



# Nanoface

User manual

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Please send feedback, comments and corrections to [info@alva-audio.de](mailto:info@alva-audio.de)

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# The Nanoface connections



# Encoder operations

## Reset the Nanoface

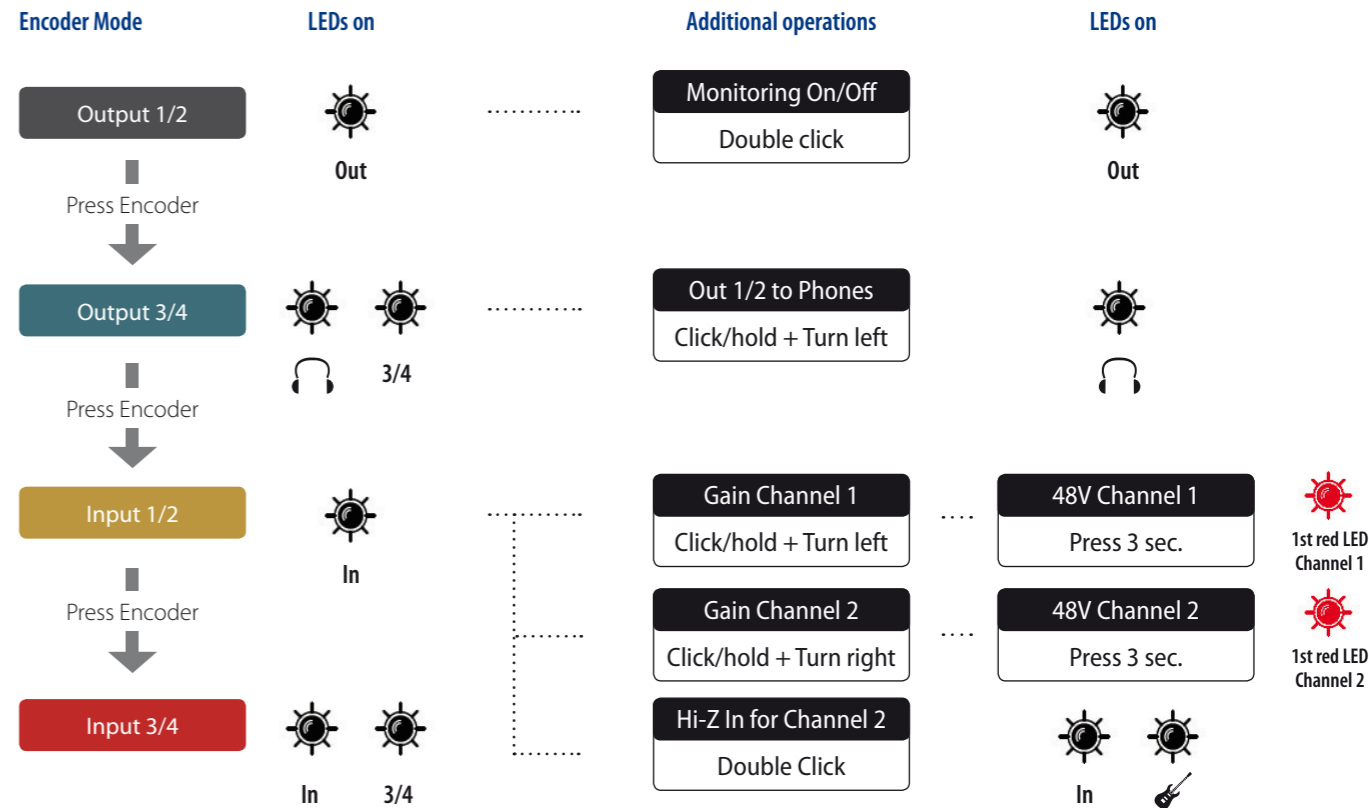
The last settings are stored in the internal memory. The Nanoface starts where you left it. Sometimes it could be useful to switch back to the factory settings of the Nanoface.

Click + hold the encoder during power up  
(plugin the USB connector or the start of the host computer)

The unit will be set to the following parameters:

- Output, Phones and input gain: -3.5 dB
- Preamps/Hi-Z gain: 0 dB
- Phantom Power (48V): off
- Phones output to channel 3/4

## All Encoder operations on a glance

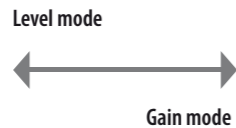


Tip: Place the included sticker with this overview on the bottom of the Nanoface.



# LED values explained

| Signal level mode |  |             |
|-------------------|--|-------------|
| LED no.           |  | Level in dB |
| 10 Red            |  | 0           |
| 9 Orange          |  | -3          |
| 8 Green           |  | -6          |
| 7 Green           |  | -9          |
| 6 Green           |  | -12         |
| 5 Green           |  | -15         |
| 4 Green           |  | -17         |
| 3 Green           |  | -19         |
| 2 Green           |  | -23         |
| 1 Green           |  | -27         |
| 48V Red           |  |             |



In level mode the Nanoface shows the level of outputs and inputs.

Turning the encoder the peakmeters switch from the level mode to gain mode. The view switches back automatically after 1 second.

If Phones 1/2 or 3/4 is selected, the meters always show no meters, but the gain.

| Gain: Out 1/2 (XLR) |  |             |
|---------------------|--|-------------|
| Step                |  | Level in dB |
| 40                  |  | 0           |
| 37                  |  | -1.5        |
| 34                  |  | -3          |
| 28                  |  | -7.5        |
| 24                  |  | -11.5       |
| 20                  |  | -17.5       |
| 16                  |  | -25         |
| 12                  |  | -34.5       |
| 8                   |  | -47         |
| 2                   |  | -121.5      |
| 48V                 |  |             |

| Gain: Out 3/4 (Phones) |  |             |
|------------------------|--|-------------|
| Step                   |  | Level in dB |
| 40                     |  | 6 (Boost)   |
| 36                     |  | 2 (Boost)   |
| 32                     |  | -2          |
| 28                     |  | -9          |
| 24                     |  | -17         |
| 20                     |  | -29         |
| 16                     |  | -44         |
| 12                     |  | -63         |
| 8                      |  | Mute        |
| 2                      |  | Mute        |
| 48V                    |  |             |

| Gain: Input 1/2 (Preamps) |  |            |
|---------------------------|--|------------|
| Step                      |  | Gain in dB |
| 20                        |  | 50.5       |
| 18                        |  | 45         |
| 16                        |  | 40         |
| 14                        |  | 34.5       |
| 12                        |  | 29         |
| 10                        |  | 24         |
| 8                         |  | 18.5       |
| 6                         |  | 13.50      |
| 4                         |  | 8          |
| 2                         |  | 2.5        |
| 48V                       |  |            |

| Gain: Input 2 Hi-Z |  |            |
|--------------------|--|------------|
| Step               |  | Gain in dB |
| 20                 |  | 43         |
| 18                 |  | 42.5       |
| 16                 |  | 40         |
| 14                 |  | 34.50      |
| 12                 |  | 29         |
| 10                 |  | 24         |
| 8                  |  | 18.50      |
| 6                  |  | 13.50      |
| 4                  |  | 8          |
| 2                  |  | 2.50       |
| 48V                |  |            |

| Gain: Input 3/4 |  |            |
|-----------------|--|------------|
| Step            |  | Gain in dB |
| 20              |  | 33         |
| 18              |  | 29         |
| 16              |  | 24         |
| 14              |  | 20         |
| 12              |  | 16.50      |
| 10              |  | 13.50      |
| 8               |  | 10.50      |
| 6               |  | 7.50       |
| 4               |  | 4.50       |
| 2               |  | 1.50       |
| 48V             |  |            |

# Cable connection

## 1. Connect the breakout cable

Mount the included breakout cable with the XLR and RCA connectors to the 15-pin port on the rear of the Nanoface.

Optional **extension cables** for the breakout cable are available from ALVA in lengths of 1 m (3.3 ft.) and 3 m (9.8 ft.). Please visit the ALVA website for more details.

