Fireface UCX Setup for Mac

Always use the approved driver from the SoundCheck DVD or from our website:
 https://support.listeninc.com/hc/en-us/sections/200370694-Drivers

---

Note: Driver testing and the stated Hardware Editor settings were performed using macOS®
Catalina 10.15. Different versions of the macOS® may require different Hardware Editor
Latency Values than those specified in *LatencyLatency Changes on page 4*. Follow the
instructions in *LatencyLatency Changes on page 4* to determine the proper latency values
for the Hardware Editor.

System Extension Blocked error message after installing audio interface driver

Starting in macOS® 10.13 'High Sierra', Apple introduced a
system that will automatically prevent users from installing
software that wasn't downloaded from the App Store. You will
need to manually allow for this from the **System Preferences**
menu. Once selected, all other software by the same developer
will be allowed to pass automatically without having to repeat the
steps.

Figure 1-1: Blocked Kernel Extension

You may see the error message in *Figure 1-1* after installing an
audio interface driver and restarting the computer. This will most
likely prevent the audio interface from working correctly.

To fix the problem, as the error message
suggests, click on:

**Apple Logo > System Preferences >
then click 'Security and Privacy'**.

Click the '**Allow**' button as shown in *Figure
1-2*.

In our own test installations we have
noticed the button does not always appear.
In this case, you may need to reinstall the
audio interface driver again and navigate
to the **Allow** button as noted above.

Figure 1-2: User Approval To Load A KEXT

Note: If the "**Allow**" button is NOT
pressed within 30 minutes
after the driver installation, this
button will disappear and you
will need to install the driver
again for the button to appear.
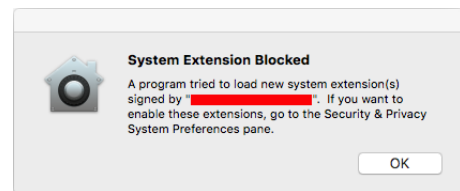You may have to click the lock
icon as well.

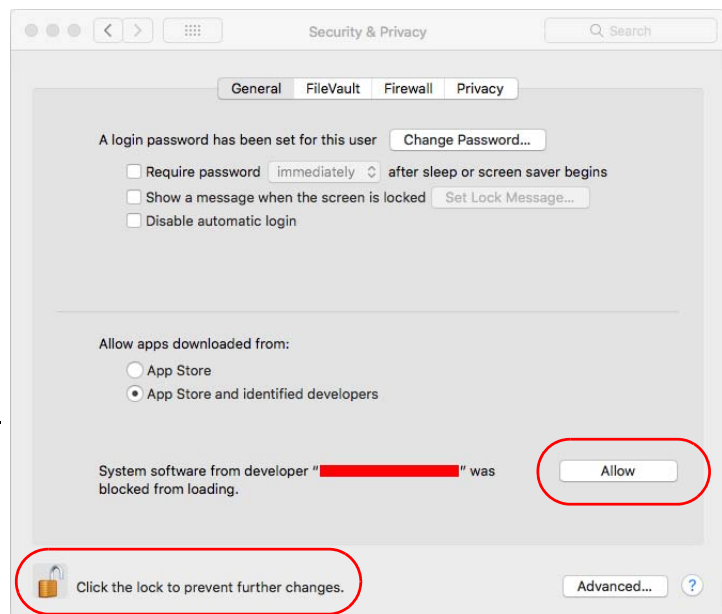Once this is complete, continue with the setup of the new hardware.

Mixer

The TotalMix application for the **Fireface UCX** should be configured as shown *Figure 1-3*. A preset for this has been saved with the driver package supplied by Listen, Inc.

From the mixer screen click "File" then click "Load Workspace". Navigate to the "SoundCheck Settings" folder in the driver folder for the audio interface.

Open "FF UCX Core Audio Mixer tmws".

Click on the "Wrench" icon on a channel to open the channels advanced settings.

The Line In and Out levels should be set to +4 dBu in the mixer as shown in *Figure 1-3* in order to work with the default Vp values in the Hardware Editor, *Figure 1-6*.
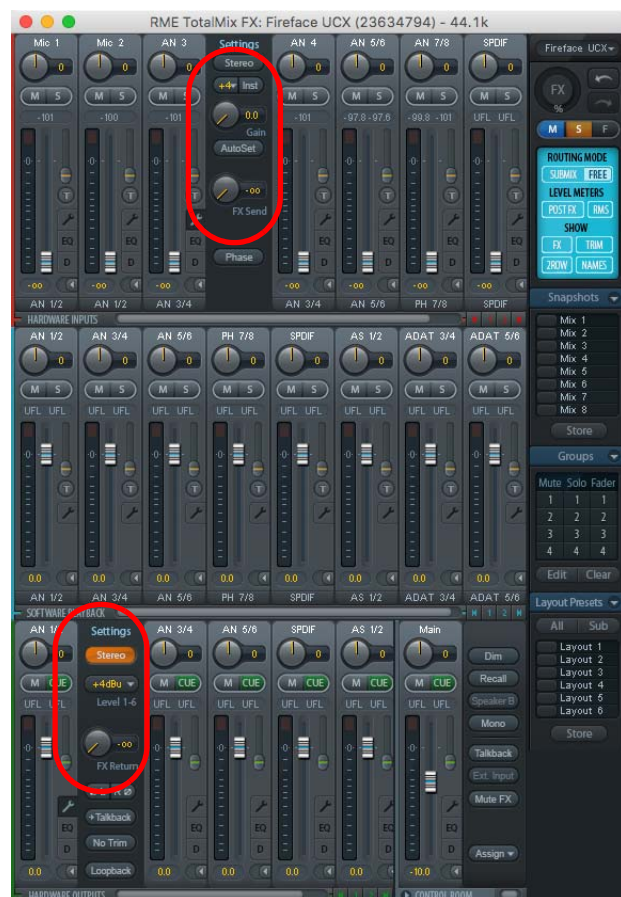

