Users' manual

Prodipe ASIO driver

Version 1.6.0.0 - 01/2013 (Windows only)

Introduction:

The ASIO Prodipe driver allows you to fully exploit your audio interface Prodipe through your audio recording (or DAW for Digital Audio WorkStation) software.

ASIO stands for **A**udio **S**treaming **I**nput **O**utput and is a registered trade mark from Steinberg.
ASIO, among other things, dramatically reduces the audio latency (the time needed by audio datas to "travel" between your computer and the audio interface used -and this is available for inputs as well as for outputs).

Prodipe ASIO driver complies with the recommendations of the version 2.0 of the ASIO Protocol.
It allows reaching latencies near the millisecond (and even lower) depending on the power of your computer.

In addition, with the built-in function "Prodipe ASIO Merge®", it allows you to use multiple Prodipe audio interfaces simultaneously. You can then create a configuration of "virtual" audio interface (up to *16 input channels and 16 output channels* in the current version).

More, the ASIO Prodipe driver is optimized for the new generations of Windows (Vista, Windows 7, Windows 8 and upcoming) by the support of the new audio features of these operating systems (ASAPI for **A**udio **S**ession **A**pplication **P**rogramming **I**nterface).
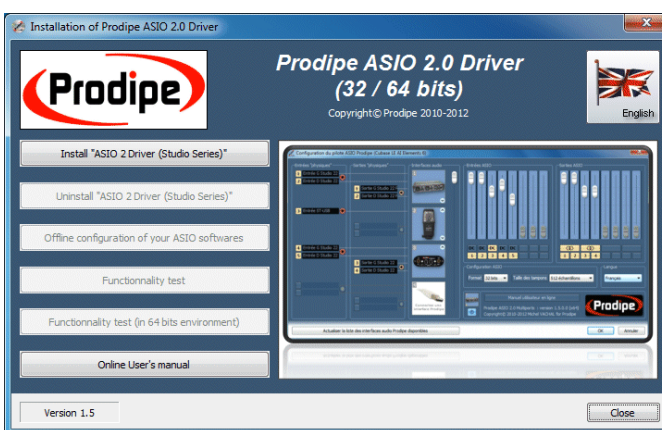
Installation:

Simply use the installer shipped with your Prodipe audio interface (or downloaded from the web site Prodipe).

The Prodipe ASIO driver is available for the **32 bits** ("x86") and the **64 bits** ("x64") versions of Microsoft Windows.

- Under Windows 32 bits, only the 32 bits version of the driver is installed
- Under Windows 64 bits, both versions (32 bits and 64 bits) of the driver are installed
- A **32 bits software** running under **Windows 32** bits uses the **32 bits version of the driver**
- A **32 bits software** running under **Windows 64** bits uses the **32 bits version of the driver**
- A **64 bits software** running under **Windows 64** bits uses the **64 bits version of the driver**

*(Installation under Windows XP, Vista & Seven **32** bits)*   *(Installation under Windows XP, Vista & Seven **64** bits)*

After you have clicked on the button *"Install ..."* you will see the configuration window of the **default parameters**:

This window lets you select the parameters that the driver will use by default.
If you know, for example, that the ASIO software that you will use with the driver requires a specific buffer size, you can change it here.
This will avoid the need to configure the driver in "Offline" mode (more details on this functionality later) or to be not able to run your ASIO software.

Of course, you will be able to modify these parameters while using the driver with your software (if your ASIO software let you doing so).

If you don't know what parameters to modify, simply click on the button "Install".

Using the ASIO Prodipe driver in your audio software:

Start your audio recording software and use one of the functions of this software to
1) select the "ASIO Prodipe driver"
2) display the "ASIO Prodipe driver" control panel

The *Cubase LE* software will be used as an example later in this manual (mostly because it is frequently shipped with Prodipe audio interfaces).

