three buttons are only visible in the Menu bar when the selected device is an AudioFuse 8Pre. They allow you to minimize or hide portions of the AFCC window to make room in your display for other things.

The Input and Output zones can be minimized, but are always at least partially visible. However, the Monitoring Mix zone can be hidden or revealed. The selected status for each zone is saved, so the next time you launch the AFCC your zone size preferences will be restored.

3.3.1. Minimize Input zone

The IN button hides the channel buttons (48V, Pad, etc.), but continues to show the icons so you can tell at a glance what type of input is plugged into each channel. It also reduces the size of the LED metering columns. Click the button again to restore the full view.

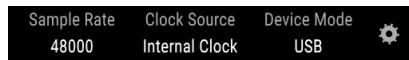
3.3.2. Hide Monitoring Mix zone

The MIX button makes the Monitoring Mix zone disappear, which brings the Input and Output zones to center for a more compact view. The smallest possible view is with the Monitoring Mix zone hidden and the other two zones minimized. You can always unhide the Monitoring Mix zone if you need to mute/solo a channel or change its pan position, etc.

3.3.3. Minimize Output zone

The OUT button hides the input sources and selection menus for each output, and also reduces the size of the LED metering columns. Click the button again to restore the full view.

3.4. Device Status [AF 8Pre only]



The Menu bar has three fields that show you the status of the AudioFuse 8Pre at a glance.

- **Sample Rate** displays the sample rate being generated or received.
- **Clock Source** indicates the sync selection: Internal, WORD, or ADAT Clock.
- **Device Mode** has two options: USB or ADAT.

Please refer to the documentation for the AudioFuse 8Pre to learn more about these settings.

3.5. Device Settings

The upper right corner of the Menu bar has an icon shaped like a gear. Click it to open the Device Settings window.

The Device Settings window contains three tabs which are common to all AudioFuse products. However, the tabs present different options depending on which AudioFuse product is selected.

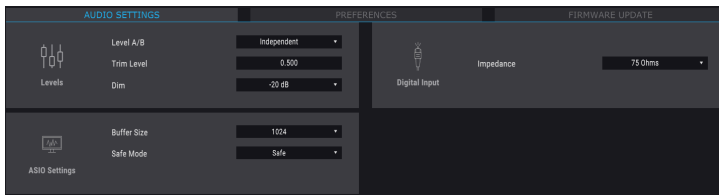
3.5.1. AudioFuse Device Settings

These three tabs contain the audio settings, preferences, and firmware update information for the AudioFuse.

3.5.1.1. AudioFuse Audio Settings


 The Audio Settings window for macOS does not have the ASIO Settings options.

The Audio Settings window is where the basic operational settings for the AudioFuse are located. We'll describe these parameters one at a time.



Level A/B

It is possible to link the output levels of both Speaker A and Speaker B. If you prefer not to have them linked, choose the Independent setting.

 When the Level A/B preference is set to Independent you will only see the uppermost blue level LED lit when turning the Output Level knob.

Trim Level

Some monitor speakers may have input characteristics that cause them to clip the audio sooner than other monitor speakers do. Conversely, some monitor speakers may be able to withstand a hotter input. The Trim Level preference allows you to offset the output levels to compensate for this.

The value can be altered in a positive or negative direction; just click and drag the value up or down until the proper ratio is achieved. The range is -12 dB to +12 dB.

Hold the Control key and click/drag for more precise control of this parameter. Double-click within the value field to reset the value to 0.

Dim Level

The Dim Level menu allows you to specify the amount of level reduction that occurs at all stereo outputs when the Dim button is pressed.

Word Clock Termination

If the AudioFuse will be the Word Clock master for your system then you don't need to set the Word Clock Termination parameter.

If you will be slaving the AudioFuse to an incoming Word Clock signal, here's what to do:

- Use the AFCC to set [Clock Source \[p.22\]](#) to External and [Digital In \[p.24\]](#) to W. CLOCK.
- Navigate to Device Settings > Audio Settings and click the Clock Termination field.
- Select 75 Ohms for the WordClock Load. This designates the AudioFuse as the last device in the Word Clock chain (i.e., it is the termination point).

If you want to sync multiple devices to Word Clock, please refer to the documentation for each device to determine how to connect them. It may be necessary to use the Pass Thru and Hi-Z options on a device like Arturia's [AudioFuse 8Pre](#), for example, in order to pass the purest possible Word Clock signal to the next device in the chain. Not every device has that feature, though, so it may be necessary to use a combination of BNC T-adaptors and a 75 Ohm termination plug. This will help to ensure the integrity of the Word Clock signal received by each device.

75 Ohm vs. Hi-Z: When to use them

If the AudioFuse will receive its Word Clock signal from another device, it's important to select the proper setting for the Word Clock Termination. Here's a table that will help you decide which one to use.

Connection between AudioFuse and master device	AudioFuse last in chain?	Clock Termination setting
Direct connection	Yes	75 Ohm
BNC T-adaptors connecting multiple cables & devices	No [*]	Hi-Z

[*] Be sure to use a 75 Ohm termination plug after the final device in the chain. Some devices might have that built in. Refer to the documentation for that device.

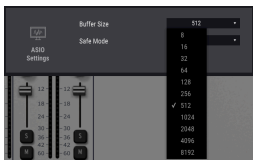


The last device in a Word Clock chain should always use a 75 Ohm termination circuit.

ASIO Settings (Windows only)

The ASIO Settings menus are only visible when using the Windows operating system.

ASIO Buffer Size



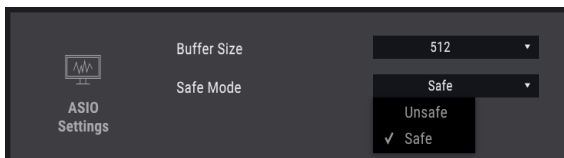
A check mark indicates the current ASIO Buffer Size

Variations in CPU speed and load can affect the amount of time it takes to process digital audio, so the AudioFuse Control Center provides a Buffer Size menu so you can select the best configuration for your computer.

