Nakamichi®

NDS4610A-II

User Manual

PW-LED
FL
FR
RL
RR
SUB-L
SUB-R
AUX-OUTPUT
EXTENDED BLUETOOTH
NDS4610A-II

DIGITAL SOUND AMPLIFIER

nakamichicaraudio.com　nakamichi.global　nakamichi.caraudio

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INTRODUCTION 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

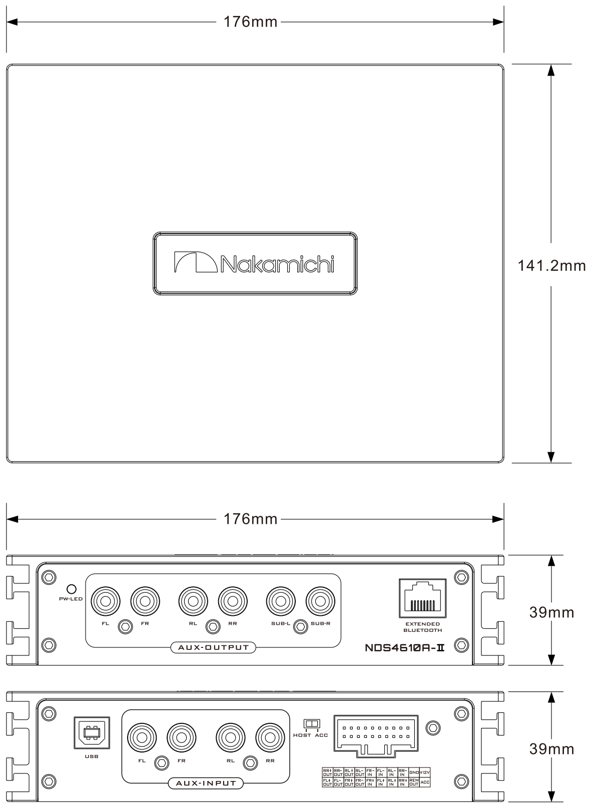
NDS4610A-II	1PC
User Manual	2PCS(1 Chinese, 1 English)
USB2.0 Cable(1.5m)	1PC
Self-Tapping Oval Head Screws (4*20mm)	4PCS
Phillips Flat Head Machine Screw (3*6mm)	8PCS
Mounting brackets	4PCS
Velcro	2PRS

PRODUCT TECHNICAL DATA

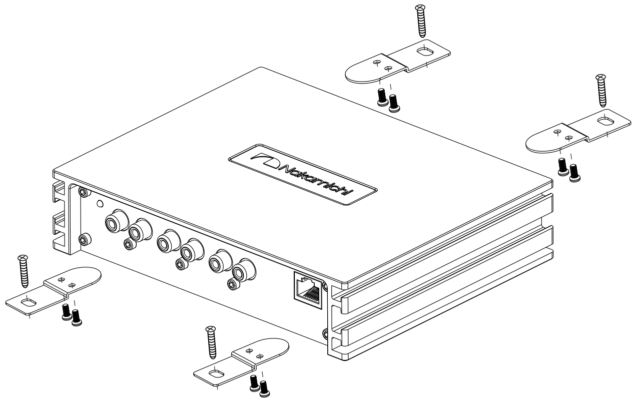
Product Data	
Dynamic Range(RCA Input)	≥100dB
S/N(RCA Input)	≥98dB
THD	≤0.05%
Frequency Response	20Hz～20KHz
Input Impedance	High Level : 240Ω; Level:12Ω
Low Level Output Impedance	100 Ω
Maximum Output Power	4CH×50W
Signal Input Range	RCA: 5.5Vpp; High Level:26Vpp
Signal Output Range	RCA: 5.5Vpp; High Level:26Vpp
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
Gross Weight	Approx. 1.2kg
Product Dimension	176(L) *141(W) *39(H)mm

Technical Sheet	
Input Type	4 Channels High Level, 4 Channels Low Level, Support built-in and external Bluetooth
Output Type	4 Channels High Level, 6 Channels Low Level
Output Gain	Gain Range: Mute, -59.9dB～0.0dB
Output Signal EQ	10 Band Equalizer Engine: 1. Frequency range: 20Hz～20kHz, 1Hz Accuracuy 2. Q value (slope): 0.404～28.85 3.Gain: -20.0dB～+ 20.0dB, 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 30dB / 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 20.000ms, 0 to 692 cm
Presets	Save 15 presets into the device

