Fireface 802 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

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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 ***Latency on page 5***. Follow the instructions in ***Latency Changes on page 5*** 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.

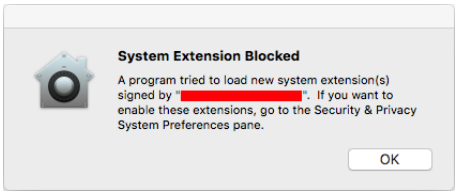

Figure 1-1: Blocked Kernel Extension

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.

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.

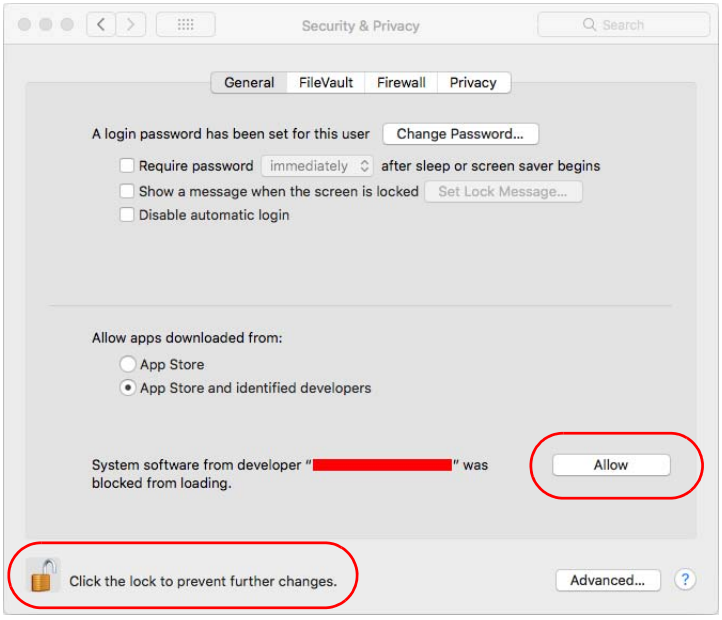

Figure 1-2: User Approval To Load A KEXT

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

Mixer

The TotalMix application for the **Fireface 802** should be configured as shown ***Figure 1-3***. A preset for this has been saved with the driver package supplied by Listen, Inc.

Figure 1-3: Mixer Screen

From the mixer menu bar click "File" then click "Load Workspace". Navigate to the "SoundCheck Settings" folder in the driver folder for the audio interface. Open "**Fireface 802** Audio Mixer tmws".

- All Input channels must be set to +4dBu. This is not the default setting! Click the “Wrench” symbol on each channel and click the drop down menu to select +4dBu as shown in ***Figure 1-3***.
- For single ended use of Ch 9 thru 12, select **INST** to match Line In Vp shown in ***Figure 1-6***.
- Main Output is also known as AN 1/2. This must be set to 0dB as shown in ***Figure 1-3***.

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
- Control Room channel is used for the Headphone output level and set to 0 dB
- Routing set to "Free"
- Gain range should be set as shown on page 2 on the Gain Range Tab of the USB Settings panel

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: "Fireface 802 Core Audio.tmws".

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

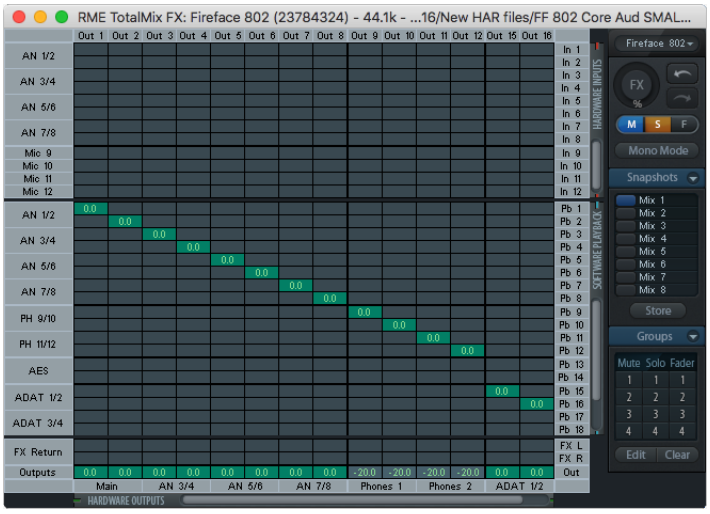

Figure 1-4: Matrix Screen

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 802** is used as the only audio interface
- Optical format can be switched to SPDIF

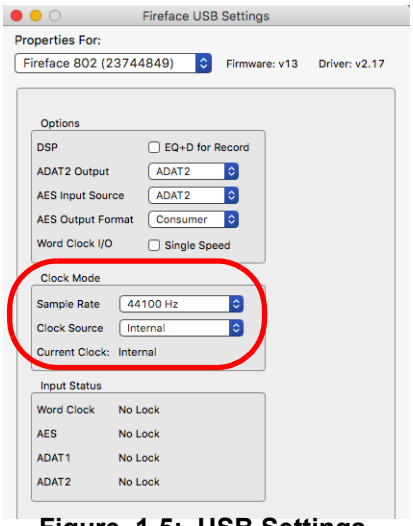

Figure 1-5: USB Settings

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.