To use the **ASIO Prodipe driver in Cubase**, click on the "Devices" menu, "Device setup...", and then select "**Asio 2.0 Prodipe Driver**" in the list of proposed ASIO drivers:
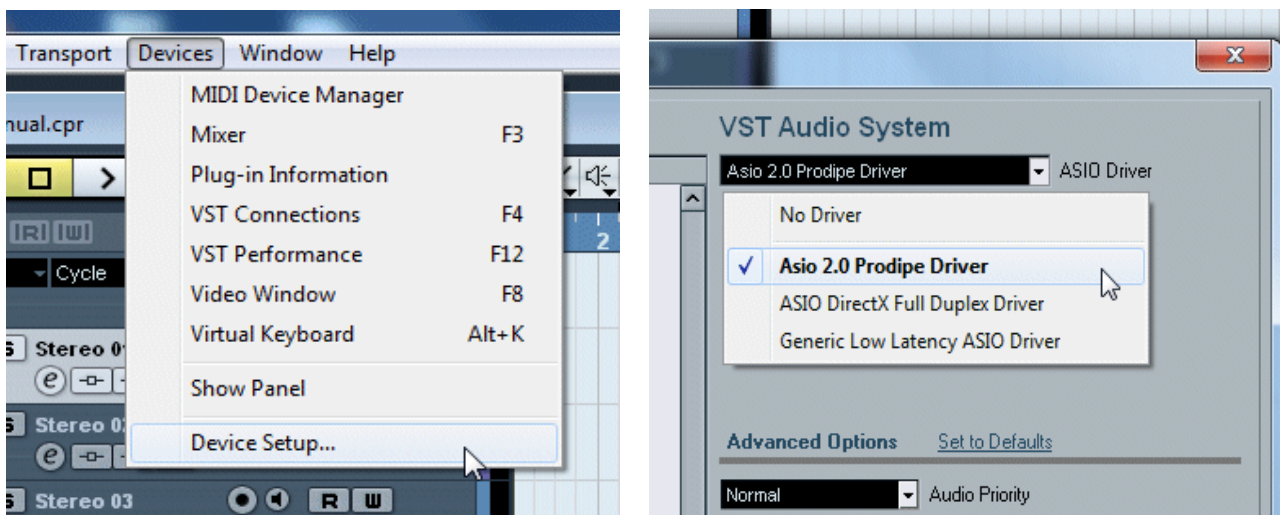
Finally, to display the **ASIO Prodipe driver control panel**, click on the "Asio 2.0 Prodipe Driver" item from the list of left, click the "Control Panel" button to the right:
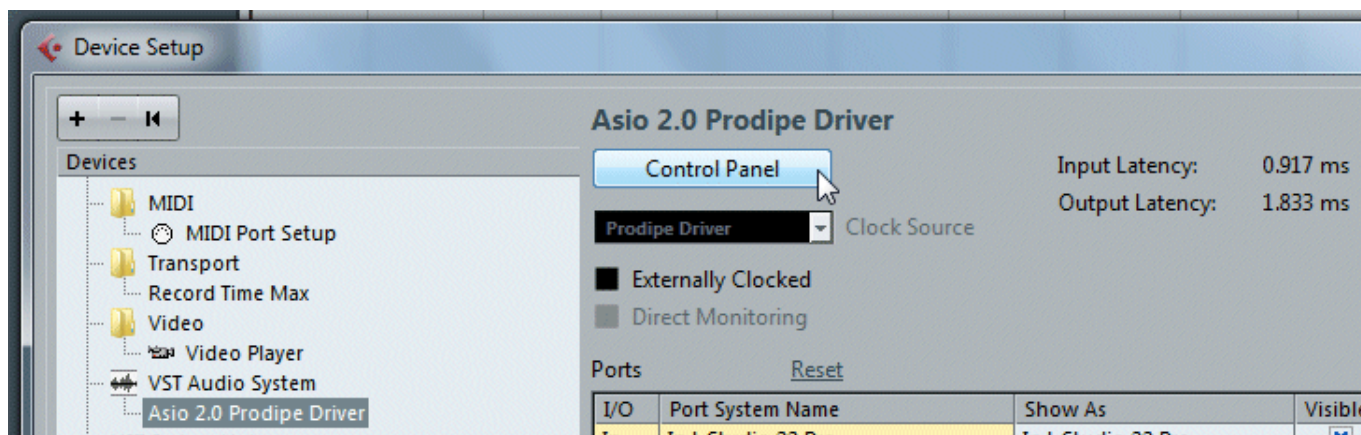
# System tray icon and easy access to the Control Panel:

The **Control Panel** of the Prodipe ASIO driver is now **easily accessible** thru the **system tray** of Windows®.
The Prodipe ASIO driver adds an icon in the system tray each time your audio software is using it:
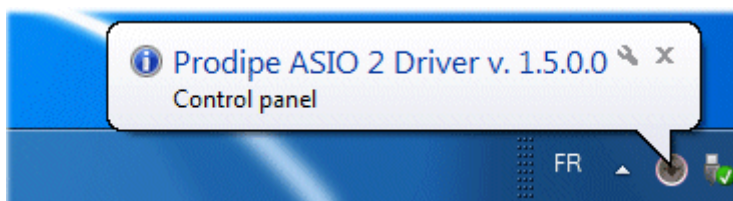
Simply click on this icon to easily get access to the Control Panel of the driver.

More, this icon informs you about any problem during the use of the driver by your audio software (*blinking icon when no hardware connected or not detected*)
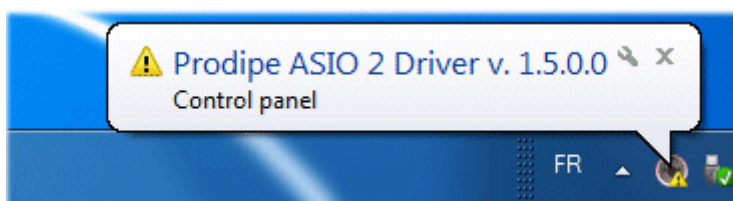
Configuration and user's interface:

"Physical" inputs:

For each connected audio interface, you can **rename inputs** and thus customize the display of the names of channels in your audio software.

