Nakamichi®

# NDS4610A

DSP Amplifier

User Manual

www.nakamichicaraudio.com

Nakamichi®

# Catalogue


Notes ..... 1

Part One: UI Introduction ..... 2

Part Two: Software Introduction ..... 3

Part Three: Product Technology Data ..... 6

Part Four: Troubleshooting ..... 8

## Notes

**Warning:**

1. To prevent short circuit, please keep the device away from water or wet places.

2. If water or any other liquid soak into the device, cut off the power immediately, and call our service engineer of inspection, in case of emergency.

3. Users are not allowed to dismount the device, please contact our service engineers when if it's necessary.

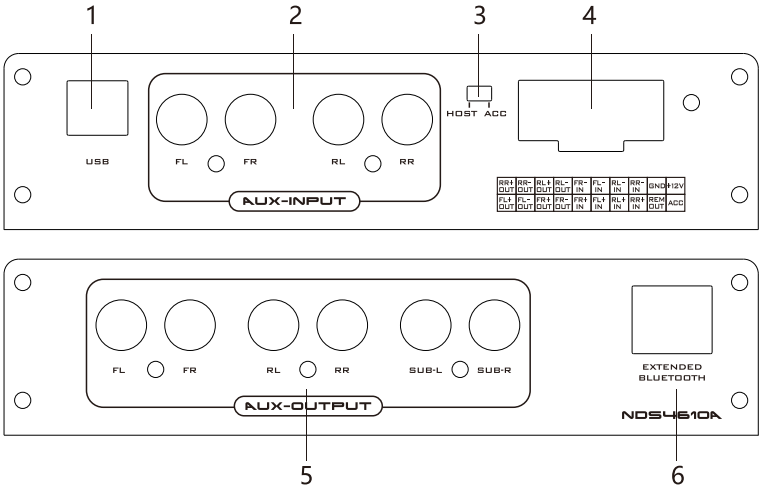
4. Surface temperature of the device could above 80 degree Celsius, please choose a safe installation spot.

## What's in the Box

| | |
|---|---|
| NDS4610A | 1Piece |
| User Manual | 2Pieces (1 Chinese, 1 English) |
| USB2.0 Cable(1.5m) | 1Piece |
| Self-Tapping Oval Head Screws (4x20mm) | 4Pieces |
| Cross Head Mechanical Screws (3*6mm) | 8Pieces |
| Installation Bracket | 4Pieces |
| Velcro | 2Pieces |

## Part One：UI Introduction

The machine interface diagram is as follows：




1、USB Port

2、AUX Low Level Input Port

3、REM Input Selection Switch：Put the switch on "ACC" mode to start the device by ACC, put the switch on "HOST"mode to start the device by high level input signal.

4、High Level Input & Output Port

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| RR+ OUT | RR- OUT | RL+ OUT | RL- OUT | FR- IN | FL- IN | RL- IN | RR- IN | GND | +12V |
| FL+ OUT | FL- OUT | FR+ OUT | FR- OUT | FR+ IN | FL+ IN | RL+ IN | RR+ IN | REM OUT | ACC |

Instruction: Only for OEM fit cables, or any after-market cables follow the OEM requirements.

5、Low Level RCA Output, connect up to 6 channels speaker output.

6、External Digital Bluetooth Input:Connect the external Bluetooth, the LED indicator will flash, the indicator will stop flash and will be always on once you have connected your Mobile phone to the device, then you can play music in your phone, and the device will change the high level input to Bluetooth Input.

Notes: Android Phone, APP function only can be used when on Bluetooth Mode.

## Part Two: Software Introducton

### (1) . PC Software Operation Introduction

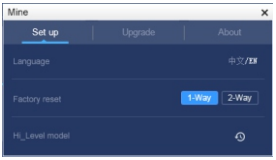
Computer Configuration Requirements: Screen resolution higher than 1280 x 768, otherwise the software UI is incomplete, only suitable for windows operation system laptop, desktop and pads.

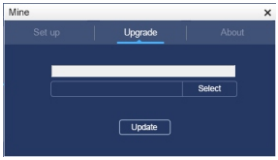
DSP Amplifier NDS4610A

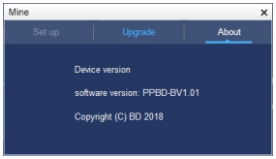
### 1.1 Main Menu Edit Section

Main Function: Mine, Save, Open Presets

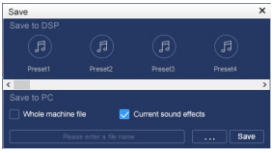
①Click "Mine"will pop up a window, here you can see the Chinese-English language switch, High Level Mode, Factory Reset, Firmware Upgrading and detail product model number.