Interfaces sold by Listen include a data sheet with more precise Vp values that you can enter in the Hardware Editor.

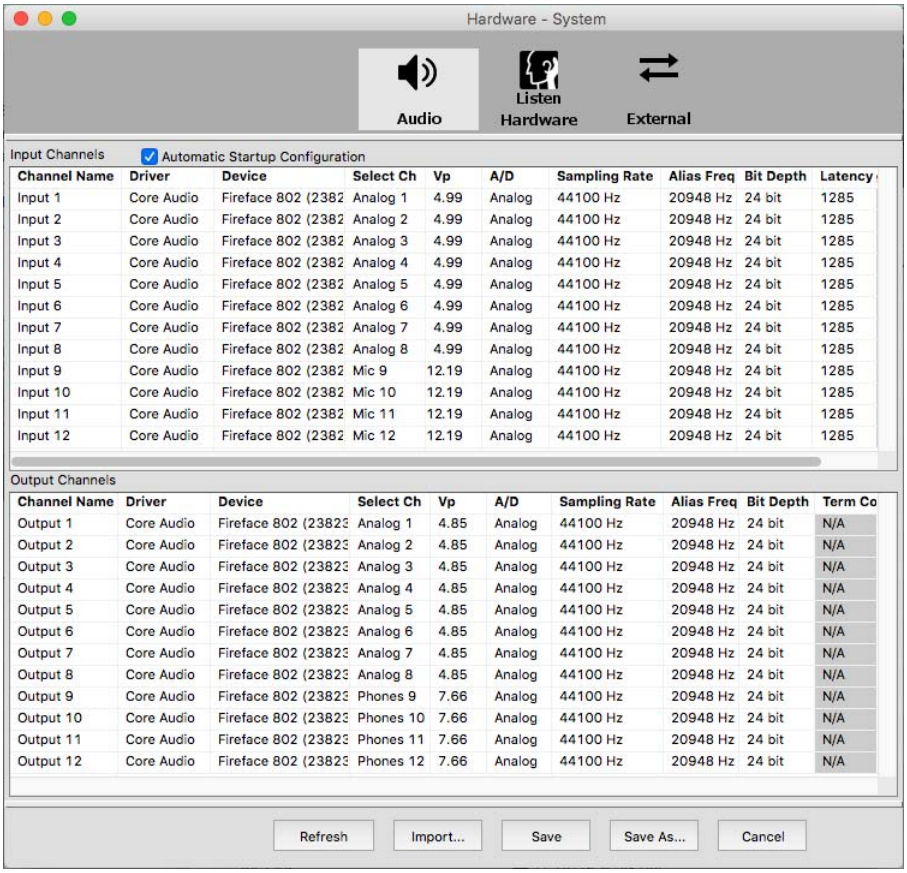

Figure 1-6: Hardware Editor

- In ***Figure 1-6***, Input 9 - 12 Vp values are for **Inst**, 1/4” TS single ended inputs, with gain set at +6 dB. Any changes to the gain setting will require updated Vp values.
- If you are using **Mic**, XLR balanced inputs, with gain set at +6dB, the nominal Vp value should be 3.36 Vp. Any changes to the gain setting will require updated Vp values. Deselect **Inst** in the mixer when using the XLR inputs. See ***Figure 1-3 Mixer Screen on page 2***. Turn on 48 V Phantom Power only if the connected microphone requires phantom power.
- **Sampling Rate:** Only one rate can be selected for all Input and Output channels of an interface
- Outputs 9 and 10 are for Headphone Output 9/10 on the device front panel

Latency

Latency in Samples for Typical Sample Rate and Buffer Values				
USB Connection	**44.1 kHz**	**48 kHz**	**96 kHz**	**192 kHz**
Samples	1285	1402	2823	5675
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)

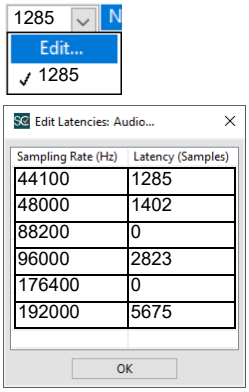

Figure 1-8: Edit Latency Table