©Cherub Technology Co., Ltd.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Cherub Technology Co., Ltd.

NUX

NAI-22

USB Audio Interface

User Manual



USB

32-bit / 192 kHz
Mac / PC/Mobile/Tablet

Audio Series

2-in | 2-out

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

FCC Warning

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

Introduce

Thank you for choosing the NUX NAI-22 2-In / 2-Out USB Audio Interface.

The NAI-22 features two discrete Class-A microphone preamps built with ultra-low-noise discrete transistors, delivering up to 63dB of clean, transparent gain. For low-output dynamic microphones, each channel is equipped with a classic 76PRE booster circuit—a discrete Class-A design that provides an additional 8dB of gain, bringing the total available gain to 71dB. This allows even gain-hungry dynamic microphones to perform at their best without requiring an external inline preamp.

Beyond being a professional USB audio interface, the NAI-22 is also the world's first USB audio interface with a built-in NAM Loader. Powered by its onboard DSP, it delivers ultra-low-latency amp processing and supports importing converted NAM profiles, allowing guitarists and bassists to enjoy authentic amplifier tones with minimal latency.

The onboard DSP provides a complete guitar processing chain, including Noise Gate, Compressor/Effects, Amp (Image/NAM), IR Loader, EQ, and Delay/Reverb. It includes four onboard preset slots, four factory amp & IR combinations, six user Image/NAM slots, and six third-party IR slots, giving you everything you need for practice, recording, and performance.

The onboard DSP also supports microphone processing. Noise Gate, Compressor/Effects, EQ, and Delay/Reverb can all be applied to microphone inputs, making the NAI-22 an ideal solution for recording, livestreaming, podcasting, and content creation.

Two custom-designed Hi-Z instrument inputs are optimized specifically for guitarists and bassists using software amp simulators and VST plug-ins. The carefully tuned input stage preserves the natural tone, dynamics, and playing feel of your instrument, allowing your plug-ins to respond just like real analog gear.

For maximum flexibility, the NAI-22 is equipped with premium Neutrik® XLR/TRS combo input connectors. Each channel features independent 48V phantom power, a dedicated XLR/TRS input selection switch, and an input level LED indicator to help monitor signal status and prevent clipping. Whether you're connecting microphones, instruments, or line-level devices, the NAI-22 provides a reliable and intuitive recording experience.

Designed with modern creators in mind, the NAI-22 features dual USB-C ports, allowing the interface to be powered independently from an external USB power source. This ensures stable operation when recording, livestreaming, podcasting, or creating content with mobile devices.

A dedicated Loopback function makes it easy to combine live input signals with playback audio from your computer or mobile device, making livestreaming, online lessons, and performance recording effortless.

The USB MONO function provides flexible routing for streaming applications. When enabled, mono input sources such as vocals or guitar are automatically routed to both left and right channels, ensuring a centered sound image. When disabled, the original stereo image is preserved for stereo instruments and playback.

The MIX control lets you instantly adjust the balance between direct input monitoring and USB playback, providing low-latency monitoring while giving you complete control over your monitoring mix.

A dedicated Mute button instantly silences the main outputs and headphone output, protecting your monitors and ears from pops or transient noise when connecting or disconnecting equipment.

The NAI-22 also features balanced TRS outputs and a powerful high-headroom headphone amplifier, delivering accurate, detailed monitoring for both studio monitors and high-impedance headphones.

To help you get started right away, every NAI-22 includes a complimentary Cubase LE license, providing everything you need to record, edit, and produce music straight out of the box.

Whether you're recording music, producing content, livestreaming, podcasting, or simply practicing at home, the NAI-22 is designed to become the centerpiece of your creative workflow.

One Interface. Endless Possibilities.