If you want to listen to music from the Nanoface after the installation process, keep a double RCA cable ready for the connection of the breakout cable to your speakers or HiFi preamp.

15-pin breakout cable connector



## 2. Connect the Nanoface to the computer

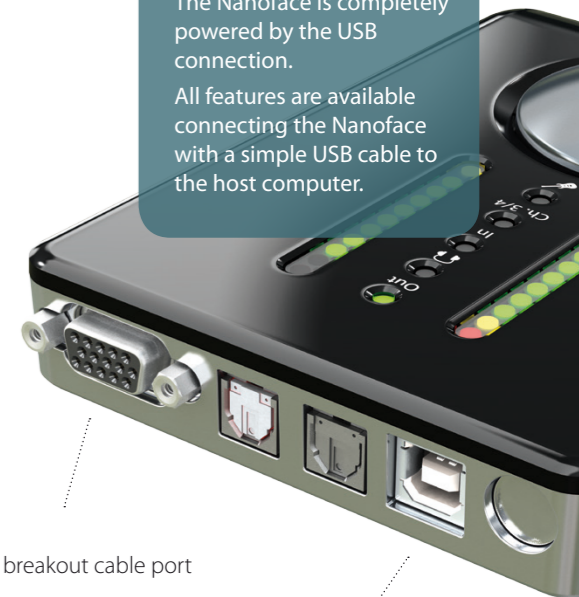
It's possible to connect the Nanoface to every Windows or Mac computer with a standard USB 2.0 port:

- a) Connect the included USB cable to the USB 2.0 port on the back of the Nanoface.
- b) The included USB cable provides two connectors. Connect the main connector to a free USB 2.0 port.

**Tip:** On every computer system we've tested, the Nanoface is sufficiently powered by the main connector of the included USB cable. This means: all 3rd party USB 2.0 compatible cables will work with the Nanoface!

**Tip:** In most setups a powered USB hub will also work. Keep in mind every device on the hub will consume power from it, so it might help to connect only the Nanoface to this hub.

The Nanoface is completely powered by the USB connection. All features are available connecting the Nanoface with a simple USB cable to the host computer.



15-pin breakout cable port

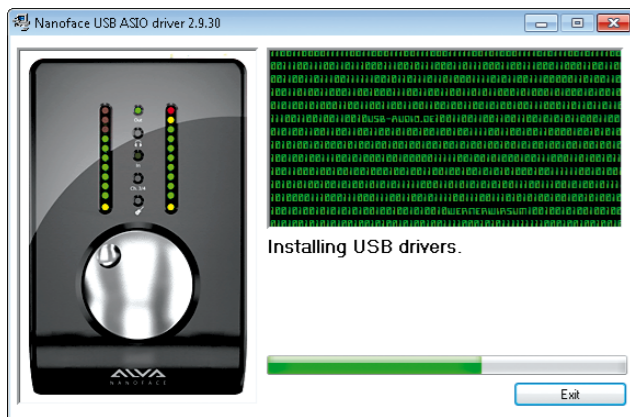
USB connector

# Driver installation Windows 32 bit and 64 bit

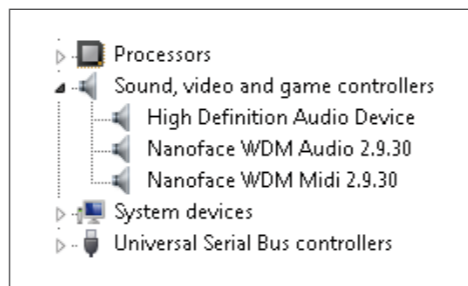
Please check the ALVA website for the latest drivers:  
[www.alva-audio.com](http://www.alva-audio.com)

## 1. Driver and software control panel installation

1. Connect the Nanoface to your computer with the included USB cable.
2. Download the latest driver and firmware update program from the Nanoface website. If a firmware update is necessary before the installation of a new driver (see Nanoface download website) please download and run the firmware updater before the driver installation.
3. Select "Install the driver". The installation starts and installs the **Nanoface ASIO driver** for professional audio programs, like Steinberg Cubase or Magix Samplitude, and the **Windows WDM driver** for the system sounds and standard audio programs (Windows Media Player, iTunes, Winamp).
4. After the successful installation a reboot of the system is necessary.



Driver installation dialog

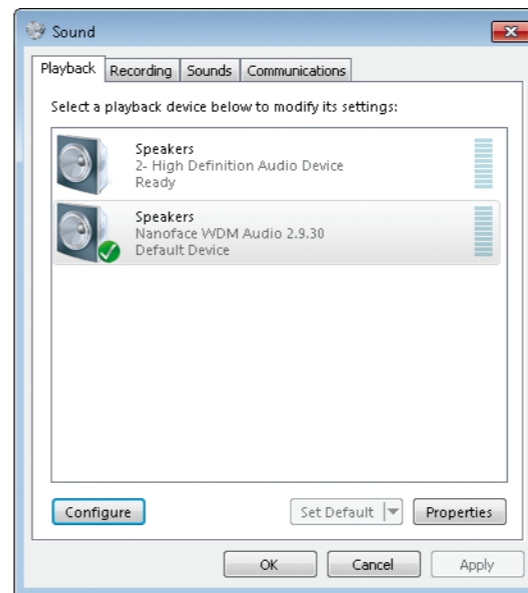


After the successful installation the Windows device manager shows the Nanoface WDM Audio and MIDI devices.

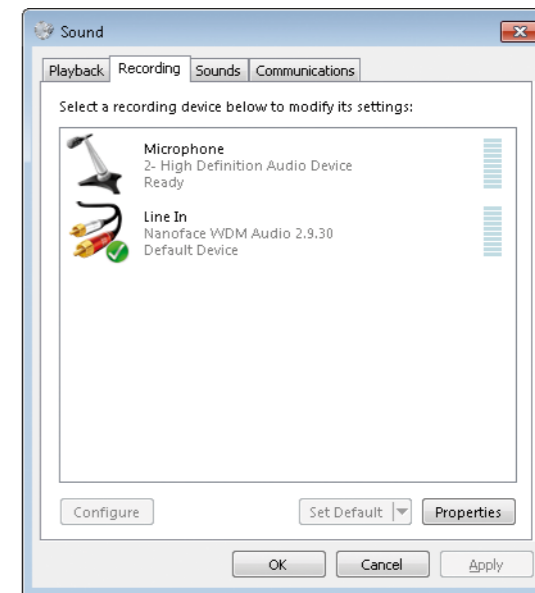
## 2. Windows audio setup

Set the Nanoface as **default audio device** for playback and recording.

**Tip:** Windows 7/8 provides speaker sets for stereo and surround. The stereo setup assigns channels 1/2 (output RCA connectors on the breakout cable) to the speakers. The 5.1 surround setup assigns the following channels to the speakers: Channel 1 (Front Left), Channel 2 (Front Right), Channel 3 (Sub), Channel 4 (Center), Channel 5 (Rear Left), Channel 6 (Rear R).



Default playback device - Stereo speakers (Line outputs 1/2).



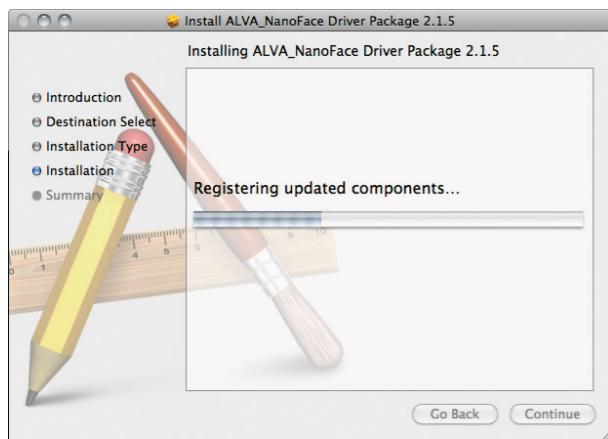
Default recording device (Line inputs 1/2).

