

# FireMix

Low latency Mixer

User's Guide

V1.0 - April 2005





# FireMix

## User's Guide

---

### Table of Contents

<b>Why FireMix?</b> .....	2
<b>Installing FireMix</b> .....	2
<b>The FireMix Application</b> .....	2
Overview.....	3
Opening The FireMix Application.....	3
The FireMix Front Panel.....	4
Using FireMix .....	5
FireMix Preferences.....	5

## Why FireMix?

One problematic aspect of most computer-based digital audio applications is the unavoidable delay between the application's input and output, commonly known as latency. In the typical recording situation where a performer listens to a mix of pre-recorded tracks and a live input of his performance, this latency means that sounds the performer creates are heard in his headphones some time after creating them, resulting in a poorly timed performance.

This problem is solved by routing the performer's live input directly to his headphones for monitoring (avoiding a latency-inducing path through the application) and mixing this feed with the pre-recorded tracks. This is accomplished with Apogee's FireMix, a software controlled mixer that allows the routing and mixing of host interface inputs and outputs, independent of the audio application. With an X-Firewire equipped Apogee host interface, the FireMix application and your favorite digital audio app, latency is no longer a problem.

## Installing FireMix

### FireMix Requirements

#### Windows XP

OS : Windows XP SP1 or SP 2 (Windows 2000 or earlier not supported)

Hardware : 1.5 gig or greater processor

At least 512 megs RAM

#### OS X

OS : OS X 10.3.9 (earlier versions are not supported)

Hardware : 867 mHz or greater

At least 512 megs RAM

Apogee Host Interface equipped with an X-Firewire card

X-Firewire firmware version : 3.3 or greater

X-Firewire FPGA version : 3.0 or greater

#### OS X

Download the FireMix Installer from our web site ([www.apogeedigital.com/downloads](http://www.apogeedigital.com/downloads)), unzip the file to the desktop of your computer, double click on the resultant .pkg file, and follow the instructions given by the installer program.

