

**Application note for the USB audio option 004-232JIT**

**Overview**

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The WZ<sup>4</sup> range of mixers listed above have the option of accommodating a high quality audio card that will send 16 audio channels to a computer for recording or processing and a return stereo channel for monitoring or effects.

The card neatly mounts within the rear pod of the WZ<sup>4</sup> mixer and the data is available from a USB2 connector at the rear of the mixer. There are 2 switches on either side of the USB2 connector which change routing options, these are described below.

The option card must be installed by a technically qualified service engineer. Please see the fitting instructions document AP8988 for further information on how the audio card is installed.

**Specification**

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The USB audio option module has selectable sample rates of 44.1kHz / 48kHz / 88.2kHz / 96kHz at 24 bit resolution.

The card has been tested with the following operating systems to ensure compatability:

- Windows XP 32 & 64 bit
- Windows Vista 32 & 64 bit
- Windows 7 32 & 64 bit
- Windows 8 32 & 64 bit

- OS X 10.5 Leopard
- OS X 10.6 Snow Leopard
- OS X 10.7 Lion
- OS X 10.8 Mountain lion

For questions about compatibility with other operating systems please contact our technical support team via the Allen & Heath website: <http://www.allen-heath.com/support>

This interface card has been tested with a variety of computers and operating systems.

With the higher sample rates (88.2 & 96 kHz) we recommend that you take some time to optimise your system latency settings to ensure that no clicks or dropouts are added to the recorded data.

For higher immunity against bandwidth related timing issues, we recommend operating at 44.1 or 48kHz sample rate.

**Typical round trip latency readings**

**PC**

Buffer Size	Sample rate kHz	Latency mS
64	48	9
256	48	30
64	96	7
256	96	20

**MAC**

Buffer Size	Sample rate kHz	Latency mS
64	48	8
256	48	19
64	96	7
256	96	14

Analogue headroom from nominal (0dBu)

19dB

Digital headroom from nominal (-20dBFS)

20dB

Frequency response

+0.25/-0.5dB 20Hz to 20kHz

THD+N (22Hz to 22kHz) Input to output, +10dBu, 1kHz, 48kHz sample rate

0.007%

## WZ<sup>4</sup> 12:2 audio routing

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For the 12:2 the card sends the following channels to the computer:

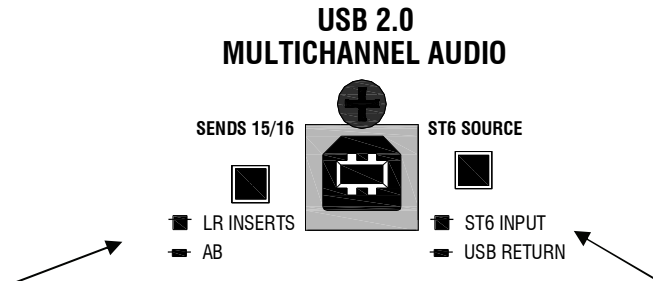
Mono channels 1-8 direct out,

Aux outputs 1-6 (Post level),

Left/right insert sends OR AB outputs (Post level) .

The ST6 input source can be from either the rear panel TRS jacks or the USB card return channel.

See switch options below.



This switch defines channels 15 & 16 sent to computer

**Switch up:** L&R mix insert sends.

**Switch down:** AB feeds post level knob / monitor feed

This switch defines ST6 input source

**Switch up:** ST6 TRS jacks on rear of mixer

**Switch down:** Stereo feed from computer

## WZ<sup>4</sup> 16:2 audio routing

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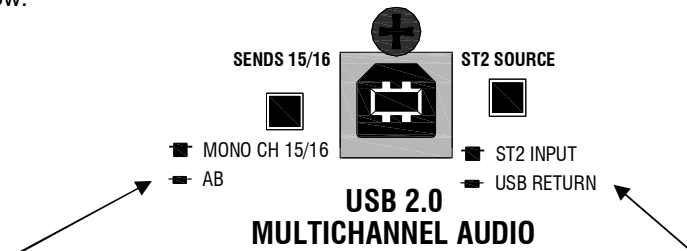
For the 16:2 the card sends the following channels to the computer:

Mono channels 1-14 (direct out),

Mono channels 15 & 16 (direct out) OR AB outputs (Post level) .