Features

- The world's first USB audio interface with a built-in NAM Loader, featuring onboard DSP processing for ultra-low-latency performance and support for importing converted NAM A2 profiles.
- Powerful onboard DSP capable of running NG, CMP/EFX, Amp (Image/NAM), IR, EQ, and DLY/RVB. Includes 4 preset slots, 4 factory amp & IR combinations, 6 user Image/NAM slots, and 6 third-party IR slots.
- The onboard DSP also supports microphone processing with NG, CMP/EFX, EQ, and DLY/RVB, providing essential vocal effects for recording and live streaming.
- Dual FET Class-A microphone preamps with up to 71dB of gain. Each channel features an independent 76 Booster, providing enough gain to drive over 90% of dynamic microphones without an external booster.
- Dual custom-designed Hi-Z instrument inputs, optimized to deliver an authentic analog playing feel for guitar and bass. Ideal for players using the onboard DSP amp processing or software amp simulators and VST plug-ins.
- Dual-input, dual-output USB audio interface supporting up to 192kHz / 32-bit ultra-high-resolution recording.
- Premium Neutrik® professional-grade input and output connectors.
- Dual USB-C ports with independent power input, enabling reliable operation for mobile recording, live streaming, and outdoor content creation.
- Dedicated USB MONO function for live streaming, allowing stereo inputs to be summed to the center with a single button to eliminate left/right channel imbalance.
- Ultra-compact, creator-focused production tool designed for recording, live streaming, content creation, and music production.
- Includes a free Cubase LE software license.

NAI-22 System Requirements

- USB 3.0 (or higher) interface
- Intel, AMD or apple silicon CPU
- 8 GB or more RAM
- Windows 10/11(64 bit), MacOS Catalina 10.15.6 or later
- Internet connection (for updates)

Driver Installation

MacOS

The NAI-22 audio interface is fully compliant with the USB 2.0 audio class standard, allowing seamless connection to a Mac (running macOS 10.15 or later) via USB cable without the need for additional drivers. The Mac will automatically recognize the NAI-22 as a USB audio device, providing access to its inputs and outputs for use in audio host software. Basic settings, such as hardware sample rate, can be configured directly in the host software.

Tip: *Use macOS's Audio MIDI Setup Utility to manage the audio input and output channels of the NAI-22.*

Windows

The NAI-22 audio interface is USB 2.0 audio class compliant, allowing you to connect it to a Windows computer (Windows 10 or later) via a USB cable without the need for additional drivers. The computer will automatically recognize the NAI-22 as a USB audio device, providing access to its inputs and outputs through your audio host software. Basic settings, such as hardware sample rate, can be adjusted in the Windows "Sound Settings". However, to access all features of the NAI-22, installing the dedicated NAI-22 driver is required.

1. Download Driver Installer

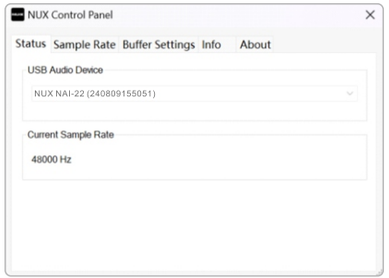
Visit the official NAI-22 website at www.nuxaudio.com to download the latest version of the driver.

2. Installation of Drivers

Connect the NAI-22 to your computer, open the downloaded driver installation package, and follow the prompts to install it. Once the installation is complete, restart your computer.

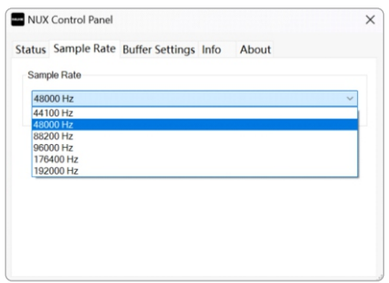
After restarting, open the NAI-22 driver by clicking on the NUX control panel icon in the system tray. If everything is working correctly, the control panel screen should appear.

Status



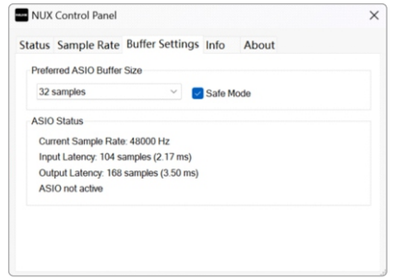
The Status tab shows the ID number of the USB audio device along with the current sample rate of the device.