However, the AFCC won't allow a buffer size that is not compatible with the current sample rate. A warning message will inform you of incompatible settings.

The Arturia USB Audio driver automatically selects the optimal buffer size each time the sample rate changes. We recommend that you keep this buffer size high enough to ensure proper audio processing, especially if your PC does not have the bandwidth to provide the necessary resources. On the other hand, please note a lower buffer size value decreases the audio latency. Setting the ASIO buffer size is always a matter of compromise between low latency and audio samples integrity

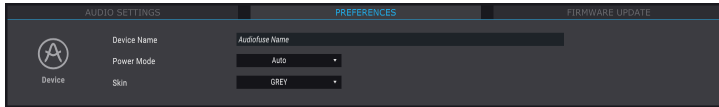
Latency



Safe mode is selected by default

Safe Mode ensures the integrity of the audio samples. However, this mode also places a higher load on the CPU. If you disable this feature, latency will decrease but the risk of dropped samples will increase. Disabling this feature is not recommended, unless you work on a particularly powerful PC with only a few tracks.

3.5.1.2. AudioFuse Preferences



Device Name

Click in this field to personalize the name of your AudioFuse.

Power Mode

It is possible to match the power usage of the AudioFuse to the circumstances in which you will be using it. Here's what each mode is designed to do:

- **AUTO:** When powered by both the DC power supply and USB, AudioFuse will work at its full capacity: All inputs and outputs are available, and the signal can go up to +24 dBu.

If AUTO is selected but the AudioFuse is relying on USB power only (no DC power supply connected), its performance and features will be the same as if GREEN mode were selected.

- **GREEN:** When AudioFuse is relying on USB power only, this is the mode that will be selected. All inputs and outputs are available in Green mode also, but the difference is that the maximum signal level in Green mode is +18 dBu.
- **MIXDOWN:** In this mode the inputs are deactivated but the signal can go up to +24 dBu.
- **MIXDOWN GREEN:** The inputs are deactivated, and the signal level is limited to +18 dBu.

Skin

This menu allows you to select one of three different appearances for the AudioFuse in the AFCC. When working in a darkened environment, or to reduce eye fatigue during long sessions, you may want to experiment by changing the AFCC Skin setting to Grey or Dark.

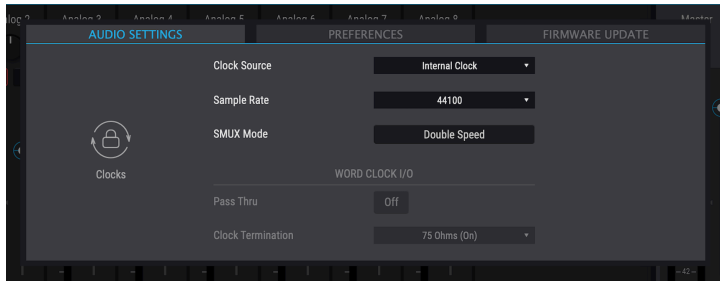
3.5.1.3. AudioFuse Firmware Update

The firmware update process is identical for each AudioFuse product, so it is described once [here \[p.20\]](#).

3.5.2. AudioFuse 8Pre Device Settings

These three tabs contain the audio settings, preferences, and firmware update information for the AudioFuse 8Pre.

3.5.2.1. AudioFuse 8Pre Audio Settings



The Audio Settings tab accesses the basic audio and Word Clock settings for the AudioFuse 8Pre. We'll describe these parameters one at a time.

Clock Source

This field determines whether the AudioFuse 8Pre uses its internal clock for timing, or synchronizes to an external clock source. There are three options: Internal, ADAT or Word Clock. A small Lock icon indicates if the AudioFuse 8Pre's clock is locked to the specified clock source. If the icon is orange, the clock source is invalid.

Sample Rate If the Clock Source of the AudioFuse 8Pre is set to Internal, use this field to select the unit's Sample Rate. If the Clock Source is set to one of the external source options, this field is greyed out and cannot be altered. The displayed sample rate will match the master device's sample rate.



In macOS the Sample Rate can be changed using Audio MIDI Setup, or within your DAW project.

S/MUX Mode The S/MUX Double Speed Mode accommodates ADAT data streams that run at sample rates higher than 48kHz. However, some 3rd party devices don't indicate they're using the higher sample rate in their data stream, so the AudioFuse 8Pre can't compensate for this automatically. If you encounter problems (like mismatched channels) on the AudioFuse 8Pre ADAT ports at sample rates above 48kHz, select Double Speed for the S/MUX Mode. This forces the AudioFuse 8Pre's ADAT decoder to operate at the higher sample rate.

Pass Thru Pass Thru hardwires the Word Clock input directly to the output, so that the AudioFuse 8Pre can pass the word clock signal directly to another device. This setting simplifies clocking multiple units in a larger system, and helps avoid the need for additional T-connectors.

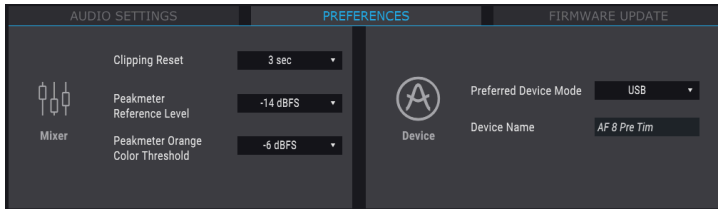


Word Clock Out is always synced with ADAT Out except in Word Clock PassThru Mode, which enables a direct hardware link (i.e., Word Clock Out = Word Clock In).

Digital Coax Termination If the AudioFuse 8Pre will be the Word Clock master for your system, you can ignore the Digital Coax Termination parameter. But if you plan to have the unit follow Word Clock from another source, then this parameter is important.

The two settings for the Digital Coax Termination parameter are 75 Ohm and Hi-Z. If the AudioFuse 8Pre is the last device in the Word Clock chain, select 75 Ohm as the termination parameter. If the AudioFuse 8Pre is in the middle of the Word Clock chain, then select HiZ.

