

NDS6831A-II User Manual



DIGITAL SOUND PROCESSOR

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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 parts 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

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

ND\$6831A-II	1PC
User Manual	2PCS (1 Chinese, 1 English)
USB2.0 Cable(1.5m)	1PC
High-level Input Line (150mm)	1PC
Self-Tapping Oval Head Screws (4×20mm)	4PCS
Cross Head Mechanical Screws (3×6mm)	8PCS
Installation Bracket	4PCS
Velcro Securing Strap	2PRS
Allen Wrench(2.5×50.5mm)	1PC
Allen Wrench(1.5×18.8mm)	1PC

PRODUCT TECHNICAL DATA

	Product Data
Dynamic Range(RCA Input)	≥100dB
S/N RCA (Input)	≥97dB
THD	≤0.05%
Frequency Response	20Hz~20KHz
Input Impedance	High Level Input: 51Ω
Low Level Output Impedance	100Ω
Signal Input Range	RCA Input: 6.5Vpp; High Level Input: 28Vpp
Signal Output Range	RCA Output: 7.5Vpp; Amplifier: 4×50W+2×120W; Bridged: 300W
Working Temperature	-20 ~ 70 °C
Power	DC 9V~16V
REM Input	High Level Input Signal:HIN1+/HIN1- or ACC control cable
REM Output	+12V Start up Voltage Output
Standby Power	≤0.1W
Net Weight	Approx. 2.3kg
Product Dimension	246(L) *160(W) *48(H)mm

	Technical Sheet
Input Type	6 Channels High Level, 6 Channels Low Level, Optical input, With built-in Bluetooth and supported external Bluetooth dongle
Output Type	2 Channels Low Level, 1~4 Channels 50W power, 5~6 Channels 120W power
Output Gain	Gain Range: Mute, -59dB~6dB
Output Signal EQ	Sound field 31-band 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. Professional filtering types: Link-Ril, Butter-W, Bessel 2. Filtering frequency division point: 20Hz~20KHz. Resolution 1Hz 3. Filter slope (slope) setting: 6dB / Oct~48dB / 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 20.000 mill, 0 to 692 cm, 0 to 273 inch
Presets	Save up to 6 presets into the device

English

PRODUCT DIMENSION





INSTALLATION INSTRUCTION





SPEAKER WIRING GUIDE - NORMAL MODE



INTRODUCTION

The interface diagram is as follows :



1. External Digital Bluetooth Input

Connect the external Bluetooth, the LED indicator will start flashing, the indicator will stop flashing and will stay constant once you have connected your Mobile phone to the device. You can now play music on your phone, and the device will automatically change the high level input to Bluetooth Input.

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

2. USB Port, Connect to the Nakamichi PC Tuning Software

There is no need to install a software driver separately as the unit supports Plug and Play. Just plug in the unit and you can immediately start tuning.

3. The Controller Port

Volume adjustment can be performed by the in-line controller.

4. High Level Input Port

HIN1	HIN2	HIN3	HIN4	HIN5	HIN6	NC	NC	NC	NC
HIN1 +	HIN2 +	HIN3 +	HIN4 +	HIN5 +	HIN6 +	NC	NC	REM OUT	ACC

a."+" is positive or positive; "-" is negative or inverted (ground).

- b. You can use custom fit original cables, or you can also define the external wiring material by himself.
- c. 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.
- 5. Low Level Input Port

Connect up to 6 channels of speaker input.

6. Low Level Output Port

Connect up to 2 channels of speaker output.

7. 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 HIN1+/HIN1- input signal from your source unit.

- 8. Power Indicator Light
- 9. Protection Light
- 10. Power Port
- 11.25A Fuse

Two 25A Fuses.

12. Power Output Port

5, 6 Power amplifier output, can be bridged.

+	-	+	-
SPK6	SPK6	SPK5	SPK5

- 13. Bridge Indicator
- 14. Power Output Port

1~ 4 way power output.

+	-	-	+	+	-	-	+
SPK4	SPK4	SPK3	SPK3	SPK2	SPK2	SPK1	SPK1

15. Optical Port Input

Connect your source unit optical cable, switch the machine audio source to digital input, and you can start playing through the optical port.

PC Software Operation Introduction

(PC can be downloaded from the official website (http://www.nakamichicaraudio.com, CONTACT, Downloads)) Computer Configuration Requirements: Screen resolution minimum requirement is 1280 x 768, otherwise the software UI will not be shown correctly. Only suitable for Windows operating system laptop, desktop and pads.



1.Menu Editing Area

NDS6831A-II File Option

Main functions: File, options operation.

- a. Click the "File" pop-up window, and select to load the preset on you computer, save it as a preset locally, load all presets or save all presets.
- Click on "Options" to select Chinese and English languages, advanced settings, firmware update, factory reset, help and about settings.