Sample Rate



The Sample Rate tab shows the current sample rate of the device, allowing you to select and set the appropriate rate from the drop-down menu.

Buffer Settings



The Buffer Settings page allows you to view and set the buffer size of the current device's ASIO driver. You can select the desired buffer size from the drop-down menu. A smaller buffer size reduces audio latency to the host software, with buffers of 256 samples or less resulting in nearly imperceptible latency.

> ***Note:*** *Please be cautious when using very small buffer sizes (less than 32 samples), as they may cause performance issues with the host software or computer.*

Safe Mode

Under the Buffer Settings page, you'll find the Safe Mode option. If you experience audio lag or latency issues, enable Safe Mode. This adds an extra buffer to help ensure the stability and reliability of your data transmission.

Product Description

Top Panel



❶ GAIN	❺ 76PRE Buttons	❾ LOOPBACK Button	⓭ Hi-Z (IN 1)
❷ 48V Phantom Power	❻ MIX	❿ MUTE Button	⓮ Hi-Z (IN 2)
❸ Line Buttons	❼ STEREO Button	⓫ MONITOR	⓯ PHONES
❹ Level Meter	❽ PHONES Level	⓬ USB MONO(PODCAST)	⓰ USB Indicator

❶ GAIN

Use the GAIN knobs to adjust the input level for microphones, instruments, or line-level sources. Turn the knob while monitoring the Input Peak Level Meter - aim for mostly green and orange without hitting red, which indicates clipping.

> ***Tip:*** *When the input signal reaches -1 dBFS (just below the digital maximum of 0 dBFS), the red LED will light up, indicating digital clipping. This can degrade the quality of the recorded audio.*

❷ 48V Phantom Power

Press this button to toggle 48V phantom power for the XLR microphone input. The LED flashes red while switching, and stays solid red when phantom power is active.

> ***Note:*** *Most condenser microphones require phantom power, while dynamic microphones usually do not.*
>
> ***Caution:*** *Phantom power may damage certain ribbon microphones.*
>
> ***Note:*** *Make sure phantom power is off before connecting or disconnecting the microphone.*

❸ Line Buttons

When using a 1/4" TRS plug in the combo jack on CHANNEL 1/2, press the LINE button to select line-level input. If using an XLR connection, make sure the LINE button is turned off.

> ***Note:*** *A common issue occurs when the LINE button setting does not match the type of plug used - resulting in no input signal.*

❹ Level Meter

The Input Peak Level Meter displays the input signal level as controlled by the Gain knob. It reflects the digital signal level after analog-to-digital conversion, ranging from -27 dBFS to 0 dBFS. When the signal reaches -1 dBFS (near the digital maximum), the red LED illuminates, indicating potential clipping.

> **Tip:** *Avoid signal levels that cause the red LED to illuminate continuously. Clipping occurs when a digital signal is overloaded, resulting in unwanted distortion.*

❺ 76PRE Buttons

The 76PRE button toggles the 76PRE preamplifier module on or off. When engaged, the button LED lights up, and the circuit provides an additional 8 dB of gain with low noise, wide dynamic range, and the distinctive tonal character of a pure Class-A design - ideal for driving low-sensitivity dynamic microphones.

❻ MIX

The MIX knob adjusts the balance between the input signal and the signal from the PC's USB. Rotating the knob clockwise to the maximum position mutes the input signal from CHANNEL 1/2 and outputs only the signal from the USB. Conversely, turning the knob counterclockwise to the minimum position mutes the USB signal and outputs only the input signal from CHANNEL 1/2. When the knob is set to the middle position, it mixes the input signal from CHANNEL 1/2 with the USB signal equally.

