



Multiface II Setup in Windows

Always use the approved driver from the SoundCheck DVD or from our website:

<https://support.listeninc.com/hc/en-us/sections/200370694-Drivers>



Figure 2-1: Mixer Screen

The TotalMix application for the **Multiface II** should be configured as shown [Figure 2-1](#).

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 "**SoundCheck Config Multiface II.tmws**".

The mixer is 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

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 2-2](#). This is also included in the workspace file:

“SoundCheck Config Multiface II.tmws”.

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

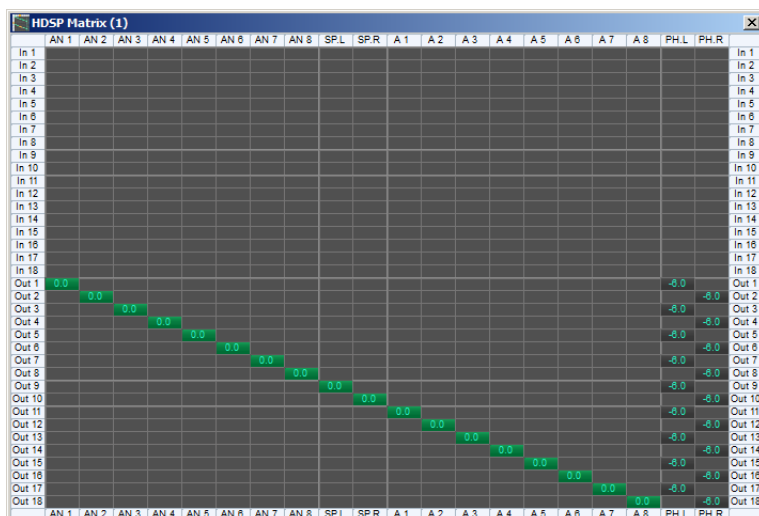


Figure 2-2: Matrix Screen

ASIO Buffer

The ASIO buffer is set in the ASIO Control Panel which is launched separately from the Mixer Utility.

The ASIO control panel can be opened by right clicking on a **Multiface II** Channel Name in the SoundCheck Hardware Editor - Audio Tab.

The **default Buffer** is set to **256** samples.

More channels of measurement may require a larger buffer.

Connection	Sample Rate	Buffer	Latency
Firewire	44.1 kHz	256	623

The sample rate of the **Multiface II** will automatically update to the rate set in the SoundCheck Hardware Editor (see [Figure 2-4](#)). The sample rate set in the SoundCheck Hardware Editor will update in the **Multiface II** mixer when the sequence runs.

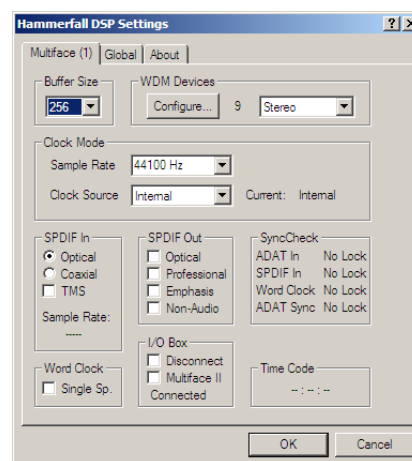


Figure 2-3: ASIO Control Panel

Note: When you change to a higher Sample Rate in the Hardware Editor, the audio interface driver will automatically change to a larger buffer. This can cause performance problems with SoundCheck. After changing the Hardware Editor Sample Rate you should change the ASIO Buffer back to the default value shown above. Follow the steps in [Latency Changes on page 3](#) to get the new Latency Value for the Hardware Editor fields.

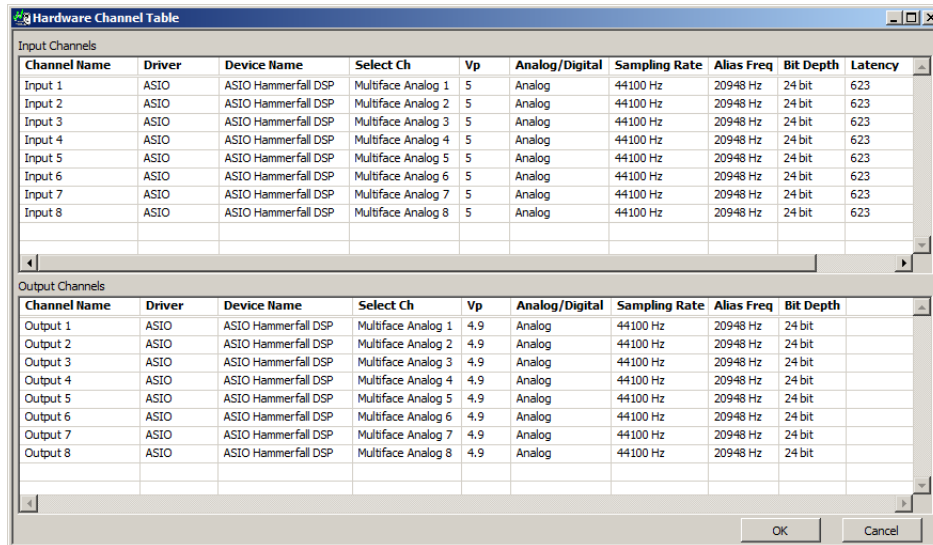
Important! Do not use different input and output driver types for an audio interface, e.g.: ASIO for Inputs and WASAPI for outputs. Doing so will result in an Acquisition Step error.