Figure 1-3: Mixer Screen

The mixer is then set to:

- Hardware Inputs: All channels used in SoundCheck must be turned down
- Hardware Outputs: All channels used in SoundCheck set to 0 dB - Unity Gain
- Software Playback: All channels used in SoundCheck set to 0 dB - Unity Gain

You must click on a Hardware Output in order to set the Software Playback for that channel. In *Figure 1-3*, the arrow shows PH 7/8 selected and set to 0dB in Hardware Outputs. The Software Playback is also set to 0dB for that channel.

- Control Room channel is used for the Headphone output level and set to 0 dB
- Routing set to "Free"

Matrix

The Matrix allows for routing of software playback channels to the necessary output channels to create a one to one relationship.

The Matrix page of the mixer is set as shown in *Figure 1-4*. This is also included in the workspace file: "FF UCX Core Audio Mixer tmws".

- Software Playback channels (vertical) are routed to Hardware outputs (horizontal). (Green cells set to 0dB.)
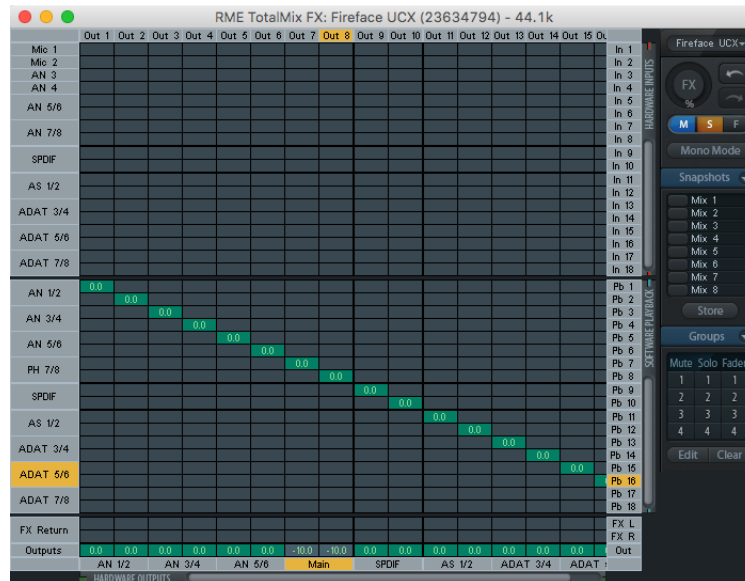

Figure 1-4: Matrix Screen

USB Settings

- The Sample Rate must be updated in the USB panel when changed in the SoundCheck Hardware Editor
- Restart SoundCheck after setting the sample rate in the **Hardware Editor** and the **Sample Rate Field** of the audio interface app
- Clock Source should be set to Internal when the **Fireface UCX** is used as the only audio interface
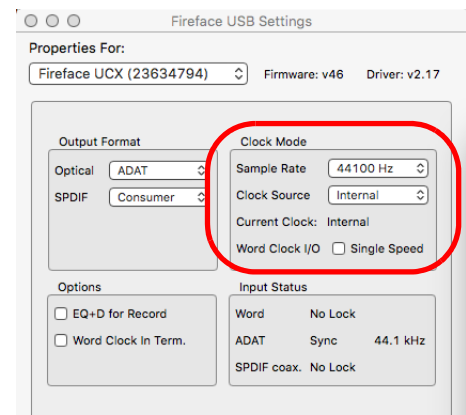- Optical format can be switched to SPDIF

Figure 1-5: USB Settings

SoundCheck Hardware Editor

The Hardware Editor in *Figure 1-6* shows the general settings for the Input and Output Vp values as well as the Latency.

- Note that the default Calibration Configuration (.CAL) file in SoundCheck has only 2 signal paths of direct input and output. New signal paths will need to be created in Calibration if you plan to use the additional hardware channels.

