Nakamichi®

NDS4615AU
User Manual

DIGITAL SOUND AMPLIFIER

nakamichicaraudio.com   nakamichi.global   nakamichi.caraudio

CONTENTS

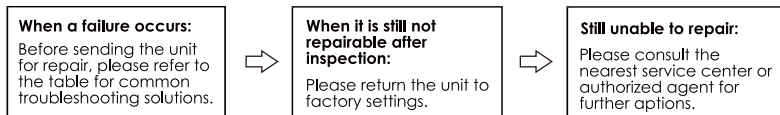# INTROUCTION AND TROUBLESHOOTING

Thank you for your purchase and welcome to the world of Nakamichi! Please keep your original proof of purchase or invoice in a safe place in case of any warranty claims. Do also mail or register your warranty with the official Nakamichi service centers and/or agents to ensure that you are provided with the relevant technical support if required.

NOTICE

1. To prevent short circuit, please keep the device away from water or damp places.
2. If water or any other liquid enters the device, cut off the power immediately, and inform the nearest Nakamichi Service Center or Agent to inspect the product.
3. Users are not recommended to disassemble the device as there are no user serviceable parts inside, please contact the nearest Nakamichi Service Center if necessary.

TROUBLESHOOTING

Ensure all cables and prts are securely connected before turning on the power.Shown below is the basic troubleshooting procedure that you should follow.

When a failure occurs:
Before sending the unit for repair, please refer to the table for common troubleshooting solutions.

⇨

When it is still not repairable after inspection:
Please return the unit to factory settings.

⇨

Still unable to repair:
Please consult the nearest service center or authorized agent for further aptions.

Troubleshooting method:

| No.	Malfunction	Reason and Solution
1	No Power	• Check the power connection and make sure it's sucure. • Check the ACC connection and make sure it's secure.
2	No Sound	• Double check if the unit is in MUTE mode. • Check if you have choose the correct input channel.
3	Unable to connect through USB	• Check the USB connection and make sure it's secure. • Check if the driver "HID-compliant device" has been properly installed in your PC.

WHAT'S IN THE BOX

NDS4615AU	1PC
User Manual	2PCS (1 Chinese, 1 English)
USB2.0 Cable(1.5m)	1PC
Self-Tapping Oval Head Screws(4*20)	2PCS
Phillips Flat Head Machine Screw(3*6mm)	4PCS
Mounting brackets	2PCS
Velcro	2PRS

PRODUCT TECHNICAL DATA

Product data	
Dynamic Range(RCA Input)	≥100dB
S/N (RCA Input)	≥90dB
THD	≤0.05%
Frequency Response	20Hz ~ 20KHz
Input Impedance	High level:47Ω
Low Level Output Impedance	51Ω
Maximum Output Power	4CH×50W
Signal Output Range	RCA:5Vpp; High level:28Vpp
Working Temperature	-20 ~ 70℃
Power	DC 9V ~ 16V
REM Input	High level Input signal:FL+/FL- or ACC control cable
REM Output	+12V start up voltage output(0.1A)
Standby Power	≤0.1W
Net Weight	Approx. 0.66kg
Product Dimension	173(L) *115.5(W) *34(H)mm

| Technical Sheet	
Input Type	4 channels high level, support built-in Bluetooth, support U DISK playback Support manual adjustment function, Support external wiring controller
Output Type	2 channels low level, 4CH×50W power
Output Gain	Gain range: mute, -59.9dB ~ 0.0dB
Output Signal EQ	Equalizer engine: 1. Frequency range: 20Hz ~ 20KHz, 1Hz accuracuy 2. Q value (slope): 0.404 ~ 28.852 3. Gain: -12.0dB ~ + 12.0dB, 0.1dB accuracuy
Output Signal Crossover	Each output is equipped with multi-order high and low pass independent filters. 1. Filtering types: Link-Ril, Butter-W, Bessel 2. Filtering frequency division point: 20Hz ~ 20KHz. Resolution 1Hz 3. Filter slope (slope) setting: 6dB / Oct to 12dB / Oct and OFF
Output Phase and Time Alignment	Each output channel can be adjusted for phase and delay, parameter range: Phase: in-phase or reverse-phase (0˚ / 180˚) Delay: 0.000 to 5.396ms, 0 to 187 cm，0 to 74 inch
Presets	Save 6 presets into the device