# Driver installation Mac OS X

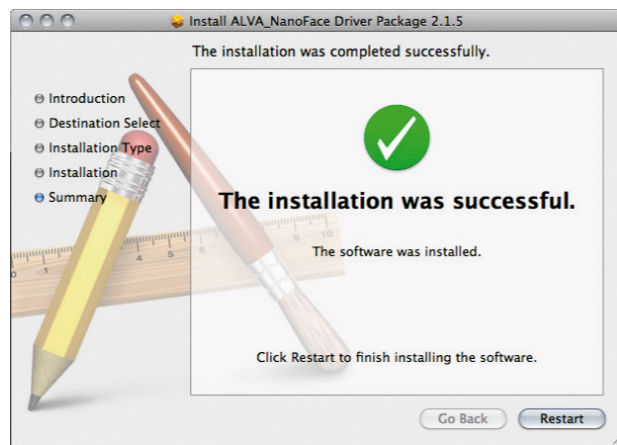
Please check the ALVA website for the latest drivers:  
[www.alva-audio.com](http://www.alva-audio.com)

## 1. Driver and software control panel installation

1. Connect the Nanoface to your computer with the included USB cable.
2. Download the latest driver and firmware update program from the Nanoface website. If a firmware update is necessary before the installation of a new driver (see Nanoface download website) please download and run the firmware updater before the driver installation.
3. Double click the driver installation file (.mpkg). Follow the given instructions. After the selection of the installation drive, please enter your administrator password to allow the installation program changes on your operating system. The setup installs the **Nanoface Mac OS X driver**. After the successful installation a reboot of the system is necessary.



Driver installation dialog.

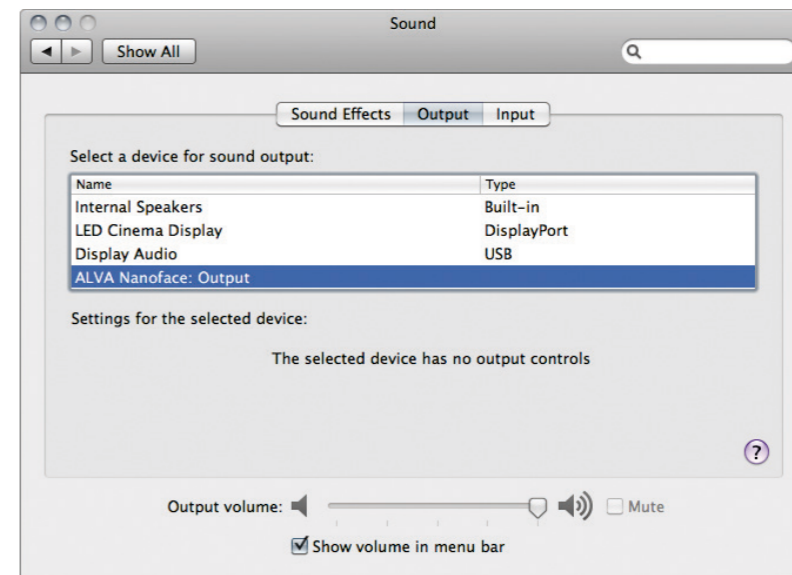


After the successful installation click the Restart button.

## 2. Mac OS X sound setup

Select **ALVA Nanoface: Output** in the sound setup of OS X.

Audio programs, like iTunes, web browsers or the system sounds, use the Nanoface out channels 1/2 (output RCA connectors on the breakout cable) for the default playback. To listen to this signal parallel on headphones, switch the phones out to channel 1/2 (see chapter Encoder operations).



Select the Nanoface for output and/or input in the system preferences of Mac OS X.



# Encoder Control

The Nanoface usability philosophy: All hardware features of the Nanoface can be controlled directly on the unit with the big silver rotary encoder.

The software control panel - for Windows and Mac OS X - allows also access to all features from the host computer (see page 25).

### Encoder operations:

- Output 1/2: gain
- Output 3/4 (= Phones): gain
- Route output 1/2 to output 3/4 (= Phones)
- Output 1/2 on Phones output: individual gain
- Input 1/2: gain (mic/instrument preamps)
- Input 3/4: gain
- 48V for inputs 1 and/or 2
- Switch input 2 to Hi-Z input
- Hardware monitoring for inputs 1/2
- Reset to the default factory values

For a detailed step-by-step description please read the following pages of this chapter.



## Duplicate output 1/2 on the phones output

### 1. Switch to headphones output mode.

Press the encoder until the headphones LED shines.

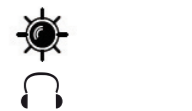
If LED 3/4 is on, go to step 2, if not ... the signal 1/2 is already duplicated on the phones output.



### 2. Press and hold the encoder. Turn it to the left.

LED 3/4 turns off. The phones output on right side of the Nanoface plays now the signal of output 1/2.

**The encoder controls now the volume of signal 1/2 separately from the chosen volume of output 1/2 on the breakout cable (speakers). This is a very useful feature for a different headphones mix.**



### 3. Switch the headphones back to output 3/4: Press and hold the encoder. Turn it to the right.

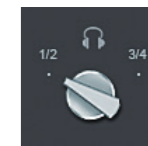


**Why do I need this?** If you are on the road or at home and want to listen to music played by software like Windows Media Player, iTunes or Winamp on the headphones you will need this feature.

Most audio programs can only play a signal on the default output of an audio hardware. In case of the Nanoface it's the analog output 1/2 on the breakout cable. The headphones output does not play this signal. Why? In the default mode the phones output is assigned to output 3/4 of the Nanoface. This is shown by LED 3/4. This would mean *you need speakers* when you just want to listen to some mp3 songs.

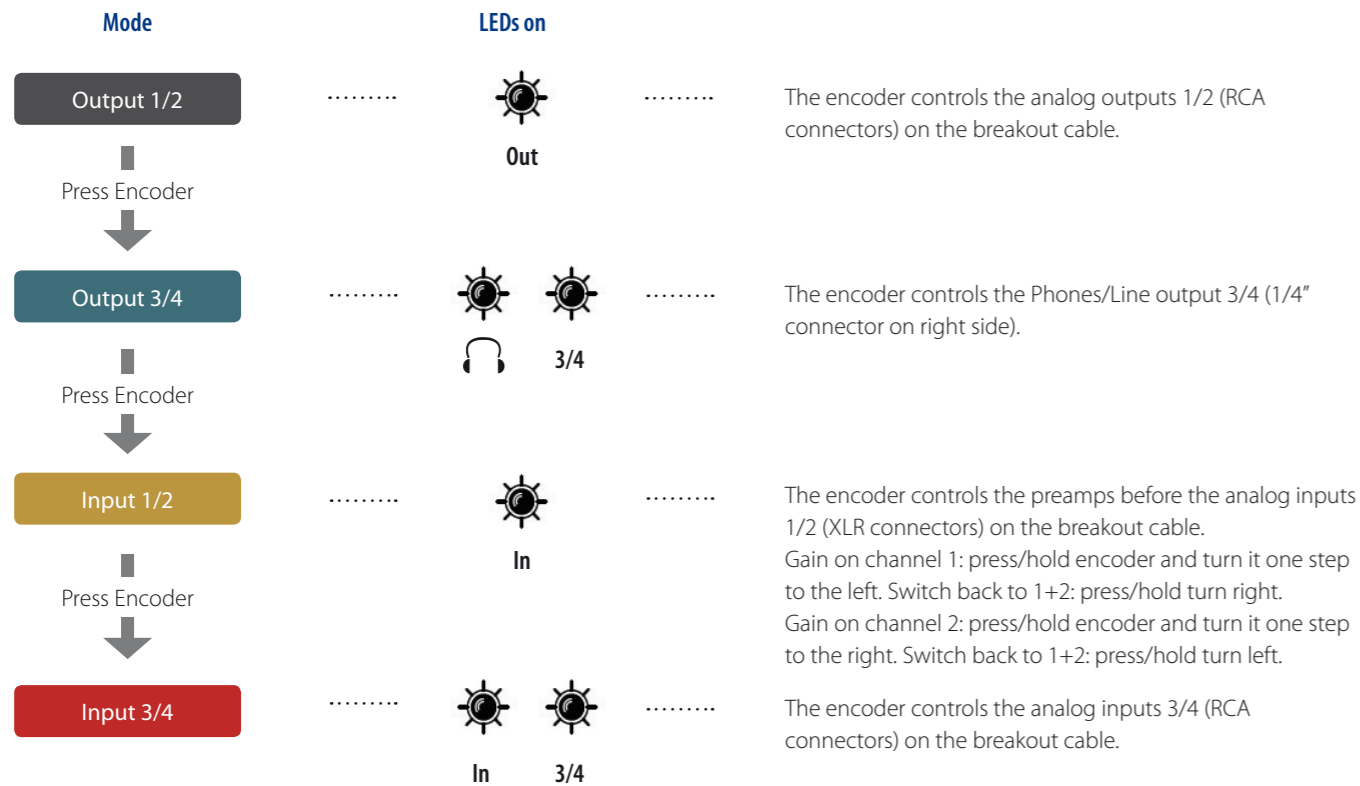
**Solution:** Just send the signal from output 1/2 to the headphones output.