> **Note:** *If the software monitor of the DAW on PC is active, adjust the MIX knob clockwise to the maximum position to turn off the input monitor signal and avoid phase issues with the hardware monitor.*

❼ STEREO Button

The STEREO button toggles the stereo function on or off. When the button is off, the input signals from CHANNEL 1 and CHANNEL 2 are mixed and routed to the stereo bus as a combined signal. When the button is pressed, the input signals from CHANNEL 1 and CHANNEL 2 are sent to the stereo bus separately, maintaining their distinct stereo channels.

❽ PHONES Level

Adjusts the headphone output volume from the PHONES jack. To prevent hearing damage, start with a low level and increase gradually.

❾ LOOPBACK Button

Pressing the LOOPBACK button mixes the audio from your computer (USB playback) with the input signals from channels 1/2, and routes the combined signal back to the computer via USB. This is useful for livestreaming, podcasting, or recording both backing tracks and live input simultaneously.

❿ MUTE Button

Silences Output 1/2 and headphone output, allowing safe cable changes without causing pops or noise.

⓫ MONITOR

Adjusts the volume level of the output 1/2.

⓬ USB MONO(PODCAST)

This function is designed for livestreaming or podcasting when using the NAI-22 with a computer or mobile device. When enabled, it centers the signals from INPUT 1 and INPUT 2 in the USB stereo stream - ideal for vocals or instruments that should appear in the middle of the stereo image. When disabled, INPUT 1 and INPUT 2 remain panned left and right respectively in the USB audio stream.

⓭ Hi-Z (IN 1)

Use this 1/4" TS input to connect your guitar or bass to Channel 1. It's a high-impedance input specially tuned for instruments, giving you a more natural tone and dynamic response when using VST plug-ins.

⓮ Hi-Z (IN 2)

Use this 1/4" TS input to connect your guitar or bass to Channel 2. It's a high-impedance input specially tuned for instruments, giving you a more natural tone and dynamic response when using VST plug-ins.

⓯ PHONES

1/4" stereo headphone output, delivering 26 mW of clean signal at 32 Ω.

⓰ USB Indicator

When the NAI-22 is connected to the PC's USB port and data transfer begins, the USB indicator will light up.

Rear Panel



⑰ USB Power Jack	⑱ USB Audio Jack	⑲ Output Jacks 1L/2R	⑳ CHANNEL 1/2 INPUT

⑰ USB Power Jack

DC 5V USB-C power input for connecting an external power source. This port is designed for use with power-limited devices like mobiles or iPads - allowing stable, long-duration operation without draining your mobile device's battery.

⑱ USB Audio Jack

Connect the NAI-22 to a USB 3.0 (or higher) port on your computer using the included USB-C to USB-C cable.

> ⚠ ***Note:*** *The NAI-22 must be connected to a USB 3.0 compliant port with sufficient bus power. Some ports - particularly on low - quality USB hubs - may not meet USB power specifications. If the NAI-22 does not power up properly, connect it directly to a USB 3.0 port on your computer.*

⑲ Output Jacks 1L/2R

1/4" TRS balanced outputs for connecting active studio monitors. Connect the left speaker to Output 1/L and the right speaker to Output 2/R for proper stereo playback.

⑳ CHANNEL 1/2 INPUT

XLR/TRS combo jack for connecting microphones, instruments, or line-level sources. These inputs accept XLR connectors, 1/4" balanced TRS, or 1/4" unbalanced TS plugs.

USB Connection and Power Supply Notes

A. When connecting to a computer via a non - USB 3.0 port, insufficient power may cause the NAI-22 to malfunction. In this case, please connect an external power source to the USB Power Jack (DC 5 V).

B. When connecting to iOS devices with a USB-C port (such as newer iPads), you can connect directly to the NAI-22's USB AUDIO port using a USB-C to USB-C cable. For extended operation, we recommend supplying power via the USB Power Jack to avoid draining the mobile device's battery.