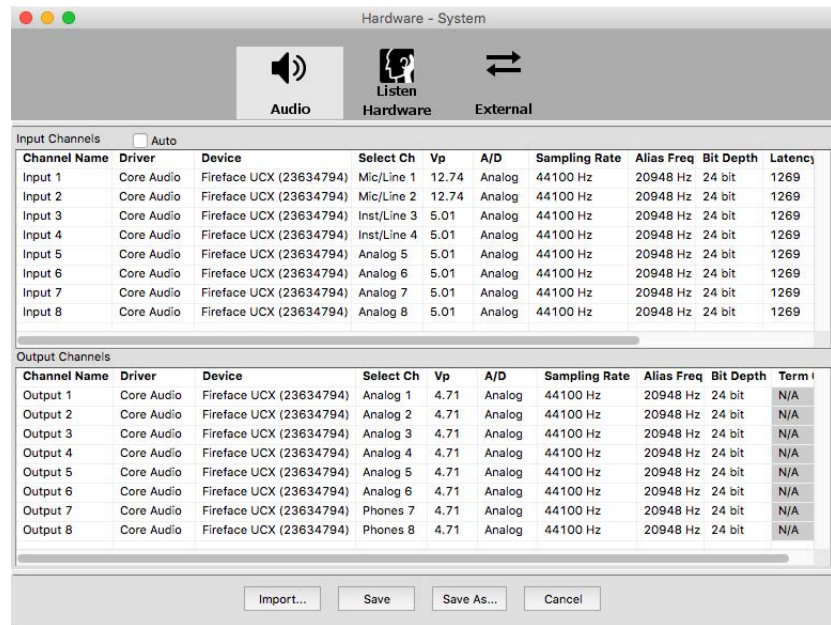- **Sampling Rate:** Only one rate can be selected for all Input and Output channels of an interface

Figure 1-6: Hardware Editor

Latency

Latency in Samples for Typical Sample Rate and Buffer Values				
USB Connection	**44.1 kHz**	**48 kHz**	**96 kHz**	**192 kHz**
Samples	1269	1386	2885	5794
Enter the **Samples** value in the Hardware Editor Latency field for the selected Sample Rate.				

Figure 1-7: Latency in Samples

Latency Changes

1. Open the Hardware Editor. Change the Sample Rate to the value you need to measure Latency for. Click on the drop down arrow next to the value in the **Latency** field of the Hardware Editor. Select **Edit** and the Latency Table will open.

2. Set the **Latency** for the desired sample rate to 0 (zero) and click OK

3. Make sure the sample rate of the audio interface has updated.

4. Run the **Self Test** sequence from the Calibration folder in SoundCheck. The Result window shows the **Audio Interface Latency** for the new Sample Rate.

5. Enter this value in the Latency field of the Hardware Editor Sample Rate/ Latency Table. Repeat this for other required Sample Rates.

6. All channels, analog or digital, must have the same latency value per sample rate for that audio interface. This insures the system will work correctly if they are used simultaneously in a sequence.

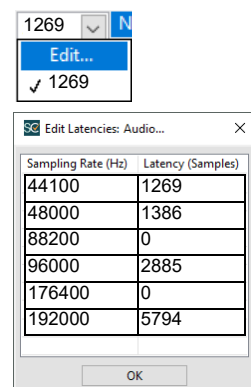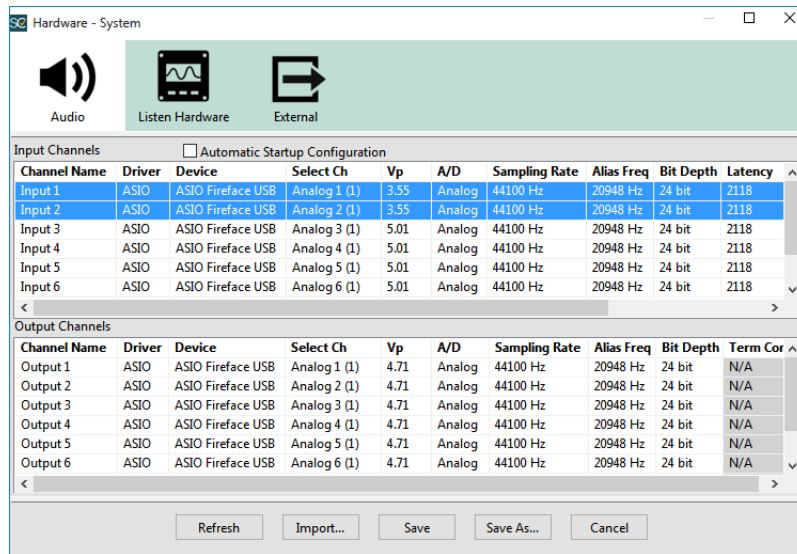7. Run the Self Test sequence again to verify that the Audio Interface Latency is 0 (zero)

Figure 1-8: Edit Latency Table

XLR Inputs 1 and 2

XLR Inputs 1 and 2 should not be used with external preamps. Use these inputs for testing dynamic microphones or microphones that require 48V phantom power. The Vp values shown in *Figure 1-6* are for the TRS Line Inputs.

Figure 1-9: XLR Input Vp Value

Figure 1-9 shows the nominal Vp values for the XLR inputs.

We recommend that you setup new input channels in the Hardware Editor with "XLR Input" in the Channel Name. Next run the "Audio Interface Calibration" process from the Hardware Editor to get more accurate XLR Input Vp values. Instructions are in the Hardware Editor chapter of the SoundCheck manual.