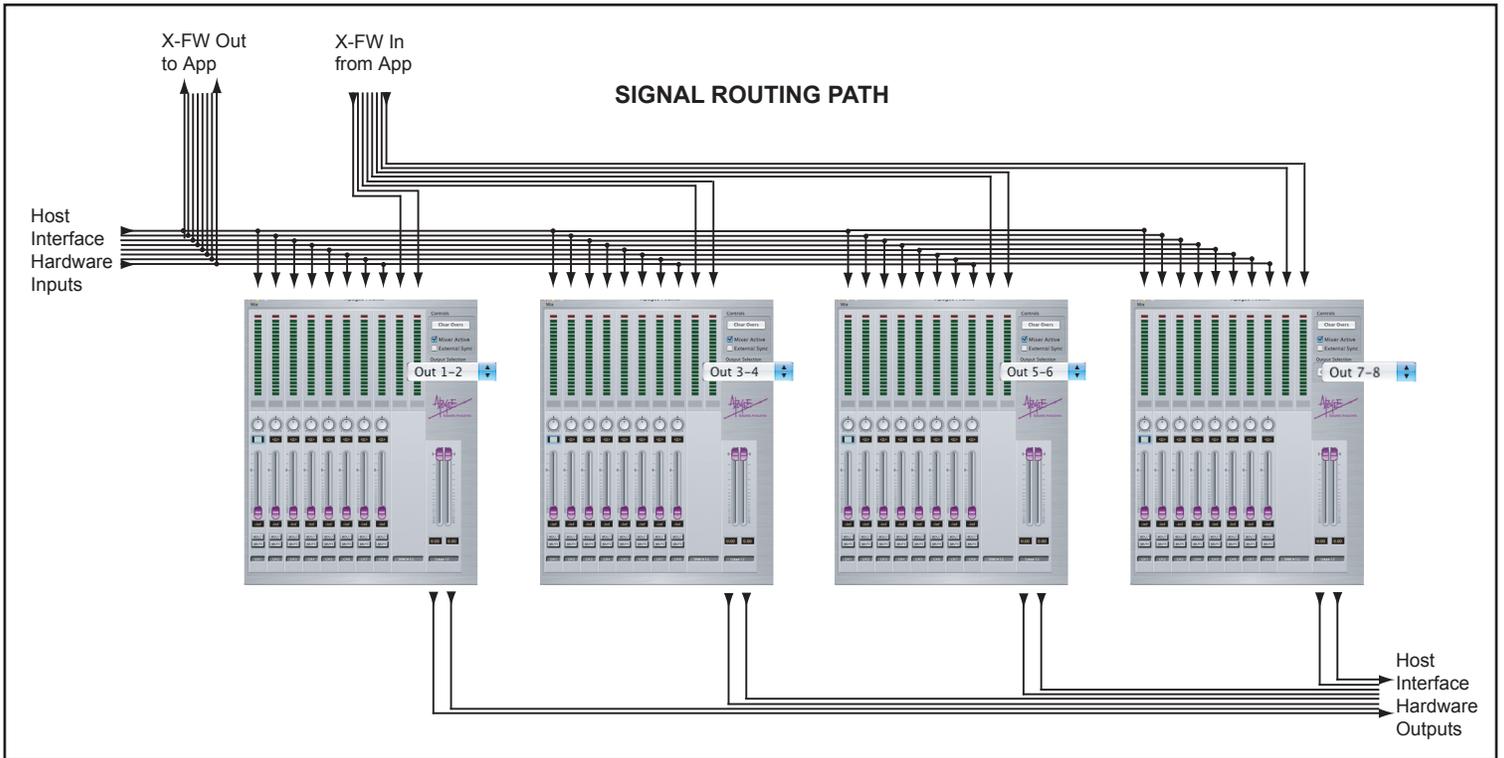
#### Windows XP

Download the FireMix Installer from our web site ([www.apogeedigital.com/downloads](http://www.apogeedigital.com/downloads)), unzip the file to the desktop of your computer, double click on the setup.exe file found in the unzipped folder, and follow the instructions given by the installer program.

# The FireMix Application

## Overview

In essence, FireMix may be conceived of as a mixer with 10 inputs and 4 pairs of outputs, where each output pair’s mix is controlled from a separate mixer “layer”. Inputs labelled **Ch 1-8** are sourced directly from the Apogee host interface’s hardware inputs 1-8, while inputs labelled **DAW In (1-2,3-4,5-6,7-8)** are sourced from corresponding outputs of the recording software used in conjunction with the X-Firewire-equipped interface. Firemix output pairs are sent directly to the Apogee host interface’s hardware outputs 1-2, 3-4,5-6 and 7-8 respectively. Please see the signal routing path diagram to the right.



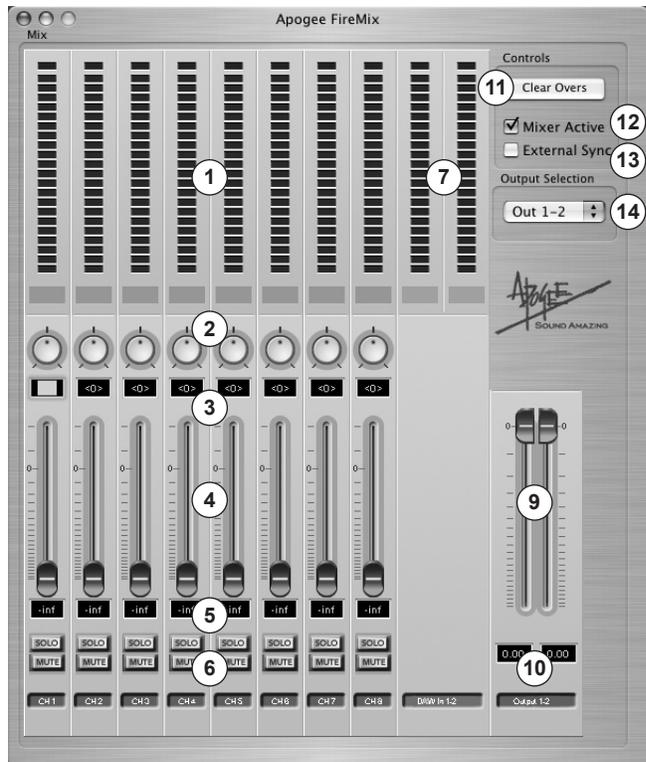
## Opening the FireMix Application

Before attempting to use FireMix software, verify the proper operation of the X-Firewire equipped Apogee host interface with your software application. Also verify that the X-Firewire firmware has been updated to the latest versions. Please check here for more information : [www.apogeedigital.com/downloads](http://www.apogeedigital.com/downloads). After connecting your X-Firewire equipped Apogee host interface, double-click on the FireMix application icon. If no host interface is connected or some other anomaly has occurred, the message “No Apogee detected” is displayed.