The ST2 input source can be from either the rear panel TRS jacks or the USB card return channel.

See switch options below.



This switch defines channels 15 & 16 sent to computer

**Switch up:** Mono channels 15 & 16 (Direct out).

**Switch down:** AB feeds (post level knob) / monitor feed

This switch defines ST2 input source

**Switch up:** ST2 TRS jacks on rear of mixer

**Switch down:** Stereo feed from computer

## WZ<sup>4</sup> 14:4:2 audio routing

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For the 14:4:2 the card sends the following channels to the computer:

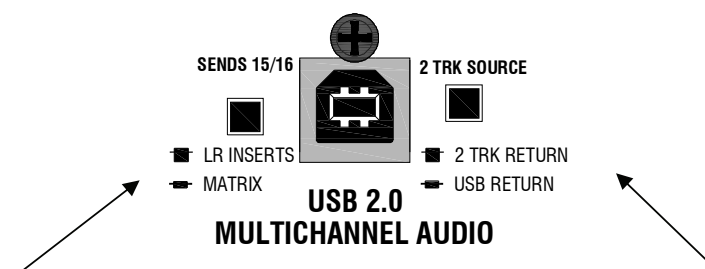
Mono channels 1-10 (direct out),

Groups 1-4 (Insert point),

Left/right insert sends OR Matrix outputs (Post level).

The 2 TRK input source can be from either the rear panel phono connectors or the USB card return channel.

See switch options below.



This switch defines channels 15 & 16 sent to computer

**Switch up:** L&R mix insert sends.

**Switch down:** Matrix outputs (Post level).

This switch defines 2TRK input source

**Switch up:** 2TRK phono connectors on rear of mixer

**Switch down:** Stereo feed from computer

# PC Driver Installation

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**BEFORE YOU CONNECT YOUR WIZARD4 TO A COMPUTER PLEASE FOLLOW THESE INSTRUCTIONS ON INSTALLING THE CORRECT DRIVERS FOR THE USB SOUNDCARD.**

CHECK [www.allen-heath.com](http://www.allen-heath.com) FOR NEWS ON THE LATEST DRIVER VERSIONS

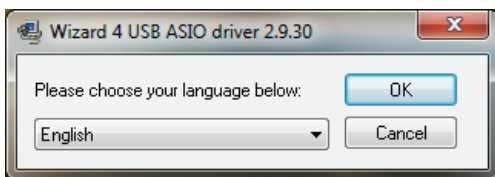
## Software Installation (Windows XP, Vista, Windows 7 and Windows 8)

Follow the procedure described below to install the USB audio drivers:

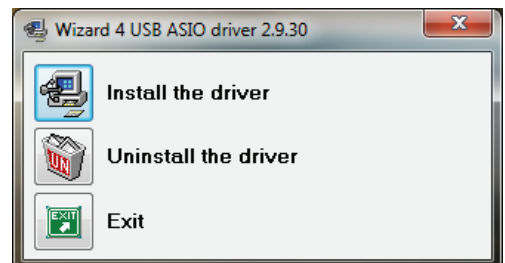
1. Connect the WIZARD 4 to your mains electricity supply and switch on.