3.5.2.2. AudioFuse 8Pre Preferences



Device Name

Click in this field to personalize the name of your AudioFuse 8Pre.

Device Mode

Use the pull-down menu to select one of the two operational modes of the AudioFuse 8Pre. USB and ADAT modes can also be selected from the unit's front panel. Please refer to the owner's manual for a description of each mode.

Clipping Reset

You can select the amount of time it will take for the AFCC Clip LEDs to reset after it has been triggered. There are four options:

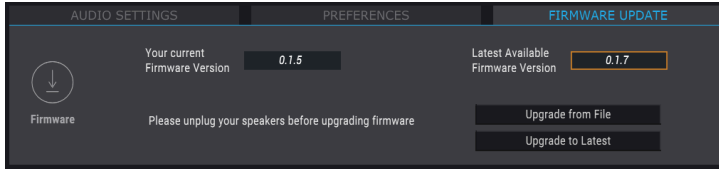
- **None:** the LED will reset immediately.
- **Infinite:** the LED will stay lit indefinitely unless it is reset manually using the AFCC.
- **1.5 sec:** the LED will stay lit for a brief moment (1.5 seconds) and then reset.
- **3 sec:** the LED will stay lit for a bit longer (3 seconds) and then reset.

3.5.2.3. AudioFuse 8Pre Firmware Update

The process of updating the AudioFuse 8Pre firmware is described in [the next section \[p.20\]](#).

3.5.3. Firmware Updates

This tab is identical for each AudioFuse product.



The AFCC will let you know when a new version of the firmware for your device becomes available. This is the page you will use for the update process. Once the file has been downloaded to your computer, click "Upgrade from File" to navigate to the file location and follow the instructions.

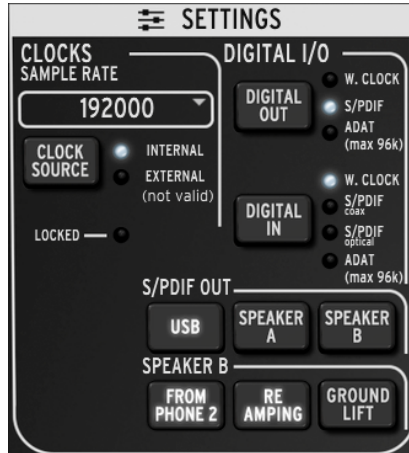


! CAUTION: During the firmware update process the AudioFuse will reboot two times, which will reboot two times. It is highly recommended to turn the volume on your monitors down all the way to prevent damage to your speakers.

4. THE AUDIOFUSE

The Arturia AudioFuse is more compact than most competing products, but the AudioFuse Control Center will reveal what a giant of a product this device really is.

4.1. The Settings section



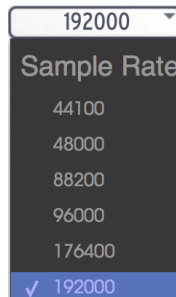
The AudioFuse Settings section

The Settings section is where synchronization and audio routing choices are made.

4.1.1. Clocks

4.1.1.1. Sample rate

This is the area where the Sample Rate for the AudioFuse is selected. There's a pull-down menu that shows you what the options are:



i When the Digital In has been set to ADAT, only the first four Sample Rate options are available (44100 through 96000).

4.1.1.2. Clock source

Internal

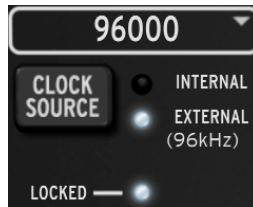
This setting is the one to select when you want the AudioFuse to be the master clock in your system. It will pass digital audio at the selected Sample Rate to the device you have selected with the Digital Out button.



⚠: The maximum sample rate an ADAT device can receive is 96k.

External/Locked

If you have another audio device connected and you want it to be the master clock instead of the AudioFuse, first connect it and make sure the unit is sending a valid clock at the sample rate you expect. Then press the Clock Source button to toggle the Clock Source LED from Internal to External.



Next, use the Sample Rate menu to set the AudioFuse to the same sample rate as the master device.

When you see the Locked LED lit, as in the picture above, that means the two devices are in perfect sync.



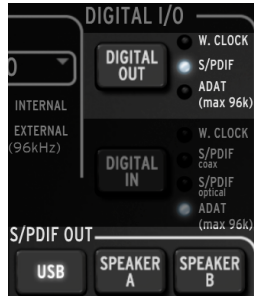
⚠: Always match the sample rate of each device in your system to the sample rate of the master device. The AudioFuse will not allow unsynchronized audio to pass through to your speakers.

4.1.2. Digital I/O

4.1.2.1. Digital Out

There are three options that can be selected with the digital output button:

- W. Clock (Word Clock), available at the coaxial output
- S/PDIF, available at both the coaxial output and the ADAT output
- ADAT, available at the ADAT output

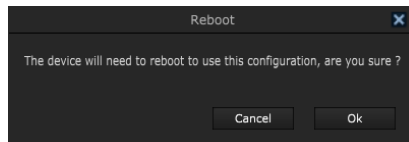


As you cycle through the options using the Digital Out button an LED will light to show the current selection.

i When S/PDIF is selected as the digital output, the three buttons in the S/PDIF Out section become available. We'll discuss those a little further down the page.

When the Digital Out option changes from ADAT to one of the other options, or from one of the other options to ADAT, a pop-up window will let you know the system needs to reboot.

i **! CAUTION:** A loud pop may happen in your monitors when switching between the digital output options. Please turn down the volume of your monitoring system before changing these settings.



i The Reboot message will not be seen if ADAT is selected as the Digital In option.

4.1.2.2. Digital In

There are four options that can be selected for the digital output:

- Word Clock: Select W. Clock as digital input
- S/PDIF coax: Select S/PDIF coax as digital input
- S/PDIF optical: Select S/PDIF optical as digital input
- ADAT: Select ADAT as digital input



As you cycle through the options using the Digital In button an LED will light to show the current selection.