### Control Panel button



## Gain for inputs and outputs

Press the encoder to switch between the input/output modes. Turn encoder to the right to increase and turn to the left to decrease the gain.



## Analog inputs and outputs on the Nanoface





## Preamp gain for analog inputs 1/2 (microphones)

### 1. Switch to input 1/2 mode.

Press the encoder until the input LED ("In") shines.

If LED 3/4 also shines, press the encoder 3 times until only the "In" LED is on. The encoder controls now the gain for both XLR inputs on the breakout cable.

### 2. Press and hold the encoder. Turn it to the left for channel 1 or turn it to the right for channel 2.

After a 1-click turn, the 1st LED of the left or right channel blinks one time to show, which channel is selected. To switch back to gain control of channel 1+2 together, press and hold the encoder and turn it to the right from channel 1 and to the left from channel 2.

### 3. Turn the encoder gradually to the right to raise the gain for the selected input(s).

Make sure the input signal is not clipping (red top LEDs turn on).

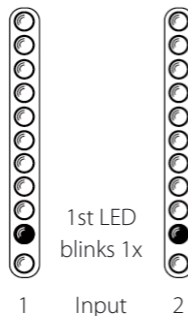
**For an exact control of the available headroom to the clipping border please use the level meter readouts in your audio software.**



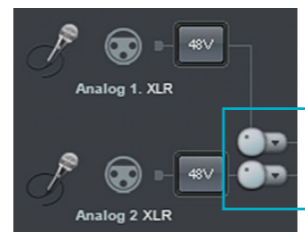
**Why do I need this?** Microphone signals are low level signals and need to be amplified. The two Nanoface preamps on inputs 1 and 2 provide a gain amplification of 50.5 dB. More than enough for most microphones.

**Tip:** To bypass the preamps of the Nanoface turn the encoder for one or both channels all the way down.

**Tip:** To find the best gain, play or sing the loudest reference tone in your performance and raise the gain until it clips. Now lower it to a safe value.



### Control Panel button (Expert Mode)



## Phantom power (48V) on/off

### 1. Switch to input 1/2 mode

Press the encoder until the input LED ("In") shines.

If LED 3/4 also shines, press the encoder 3 times until only the "In" LED is on. The encoder controls now the gain for both XLR inputs on the breakout cable.

### 2. Press and hold the encoder. Turn it to the left for channel 1 or turn it to the right for channel 2.

After a 1-click turn, the 1st LED of the left or right channel blinks one time to show, which channel is selected. To switch back to the control of channel 1+2 together, press and hold the encoder and turn it to the right from channel 1 and to the left from channel 2.

### 3. Press the encoder for 3 seconds.

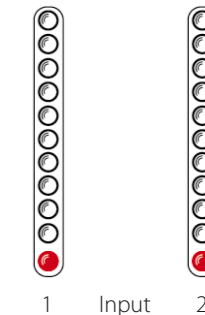
The 1st red LED of the left chain (= input 1) turns on. If channel 2 is selected, the 1st LED in the right chain turns on.

**To avoid the accidentally activation of the phantom power, it's not possible to activate/deactivate the phantom power at the same time for both channels. It's only possible by a previous selection of input channel 1 or 2. If you not press the encoder long enough, the Nanoface changes to input 3/4.**

**Turn the phantom power off: Select channel 1 or 2 and press the encoder for 3 seconds.**

**Why do I need this?** Condenser microphones are built with internal active electronic elements. To operate these mics the so-called phantom power is necessary. It's called „phantom“ because the low power is invisible to dynamic microphones. Condenser mics will not work if they don't get the necessary power of usually 48V over a balanced mic cable, in most cases a XLR cable. In this case the supply voltage is referenced to the ground pin of the connector, pin 1 of the XLR connector.

**Tip:** Some semi-professional condenser mics provide internal battery powering and don't need the 48V power from the Nanoface. If you ask yourself if your microphone needs phantom power or not, please have a look on the documentation or consult the manufacturer.



### Control Panel button





## Switch hardware monitoring on/off

### 1. Switch to Output 1/2 mode.

Press the encoder until only the "Out" LED shines.

Output 1/2



Out

### 2. Switch hardware monitoring on: Double click the encoder.

The "In" LED starts blinking.

- The signal of the analog inputs 1/2 is directly routed in hardware to the analog output 1/2.
- Input 1/2 + software output 1/2 (signal from the from the computer) will be mixed to a mono signal on phones output 1/2 (switch from phones 3/4 to 1/2). See next page.



Out



In

(blinks)



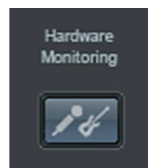
Out

Switch hardware monitoring off: Choose Output 1/2 and double click the encoder.

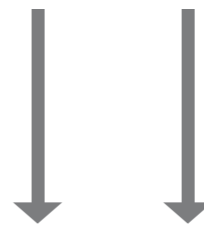
**Why do I need this?** Monitoring through modern audio software has big advantages: the signal can be mixed with other tracks, routed to different outputs and it can be processed with plug-in effects (e. g. reverb on vocals, virtual guitar racks). Unfortunately this way of working always introduces latency. The latency depends on the combination of the host computer, the audio software and the used plug-ins and the driver of the audio interface. If the latency is too large, it's nearly impossible for a live performer to play or sing with software monitoring. For example: A drummer will have big problems in his performance when he listens to a delayed headphone signal.

To avoid any software latency the Nanoface provides with hardware monitoring a technique of routing the input signal directly to the output of the audio card, without passing it through the software. It works like a direct cable connection from the inputs to the outputs.

Control Panel button



Analog inputs 1/2 (XLR or Hi-Z input) is routed directly to the RCA outputs 1/2



Analog inputs 1/2 + software output 1/2 are mixed to a mono signal on phones output 1/2



Mix to a mono signal



## Switch analog input 2 to the Hi-Z instrument input (“guitar input”)

### 1. Switch to input 1/2 mode.

Press the encoder until the input LED (“In”) shines.  
If LED 3/4 also shines, press the encoder until only the “In” LED is on (3 times).



In

### 2. Double click the encoder.

The guitar LED shines.  
Analog input 2 gets it’s signal now from the Hi-Z instrument input on the right side.



In



**The input on the breakout will not pick up any signal until the Hi-Z input is switched off. The encoder - switched to input 2 (press/hold + turn right) - adjusts now the analog preamp gain of the Hi-Z input and makes the guitar signal louder.**

### 3. Switch back to the XLR line-input on the breakout cable: Double click the encoder.

The guitar LED turns off.



In



**Why do I need this?** Plugging an electric guitar or another high-impedance source in a line-level input results in a loss of high frequencies and the sound gets dull. So it’s not a good idea to use an electric guitar or bass on the XLR or RCA inputs of the breakout cable.