SoundCheck Hardware Editor

The Hardware Editor in [Figure 2-4](#) 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

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



The screenshot shows the 'Hardware Channel Table' window. It contains two tables: 'Input Channels' and 'Output Channels'. Both tables have columns for Channel Name, Driver, Device Name, Select Ch, Vp, Analog/Digital, Sampling Rate, Alias Freq, Bit Depth, and Latency. The Input Channels table shows 8 channels, all with a Vp of 5 and a Sampling Rate of 44100 Hz. The Output Channels table shows 8 channels, all with a Vp of 4.9 and a Sampling Rate of 44100 Hz.

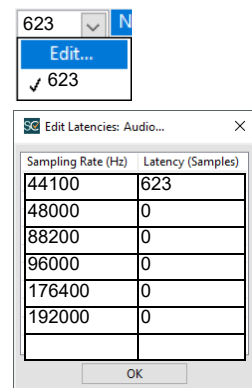
Channel Name	Driver	Device Name	Select Ch	Vp	Analog/Digital	Sampling Rate	Alias Freq	Bit Depth	Latency
Input 1	ASIO	ASIO Hammerfall DSP	Multiface Analog 1	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 2	ASIO	ASIO Hammerfall DSP	Multiface Analog 2	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 3	ASIO	ASIO Hammerfall DSP	Multiface Analog 3	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 4	ASIO	ASIO Hammerfall DSP	Multiface Analog 4	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 5	ASIO	ASIO Hammerfall DSP	Multiface Analog 5	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 6	ASIO	ASIO Hammerfall DSP	Multiface Analog 6	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 7	ASIO	ASIO Hammerfall DSP	Multiface Analog 7	5	Analog	44100 Hz	20948 Hz	24 bit	623
Input 8	ASIO	ASIO Hammerfall DSP	Multiface Analog 8	5	Analog	44100 Hz	20948 Hz	24 bit	623

Channel Name	Driver	Device Name	Select Ch	Vp	Analog/Digital	Sampling Rate	Alias Freq	Bit Depth	Latency
Output 1	ASIO	ASIO Hammerfall DSP	Multiface Analog 1	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 2	ASIO	ASIO Hammerfall DSP	Multiface Analog 2	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 3	ASIO	ASIO Hammerfall DSP	Multiface Analog 3	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 4	ASIO	ASIO Hammerfall DSP	Multiface Analog 4	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 5	ASIO	ASIO Hammerfall DSP	Multiface Analog 5	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 6	ASIO	ASIO Hammerfall DSP	Multiface Analog 6	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 7	ASIO	ASIO Hammerfall DSP	Multiface Analog 7	4.9	Analog	44100 Hz	20948 Hz	24 bit	
Output 8	ASIO	ASIO Hammerfall DSP	Multiface Analog 8	4.9	Analog	44100 Hz	20948 Hz	24 bit	

Figure 2-4: Hardware Editor

Latency Changes

- 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.
- Set the **Latency** for the desired sample rate to 0 (zero) and click OK
- Make sure the sample rate of the audio interface has updated. Change the ASIO Buffer/USB Streaming mode for the audio interface in the **ASIO Control Panel** (if applicable). Typically there is no buffer control for WDM / WASAPI.
- Run the **Self Test** sequence from the Calibration folder in SoundCheck. The Result window shows the **Audio Interface Latency** for the new Buffer size or Sample Rate.
- Enter this value in the Latency field of the Hardware Editor Sample Rate/ Latency Table. Repeat this for other required Sample Rates.
- 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.
- Run the Self Test sequence again to verify that the Audio Interface Latency is 0 (zero)



The screenshot shows the 'Edit Latencies: Audio...' dialog box. It contains a table with two columns: 'Sampling Rate (Hz)' and 'Latency (Samples)'. The table has 6 rows, with the first row showing 44100 Hz and 623 samples. The other rows show 48000 Hz, 88200 Hz, 96000 Hz, 176400 Hz, and 192000 Hz, all with a latency of 0. There is an 'OK' button at the bottom.

Sampling Rate (Hz)	Latency (Samples)
44100	623
48000	0
88200	0
96000	0
176400	0
192000	0

Figure 2-5: Edit Latency Table