PEODUCT DIMENSIONS

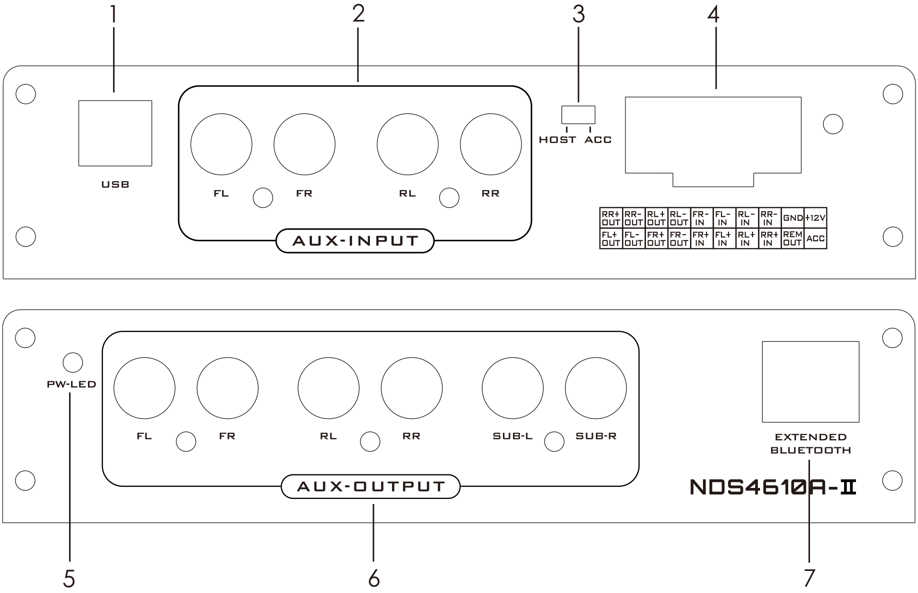

176mm
Nakamichi
141.2mm
176mm
39mm
PW-LED
FL
FR
RL
RR
SUB-L
SUB-R
AUX-OUTPUT
EXTENDED BLUETOOTH
NDS4610A-II
39mm
USB
FL
FR
RL
RR
AUX-INPUT
HOST
ACC
RR+ OUT
RR- OUT
RL+ OUT
RL- OUT
FR- IN
FL- IN
RL- IN
RR- IN
GND
+12V
FL+ OUT
FL- OUT
FR+ OUT
FR- OUT
FR+ IN
FL+ IN
RL+ IN
RR+ IN
REM OUT
ACC

INSTALLATION INSTRUCTIONS



INTRODUCTION

The machine interface diagram is as follows:


1
2
3
4
USB
FL
FR
RL
RR
AUX-INPUT
HOST ACC
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
PW-LED
FL
FR
RL
RR
SUB-L
SUB-R
AUX-OUTPUT
EXTENDED BLUETOOTH
NDS4610A-Ⅱ
5
6
7

1. **USB2.0 Port, Connect to the computer tuning software**
   No need to download the driver installation, connected to the computer sound software installed automatically.
2. **AUX Low level input port**
   Connect up to 4 channels low level input.
3. **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.
4. **High level input and output port**
   Note: Only limited to the special-purpose wire material for the special car selected by the original factory, or the external wire material defined by the user.