Usually a DI-box (= direct input) is used to change the high impedance of the guitar output to the low impedance of the line level input. The Nanoface provides a special high-impedance instrument input, which can be used alternatively to the analog input 2 on the breakout cable. If the input 2 is switched to the Hi-Z input it’s possible to use an electric guitar or bass directly with the Nanoface.

## Software Control Panel

The Nanoface provides a software control panel - for Windows and Mac OS X. The panel will be installed with the driver and provides two modes: Easy and Expert.

### Start the Control Panel

Windows

Start > All programs > ALVA > Nanoface Control Panel

Mac OS X

Applications > ALVA Nanoface.app

## Easy Mode

All basic features of the Nanoface can be controlled in this mode.

Current driver and firmware version.  
Check for the latest version: a click on the little arrow opens the Nanoface download website.

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Switch to Expert mode.

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Phantom power for input 1&2.

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Switch hardware monitoring on/off.  
Analog inputs 1/2 will be directly routed in hardware to the analog output 1/2.  
With zero latency!

Switch analog input 2 to the Hi-Z instrument input (“guitar input”) on the right side of the Nanoface.

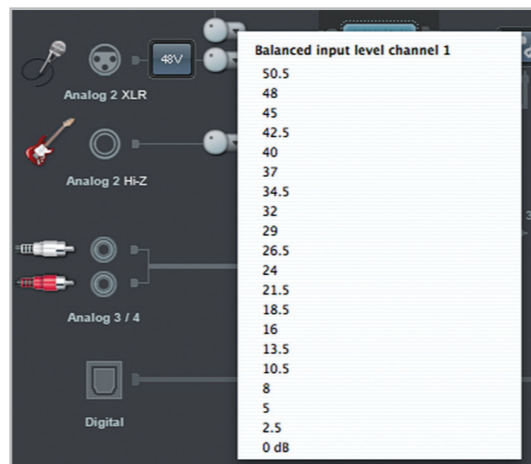
Choose the source for the headphone output: Analogue out 3/4 (default) or 1/2.

## Expert Mode

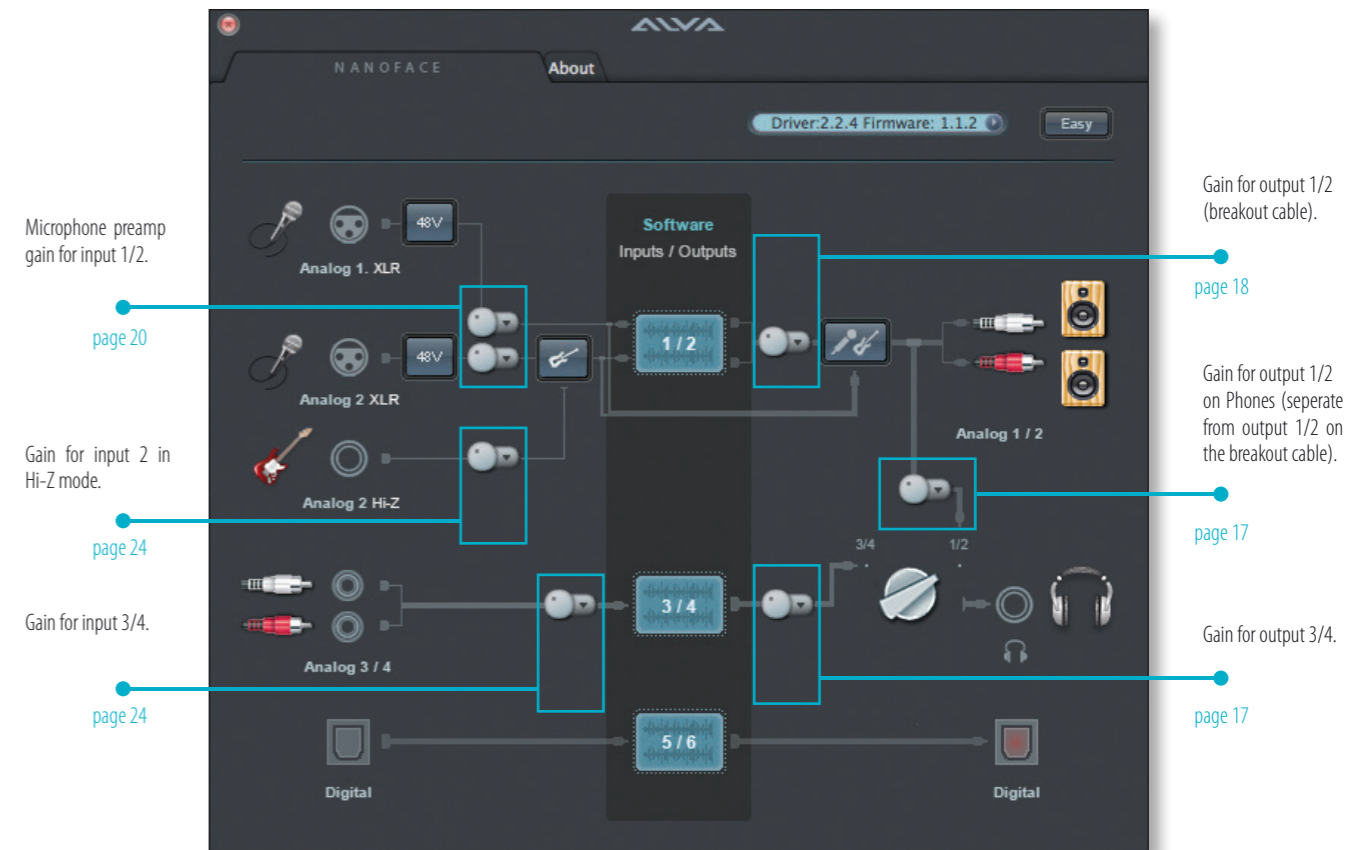
The advanced mode provides additional features - arranged in a map with all inputs and outputs and the internal signal routing of the Nanoface. Besides all included basic control elements of the Easy Mode you can find the following gain/level settings as menus:

- Microphone preamp gain for input 1/2 (in steps from 0 to 50.5 dB)
- Gain for input 2 in Hi-Z mode (in steps from 0 to 43 dB)
- Gain for input 3/4 (in steps from 0 to 50.5 dB)
- Level of output 1/2 (in steps from -121.5 to 0 dB)
- Level of output 1/2 routed to phones out (in steps from -69 to +6 dB)
- Level of output 3/4 (in steps from -69 to +6 dB)

**Attention!** The Nanoface is by design a complete hardware controlled interface, all control panel actions - e. g. pressing a button for change the state of the hardware and need an internal reconfiguration. This process will stop the audio transmission for a short - mostly unnoticed - moment. Please do not use the control panel during a recording or critical playback.



The menu for the microphone preamp gain of analog input 1.



# Nanoface Connectivity

- Audio: 6 inputs + 6 outputs
- MIDI: 1 x input + 2 x output
- 4 x analog I/O (channels 1-4)
- Digital optical SPDIF I/O (channels 5-6)
- 2 x Mic preamps including phantom power (analog inputs 1/2)
- 1 x Hi-Z instrument input (alternatively usable instead of analog in 2)

**The Nanoface provides 6 audio I/Os** – more than enough for a small home studio, a DJ- or surround setup.

**A MIDI input and two MIDI outputs** allow to connect a master keyboard and two external synthesizers or samplers.

**Four analog inputs** – two of them equipped with high-quality mic preamps - allow the simultaneously recording of different sources at the same time, like a microphone, an electric guitar and a synthesizer.

**Four analog outputs** provide a flexible setup for monitoring two stereo signals at the same time, e. g. with main speakers and headphones. The signal from output 1/2 can be routed to output 3/4 and individually adjusted.

**The digital I/O works in standard SPDIF format.** This makes the Nanoface the perfect partner for a digital signal from a CD player or an effect unit.