4.1.3. S/PDIF Out

Some monitor speakers have a digital input, and AudioFuse is happy to oblige. When the Digital Out LED indicates the S/PDIF has been selected, these three buttons become available.



Click the one you would like to use. These are mutually exclusive options, so only one selection can be made.

- When USB is selected, the S/PDIF output sends the audio that is coming into the AudioFuse from your computer.
- When Speaker A is selected, the S/PDIF output sends the same signal that is being sent to the physical Speaker A output. The Output level, Mono, Dim, and Mute controls affect the physical and S/PDIF outputs the same way. Also, the Speaker A-B button functions the same way the physical switch does.
- When Speaker B is selected, the S/PDIF output sends the same signal that is being sent to the physical Speaker B output. The Output level, Mono, Dim, and Mute controls affect the physical and S/PDIF outputs the same way. Also, the Speaker A-B button functions the same way the physical switch does.



⚠: The S/PDIF Out signal will be sent to both the coaxial output and the ADAT output.

4.1.4. Speaker B

The Speaker B output can be set as an additional stereo audio output mirroring the audio routed to Phones 2. This mode is activated when the "From Phone 2" button is clicked.



When this is the case, the formerly greyed-out "Re-Amping" and "Ground Lift" buttons will become visible.

i When From Phone 2 is selected, the Speaker A/B button in the Main Input/Output section turns grey and cannot be toggled. See the [Main inputs and outputs \[p.26\]](#) section of the AudioFuse chapter for more information.

4.1.4.1. From Phone 2

When this button is active, the Speaker B output will receive the signal you selected with the Phones 2 selector button (Main, Cue 1, or Cue 2).

This setting also allows you to control the Speaker B output volume using the Phone 2 output knob, while still having independent control over the Speaker A output using the main output knob.

4.1.4.2. Re-Amping

This button activates the Re-Amping feature. This causes the Speaker B left output to switch its impedance to match the input on a guitar amplifier, enabling you to route a "clean" guitar recording into the guitar amp and re-record its output.

And as mentioned in the previous section, the Speaker B left output volume may be controlled using the Phones 2 output knob.

i The "From Phone 2" button must be active to use the Re-Amping feature.

4.1.4.3. Ground lift

The Ground lift button will disconnect the electrical ground on the Re-Amping output to eliminate a ground loop "buzz" or hum.

i The "From Phone 2" and "Re-Amping" buttons must be active to use the Ground Lift feature.

4.2. Main inputs and outputs

This area of the AudioFuse Control Center window most closely resembles the AudioFuse itself. When you press one of the front-panel buttons on the physical unit there will be a corresponding change in the AFCC window as well.



The Control Center's main input/output section

i The Input Channel buttons are only lit when a cable is connected to Input Channels 1 or 2. In the picture above a 1/4" cable is connected to Input Channel 1 and an XLR cable is connected to Input Channel 2. A grey button means that function is not available because of the type of cable being used.

4.2.1. Output



4.2.1.1. Level knob

Click the knob and drag it up or down to raise or lower the output level. The numbers beneath the knob graphic will change to indicate the current level. These numbers will change when the physical knob is moved also.

4.2.1.2. Source selection

Click the button in software or on the physical unit to choose the source sent to the output: Main, Cue 1, or Cue 2. Main is selected when both LEDs are lit.

4.2.1.3. Mono

The stereo output will become mono when this button is pressed. This is useful when you want to check for phase cancellations, which can affect the sound significantly when the destination device does not have stereo speakers.

4.2.1.4. Dim


Clicking this button will reduce the output level by an amount defined within the [AudioFuse Preferences window \[p.17\]](#). Click it again to restore the level to its original setting. The default Dim amount is -20 dB, but two other values are available (-10 dB and -30dB). See the [AudioFuse Audio Settings section \[p.14\]](#) of the [Menu bar chapter \[p.17\]](#) for more information.

4.2.1.5. Mute

This button silences the outputs. Click it again to unmute.

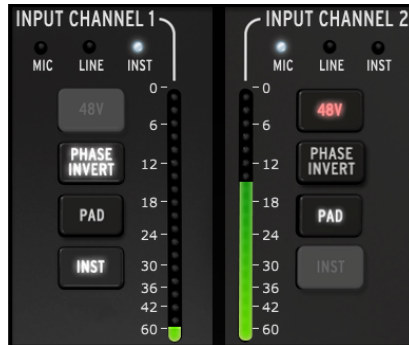
4.2.1.6. Speaker selection

Two sets of monitor speakers can be connected to the AudioFuse, and this button allows you to switch between them. Their levels are controlled with the Output Level knob. There are two configuration options available in the Preferences window that can be used to link and/or offset the speaker levels. For more information about these settings, see the [AudioFuse Audio Settings section \[p.14\]](#) of the Menu bar chapter.

 If the Speaker A/B button is grey, this means Speaker B cannot be selected. This is because the 'From Phone 2' button has been clicked inside the Speaker B area of the Settings window. For more information about this, read the [Speaker B section \[p.25\]](#).

4.2.2. Input Channels 1 and 2

When you plug a cable into these channels their buttons and LEDs light up. The features are different depending on the type of cable you plug in.



4.2.2.1. Microphone [XLR]

When a microphone is connected with an XLR cable the MIC LED for that Input Channel will be lit.

48v

Some microphones require "phantom power." This will be supplied when the 48v button is lit orange.

Phase Invert

This button will invert the phase of the incoming signal. It can be very useful when using two microphones on the same source, for example, and the distance between them is causing the combined signal to overemphasize certain frequencies. Phase inversion is one way to neutralize these harmonic "nodes".

Pad/Boost

Three states are available for this button: Pad, Boost, and Off.

- Pad: button lit white. This reduces the input signal level by 20 dB.
- Boost: button lit orange. This adds about 10dB gain to boost weaker signals.
- Off: the button is not lit and the signal is unaffected.