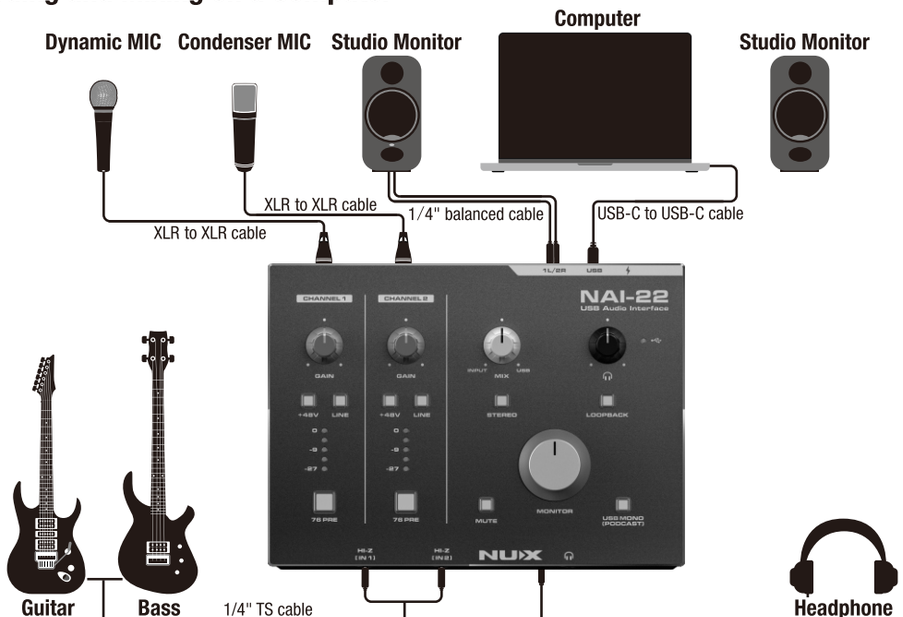
C. When connecting to iOS devices with a Lightning port, an Apple Camera Kit adapter (or similar Lightning-to-USB adapter) is required. Due to Apple's power limitations on Lightning ports, you must connect an external power supply to the USB Power Jack before connecting the iOS device via the Camera Kit.

> ⚠ ***Important:*** *Always connect the external power first, then connect the Lightning device via the adapter.*

D. When connecting to Android devices with a USB-C port, you can use a USB-C to USB-C cable to connect directly to the USB AUDIO port. For longer sessions, power can be supplied via the USB Power Jack to prevent draining the mobile device's battery.

Application Example

A. Recording and Mixing on a Computer



To record with the NAI-22 on a computer, connect it using the included USB cable or a high-quality USB-C cable.

Connect your instrument to Hi-Z 1 or Hi-Z 2 for direct instrument recording.

Connect a microphone to the XLR input of Channel 1 or Channel 2 for vocal or mic-based recording.

Plug your headphones into the PHONES output, and connect your studio monitors to Output 1L/2R for monitoring.

> ***Note:*** *When using a condenser microphone, be sure to enable 48 V phantom power.*

You may also activate the 76PRE function when using any microphone or instrument input. This provides additional gain and imparts the warm, responsive character of analog Class-A circuitry.

Once all devices are connected, adjust the GAIN controls according to your input sources.

Use the Input Level Meter to monitor signal strength. For optimal recording quality, aim for peaks around -6 dB to -3 dB, with the meter showing mostly green and orange LEDs, and avoiding red.

Use the MIX knob to balance between direct hardware monitoring and USB playback monitoring, depending on your recording or mixing needs.