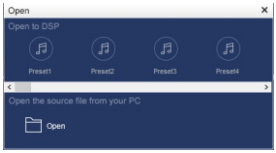


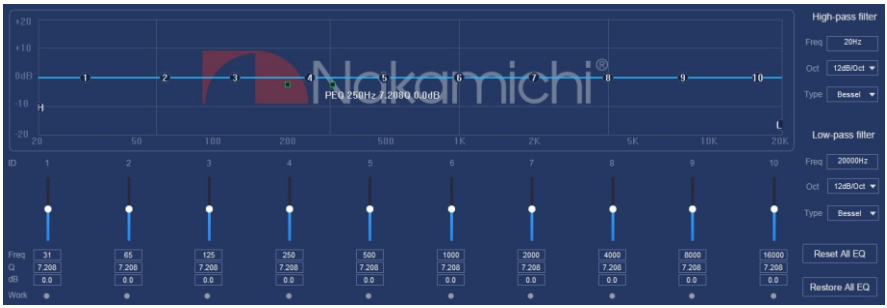

②Click "Save"or "Open"will pop up a window, there are 15 preset slots available, it's easy for you to save the data to device or PC.



③ Click “Unconnected”button to connect your PC with the device.

## 1.2 Channel EQ Edit Zone




Main function Setup: Current output channel EQ setup, 10 bands EQ: Frequency, Q Value (Bandwidth) and gain (increase or decrease the frequency amplitude near the frequency point).

① Reset All EQ: Reset the 10 bands EQ to factory bypass mode (all the frequency point, Q Value and Gain will be restored to its initial value).
② Restore All EQ: Choose between the current EQ setup and bypass mode (all the gain restored to 0 dB, the frequency point stay the same).

## 1.3 Channel Crossover Edit Zone

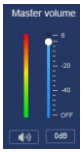
Main Function Setup: Channel High & Low Pass Filter Setup
Adjustable: Filter Type, Frequency point and Q Value (Gradient or Slope)
Technical Instruction: The crossover point of Bessel and Butterworth Filter is at -3dB, the crossover point of Linkwitz-Riley Fliter is at -6dB.

## 1.4 Sound Stage Location and Time Alignment Adjustment

Locate sound stage and adjust delay, phase adjust for every channel, volume, mute etc.Output L + R: Tuning for both left and right channel.

## 1.5 Main Volume Adjustment Zone

Adjustment Range: On/off, -59dB ~ 6dB. Click the speaker button to mute the main volume.



## (2).Smart-phone Software Operation Instruction

Startup Interface

Main Interface

Time Alignment Interface

Crossover Interface

Channel Interface

EQ Interface

2.1 Startup Interface: The startup interface for NDS4610A APP.

2.2 Main Interface: Access to the NDS4610A App, Here you can share and save the preset files to your phone, check the device model number and firmware version, adjust or mute the main volume, choose the type of input audio source and mixed audio source, proceed encrypt operation to preset files, store and use 15 presets etc.

2.3 Time Alignment Interface: Sound Stage Location Output and Time Alignment Adjustment.

2.4 Crossover Interface: High and Low Pass Channel Setup, Independent High and Low Pass Filter, Adjustable, Filter Type, Frequency point and Q Value (Gradient or Slope).

2.5 Channel Interface: Setup output channel volume, Phase and High & Low Pass Filter.

2.6 EQ Interface: Display output channel EQ curve (Gain, Q Value and Frequency); and reset All bypass EQ or restore EQ operation.