**Do not connect the WIZARD 4 to the PC at this time.**

2. Open the Drivers folder and run **Setup.exe**.



3. Select your preferred language

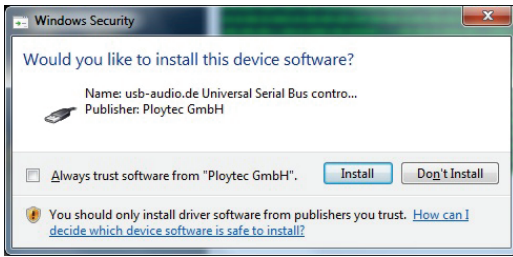


4. Select **Install the driver**



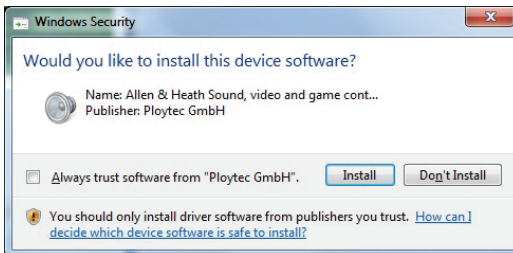
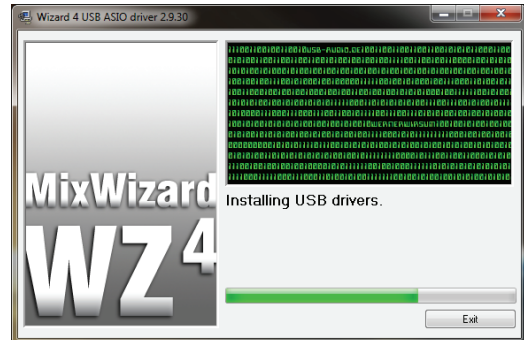
5. When prompted, connect the Wizard 4 to the PC with the USB lead.

# PC Driver Installation



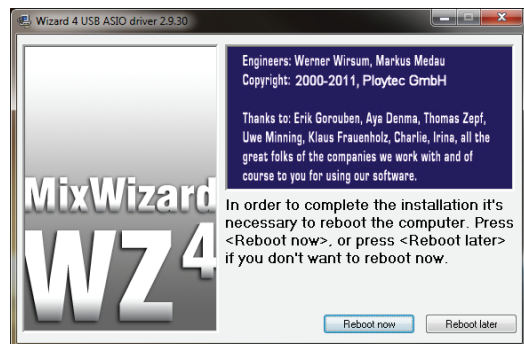
6. If this window appears, select 'Install'.

7. The USB driver will now install.



8. If this window appears, select 'Install'.

9. Reboot to complete installation.



The installation process may differ slightly dependant upon Operating System and Security Software.

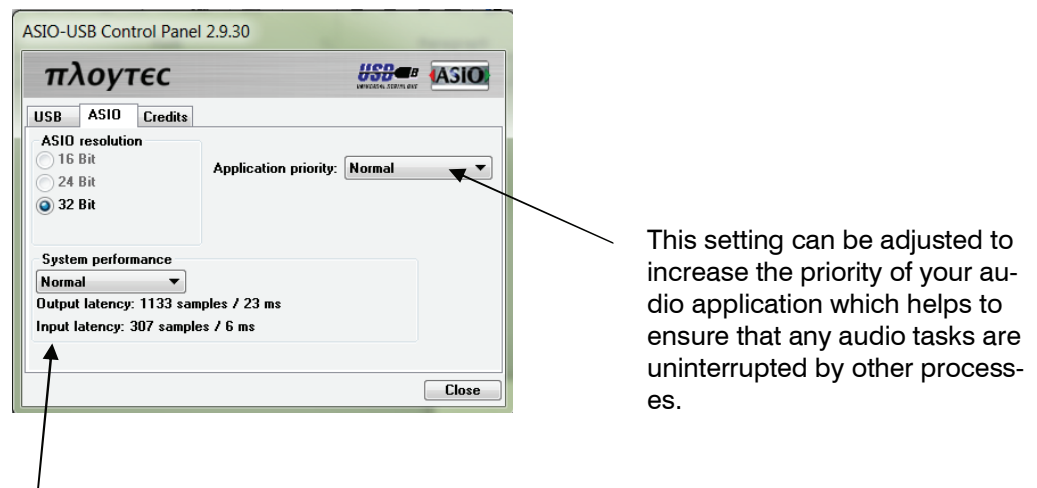
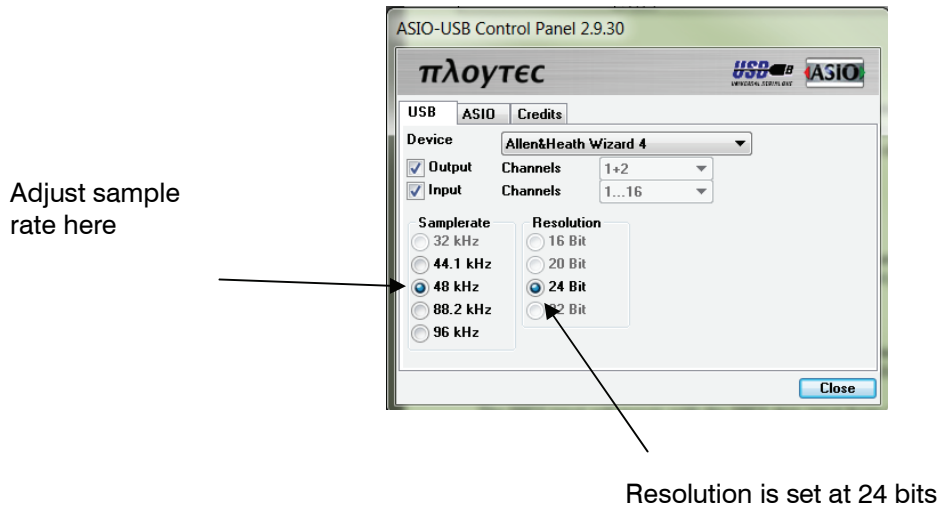
**NOTE: Always use the same USB port with your Wizard 4.**