For example, if you connect a microphone on input 1 (left input on a stereo audio interface configuration), and that the microphone is used for the recording of an acoustic guitar, you can change the default name "Left Input Studio 22 Pro" in "Acoustic guitar":
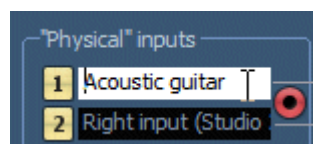
Caution: ASIO imposes a maximum length of 32 characters for the names of input/output (ASIO Prodipe driver automatically truncates the names whose length is greater than 32 characters).

You can **enable or disable the use of the inputs** (regardless of the outputs).
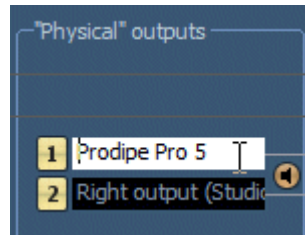This feature can be useful in a configuration with multiple audio interfaces that you want to use all output interfaces but only one of these inputs. The goal is to reduce the use of the processor to the strict necessary.
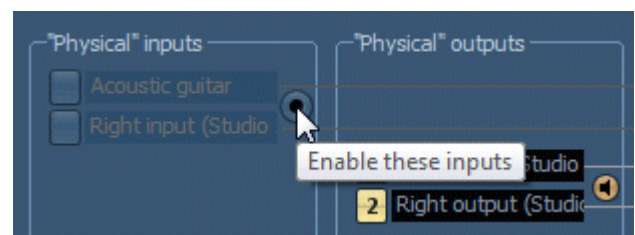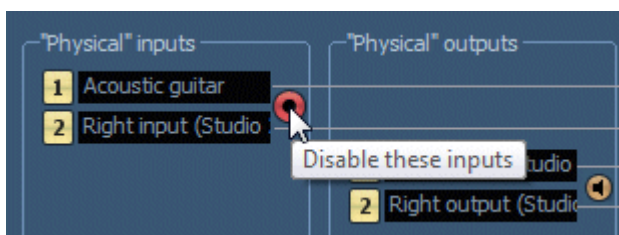
"Physical" outputs:

For each connected audio interface, you can **rename outputs** and thus customize the display of the names of channels in your audio software.

For example, if you connect a Prodipe Pro 5 active speaker on output 1 (left output on a stereo audio interface configuration), you can change the default name "Left Output Studio 22 Pro" in "Prodipe Pro 5":

Caution: ASIO imposes a maximum length of 32 characters for the names of input/output (ASIO Prodipe driver automatically truncates the names whose length is greater than 32 characters).

You can **enable or disable the use of the outputs** (regardless of the inputs).

This feature can be useful in a configuration with multiple audio interfaces that you want to use all input interfaces but only one of these outputs. The goal is to reduce the use of the processor to the strict necessary.
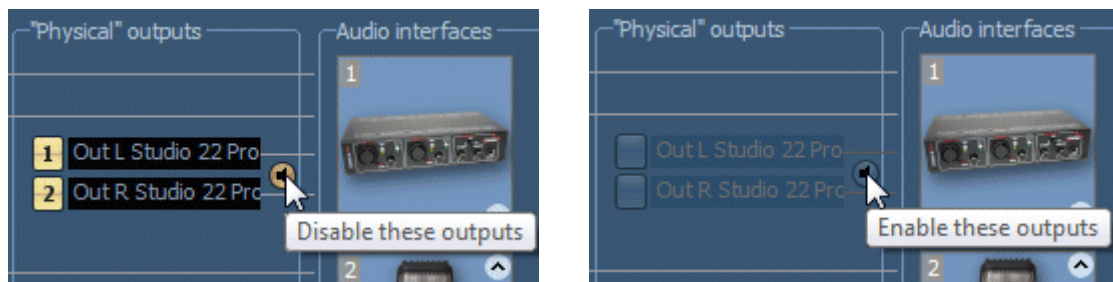
Caution: you cannot validate the configuration of the driver if you do not use at least one input (mono or stereo) and at least one (stereo) output.

Special function for the conversion of a mono input audio interface into a stereo input interface

Some audio software may not work correctly when used with an ASIO driver that does not "show" at least 2 inputs (1 stereo input in other words).
The ASIO Prodipe driver allows to virtually converting a mono interface into a stereo one:

right click on the icon of the audio interface(the Prodipe Studio 12 of the microphone ST-USB for example):


and then click on the menu "Mono input into stereo input conversion":

the audio data from the two "virtual" inputs in this case being a duplication of the audio data from the single mono physical input.

Special function of mix (mono) of all inputs

You may need for specific reasons (DJ, radio, instrument practice, etc.) to connect a microphone, a guitar, etc. on one of both inputs (at your choice), in such a manner that your DAW software receive a signal on both inputs.