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

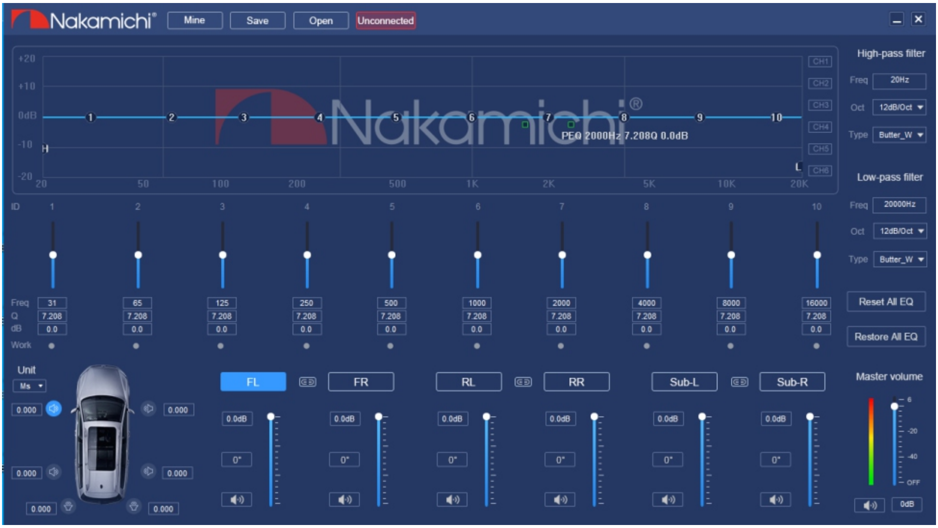
5. **Power indicator light**
6. **AUX Low level output port**
   Connect up to 6 channels of speaker output
7. **External digital Bluetooth input port**
   Connect the external Bluetooth, the LED indicator will flash, the indicator will stop flash and will be always on once you have connected your Mobile phone to the device, then you can play music in your phone, and the device will change the high level input to Bluetooth Input.

SOFTWARE INTRODUCTION

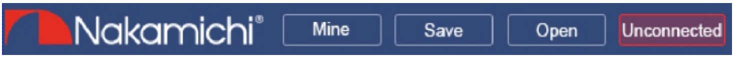
PC Software Operation Introduction

(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.

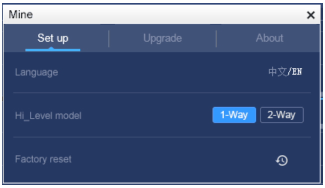

Nakamichi
Mine
Save
Open
Unconnected
PEQ 2000Hz 7.208Q 0.0dB
CH1
CH2
CH3
CH4
CH5
CH6
High-pass filter
Freq 20Hz
Oct 12dB/Oct
Type Butter_W
Low-pass filter
Freq 20000Hz
Oct 12dB/Oct
Type Butter_W
Reset All EQ
Restore All EQ
Freq
Q
dB
Work
Unit
Ms
FL
FR
RL
RR
Sub-L
Sub-R
Master volume
0dB

1. Menu editing area

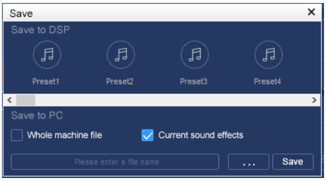

Nakamichi
Mine
Save
Open
Unconnected

Main functions: Mine, save, open and machine connection to host operations.

a. Click the "Mine" pop-up window, Chinese and English switching, Hi_level model,factory reset, firmware update and view about.

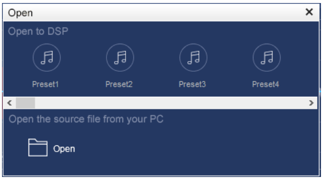

Mine
Set up
Upgrade
About
Language
中文/EN
Hi_Level model
1-Way
2-Way
Factory reset

b. Click the "Save" pop-up window to save the preset sound effects to the machine or save the sound effects to the computer.

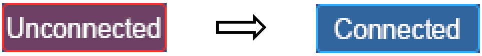

Save
Save to DSP
Preset1
Preset2
Preset3
Preset4
Save to PC
☐ Whole machine file
☑ Current sound effects
Please enter a file name
...
Save

SOFTWARE INTRODUCTION

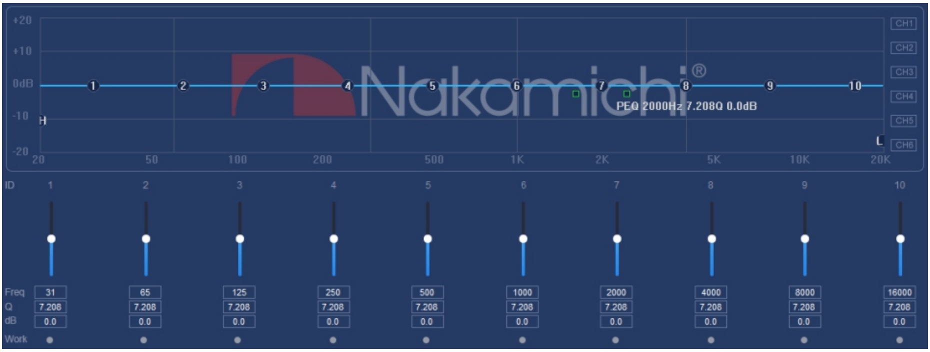
c. Click the "Open" pop-up window to open the sound effect file previously saved in the machine, or open the sound effect file stored on the computer.