Nanoface connection example ▶



## Outputs Speakers

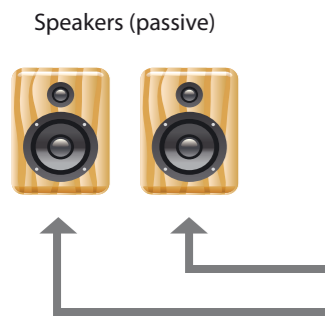
### 1. Cable Connection

Connect the speakers to the output RCA connectors on the breakout cable. Output 1 goes to the left speaker and output 2 to the right.

The outputs are labeled Out 1 / Out 2 and use unbalanced connections to match the connectors of usual home audio equipment. For the connection use a paired RCA cable.

Keep in mind, that for a satisfied level, a pair of active speakers or a HiFi preamp might be necessary.

**Attention:** Always turn down the level before you connect active powered speakers to the Nanoface. Turn off your active speakers or your preamp before you start the computer or connect the Nanoface to avoid a potentially damage of your equipment or hearing loss.



HiFi Preamp



Output 1/2

The Nanoface provides 4 analog outputs in two stereo pairs:

- Output 1/2 on the breakout cable (output RCA connectors).
- Output 3/4 as 1/4" TRS connector on the right side of the Nanoface (headphones symbol).

Both signals can be used as an output for different signals (e.g. main mix + headphones mix) from the multitrack software.

### 2. Playback with audio programs

Choose the Nanoface in the Windows or Mac OS X audio setup as the default sound device.

Audio programs, like Windows Media Player, iTunes, Winamp or VLC will now automatically use the Nanoface output 1/2 and play their signals to the speakers.

**Tip.** Some audio or video programs, like the video player VLC, provide a selection from a list of all available audio devices. In this case it's possible, to choose the Nanoface as playback device even when it's not the default sound device in the operating system.

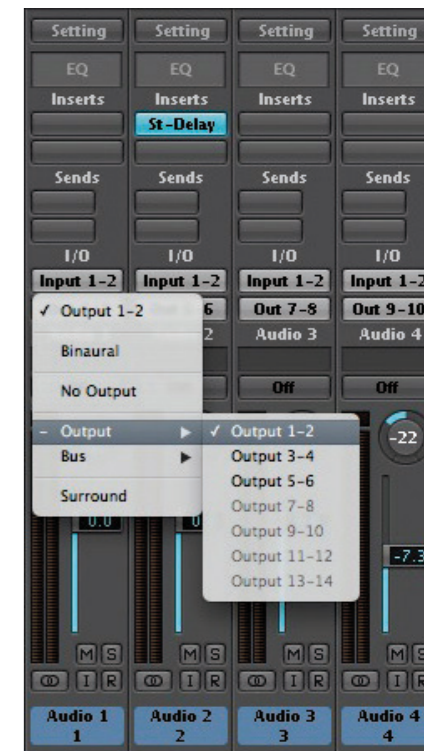
**Tip.** It is recommended, to switch all system sounds off in Windows to avoid problems with other audio programs.

### 3. Multichannel audio programs

The Nanoface is a multitrack audio interface. The different outputs are available via the driver to any audio software and the operating system, which supports multiple audio outputs.

For the playback on the speakers with a professional multichannel audio software, like Steinberg Cubase, Apple Logic, AVID Pro Tools or Reaper, just to name a few, two steps are necessary:

- Choose the Nanoface in the audio setup of this program (e.g. ASIO device setup in Cubase or Wavelab).
- Select Output 1/2 in the track (stereo audio track, submix bus or master out), which should play its' signal on the speakers.



Output channel selection in Apple Logic



## Outputs Headphones (or 2nd pair of speakers)

### 1. Cable Connection

Connect the headphones to the phones output on the right side of the Nanoface. A 1/4 inch TRS connector or an adapter from Mini-TRS-plug to 1/4 inch TRS is necessary.

With a Y-TRS-adapter the phones output can be used as 2nd line output for a 2nd pair of speakers.

Output 3/4 provides 100 Ohm and can drive any type of low or high impedance headphones.



1/4" TRS connector

**Attention:** Always turn down the level before you connect your headphones to the Nanoface. Don't wear headphones during the start of the computer or the connection of the Nanoface to USB to avoid potential hearing loss.

### 2. Playback with audio programs

Standard Windows or Mac OS X programs cannot play on the output 3/4. If the Nanoface is the default sound device in the audio setup, those programs play on the output 1/2 on the breakout cable (speakers).

To listen to the signal on the headphones you have to duplicate the output 1/2 on the phones out:

The Nanoface provides 4 analog outputs in two stereo pairs:

- Output 1/2 on the breakout cable (output RCA connectors).
- Output 3/4 as 1/4 inch TRS connector on the right side of the Nanoface (headphones symbol).

Both signals can be used as output for a different signals (e.g. main mix + headphones mix) from the multitrack software.

### 1. Switch to headphones output mode.

Press the encoder until the headphones LED and the LED Ch. 3/4 shines. This means the phones output plays now channels 3/4.

### 2. Press and hold the encoder. Turn it one step to the left.

LED 3/4 turns off. The phones output plays now the signal of output 1/2.

**The encoder controls the volume of signal 1/2 separately from the chosen volume of output 1/2 on the breakout cable (speakers).**

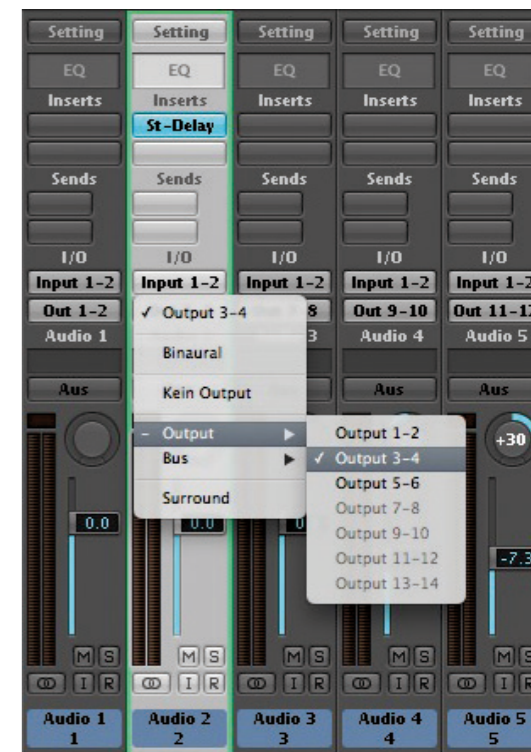
To switch back to channel 3/4 on the phones choose headphones mode again and click/hold + turn the encoder one step to the right.

### 3. Multichannel audio programs

The Nanoface is a multitrack audio interface. The different outputs are available via the driver to any audio software and the operating system, which supports multiple audio outputs.

For the playback on the headphones with a professional multichannel audio software, like Steinberg Cubase, Apple Logic, AVID Pro Tools or Reaper, just to name a few, two steps are necessary:

- Choose the Nanoface in the audio setup of this program.
- Select Output 3/4 in the track (stereo track, submix bus or master out), which should play his signal on the phones.



Output channel selection in Apple Logic

## Outputs Connect digital equipment to the optical S/PDIF output



Digital S/PDIF output  
(red light)

The Nanoface provides a digital SPDIF I/O in the optical TOSLINK format (channel 5/6).

The S/PDIF I/O supports stereo format for uncompressed PCM signals (WAV, AIF, mp3 ...). It is used by the usual playback in a DAW, Windows Media Player, iTunes and other audio programs. The S/PDIF I/O supports also compressed surround formats, like AC3 on Microsoft Windows.

### 1. Cable Connection

To send a digital signal from the Nanoface to another device, connect a standard optical lightpipe cable from the optical output on the back of the Nanoface to digital input of your external equipment. This could be an external DA converter, a HiFi system, another audio interface or an external DA converter.