In this way, the signal of a microphone connected to the *left* input will be present on *left and right* inputs, and the signal of a microphone connected to the *right* input will be also present on *left and right* inputs: both signals of both microphones will be mixed together and will be present on both inputs.
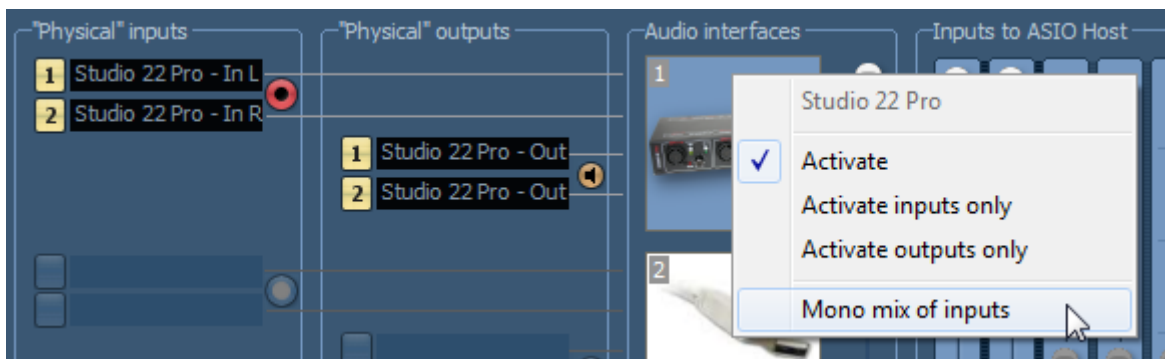
Here, a microphone connected to the left input will be "heard" on the left channel only by your DAW software.
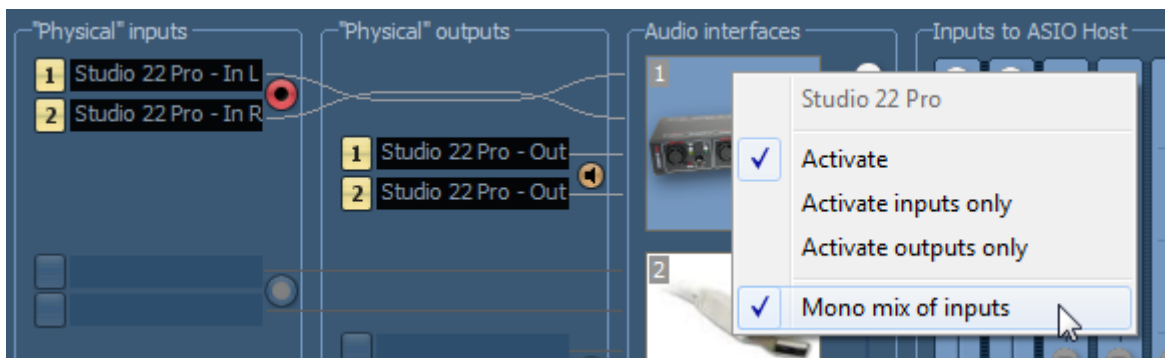
Here, the same microphone will be "heard" on channels left an right by your DAW software
*(as if it was connected to both inputs)*

Special feature for use with Prodipe audio interfaces with audio inputs only (ST-USB, Prodipe Guitar for example)

When you connect an audio interface with audio inputs only (a USB microphone for example, like the ST-USB from Prodipe, or the Prodipe Guitar interface), the ASIO driver uses your default audio interface for audio outputs.

Indeed, an ASIO driver with audio inputs only would be of a very limited usage.

In this case, please setup the default audio interface of your system.
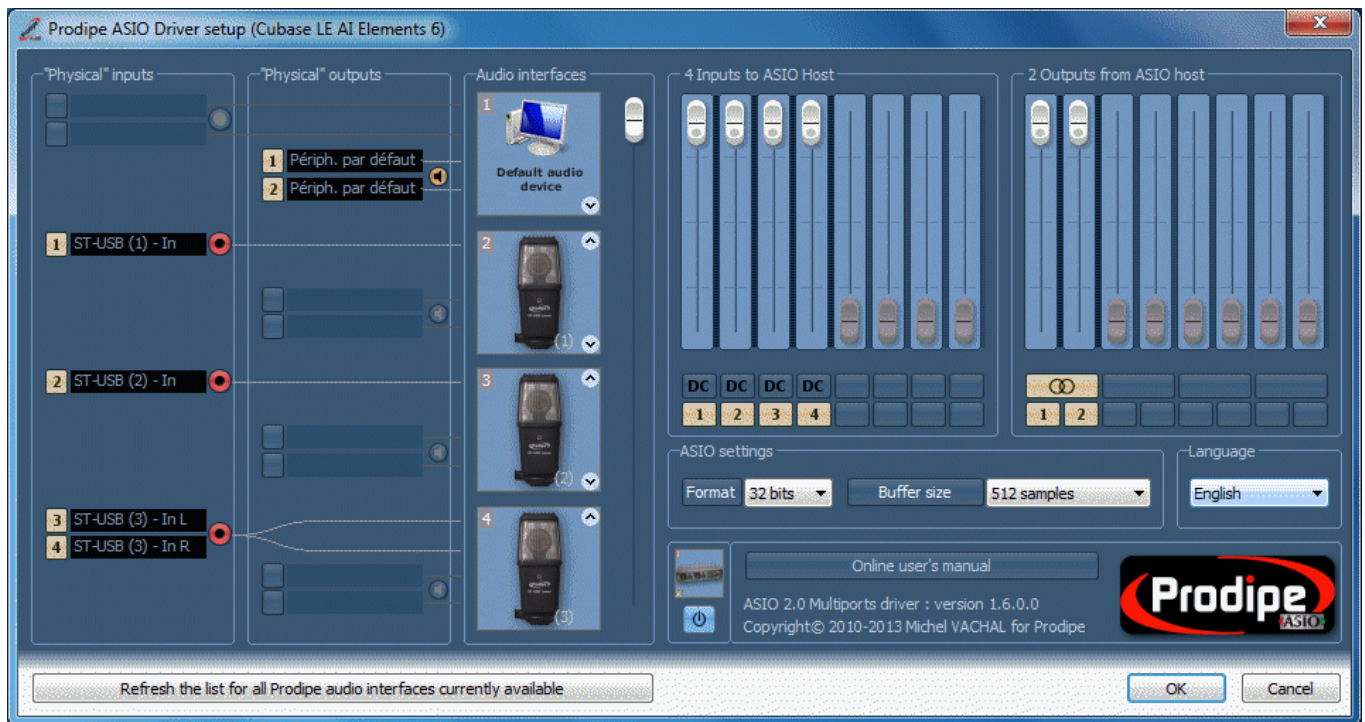
Remarks:

The **audio interfaces list** is **automatically updated** during the connection or disconnection of an interface. If however it does not correspond to the actually connected interfaces, you can click on the button "**Refresh the list for all Prodipe audio interfaces currently available**".

Caution: you can connect or disconnect an audio interface while using the ASIO Prodipe driver with your audio software, and without closing it. However, it may that your audio software does not react to the reset request of the ASIO Prodipe driver.
In this case, you can:

- quit and restart you audio software

  or

- disable the ASIO Prodipe driver in your audio software (by selecting another for example), connect or disconnect your audio interface(s), and then select the ASIO Prodipe driver again.

ASIO Inputs:

The "**Inputs to ASIO Host**" frame represents the **visible inputs** from the software audio host side.
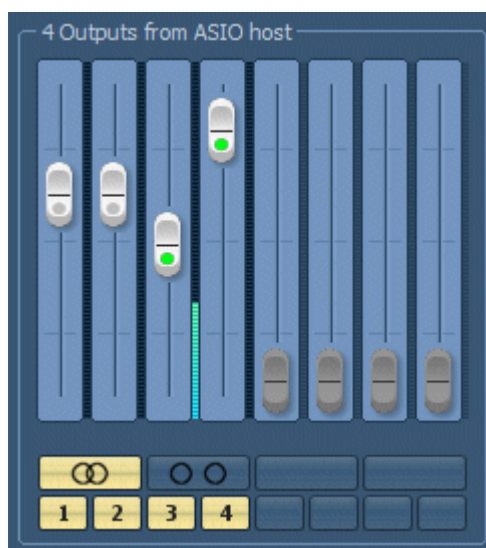
You can:
- **adjust the physical input levels**.
- **visualize the signal levels** on each input
- **activate/disable the "DC offset correction"** on each input. The "DC offset correction" cancels the continuous current generated by some audio interfaces and improves the signal processing of the audio software host. ▯DC▯
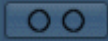- **activate / disable the monitoring** ◀ of any activated input (the monitoring lets you listen to the relevant input).

ASIO Outputs:

The "**Outputs from ASIO Host**" frame represents the **visible outputs** from the software audio host side.

You can:
- **adjust the physical output levels**,
(to individually adjust the channels, check the button "Channels linked" ▯∞▯ in order to have independents cursors ▯○○▯).
- **visualize the signal levels** on each output

Remarks regarding the activation state of inputs and outputs :
Depending on the configuration of the host software (Cubase for example) currently using the Prodipe ASIO driver, it may be that some inputs or outputs of the driver are unused (inactivated).

Inactivated inputs or outputs are marked with a cursor of witch the activation indicator is gray.

Activated inputs are marked with a cursor of witch the activation indicator is red.

Activated outputs are marked with a cursor of witch the activation indicator is green.

Connections on the USB ports of your computer:

Generally, but especially when using multiple audio interfaces simultaneously, it is better to connect audio interfaces on the USB ports that are directly connected to the motherboard of your computer.

You should therefore avoid connecting your audio interfaces on USB hubs. Indeed, they can desynchronize, and even block the flow of digitized audio datas of the audio interfaces connected.