Open
×
Open to DSP
Preset1
Preset2
Preset3
Preset4
Open the source file from your PC
Open

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


Unconnected
Connected

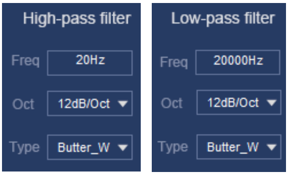
2. Channel EQ editing area


+20
+10
0dB
-10
-20
20
50
100
200
500
1K
2K
5K
10K
20K
H
L
1
2
3
4
5
6
7
8
9
10
PEQ 2000Hz 7.208Q 0.0dB
CH1
CH2
CH3
CH4
CH5
CH6
Work

ID	1	2	3	4	5	6	7	8	9	10
Freq	31	65	125	250	500	1000	2000	4000	8000	16000
Q	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208	7.208
dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Main function configuration: Equilibrium design of current output channel, 10-band equalization adjustable: frequency, Q value (response bandwidth) and gain (increasing or decreasing the frequency response amplitude near the frequency point).

3. Channel divider editing area



High-pass filter

Freq 20Hz

Oct 12dB/Oct

Type Butter_W

Low-pass filter

Freq 20000Hz

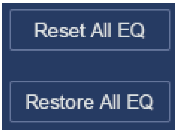
Oct 12dB/Oct

Type Butter_W

Main Function Setup: Channel High & Low Pass Filter Setup.

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

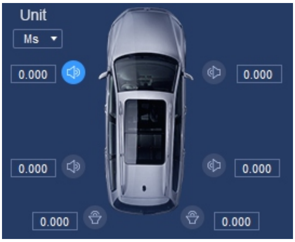
4. Equalizer editing area


Reset All EQ
Restore All EQ

SOFTWARE INTRODUCTION

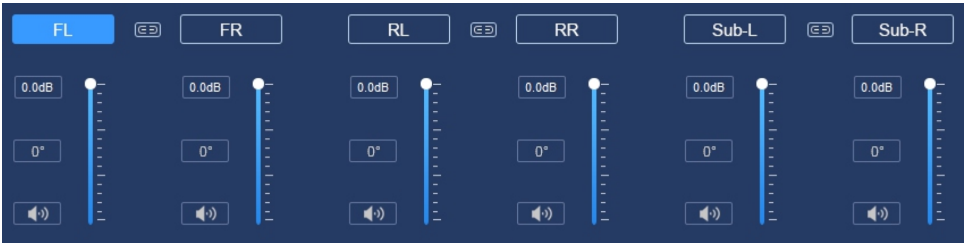
a. Reset EQ: It is used to restore the parameters of the all equalizer to the original pass-through mode (the frequency of the equalizer, the Q value and the gain are restored to the initial value).
b. Restore EQ: Switch between the currently designed equalizer state parameters and the pass-through mode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

5. Channel delay editing area



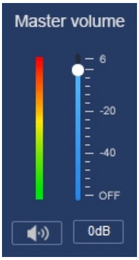
Main function:delay value setting of output channel, delay unit selection.
a. Delay Unit: Click the left and right arrows to choose between milliseconds and centimeters.
b. Delay: set the delay value by scrolling the mouse wheel in the delay input box, or enter the value to set the delay value.

6. Output channel editing area



Main functions: sound field positioning editing area, volume adjustment of each channel, positive and negative phase selection, mute and joint adjustment of left and right channels, etc.