### 2. Playback with audio programs

Standard Windows or Mac OS X programs usually cannot play on the output 5/6. If the Nanoface is the default sound device in the audio setup, those programs play on the output 1/2 on the breakout cable (speakers). Some audio or video programs provide an option to play on an available S/PDIF output.

Keep in mind, it's not possible, to listen or route the S/PDIF output to the speakers or the headphones. It's a digital format and needs a previous digital to analog conversion before it can be heard.

### 3. Multichannel audio programs

The Nanoface is a multitrack audio interface. The different outputs are available via the driver to any audio software and the operating system, which supports multiple audio outputs.

For the playback on the headphones with a professional multichannel audio software, like Steinberg Cubase, Apple Logic, AVID Pro Tools or Reaper, just to name a few, two steps are necessary:

- Choose the Nanoface in the audio setup of this program.
- Select Output 5/6 in the track (stereo audio track, submix bus or master out), which should be play its signal on the digital out.

**Digital Clock.** Digitally connected devices need a so-called **Word Clock** to run in sync. One device has to be the clock master - which sets the clock for all connected devices - and the other has to be the clock slave.

The Nanoface is the clock master and uses the sample rate from the audio program on the host. Other devices - like a DA converter - run as clock slave to the Nanoface and use the provided sample rate (e. g. 44.1 or 96 kHz).

If the Nanoface is connected to another digital device through its optical input, it runs as a slave and uses the clock of this master device.



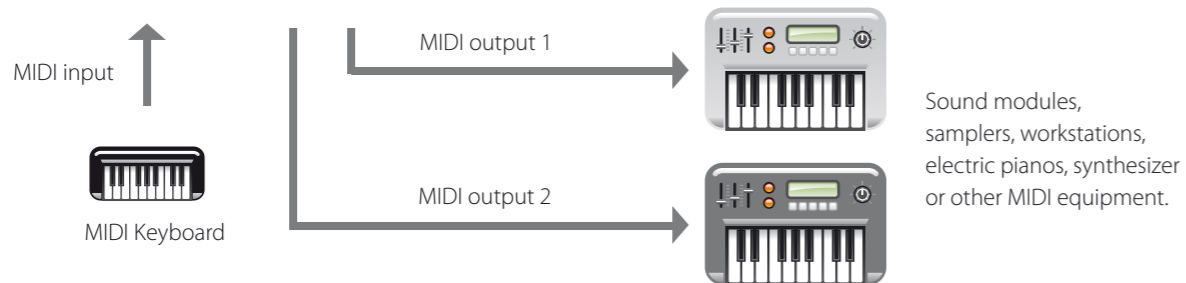
## Outputs MIDI equipment

### 1. Cable Connection

Connect external MIDI equipment via standard 5-pin MIDI cables to the MIDI outputs 1 and 2.

### 2. MIDI programs

Both outputs are available for MIDI playback in any MIDI program or sequencer.



The Nanoface provides a MIDI input and two MIDI outputs via standard DIN-jacks on the breakout cable.

After the driver installation the MIDI ports are available for any MIDI software. As standard MIDI ports, each output adds 16 MIDI channels to the setup.

## Inputs MIDI keyboard

### 1. Cable Connection

Connect an external MIDI master keyboard via a standard 5-pin MIDI cable to the MIDI input.

The MIDI data will be transmitted via the USB cable to the host computer and then to the MIDI software. A direct MIDI through from the input to a MIDI output of the Nanoface without MIDI software on the host computer is not possible.

### 2. Record the MIDI data in a MIDI program

The MIDI input is available in any MIDI program or sequencer. Received MIDI events can be recorded after the selection of the Nanoface MIDI input as source for a MIDI track.



### What is MIDI?

MIDI signals include trigger instructions for a sound device, but no sound. It needs a MIDI sound module, a virtual instrument or a sampler to create an audible "sound". In contrary to audio files, like WAV or AIF or even MP3, MIDI files are very small.

Example: A piano solo played on the master keyboard creates trigger information: note, octave, note on and note off, dynamic and others.

This information will be interpreted by a MIDI sound module, a sampler or synthesizer, which generate the final piano sound.

## Inputs Dynamic microphones

### 1. If phantom power is activated, turn it off.

The 1st red LED in the channel(s) to which the microphone will be connected has to be turned off (input 1 = left LED; input 2 = right LED).

**Attention!** Activated phantom power can damage other equipment (e. g. ribbon mics). Phantom power should always be turned off if it's not needed for a connected condenser microphone. In contrary to condenser microphones (see next page), dynamic microphones, like the Shure SM57 and SM58, don't use internal electronic components which needs to be fed by external phantom power. Before you connect such a mic to analog input 1 or 2, make sure the phantom power is not active. The first red LED in the channel to which the microphone is connected, has to be off.

Turn phantom power off: Switch to input mode, select channel 1 or 2 and press the encoder for 3 seconds. The 1st red LED in this channel stops shining.

### 2. Cable Connection

Connect one or two dynamic microphones to the XLR inputs 1 and/or 2. For the connection of condenser mics please read the next page.

**Attention!** Keep in mind, microphones in the vicinity of speakers can cause loud and dangerous sounds. They can not only damage your hearing but also your equipment. Always try to keep a safe distance between microphones and speakers and lower the volume of the Nanoface preamp gain and the output level before the connection process.



The Nanoface provides 2 XLR microphone inputs with optional phantom power (48V) on the breakout cable.

Microphone signals are low level signals and need a preamplifier to boost them to a usable line-level signal. The Nanoface provides two mic preamps on input 1 and 2 for any kind of microphone type and level. Both inputs are equipped with preamps of up to 50.5 dB gain.

If input 2 is switched to the instrument input on the right side of the Nanoface (guitar symbol), it's possible to connect only one microphone to input 1. Input 2 on the breakout cable is off.

### 3. Select the channel for the preamp gain

Step 1) Switch to input 1/2 mode.

Press the encoder until the input LED ("In") shines. If LED 3/4 also shines, press the encoder 3 times until only the "In" LED is on.

Test the mic: you should see activity on the meters of the LED chain. Channel 1: left LEDs; Channel 2: right LEDs.

The encoder now controls the gain for both XLR inputs on the breakout cable. If you want to set a different gain for every mic continue with step 2.

Step 2) Press and hold the encoder. Turn it to the left for channel 1 or turn it to the right for channel 2.

After a 1-click turn, the 1st green LED of the left or right channel blinks one time to show, which channel is selected. To switch back to the gain control of channel 1+2 together, press and hold the encoder and turn it to the right from channel 1 and to the left from channel 2.

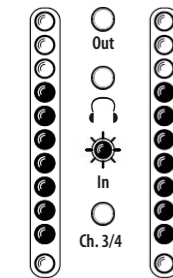
### 4. Set the preamp gain

Turn the encoder gradually to the right to raise the gain for the selected input(s).

Make sure the input signal is not clipping (red top LEDs turn on). For an exact control of the available headroom to the clipping border please use the level meter readouts in your audio software.

### 4. Record the signal from the microphone on the computer

To record the microphone signal in your audio software, choose the Nanoface as audio interface, create a mono track and choose channel 1 as input. For a mic on input 2 create another mono track and choose channel 2 as input.



Input 1    Input 2

## Inputs Condenser microphones

### 1. Cable Connection

Connect one or two condenser microphones to the XLR inputs 1 and/or 2.

**Attention!** Keep in mind, microphones in the vicinity of speakers can cause loud and dangerous tones. They can not only damage your hearing but also your equipment. Always try to keep a safe distance between microphones and speakers and lower the volume of the Nanoface preamp gain and the output level before the connection process.

### 2. Select a channel for the preamp gain

**Step 1) Switch to input 1/2 mode.**

Press the encoder until the input LED ("In") shines. If LED 3/4 also shines, press the encoder 3 times until only the "In" LED is on.

Test the mic on input 1 by speaking or singing: you should see activity on the meters of the left LED chain. Channel 2: activity on the right LED chain.