When installing on a MS Windows system, the drivers will be associated with the USB port that you are currently plugged into. If you attempt to use the Wizard 4 with another USB port, or without installing the drivers at all, the system may work but with degraded performance (XP, Vista, Windows 7), or may not work at all (2000).

# PC Control Panel

The PC driver can be configured in the driver setup section of your digital audio workstation software by selecting the ASIO configuration option.

This will open the window below that allows the user to adjust various driver settings.



The system performance option adjusts the buffer size to optimise the system to your personal preference.

High speed setting gives the lowest latency figure. Relaxed has the largest buffer.

Please note that a higher buffer setting reduces the risk of any audio dropouts due to system conflicts on your computer, but increasing the buffer size also increases the latency delay.

# MAC Driver Installation

**BEFORE YOU DO ANYTHING WITH YOUR Wizard 4, PLEASE READ THE FOLLOWING CAREFULLY TO ENSURE YOUR MAC IS CORRECTLY SET UP TO BE USED WITH THE MIXER.**

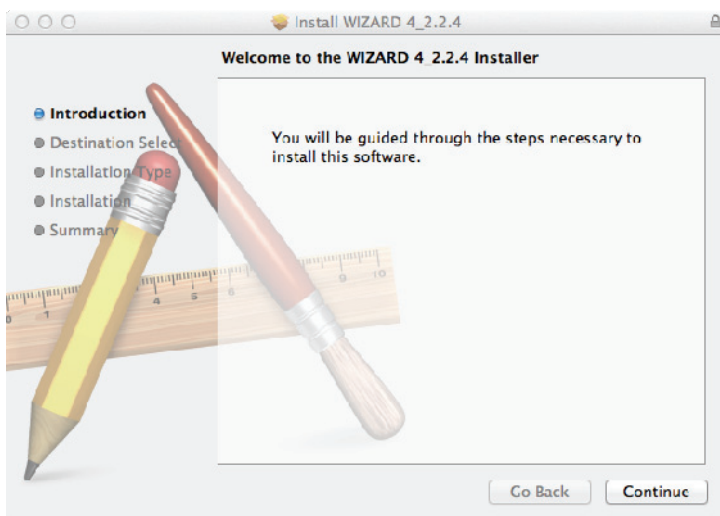
CHECK [www.allen-heath.com](http://www.allen-heath.com) FOR NEWS ON THE LATEST DRIVER VERSIONS

## Mac OSX

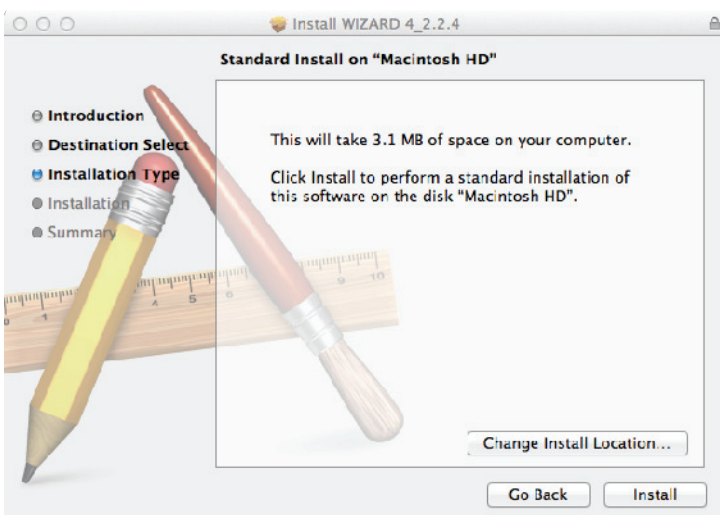
Open the Wizard 4\_Driver\_x.x.x.dmg to reveal the window shown.