PEODUCT DIMENSIONS
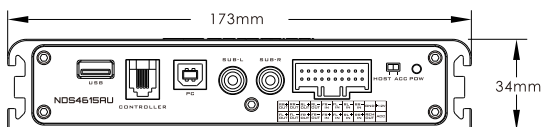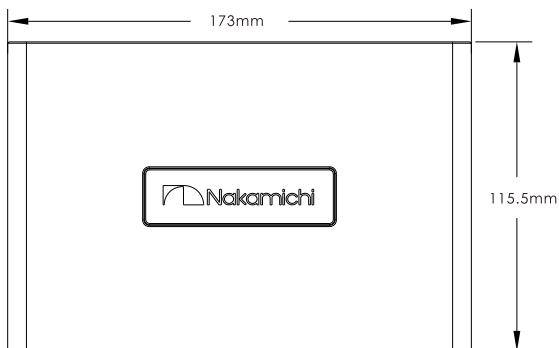
INSTALLATION INSTRUCTIONS
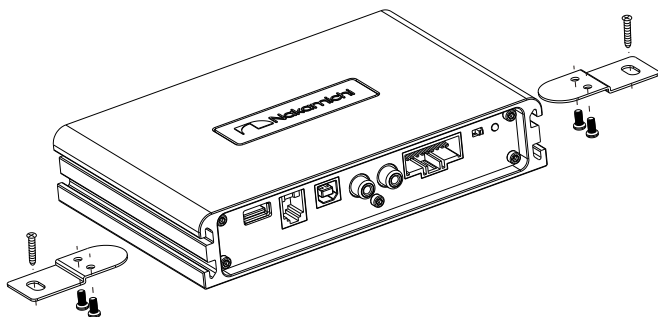
INTRODUCTION

The machine interface diagram is as follows:
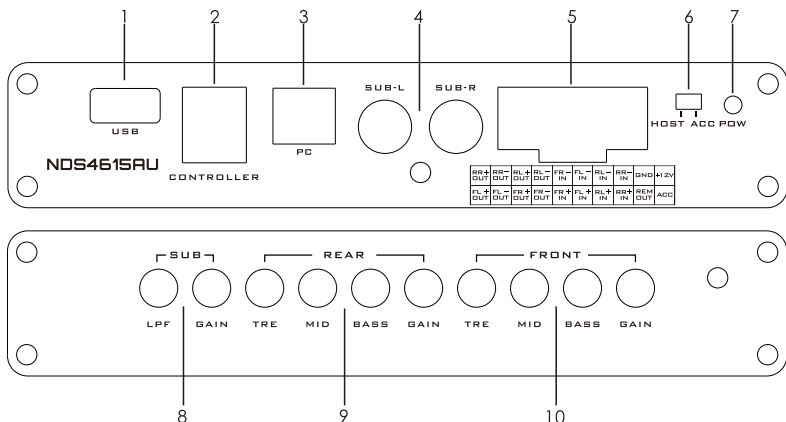
1. USB Port
   Insert the U disk, and play the songs in the U disk under the audio source of the player.
2. The controller port
   Data call and total volume adjustment can be performed by the line controller.
3. PC connection port
   USB2.0 port, no need to download the driver installation, connected to the computer sound software installed automatically.
4. AUX Low level input port
   Install a bass amplifier or subwoofer to use the RCA output of SUB-R and SUB-L to enhance the bass intensity of the audio system.
5. High level input and 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

   a. "+" is positive or positive; "-" is negative or inverted (ground).
   b. Before connecting the power supply, you must confirm that the power supply meets the designed power requirements and connect in strict accordance with the equipment instructions. Otherwise, the equipment may be damaged and may cause accidents such as fire, electric shock, etc.
6. Machine start mode switch
   When the switch is turned to the "ACC" terminal, the machine is started by ACC, and when it is turned to the "HOST" terminal, the machine is started by the high level FL+/FL- input signal.
7. Power indicator light
8. Super bass effect adjustment knob
   Adjustable gain and low pass filter.
9. Rear sound field sound effect adjustment knob
   Adjustable gain, treble, midrange, bass.
10. Front sound field sound effect adjustment knob
    Adjustable gain, treble, midrange, bass.