Boost is only available when a microphone is being used.

Inst

This button is dark because the AudioFuse and AFCC know that this option is not needed when a microphone is being used on that channel.

4.2.2.2. Line / Instrument (1/4")

When an instrument is connected with a 1/4" cable the LINE LED for that Input Channel will be lit. Pressing the INST button will toggle the LED to INST.

 Plugging a 1/4" cable into an AudioFuse input will engage the Pad feature automatically. Press the Pad button to disengage this feature if a higher input level is needed.

48v

This button is dark because the AudioFuse and AFCC know that this feature is not needed when a channel is connected to an instrument of some sort.

Phase Invert

This button will invert the phase of the incoming signal. This can be used to "stereoize" a mono signal that is being sent into both Input Channels 1 & 2 at the same time, for example.

Pad

Two states are available for this button: Pad and Off.

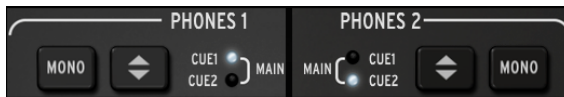
- Pad: button lit white. This reduces the input signal level by 20 dB.
- Off: the button is not lit and the signal is unaffected.

Inst

When this button is toggled the input level and impedance characteristics of the Input Channel change. Choose the one that works best for the instrument you are using.

4.2.3. Phones 1 and 2

Two independent headphone channels are available. Their features are identical and can be set by each user to suit their needs.



4.2.3.1. Mono output

The stereo output will become mono when this button is pressed.

4.2.3.2. Headphones Source selection

The user can decide which output to monitor through the headphones: Main, Cue 1, or Cue 2. Main is selected when both LEDs are lit.

4.3. Phono Line 3/4



The Phono Line 3/4 section

As simple as this section seems, it greatly expands the functionality of the AudioFuse. You can use it to connect a synthesizer or other instrument, plug in a turntable, or route a guitar through your DAW to the Re-Amping feature.

i **!** It is not possible to use the 1/4" connectors and the Phono connectors at the same time for Input Channels 3 & 4. When the Phono switch is not active, neither are those inputs; when the Phono switch is active, the 1/4" connectors are disabled.

One major difference between the two channels in this section and Input Channels 1 & 2 is that they have a mixture of shared controls and independent controls.

4.3.1. Independent controls

4.3.1.1. Gain [both]

Use these knobs to adjust the input gain of Input Channels 3 and 4 to their optimum levels. The available gain range is 0 to +20dB.

4.3.1.2. Inst [input 3 only]

This button will change the impedance of Input Channel 3.

i **!** You can also use the 1/4" input 3 for the [Re-Amping feature \[p.25\]](#).

4.3.1.3. Pad [both]

When this button is clicked it will reduce by 20 dB.

4.3.2. Shared controls

4.3.2.1. Link



When the Link button is clicked the Gain knobs will jump to the lowest of their two values. After that, when one knob is turned the other will turn also.

Gain

When the Link button is lit the Gain knobs technically become "Shared controls"; their values will become identical, and when you turn one knob both knobs will turn.

4.3.2.2. Phono

If you want to connect a turntable to the AudioFuse, click this button and use the Phono inputs on the rear panel. This will match those inputs to RIAA standards.

It is advisable to click the Link button when connecting a turntable so the left/right channel gain levels will match, but you can decide not to use this feature if you need the levels to be independent for some reason.



Clicking the Phono button will disable the 1/4" jacks for Inputs 3 & 4.

4.4. Direct Monitoring Mix



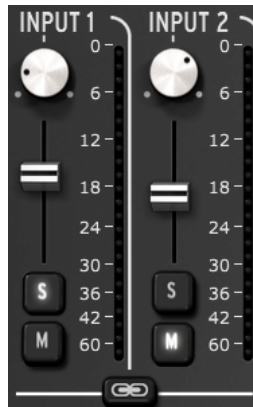
The Direct Monitoring Mix section: 8- channel ADAT view

This area of the main window allows you to set the output levels and pan positions of the visible channels, plus you can solo, mute, and link the channels. The combined stereo signal from these channels is sent to the Main, Cue 1, and/or Cue 2 outputs.

There are four different configurations of input channels that you may see in this area of the window depending on the selection you have made with the Digital In button in the [Settings \[p.21\]](#) section. We'll look at those configurations in this chapter.

4.4.1. Common controls

Each channel and pair of channels have similar controls:



- Pan: adjusts stereo position
- Level fader: adjusts output level
- Solo/Mute
 - Solo: mutes all other channels unless they also have their Solo button pressed
 - Mute: silences only that channel
- Link channels: allows you to control the output levels of a pair of channels at the same time.

4.4.2. Input configurations

4.4.2.1. Basic display



This is what you will see for all sample rates when Word Clock is selected for the Digital Input. It is the most basic configuration, with only four audio channels in use.

4.4.2.2. S/PDIF display



Another pair of audio channels are added when the Digital Input is set to one of the two S/PDIF inputs (coaxial or optical). All sample rates between 44100 and 192000 are available.

4.4.2.3. ADAT display [44.1/48k]



When the Digital Input is set to ADAT and one of the two lowest sample rates is selected, 8 ADAT channels will be shown.

4.4.2.4. ADAT display [88.2/96k]

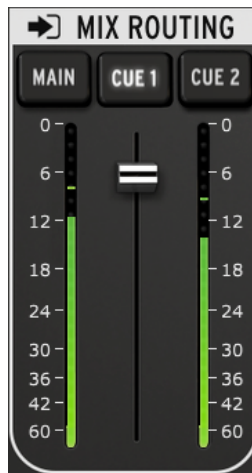


The maximum sample rates for an ADAT input are 88200 and 96000. At these rates only four channels of audio are being transmitted by the ADAT device to the AudioFuse, and so only four channels are displayed in the Direct Monitoring Mix window.



Sample rates of 176400 and 192000 are not available when the Digital Input is set to ADAT.