The Prodipe ASIO driver alerts you on these kind of connections with a warning icon :

as well as a tooltip :
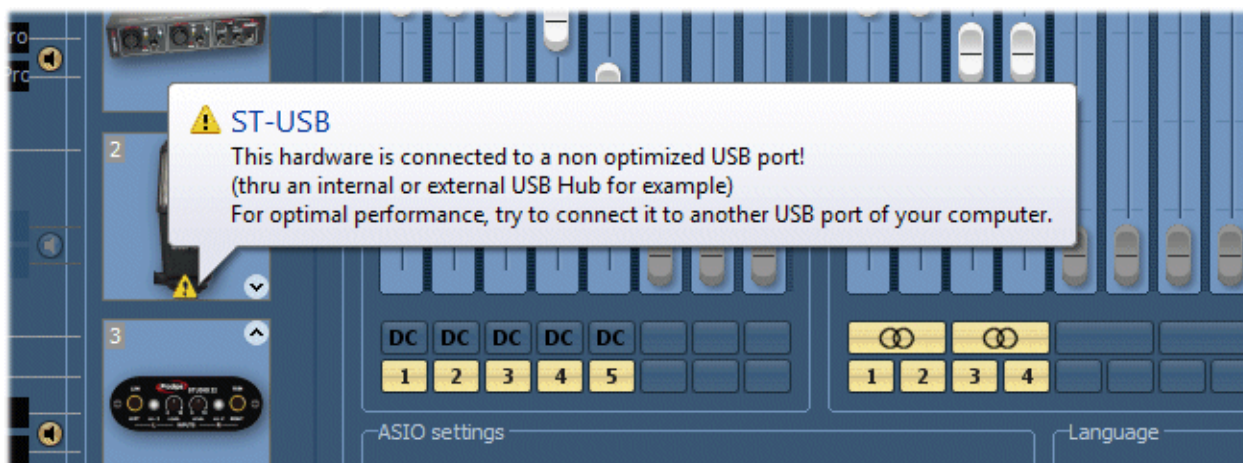
However, you can simply ignore this warning if your hardware is working properly.

Also note that some computers have USB ports connected to internal USB hubs (you will always see this warning in this case).

Audio interfaces List (list order):

This list shows all audio interfaces - recognized by the Prodipe ASIO driver - and connected to your computer.

You can **change the list order** of audio interfaces if the order in which your system has recognized them does not match the physical order in which you use them.
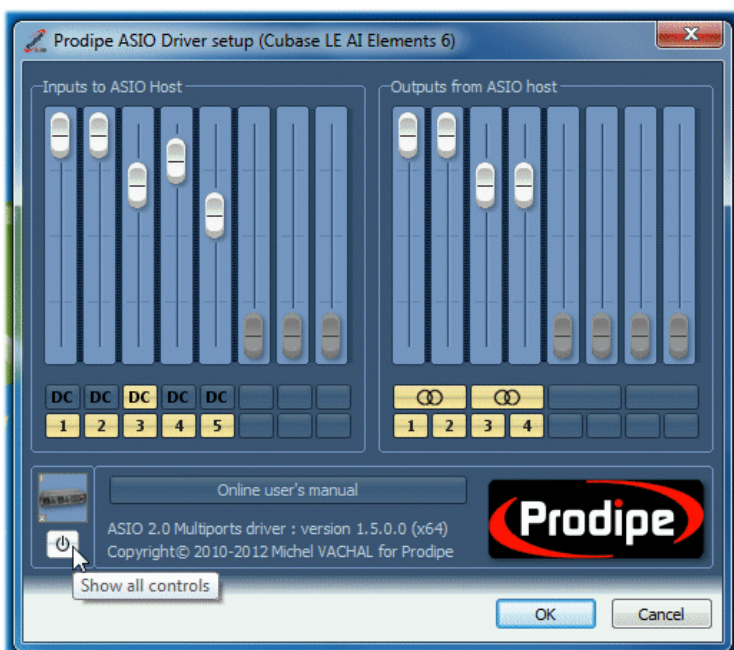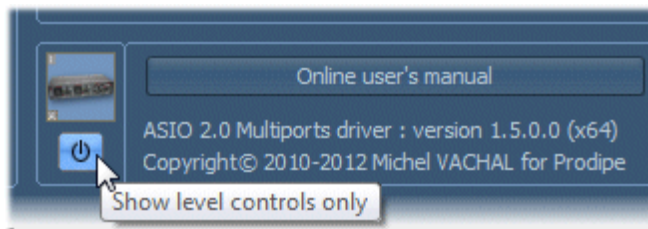Use the arrow icons up and down at the bottom right of each audio interface:

Finally, you can use the vertical scrollbar to visualize and configure up to 16 audio interfaces.