Click on the Wizard 4.mpkg file to launch the driver installation.



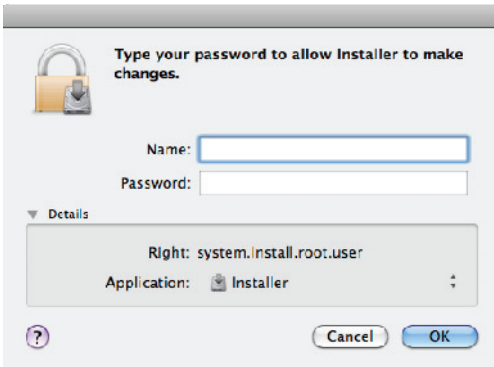
Click on "Continue".



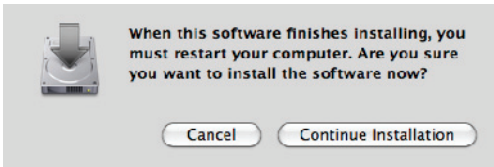
Select install location and then click "Install".

# MAC Driver Installation

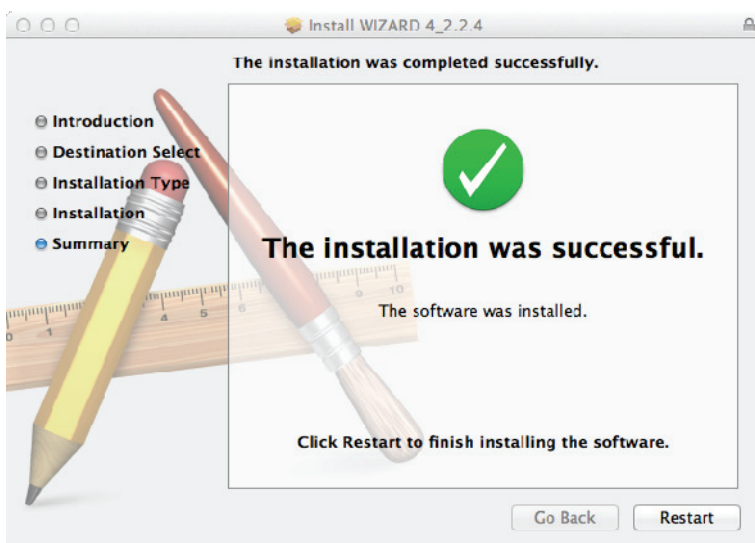
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Enter your system password.



Click on "Continue Installation".



Restart your Mac.

# MAC Driver Installation

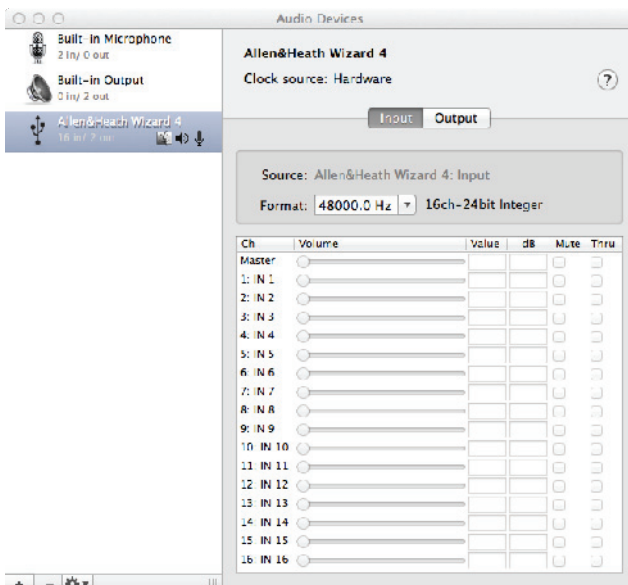
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## Checking the Driver Installation

Once the driver installation is complete, you will need to check that the Wizard 4 is being recognised. To do this, connect the Wizard 4 to your Mac and then, from the file menu, select:

GO → Utilities → Audio MIDI Setup

The **Audio Devices** window will open automatically.



In the **Audio Input** section, the number of channels should be seen as 16.

In the **Audio Output** section, the number of channels should be seen as 2.