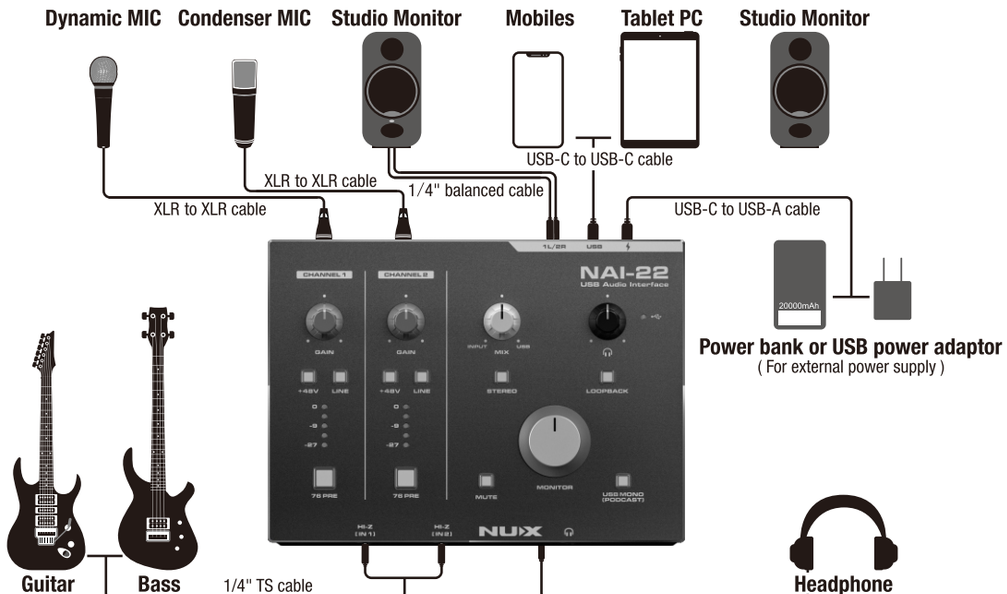
Windows users

Install the NUX ASIO driver to enable low-latency recording in your DAW.

When mixing or arranging with multiple VST instruments or plug-ins, increase the buffer size (up to 2048 samples) to avoid playback glitches caused by insufficient processing resources.

B. Live streaming and Podcasting with a mobile device

The NAI-22 is designed for seamless integration with mobile devices such as smartphones and ipads, making it ideal for livestreaming, podcasting, or mobile content creation.



1. Connecting to USB-C Devices (e.g., iPad, Android phones/tablets)

Use a USB-C to USB-C cable to connect your mobile device to the USB AUDIO port on the NAI-22. For long recording sessions, we recommend supplying power to the USB Power Jack (DC 5 V) to avoid draining your mobile device's battery.

2. Connecting to Lightning Devices (e.g., iPhone)

Use an Apple Camera Adapter (Lightning to USB) to connect your iOS device to the NAI-22.

> ⚠ ***Important:*** *Connect external power to the USB Power Jack before connecting your iOS device. This ensures stable operation, as iPhones and iPads with Lightning ports cannot supply enough power on their own.*

3. Recommended Settings

Enable the USB MONO (PODCAST) function when using a single microphone or instrument, to center the signal in the stereo field for better voice presence.

Adjust the GAIN knob to ensure optimal input level (peak around -6 dB to -3 dB).

Use the MIX knob to control the blend between your live input and the USB audio return signal (such as background music or system sounds).

Use the Loopback function to mix audio from your device (e.g., background music or app sounds) with your microphone/instrument input and send the combined signal back to your streaming or recording app.

NAI Controller Software

Visit the NAI-22 product page on www.nuxaudio.com and download the appropriate NUX Audio Software or NAI Controller Software for your Windows or macOS system. The software provides full access to the NAI-22's onboard DSP functions, including effect editing, output configuration, and USB audio settings.

Using the Onboard Guitar Effects

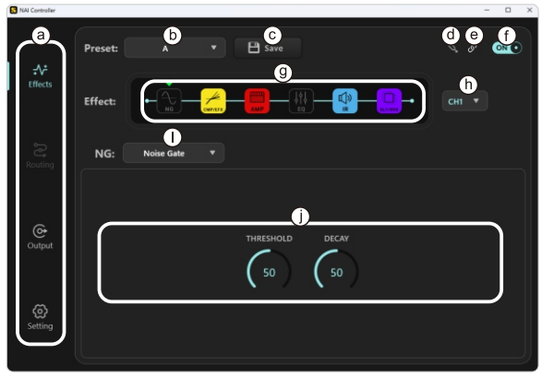
When using the onboard guitar effects, connect your guitar directly to the HI-Z Input 1 or HI-Z Input 2 on the front panel. For the best results, set the input GAIN control to its minimum position, then adjust the overall volume using the Effect Volume parameter together with the Monitor or Headphone output level.