SOFTWARE INTRODUCTION

PC Software Operation Introduction

(PC can be downloaded from the official website (http://www.nakamichicaraudio.com, CONTACT, Downloads))

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.
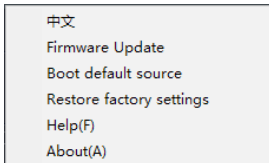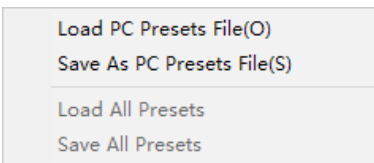
1. Menu editing area

Main functions: File and options operation.

a. Click the "File" pop-up window, and select to load the scene on you computer, save it as a scene on you computer, load the whole machine scene or save the whole machine scene.

b. Click on "Option" to select Chinese and English switching, firmware Update, boot default source, restore factory settings, help and about settings.
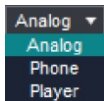

2. Function editing area
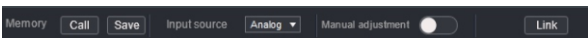
Main functions: scene, input source, hardware manual tuning and joint tuning settings.

a. Click "Call" or "Save" to recall or save 6 sets of scene data.

SOFTWARE INTRODUCTION

b. Click the drop-down box of "Input source" to select the input audio source. There are analog, Bluetooth and player options.

c. Click the "Manual adjustment" fader to switch to the hardware manual adjustment setting.

d. Click "Link" to set the synchronization method of joint debugging: copy from left to right or copy from right to left.
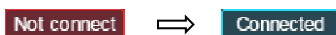
3. Main volume and software connection editing area

Main functions: master volume and computer software connection settings.

a. Main volume adjustment range: off, -59dB ~ 6dB. Click the speaker button to mute the main volume.

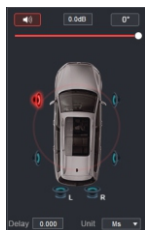b. Click the "Not Connected" button to connect the host with a PC.

4. Output channel editing area

Main function: selection of output channel.

5. Channel delay, volume, phase editing area

Main functions: output channel volume, mute, forward and reverse and delay settings.

a. Volume adjustment: Push the fader left and right to adjust the sound level, you can also enter a value or scroll the mouse wheel in the volume input box to adjust the sound level. Click the horn button to switch to mute
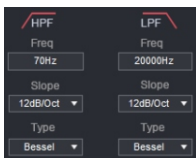
b. Positive phase adjustment: Click [0°] or [180°] to switch between positive phase and reverse phase.

c. Delay: set the delay value by scrolling the mouse wheel in the delay input box, or enter the value to set the delay value.

d. Delay Unit button: Click the drop-down list to select milliseconds, centimeters, and inches.

SOFTWARE INTRODUCTION

6. Channel divider editing area

Main Function Setup: Channel High & Low Pass Filter Setup

Adjustable: Filter Type, Frequency point and Q Value (Gradient or Slope).

7. Equalizer editing area

a. Reset EQ: It is used to restore the parameters of the 9-band equalizer to the original pass-through mode (the frequency of the equalizer, the Q value and the gain are restored to the initial value).

b. Restore EQ: Switch between the currently designed equalizer state parameters and the pass-through mode (the gain of all equalization points is restored to 0 dB, the frequency and value are unchanged).

8. Channel EQ editing area
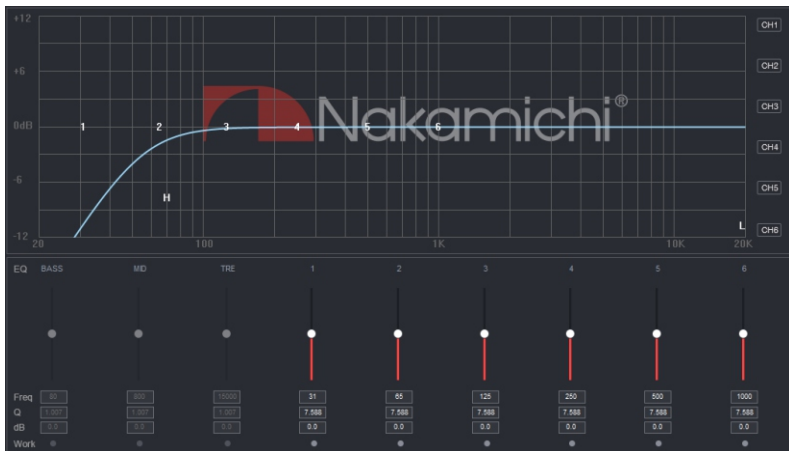
Main function: The equalization setting of the current output channel, equalization adjustable items: frequency, Q value (response bandwidth) and gain (increase or decrease the frequency response amplitude near the frequency point).
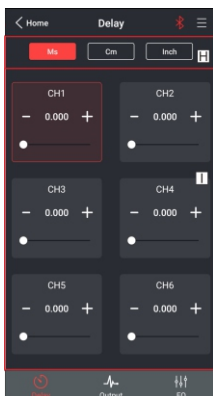
SOFTWARE INTRODUCTION(SMARTPHONE)

Smart-phone Software Operation Instruction

(APP can be downloaded from the official website(http://www.nakamichicaraudio.com, CONTACT, Downloads))

Home

Delay

1. **Home Interface**

   It can restore factory settings,hardware manual switch, power-on default sound source, share sound effects, save sound effects, turn on local sound effects, check the model and version number of the unit. Frequency mode,Audio source setting, playlist, advanced tuning interface entry and volume setting; storage and recall of 6 sets of preset scenes.