The encoder now controls the gain for both XLR inputs on the breakout cable. If you want to set a different gain for every mic continue with step 2.

**Step 2) Press and hold the encoder. Turn it to the left for channel 1 or turn it to the right for channel 2.**

After a 1-click turn, the 1st green LED of the left or right channel blinks one time to show, which channel is selected. To switch back to the gain control of channel 1+2 together, press and hold the encoder and turn it to the right from channel 1 and to the left from channel 2.



### Condenser mics vs. dynamic mics

Condenser microphones are built with internal active electronic elements. To operate these mics the so-called phantom power is necessary.

The phantom power transmits DC electric power through typical XLR microphone cables.

Some semi-professional condenser mics provide internal battery powering and don't need the 48V external power from the Nanoface.

If you are not sure if your microphone needs phantom power or not, please have a look on the documentation or consult the manufacturer.

### 3. Turn phantom power on

Press the encoder for 3 seconds.

The 1st red LED of the left chain (= input 1) or turns on. If channel 2 is selected, the 1st LED in the right chain turns on.

To avoid the accidental activation of the phantom power, it's not possible to activate/deactivate the phantom power at the same time for both channels. It's only possible by a previous selection of input channel 1 or 2. If you don't press the encoder long enough, the Nanoface changes to input 3/4.

**Attention!** Before you connect other equipment to analog input 1 or 2, make sure the phantom power is not active.

**Turn the phantom power off: Select channel 1 or 2 and press the encoder for 3 seconds.**

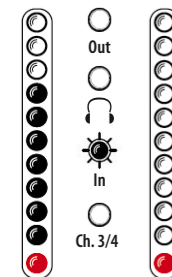
### 3. Set the preamp gain

Turn the encoder gradually to the right to raise the gain for the selected input(s).

Make sure the input signal is not clipping (red top LEDs turn on). For an exact control of the available headroom to the clipping border please use the level meter readouts in your audio software.

### 4. Record the signal from the microphone on the computer

To record the microphone signal in your audio software, choose the Nanoface as audio interface, create a mono track and choose channel 1 as input. For a mic on input 2 create another mono track and choose channel 2 as input.



Input 1      Input 2

If phantom power is enabled the 1st red LED shines.

### Connection example

**Mic 1** (Condenser - 48V on)



Input 1 (XLR - Line In)

**Mic 2** (Dynamic - 48V off)



Input 2 (XLR - Line In R)





## Inputs Electric guitar or bass

### 1. Cable Connection

Connect the electric guitar or bass to the Hi-Z input on the right side of the Nanoface (guitar symbol).

### 2. Switch to input 1/2

Press the encoder until the input LED ("In") shines. If LED 3/4 also shines, press the encoder 3 times until only the "In" LED is on.

### 3. Turn the Hi-Z input on: double click the encoder

The guitar LED turns on. Analog input 2 now get it's signal from the Hi-Z instrument input on the right side. The input on the breakout cable will not pick up any signal until the Hi-Z input is turned off (double click).



### 4. Select channel 2

Press and hold the encoder. Turn it to the right to select channel 2.

After a 1-click turn, the 1st green LED of the right chain blinks one time to show channel 2 is selected.

To switch back to the gain control of channel 1+2 together, press and hold the encoder and turn it to the left.



### Why does it need a Hi-Z instrument input?

Plugging an electric guitar or bass in a line-level input results in a loss of high frequencies and the sound gets dull.

Usually a DI-box (= direct input) is used to change the high impedance of the guitar output to the low impedance of a line level input.

With a special Hi-Z input for the direct recording of electric instruments the Nanoface provides all necessary inputs. Just plug the guitar in.



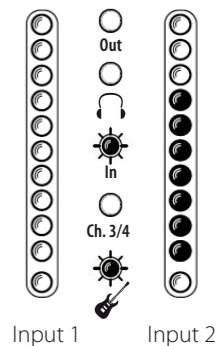
### 5. Set the preamp gain

Turn the encoder gradually to the right to raise the gain, turn it to the left to lower it.

The Nanoface provides a gain of up to 43 dB on the instrument input. The gain is adjustable in 20 steps. Make sure the input signal is not clipping (red top LEDs turn on). For an exact control of the available headroom to the clipping border please use the level meter readouts in your audio software.

### 4. Record the signal from the instrument input on the computer

To record the guitar in your audio software, choose the Nanoface as audio interface, create a mono track in your recording software and choose channel 2 as input for this track.



### Connection example

Dynamic microphone



Input 1 (XLR - Line In)

Electric bass guitar



Input 2 (Hi-Z input - right side)



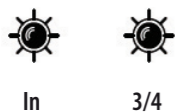
## Inputs External equipment to the line inputs 3/4

### 1. Cable Connection

Connect any line level equipment to the RCA input connectors on the breakout cable. This could be a tape recorder, a synthesizer output, a CD player or a turntable (with RIAA EQ preamp).

### 2. Switch to input 3/4

Press the encoder until the input LED ("In") and LED 3/4 shines.

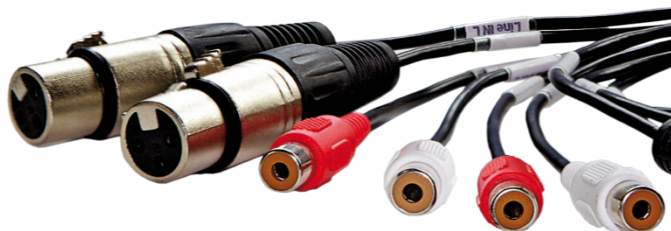


### 3. Set the input gain

Turn the encoder gradually to the right to raise the gain, turn it to the left to lower it.

The Nanoface provides a gain of up to 33 dB on line input 3/4. The gain is adjustable in 20 steps.

Make sure the input signal is not clipping (red top LEDs turn on). For an exact control of the available headroom to the clipping border please use the level meter readouts in your audio software.



## Inputs Digital equipment to the optical S/PDIF input

### 1. Cable Connection

To send a digital signal to the Nanoface, connect a standard optical lightpipe cable to the optical input on the back of the Nanoface. This could be an external AD converter, a CD player, HiFi system or another audio interface.

### 2. Record the signal

To record from the digital input in your audio software, choose the Nanoface as audio interface, create a stereo track and choose channel 5/6 as input.

To listen to this signal, route input channel 5/6 to the analog output 1/2 or 3/4 in your audio software (software monitoring).

The Nanoface provides a digital SPDIF I/O in the optical TOSLINK format (channel 5/6).  
If a digital signal is present on the input the Nanoface runs as clock slave.



Digital S/PDIF input

## 1. Nanoface downloads

Driver and manual updates can be found on our website: [www.alva-audio.de/nanoface](http://www.alva-audio.de/nanoface)

## 2. Distributor contact

The worldwide distributor of the Nanoface:

Audio AG  
Am Pfanderling 60  
D-85778 Haimhausen  
Germany


Tel.: +49 (0) 8133 / 918170


Fax: +49 (0) 8133 / 9166

E-Mail: [info@audioag.com](mailto:info@audioag.com)

Internet: [www.audioag.com](http://www.audioag.com)

## 3. Declaration of Conformity

 **CE** . The Nanoface has been tested and found to comply with the limits of the European Council Directive on the approximation of the laws of the member states relating to electromagnetic compatibility according to RL2004/108/EG, and European Low Voltage Directive RL2006/95/EG.

 **FCC** . This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help. U.S. responsible party info: Synthax United States, 1700 NW 65th Ave ste 7, Fort Lauderdale, FL 33313, Phone: 330.259.0308 ext 281



**Note on Disposal** . According to the guideline RL2002/96/EG - WEEE – Directive on Waste Electrical and Electronic Equipment), valid for all European countries, the Nanoface has to be recycled at the end of its lifetime.

In case a disposal of electronic waste is not possible, the recycling can also be done by the Nanoface distributor. Send it free to the door of Audio AG (address on page 46). Unrepaired shipments will be rejected and returned to the costs of the sender.