4.5. AudioFuse Mix Routing



The Mix Routing section

The Mix Routing section enables you to select the destination of the Direct Monitoring Mix.. There are three destinations: Main, Cue 1, and Cue 2. You can select any combination of these output destinations simultaneously.

The output level of the Mix Routing section can be controlled with the fader that is located between the two LED level meters.

4.6. Talkback



The Talkback section



The Talkback feature is only available at sample rates up to 96000.

The Talkback section enables you to select the destinations that will receive audio from the built-in microphone when the Talkback button is pressed on the AudioFuse. There are three destinations: Speaker, Phones 1, and Phones 2. You can select any combination of these output destinations simultaneously.

The gain level of the Talkback microphone can be set with the Gain knob that is located above the selection buttons.

When this happens the output level of the Direct Monitoring Mix section is reduced by the amount set in the [AudioFuse Audio Settings window \[p.14\]](#). This allows the people wearing headphones to hear what is being said without completely silencing the audio material while preventing a feedback loop.

To learn how to adjust the Dim amount, see the [AudioFuse Audio Settings section \[p.14\]](#) of the Menu bar chapter.



The AudioFuse Control Center window does not contain a Talkback button.

5. THE AUDIOFUSE 8PRE

The Arturia AudioFuse 8Pre is a rackmountable member of the AudioFuse family, and has many unique features. The AudioFuse Control Center will help you make the most of each one.

5.1. The Input zone



Spanning the width of the AFCC window beneath the Menu bar is the Input zone. It houses the virtual representation of what's happening on the front panel of the AudioFuse 8Pre, along with meters that display the signal that is arriving at the ADAT Inputs.

5.1.1. The Analog Inputs

When its view is maximized this set of inputs shows you everything that's going on at the front panel of the AudioFuse 8Pre. It has:

- buttons that match those on the front panel, which can toggle (and be toggled by) the corresponding buttons
- LED meters that display the signal level of each input
- icons that represent the type of input device being used.

The icon for an unused input channel looks like one of the combo jacks on the AudioFuse 8Pre. When you plug something in, the icons change to match the type of connection that has been made.

For example, plug in a mic and the icon becomes a microphone on a stand; make a 1/4" connection and the icon becomes a 1/4" plug. When the INST button is toggled on for inputs 1 or 2, the 1/4" plug icon becomes a guitar.

 The INST button is only available for Analog inputs 1 and 2.

You'll notice that some buttons are greyed out when you use certain types of inputs. For example, when you plug in a 1/4" cable the AudioFuse 8Pre knows you will not need phantom power for that device, so the 48V button is deactivated.

The following table lists the buttons that can be used with each input type.

Analog input #	Button name	Visible for input type:	Possible settings
1-8	48V	Microphone	On (lit red), Off
1-8	PAD	Microphone Line, Instrument	Off, PAD (-20dB), BOOST (+10dB) Off, PAD (-20dB)
1-2 (only)	INST	Line, Instrument	On (lit blue), Off
1-8	PHASE	Microphone, Line, Instrument	On (lit blue), Off



The icons do not change when an insert connection is used for Input channels 1 or 2.

5.1.2. The Digital Inputs

This section only has LED level meters. They will display the signal levels for each of the incoming ADAT tracks. There are no other functions available. When no valid incoming ADAT signal is detected, the Digital Inputs label and icon are greyed.

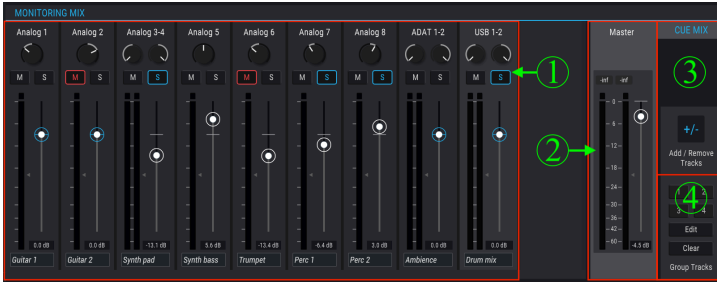
5.1.3. The Input zone, minimized



You can click the IN button in the Menu bar to minimize the entire Input zone (Analog Inputs and Digital Inputs). This hides the channel buttons (48V, Pad, etc.), but continues to show the icons so you can tell at a glance what type of input is plugged into each channel. It also reduces the size of the LED metering columns.

Click the button again to restore the full view.

5.2. The Monitoring Mix zone



Section	Name	Function
1	Channel display	Adjust level, pan, Solo/Mute status of Cue Mix channels
2	Master level fader & meter	Adjust overall level of Cue Mix, numerical readout of peak levels
3	Cue Mix: Add / Remove Tracks	Define contents of Cue Mix
4	Cue Mix: Group Tracks	Link certain Cue Mix channels for simultaneous edits

At the center of the AFCC window is the Monitoring Mix zone. Its function is to define the Cue Mix, which can then be sent to any of the unit's outputs.

It has three main sub-sections: the Channel display, the Master level fader, and the Cue Mix Settings section. The Cue Mix Settings section contains two sub-sections of its own: the Add/Remove Tracks section and the Group Tracks section.

5.2.1. Channel display

This section occupies the majority of the Monitoring Mix zone. Which channels you will see here depends on what you want the Cue Mix to contain. For example, it might have only a few Analog inputs, a half-dozen ADAT tracks, and one or more sources arriving over USB from your DAW. You can make these selections using the [Add / Remove Tracks feature \[p.40\]](#).

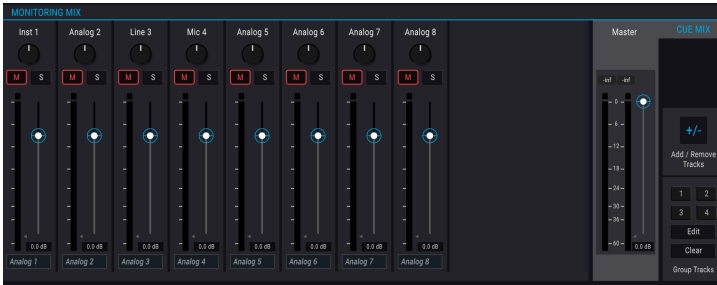
Use the individual faders of each mono or stereo input channel to set their levels. This will affect the Cue Mix only, not what is sent to the DAW input channels or the Main 1-2 outputs.