## Part Three：Product Technology Data

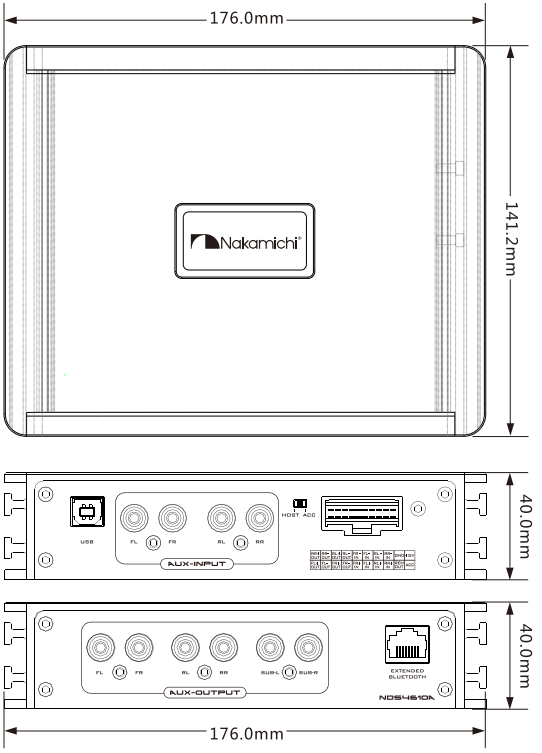
### Product Data

| | |
|---|---|
| Dynamic Range(RCA Input) | ≥100dB |
| S/N (RCA Input) | ≥90dB |
| THD | ≤0.05% |
| Frequency Response | 20Hz～20KHz |
| Input Impedance | High Level Input: 240Ω　Low Level Input: 12KΩ |
| Low Level Output Impedance | 100Ω |
| N-Power | 4x25W(±1W　10%THD) |
| Output Power | 4x50W |
| Signal Input & Output Range | RCA Input:5.5Vpp ; High Level:26Vpp; RCA Output: 5.5Vpp |
| Working Temperature | -20～70℃ |
| Power | DC9V~16V |
| REM Input | High Level Input Signal: FL+/FL- or ACC control cable |
| REM Output | +12V Startup Voltage Output |
| Standby Power | ≤0.1W |
| Gross Weight | Approx 1.2kg |
| Product Dimension | 176 (L) * 141.2(W)*40(H) mm |

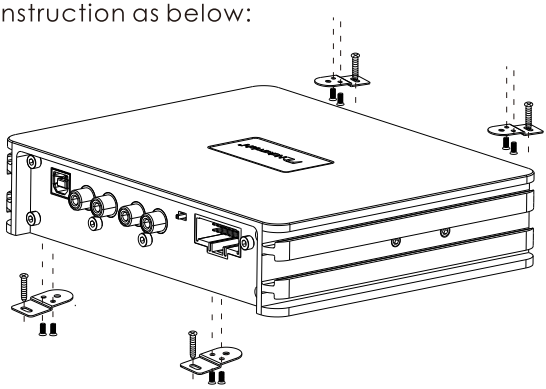
### Technical Sheet

| | |
|---|---|
| Input Signal Type | 4 Channel high level Input, 4 Channel Low Level Input, external digital Bluetooth |
| Output Signal Type | 4 Channel high level Output, 6 Channel low level output |
| Output Signal Gain | Gain Range: Mute, -59dB～6dB |
| Output Signal EQ | 10 Bands EQ for every channel<br>1. Frequency Range ： 20Hz～20KHz，1Hz Accuracy<br>2.Q Value(Slope)： 0.404～28.85<br>3.Gain ： -20.0dB～+20.0dB，0.1dB Accuracy |
| Output Signal Crossover | Equipped with 2nd order high and low pass filter<br>1. Professional filter type: Butterworth, Linkwitz-Riley, Bessel<br>2. Filter Crossover Point：20Hz～20KHz. Resolution 1Hz<br>3. Filter Slope Setup：6dB/Oct～30dB/Oct |
| Output Phase and Time Alignment | Adjust phase and time alignment for every output channel.<br>Phase：In Phase or Out Phase（0 °/180 °）<br>Time Alignment：0.00 to 20.00ms, 0.00 to 692.00inch |
| Presets | Save 15 presets into the device |

Product Dimension as below:




Installation Instruction as below:



## Part Four: Troubleshooting

### Troubleshooting

Check all the cables and ports all perfectly safe before you switch on the power.
Common troubleshooting procedure:

**when a fault occurs:**
Before taking products to dealers, please follow our suggestions to check your device.

→

**You can not fix the problem after inspection:**
Try to reset all the settings to factory mode.

→

**Still unable to fix:**
Please contact our authorized dealer

Regulare failure and failure elimination:

| No | Malfunction | Reason and Solution |
|---|---|---|
| 1 | No Power | ① Check the power connection?<br>② Check the ACC connection? |
| 2 | No Sound | ① Is it in mute mode ?<br>② Have you choose the right input signal channel? |
| 3 | Unable to connect USB | ① Check the USB connection?<br>② Check if the driver "HID-compliant device"has been installed in your PC? |

Nakamichi®

www.nakamichicaraudio.com