Compact view of the Panel Control:

To show only the levels controls of the Control Panel, activate the compact view by clicking on the corresponding button:

to get the following view :

When the driver "shows" more than 8 inputs or outputs, you can use the button on the top right of the window to select the channels to visualize:
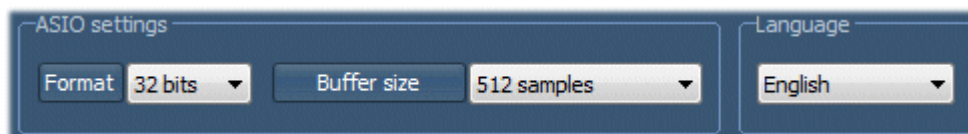
from channel 1 to 8 :

or from channel 9 to 16

Settings (ASIO format, ASIO buffer size, language):

- **Format** (*representation of audio datas*)**:** select 16 or 32 bits depending on the needs of your audio software. A 32 bits resolution is generally more suitable (this reduces calculations errors by the audio software), better dynamic.
- **Buffer size** (*buffers are areas of memory used for the exchange of data between the ASIO driver Prodipe and the ASIO host software*)**:**
  Select between 128, 256, 512 or 1024 samples (the default value is 512 samples).
  You can even modify this value while your audio software is using the driver. Your audio software will receive a reset request from the driver. If your software does not respond to this request, just restart it.

  A small buffer size reduces the latency and improves the processing of the audio effects from your audio software, but increase the processor usage.
  A big buffer size increases the latency but reduces the processor usage.
  A value of 256 samples can be used with any problem on most recent computers and most ASIO audio software. The default value of 512 samples guarantees a proper use as soon as you start using the driver.
 For your information, even with the smallest size of 128 samples, the Prodipe ASIO driver uses only 1 to 2% of the processor when one audio interface is connected, between 8 and 10% when 4 stereo interfaces are connected (that to say 8 audio channels), and between 10 and 25% when 8 stereo interfaces are connected (that to say 16 audio channels, the maximum for the current version of this driver).

- **Language:** select in this list the language to be used in the Control Panel of the ASIO Prodipe driver (currently French and English in this version of the driver).

Settings storage

All your settings (audio interfaces used, levels, buffer size, etc…) are independently stored for each host software used.

The name of the application currently using the Prodipe ASIO driver is shown on the title bar of the Control Panel :
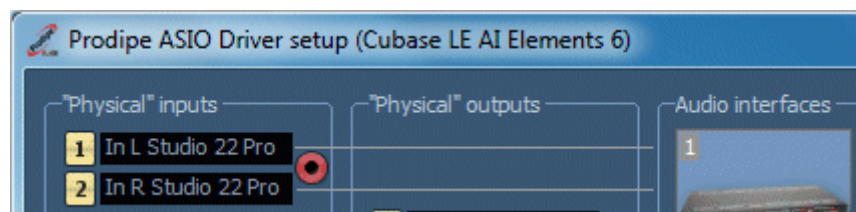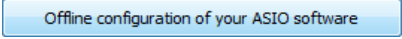
 (*here "Cubase LE AI Elements 6"*)

This lets you for example setup different audio buffer sizes for each audio software used.

Installer : "Offline" configuration of your ASIO software

The Prodipe ASIO driver stores its settings (ASIO format, Buffer size) for each ASIO software used. Most of ASIO software let you change these parameters while using the driver. However, if it was not the case for one of these software, you can use the "Offline" configuration of the installer.

Once you have installed the Prodipe ASIO driver, and use it (at least once) with the ASIO software of which you want to modify the parameters, start again the installer.

The button [Offline configuration of your ASIO software] of the installer will be activated:

Click on this button to get the "Offline" configuration window:
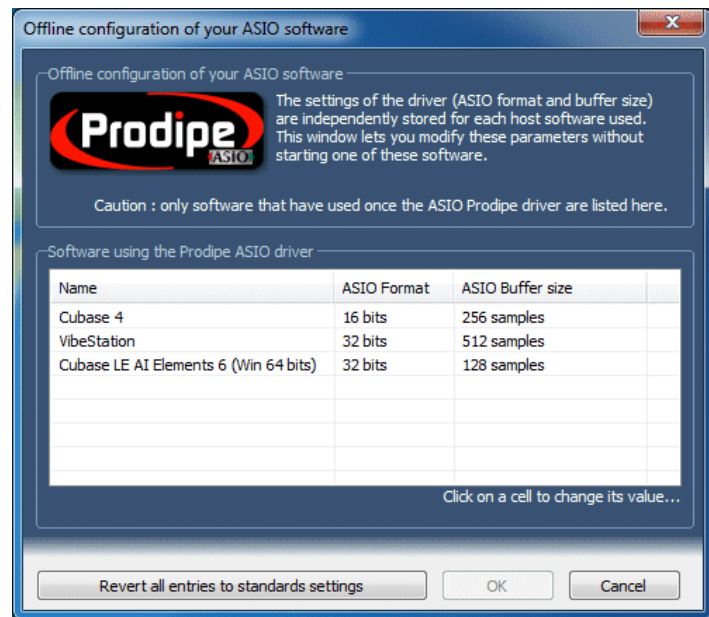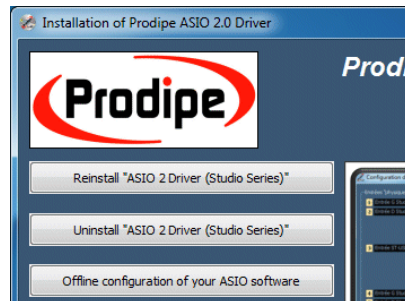
Simply click in the cell for which you want to modify the value (ASIO Format or Buffer size), for the selected software.