Setting the input gain too high may cause input clipping and affect the gain structure of the amp modeling, resulting in inaccurate amp response and reduced playing dynamics.

Using the Onboard Effects for Microphone Processing

The NAI-22's onboard DSP can also be used as a vocal effects processor. Simply enable the NG, CMP/EFX, EQ, and DLY/RVB modules in the Effect page to create a complete vocal signal chain for recording, livestreaming, or content creation.

NG (Noise Gate)
Reduces unwanted background noise and microphone bleed in noisy environments.
CMP/EFX (Compressor)
Apply a compressor to smooth out vocal dynamics, delivering a more consistent level and making singing feel more natural and effortless.
EQ
Shape the tonal balance of your voice to achieve the desired sound for your microphone and performance.
DLY/RVB
Add ambience with a short delay (approximately 100 – 150ms) or a subtle reverb with a short decay time to enhance vocal presence without overwhelming the original sound.



ⓐ Function
Select the page to configure: Effect, Routing, Output, or Settings.

> ***Note:*** *The Routing page is available on the NAI-24 only.*

ⓑ Preset
Select the active preset. Available options are Bypass and Preset A-D.

ⓒ Save
Click Save to store the current settings to the selected preset.

ⓓ Tuner
Click to enter the Tuner and tune your instrument.

ⓔ Connection
Click to select the NAI device to connect to, establish communication, or disconnect the current connection.

ⓕ ON/OFF
Enables or disables the onboard DSP effects. When Effect is turned ON, the sampling rate of your Windows or macOS system is automatically switched to 48kHz to ensure proper DSP operation.

ⓖ Effect Chain
This is the effect editing area. Left-click a module to select it, right-click to enable or bypass the module, and drag modules to rearrange the signal chain.

ⓗ Channel
Select the input channel to process. CH1 applies the effects to Input 1, while CH2 applies them to Input 2. DSP effects can only be enabled on one input channel at a time.

ⓘ Model
Select the effect model for the currently selected module.

ⓙ Parameter
Adjust the parameters of the selected effect model.



k OUT 1-2 Meter
Displays the output level of OUT 1-2.

l MUTE
Click to mute the OUT 1-2 outputs.

m DIM
Click to attenuate the OUT 1-2 outputs by 20dB.

n MONO
Click to sum the OUT 1-2 outputs to a mono signal.

o HP 1 Meter
Displays the output level of the HP 1 headphone output.

p MUTE
Click to mute the HP 1 headphone output.

q DIM
Click to attenuate the HP 1 headphone output by 20dB.

r MONO
Click to sum the HP 1 headphone output to a mono signal.



s Device
Displays the name of the currently connected device.

t Sample Rate
Select the desired sampling rate. Available options are 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, and 192kHz.

> ***Note:*** *When Effect is enabled, the sampling rate is fixed at 48kHz to ensure proper DSP operation. To change the sampling rate, first disable Effect on the Effects page.*

u Buffer Size
Select the desired audio buffer size.