The Channel display is also affected by whether the AudioFuse 8Pre is in USB mode or ADAT mode.

5.2.1.1. Channels can be named

To name a channel, click in the name field below the channel fader and type the desired name. If no name is entered the default name for that channel will be used: Analog 1-2, ADAT 3, USB 5-6, etc.

5.2.1.2. Operation mode affects the Cue Mix layout



If you compare this graphic with the one at the [top of this section \[p.38\]](#) you'll notice something missing: the USB input channels. Here's why: When the AudioFuse 8Pre is in ADAT mode it is being used as an analog-to-digital converter, so there will be no incoming USB channels in the mix. But when the AudioFuse 8Pre is in USB mode you are able to add all three types of input channels in the Cue Mix: Analog, ADAT, and USB.

ADAT mode also removes the incoming USB routing options in the Digital Output zone, which is described [elsewhere \[p.42\]](#).

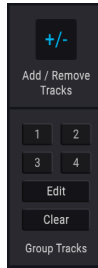
5.2.2. Master level fader

Just like the master fader on a physical mixing console controls the combined output of all of the audio passing through the console, the Master level fader of the AFCC allows you to raise or lower the combined output of all of the input channels in the Channel display before it is sent to the Cue Mix. As with the individual channel levels in the Channel display, the Master fader will affect the Cue Mix only, not what is sent to the DAW input channels or the Main 1-2 outputs.

5.2.2.1. Master level peak value

The small window above the fader shows the peak levels that occur during playback. Double-click the value field to reset it.

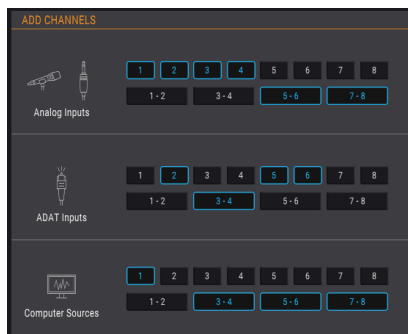
5.2.3. Cue Mix Settings section



This section allows you to define the contents of the Cue Mix. It is also where you can create and select different Track Groups, which makes it easy to perform simultaneous edits to multiple Cue Mix channels at the same time.

5.2.3.1. Add / Remove Tracks

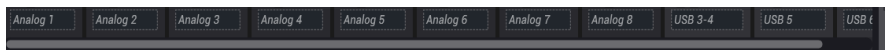
Click the Add / Remove Tracks button to open the Input Selection window.



This shows all of the input sources that can be included in the Cue Mix. You can select individual sources by clicking on a number, or select stereo sources by clicking one of the buttons that contains two numbers. As each button is clicked a channel will be added or removed to the Channel display in the Monitoring Mix section, which remains visible in the background.

The only exception to this rule is when the AudioFuse 8Pre is in ADAT mode: one can not add USB channels in the Cue Mix in this case. But they will be there when USB mode is selected.

Channel display access slider



When a large number of input sources are added to the Cue mix a slider appears along the bottom of the Monitoring Mix window, allowing you to access the input sources that have been pushed out of view.

5.2.3.2. Group Tracks

This function enables you to set up groups of channels (i.e., tracks) within the Cue Mix so you can control them all at one time. Grouped tracks can be muted or soloed with a single click, for example, or you can adjust their levels by moving a single control.

There are four color-coded groups available. When a channel is added to a group, the name field under that channel's fader is highlighted with that same color.

To select a Track Group, click one of the four buttons. Once a group is selected you can adjust its settings as described above, or you can edit the group or clear it.

Edit the Track Group

Follow these steps to assign or remove individual channels from a Track Group.

1. Click the Edit button.
2. Select the Track Group you want to edit by clicking its button.
3. Click the name field for the channel you want to assign or remove from the Track Group.
4. If you want to edit the contents of more than one Track Group, simply select the next Track Group button. Then follow the same steps to assign or remove the channels from that Track Group.
5. When you are done, click the Edit button to exit this mode.

Clear the Track Group

If you want to remove all of the channels from a Track Group and start over, it's easy to do:

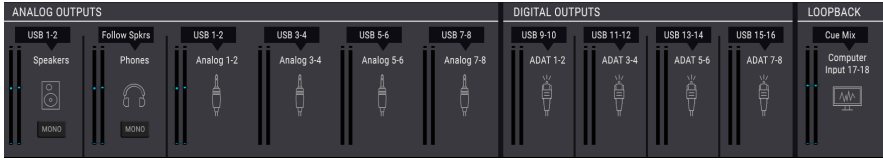
- Click the Clear button.
- Select the Track Group you want to clear by clicking its button.

All channels will be removed from the Track Group immediately.



The Monitoring Mix zone can be hidden or revealed by clicking the MIX button in the middle of the Menu bar.

5.3. The Output zone



Stretching across the bottom of the AFCC window from left to right is the Output zone. It shows at a glance the signals that are passing through the AudioFuse 8Pre, along with the sources and levels as indicated by the LED meters. And depending on the operational mode (USB or ADAT) there can be menus that allow you to select which input source will be routed to which output, a pair at a time.

5.3.1. Selected Mode affects the features

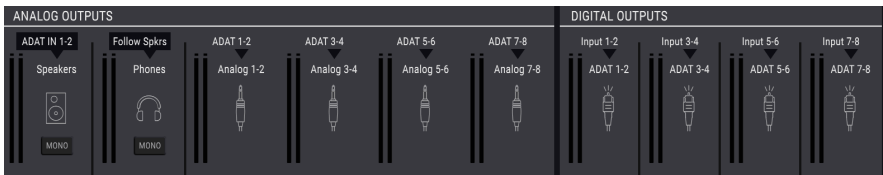
There are different features available for the Output zone depending on the mode you have selected for the AudioFuse 8Pre. The most obvious difference is the Loopback feature: it's there in USB mode but not in ADAT mode. But there are other significant differences as well.