   A. Connection Status:

   Red means not connected, green means connected.

   B. Menu:

   You can perform operations such as restoring factory settings, hardware manual switching, starting default sound source, sharing sound effects, saving sound effects, opening local sound effects, and viewing the model and version number of the machine.

   C. Audio source selection:

   There are analog, Bluetooth and player options.

   D. Playlist:

   Click on the playlist to enter the player interface, you can slide left and right to adjust the total volume, the volume range:

   0 ~ 66, can play songs in the U disk.

   E. Advanced tun:

   Click [Advanced Tuning] to enter the delay interface, channel interface and EQ interface settings.

   F. Volume adjustment:

   Press and hold the volume scale clockwise or counterclockwise to adjust the volume. The main volume range is 0 ~ 66, The subwoofer range: 0 ~ 60, The medium, high and low volume range -12dB ~ + 12dB.Tap the speaker button to mute the master volume.

   G. Preset scene :

   There are 1~6 presets to choose from.

2. **Delay Interface**

   Sound field positioning output delay adjustment.

   H. Unit switching:

   Switch between milliseconds, centimeters, and inches.

   I. Delay setting:

   Click setting window of the corresponding channel. Slide the dots left and right to set the delay value. Delay settings can be made for CH1~CH6 speakers.

   Delay range: millisecond range: 0.000 ~ 5.396; cm range: 0 ~ 187; inch range: 0 ~74.

SOFTWARE INTRODUCTION(SMARTPHONE)
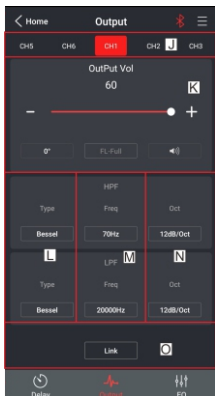
Output

EQ

3. Channel Interface
Channel selection, volume, mute, forward and reverse, high and low pass frequency setting and joint tuning operation.

J. Output channel selection:
6 channels are available.

K. Channel volume, phase:
The volume can be adjusted by sliding left and right, the volume range: 0~60, click the speaker button to mute.Forward and reverse switching.

L. Channel type:Choose from Link-Rill, Butter-W and Bessel.

M. Slope selection:
6dB/Oct,12dB/Oct and OFF can be selected.

N. Frequency Range:20Hz~20KHz.

O. Channel joint debugging settings:
Click the joint debugging button, and the joint debugging window will pop up to select the joint debugging method.

4. EQ Interface
Corresponding to the adjustment of the output channel EQ curve (gain, Q value and frequency); reset equalization, pass-through equalization or parametric equalization operation settings.

P. EQ display:
Edit the display area.

Q. Output EQ gain, Q value and frequency settings:
Output EQ gain setting: left and right

sliding screen can select EQ, you can drag the slider up and down. Select the first line value, and drag the slider bar left and right in the pop-up dialog box to adjust the adjustment range: -12dB~+12dB.
Q value: Click the second line value, and drag the slider bar left and right in the pop-up dialog box to adjust, the adjustment range is 0.404~28.852.
Frequency setting: Click the third line value, and drag the slider bar left and right in the pop-up dialog box to adjust it. The adjustment range is 20Hz~20KHz.

Q. Reset equalization, restore equalization, pass-through equalization settings:
Click [Reset EQ] to restore the parameters of the equalizer to the original pass-through mode (the equalizer frequency, Q value and gain are restored to their initial values). When there is channel adjustment, display [straight-through equalization], click [straight-through equalization], click [OK], all values (frequency, Q value and gain) will return to the initial value. At this time, the [straight-through equalization] button will become [recovery equalization]. Press the button and click [Resume Equilibrium], all values (frequency, Q value and gain) will be restored to the value before the pass-through.

SCAN OUR QR CODE OR VISIT <u>WWW.NAKAMICHICARAUDIO.COM</u>
FOR COMPLETE AUDIO SETTINGS INSTRUCTIONS

f nakamichi.global   nakamichi.caraudio

Made in China | 中國制造