Remarks :

- The names of the software showed in the list correspond to the name of their executable file. The executable file name does not always correspond to the commercial name of the software.
- 64 bits software are labeled with the suffix "(Win 64 bits)".

ASIO Format:
Choose between **16** or **32** bits values
The (**default**) value **32** bits fits for most of all ASIO software.
However, if you experience –while playing or recording- strange sound effects or worst, no sound at all, try to change this value.

ASIO Buffer size:
Choose between **128**, **256**, **512** or **1024** samples.
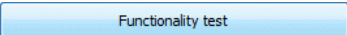The (**default**) value of **512** samples gives the best compromise latency/stability.
However, if you experience –while playing or recording- too much latency, you can try to reduce this value. If the value is incompatible with your ASIO software, you may hear gaps in the sound: try to increase the value in this case.
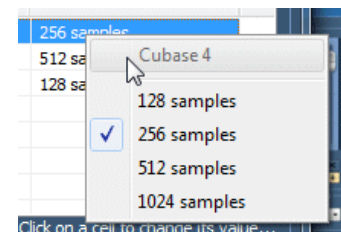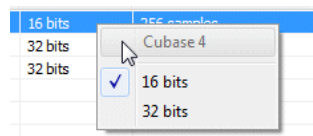
Read the previous section "Settings (ASIO format, ASIO buffer size, language)" for more information on these parameters.

Installer : Functionality test

Once you have installed the Prodipe ASIO driver, the button [Functionality test] will be activated:

Click on this button to start the functionality test: this tool allows you to check and validate the correct operation of the Prodipe ASIO driver as well as your Prodipe hardware.
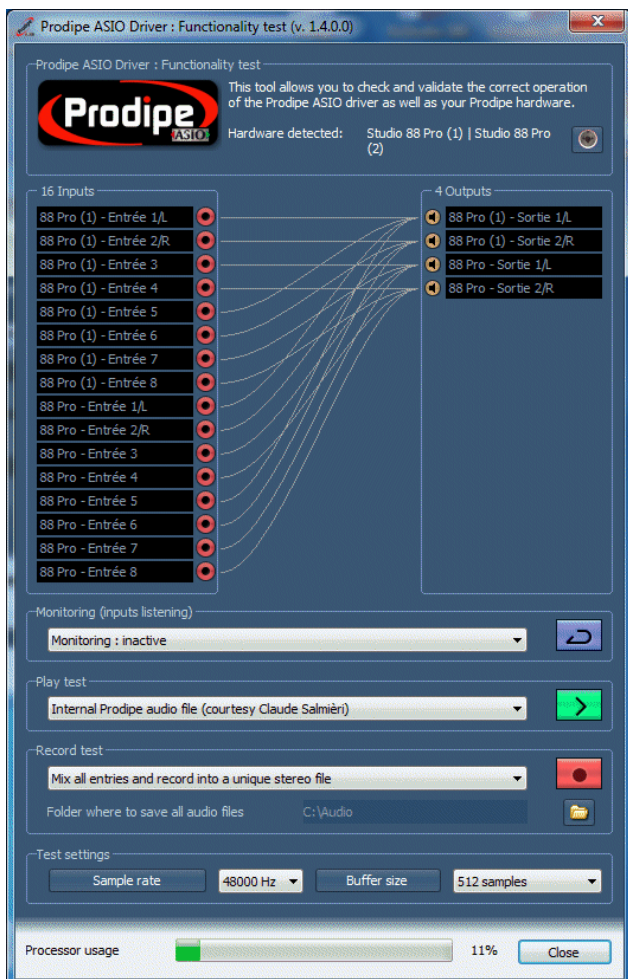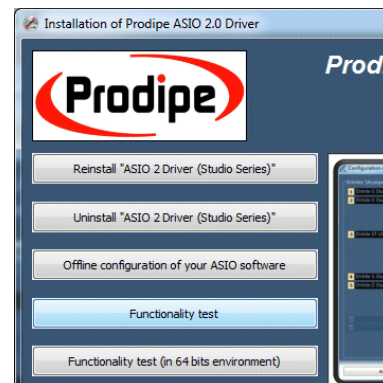
This tool lets you
- **Check that the Prodipe ASIO driver is properly installed**

- [↰] do a **monitoring test** (listening all inputs toward all outputs)

- [→] do a **listening test** on all outputs of the driver (from the embedded audio file, as well as from an external audio from your choice)

- [●] do a **recording test** of all the inputs toward
  - o A unique stereo audio file containing the mix of all audio inputs of the driver
  - o A separate mono audio file for each audio input

(Here, the functionality test for 2 x Studio 88 Pro connected and for witch only the main outputs (1/L and 2/R) are activated inside the Prodipe ASIO driver: 16 input channels and 4 output channels)

Under Windows 64 bits, the button [Functionality test (in 64 bits environment)] lets you check and validate the 64 bits version of the Prodipe ASIO driver (all functionalities are the same as with the 32 bits version)

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