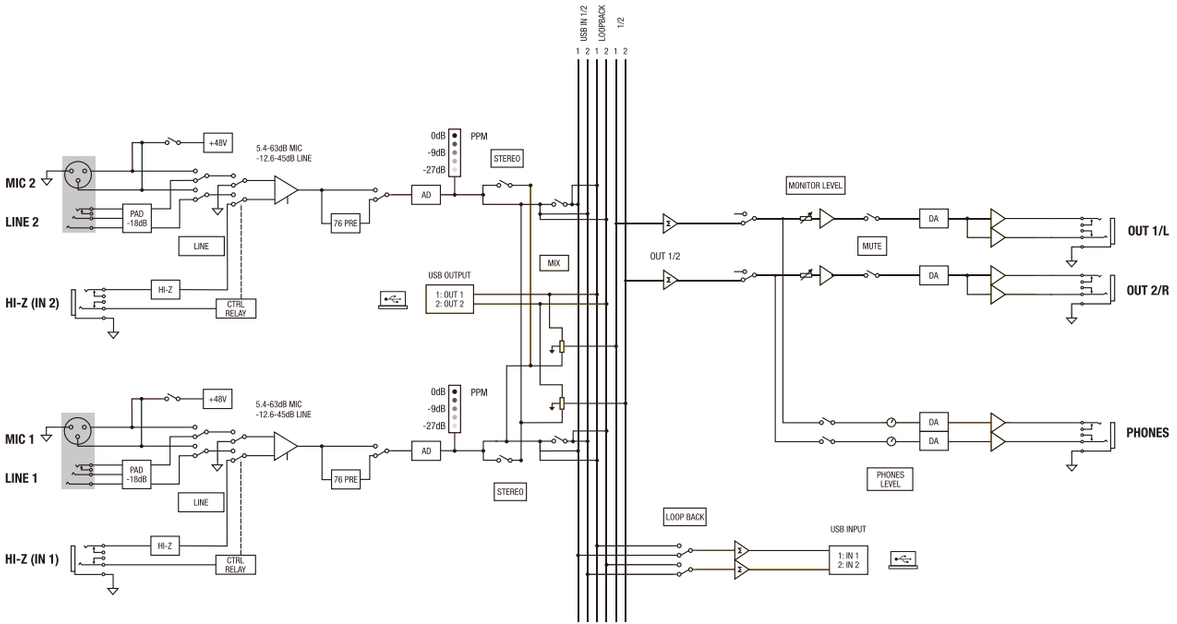
> ***Note:*** *Smaller buffers cut latency yet demand higher computing power. Overly low buffer settings trigger audio glitches on weak PCs. Use larger buffers for smooth playback with numerous VSTs and virtual instruments.*

v Input Latency
Displays the current input latency.

w Output Latency
Displays the current output latency.

x Control Panel
On Windows, click to open the USB Audio Settings panel. On macOS, click to open the Audio MIDI Setup utility.

NAI-22 Block Diagram



Specifications

MIC IN	
Dynamic Range	113 dB (A-weighted)
Frequency Response	20 – 20 kHz, ±0.1 dB
THD+N	<0.002% @ -1 dBFS (at minimum gain)
EIN	-125 dBu (A-weighted)
Maximum Input Level	6.8 dBu (at minimum gain)
Gain Range	5.4 - 63 dB
Input Impedance	2.4 kΩ

LINE IN	
Dynamic Range	112 dB (A-weighted)
Frequency Response	20 – 20 kHz, ± 0.2 B
THD+N	<0.003% @ -1 dBFS (at minimum gain)
Maxi Input Level	26 dBu (at minimum gain)
Gain Range	-12.6 - 45 dB
Input Impedance	21 kΩ

HI-Z	
Nominal Input Level	-10 dBu
Input Impedance	1 MΩ

LINE OUT 1L/2R	
Dynamic Range	112 dB (Balanced, 200 kΩ, A-weighted)
Frequency Response	20 – 20 kHz, ± 0.1 dB
THD+N	<0.002% @ -1 dBFS
Max Output Level	+18 dBu (Balanced, 0 dBFS)
Output Impedance	240 Ω

HEADPHONE OUT	
Dynamic Range	105 dB (A-weighted)
Frequency Response	20 – 20 kHz, ± 0.1 dB
THD+N	<0.005% @ -5 dBFS
Power Output	26 mW @ 32 Ω

Dimensions	174(L) x 128(W) x 67(H)mm
Weight	546 g

Accessories

- USB-C to USB-C Cable x1
- USB-C to USB-A Adaptor x1
- Cubase License x1
- NUX Sticker x1
- Quick Start Guide x1
- User's Manual x1

*Specifications and features are subject to change without notice.