## The FireMix Application (continued)

### FireMix front panel

- 1) **Input meters 1-8** – The first eight meters display the level of inputs sourced from the Apogee host interface’s inputs 1-8.
- 2) **Pan** – These software knobs pan input signals between the selected output pair. The mouse motion used to set the pan knob may be set in the FireMix preferences.
- 3) **Pan Value Indicator** – These indicators display the value of the pan knob setting, from –64 (full left) to 0 (center) to 64 (full right).
- 4) **Input Faders 1-8** – These software controls set the gain level at which inputs are mixed to the output pair.
- 5) **Input Fader Value Indicator** - These indicators display the input fader’s gain value, from –inf to (+) 6.02.
- 6) **Solo/Mute Buttons** – These buttons offer useful monitoring functions commonly found on most mixers. When an input channel’s Mute button is engaged, that channel is muted and the input signal is no longer heard. When an input channel’s Solo button is engaged, the Mute buttons of all OTHER input channels are engaged, so that only the “Solo’ed” input channel is heard.
- 7) **DAW In (1-2,3-4,5-6,7-8)** – these meters display the level of inputs sourced from outputs of the recording software used in conjunction with the X-Firewire-equipped Apogee interface.
- 8) **DAW In Faders** – Quite simply, there aren’t any! The inputs sourced from recording software outputs are mixed at unity gain, i.e. if a fader was present, it would be set at 0.
- 9) **Stereo Output Faders** – These software controls set the output attenuation level.
- 10) **Stereo Output Fader Value Indicators** - These indicators display the stereo output fader’s attenuation value, from –inf to 0.
- 11) **Clear Overs** – This button clears the red OVER indicators
- 12) **Mixer Active** – This box must be checked for the FireMix mixer to be active. Uncheck **Mixer Active** to interrupt signal flow for troubleshooting purposes.
- 13) **External Sync (Mac OS X only)** – To set the connected Apogee host interface to external sync, check this box and select the desired external source on the host interface front panel.
- 14) **Output Selection** - This drop-down menu selects the output pair “layer” to be displayed.



## The FireMix Application (continued)

**Using FireMix** – In the following example, we will assume the following setup: a microphone (via a mic-preamp) is connected to Input 1 of a Rosetta 800, and the Rosetta 800’s analog outputs are connected to a monitoring system with speakers and a headphone. We are recording onto track 1 of a Logic session, and tracks 2-8 contain pre-recorded tracks.

- 1) After opening Logic and FireMix, set Output Selection to Out 1-2. Set up a mix of the prerecorded tracks using Logic’s Track Mixer window, and route this mix to outputs 1-2. Playback level of the mix (as displaying in Logic) should match the level displayed on the stereo input meter (9-10), and should be present at the hardware outputs.
- 2) Set the mic-pre gain so the input level displayed on FireMix meter 1 is appropriate to the signal being recorded, and raise fader 1 for the desired monitoring level.
- 3) Set an audio track in Logic to accept a signal from input 1 and record-enable the track; input level should appear on the track’s meter. To avoid monitoring the record-enabled track through Logic’s mixer (and thus with additional latency), uncheck the Software Monitoring box found in Logic under Audio>Audio Hardware and Drivers.
- 4) When recording multiple instruments, connect them to the host interface inputs 1-8 and repeat steps 2-3, creating additional Logic tracks for each instrument.

### FireMix Preferences

#### Pan Control

**Mouse motion** – This preference sets the mouse motion required to modify the pan knob. Settings are self-explanatory.

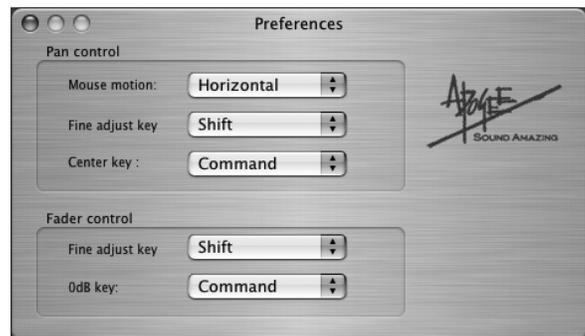
**Fine adjust key** – This preference specifies the computer key used to make fine adjustments to the pan knob; press the specified key before modifying the knob position with the mouse.

**Center key** – This preference specifies the key used to set the pan knob to its center position; press the specified key and click on the pan knob to return it to the center position (pan value of “0”).

#### Fader Control

**Fine adjust key** – This preference specifies the computer key used to make fine adjustments to the fader; press the specified key before modifying the fader position with the mouse.

**0 db key** – This preference specifies the key used to set the fader to 0 db; press the specified key and click on the fader to return it to 0 db gain.



FireMix User's Guide - v1.0 - April 2005  
Text conceived *and* delivered by: Roger Robindore  
Graphics by: Sean McArthur