5.3.1.1. USB mode features

The graphic at the [top of this section \[p.42\]](#) shows the Output zone in USB mode. There are two main ways that USB mode is different from ADAT mode:

- You can select from several source assignments for each output pair. Each input/output pair can be assigned independently of the others.
- The [Loopback section \[p.44\]](#) allows your DAW to record the output of another application within your computer, for example. This feature is only available in USB mode.

5.3.1.2. ADAT mode features



In ADAT mode most of the input/output routings are fixed. For example, Analog Inputs 1-2 are always routed to ADAT Outputs 1-2, and ADAT Inputs 1-2 are routed to Analog Outputs 1-2, etc.

The input sources for the Speakers and the Phones are still selectable in ADAT mode, and offer the same options: ADAT IN 1-2 and Cue Mix for the speakers, and ADAT IN 1-2, Cue Mix, and Follow Speakers for the headphones.

5.3.2. Speakers and Phones: special features

5.3.2.1. Mono buttons

There's a Mono button located beneath the Speakers and Phones in the Analog Outputs section. Use this to check your mix every now and then to make sure your listeners will not encounter any phase cancellation issues if they listen to your song through a mono speaker.

The Mono buttons are present in both USB mode and ADAT mode.

5.3.2.2. Phones: "Follow Speakers" option

The AudioFuse 8Pre has a front panel button under the Speakers knob that allows you to select either MAIN 1-2 or CUE as the source that will be sent to the speakers and the headphones. By default the speakers and the headphones receive audio from the same source, but it is possible to set them independently using the AFCC.

Click the menu above the Speakers or the Phones to make independent selections, or select "Follow Speakers" for the Phones so that the headphones and the speakers will always change to the same source at the same time.

5.3.3. USB mode: Analog Outputs

The source for each pair of Analog Outputs can be selected in USB mode. For example, there are four options for analog outputs 1-2: Cue Mix, USB In 1-2, Analog In 1-2, or ADAT In 1-2.

The following table lists all of the input / output routing options that are available in the selection menu for each analog output in USB mode.

Speakers	Phones	Analog Out 1-2	Analog Out 3-4	Analog Out 5-6	Analog Out 7-8
Cue Mix	Cue Mix	Cue Mix	Cue Mix	Cue Mix	Cue Mix
USB 1-2	USB 1-2	USB 1-2	USB 3-4	USB 5-6	USB 7-8
	Follow Speakers	Analog In 1-2	Analog In 3-4	Analog In 5-6	Analog In 7-8
		ADAT In 1-2	ADAT In 3-4	ADAT In 5-6	ADAT In 7-8

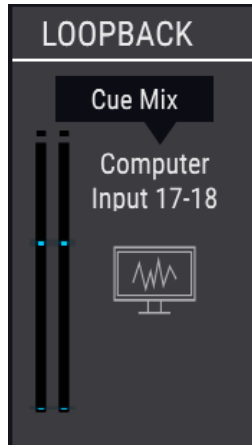
5.3.4. USB mode: Digital Outputs

The source for each pair of Digital Outputs can be selected in USB mode. For example, there are four options for digital outputs 1-2: Cue Mix, USB In 1-2, or Analog In 1-2.

This table lists all of the input / output routing options that are available in the selection menu for each digital output in USB mode.

ADAT Out 1-2	ADAT Out 3-4	ADAT Out 5-6	ADAT Out 7-8	Loopback
Cue Mix	Cue Mix	Cue Mix	Cue Mix	Cue Mix
USB 9-10	USB 11-12	USB 13-14	USB 15-16	USB 17-18
Analog In 1-2	Analog In 3-4	Analog In 5-6	Analog In 7-8	Disabled

5.3.5. USB mode: Loopback section



The Loopback section is only visible when the AudioFuse 8Pre is in USB mode. It provides two additional input channels that are not accessed through the front or rear panels of the AudioFuse 8Pre: USB channels 17 and 18. They are connected to a dedicated USB record stream, so the output of another application can be recorded directly by a DAW.

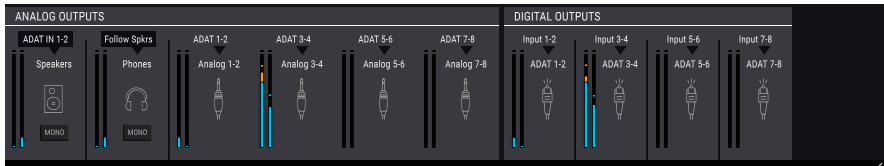
The source for the Loopback channels can be USB 17-18 or the Cue mix of the AudioFuse 8Pre. There is also a Disabled selection if this function is not required..



The Loopback section is not visible when the AudioFuse 8Pre is in ADAT mode.


5.3.6. ADAT mode: Analog and Digital Outputs

In ADAT mode most of the input/output routings are fixed for both the Analog and Digital Outputs. For example, Analog Inputs 1-2 are always routed to ADAT Outputs 1-2, and ADAT Inputs 1-2 are routed to Analog Outputs 1-2, etc.



The input sources for the Speakers and the Phones can be selected, however, and offer the same options that are available in USB mode. The following table shows the options:

Destination	Source options
Speakers	ADAT IN 1-2, Cue Mix
Phones	ADAT IN 1-2, Cue Mix, Follow Speakers

 The Loopback section is not available when the AudioFuse 8Pre is in ADAT mode.

5.3.7. The Output zone, minimized



You can click the OUT button in the Menu bar to minimize the entire Output zone (Analog Outputs, Digital Outputs, and the Loopback section, if visible). This hides the input sources and selection menus for each output, and also reduces the size of the LED metering columns.

Click the button again to restore the full view.

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