Load PC Presets File(O) Save As PC Presets File(S)
Load All Presets
Save All Presets

中文	
Advanced	
Firmware Update	
Restore factory setting	IS
Help(F)	
About(A)	

2.Function Edit Area

Memory	Call	Save	Input source	Hi.Level 🔻	Reset	Link	Mixer	Stereo

Main functions: preset, master source, channel type, link, mixer and mode setting.

- a. Scene: 6 sets of presets can be recalled or stored.
- b. Master source: Click the input audio source drop-down list to select the input audio source. There are Optical, Phone, AUX and Hi.Level.

Optical
Phone
AUX
Hi.Level

- c. Reset: Click Reset to clear the channel type or restore the default channel type.
- d. Link: Click the Link to set the Link synchronization mode: copy from left to right or copy from right to left.
- e. Click "Mixer" to enter the mixing interface, the interface is as shown below.



f. Click on the Stereo mode to switch to the bridging mode.

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.

Not connect => Connection

4. Output channel Editing Area



Main function: configure the type of output channel.

5. Channel Delay, Volume, Phase Editing Area



- a. Push the fader left or right to adjust the setting, or enter a value or roll the mouse wheel in the volume input box to adjust the setting. Click the speaker button to switch mute modes.
- 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.

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). When the slope is 6dB/Oct.

HPF	LPF
Freq	
70Hz	20000Hz
Slope	Slope
12dB/Oct ▼	12dB/Oct ▼
Туре	Туре
Bessel 🔻	Bessel 🔻

7. Equalizer Editing Area

- a. Reset EQ: It is used to restore the parameters of the 31-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).
- c. Click PEQ Mode to switch GEQ Mode. The Q value and frequency cannot be adjusted in the PEQ Mode interface.



8. Channel EQ Area

Main function configuration: Equilibrium design of current output channel, 31-band equalization djustable: frequency, Q value (response bandwidth) and gain (increasing or decreasing the frequency response amplitude near the frequency point).



SOFTWARE INTRODUCTION

Smart-Phone Software Operation Instruction

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







Home

1. Home Interface

Restore factory settings, share sound effects, save sound effects, turn on local sound effects, check the model and version number of the unit, and exit the software operation; volume, sound source, mode settings; storage and recall of 6 sets of preset scenes.

A. Connection Status:

Red means not connected, green means connected.

B. Menu:

You can restore factory settings, share sound effects, save sound effects, turn on local sound effects, check the model and version number of this unit, and exit the software operation.

C. Volume adjustment:

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

Sound source: There are optical fiber, Bluetooth, low level and high level to choose from.

Mode: Switch between stereo mode and bridge mode.

D. Scene preset:

There are 1~6 presets to choose from.

E. Advanced settings:

Click [Advanced Settings] to enter the settings of the delay interface, channel interface, EQ interface and mixing interface.

2. Delay Interface

Sound field positioning output delay adjustment.

F. Delay setting:

Click the speaker of the corresponding channel to enter the delay setting window of the corresponding channel, and slide the dots in the corresponding direction left and right to set the delay value. Delay settings can be made for CH1 to CH8 speakers. Delay range: millisecond range: $0.000 \sim 20.000$; cm range: $0 \sim 692$; inch range: $0 \sim 273$.

G. Unit switching:

Switch between milliseconds, centimeters, and inches.

3. Channel Interface

Channel high-low-pass crossover setting with high-low-pass independent filtering. Adjustable: Filter type, frequency and Q value (slope or slope).

H.Output channel selection: 8 channels are available.

SOFTWARE INTRODUCTION





EQ

 Output channel volume setting: You can adjust the volume by sliding left and right. The volume range is 0~60. Click the speaker button to mute. Configurable output channel type, forward and reverse switching.

J. Channel type:

Choose from Linkwitz Riley, Butterworth and Bessel.

- K. Frequency Range:20Hz~20KHz.
- L. Slope selection:

6dB/Oct,12dB/Oct,18dB/Oct,24dB/Oct, 30dB/Oct,36dB/Oct,42dB/Oct,48dB/Oct and off can be selected.

M. Joint tuning and channel type settings: Click the joint tuning button to bring up the joint tuning window and select the joint tuning method. Click Reset to reset the output channel type and make the output type customizable.

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.

N. EQ display:

Edit the display area.

O. Output EQ gain, Q value and frequency settings:

Output EQ gain setting: A total of 31 EQ, left

Mixer

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.

P. Reset equalization, restore equalization, pass-through equalization settings:

Click [Reset EQ] to restore the parameters of the 31-band 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 fime, 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.

5. Mixing Interface

6 high level, 6 AUX, digital left and digital right, Bluetooth left and blue right mixing selection and adjustment can be performed. The adjusting range is 0 ~ 100.



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