7. Main volume editing area

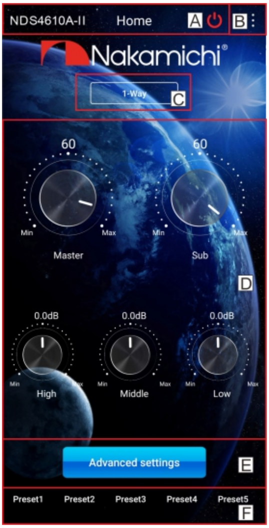


Main functions: master volume and computer software connection settings.
Main volume adjustment range: off, -59dB ~ 6dB. Click the speaker button to mute the main volume.

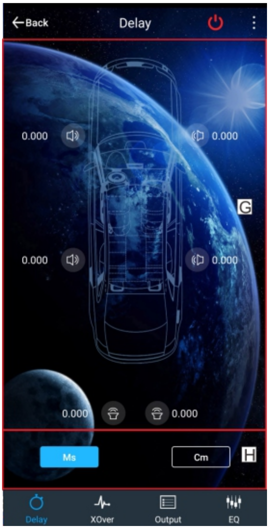
SOFTWARE INTRODUCTION(SMARTPHONE)

Smart-phone Software Operation Instruction

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


NDS4610A-II
Home
A
B
Nakamichi
1-Way
C
60
60
Min
Max
Min
Max
Master
Sub
D
0.0dB
0.0dB
0.0dB
Min
Max
Min
Max
Min
Max
High
Middle
Low
Advanced settings
E
Preset1
Preset2
Preset3
Preset4
Preset5
F

Home


Back
Delay
0.000
0.000
G
0.000
0.000
0.000
0.000
Ms
Cm
H
Delay
XOver
Output
EQ

Delay

1. Home Interface

It can 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;Frequency mode, volume settings; storage and recall of 15 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, view the model and version number of the machine, and exit the software operation.

C. Frequency mode selection:

There are full frequency and two frequency division options.

D. 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 -20dB ~ + 20dB.Tap the speaker button to mute the master volume.

E. Advanced settings

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

F. Scene preset:

There are 1~15 presets to choose from.

2. Delay Interface

Sound field positioning output delay adjustment.

G. Delay setting:

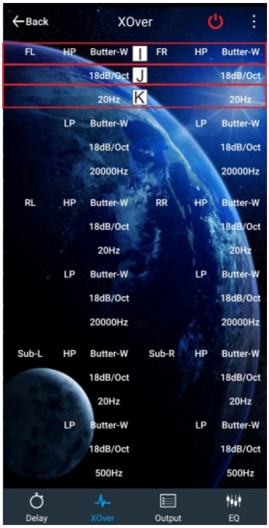
Click setting window of the corresponding channel. Slide the dots left and right to set the delay value. Delay settings can be made for CH1~ CH6 speakers.

Delay range: millisecond range: 0.000 ~ 20.000; cm range: 0 ~ 692.

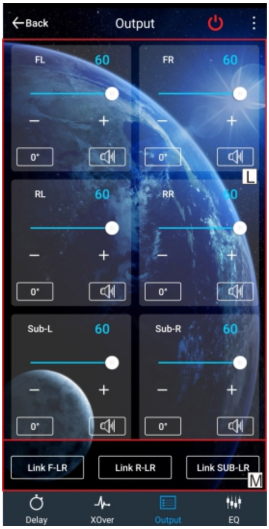
H. Unit switching:

Switch between milliseconds and centimeters.

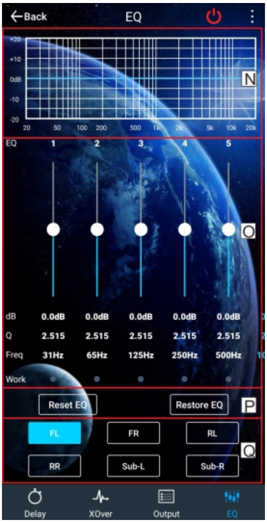
SOFTWARE INTRODUCTION(SMARTPHONE)


Back
XOver
FL HP Butter-W I FR HP Butter-W
18dB/Oct J 18dB/Oct
20Hz K 20Hz
LP Butter-W LP Butter-W
18dB/Oct 18dB/Oct
20000Hz 20000Hz
RL HP Butter-W RR HP Butter-W
18dB/Oct 18dB/Oct
20Hz 20Hz
LP Butter-W LP Butter-W
18dB/Oct 18dB/Oct
20000Hz 20000Hz
Sub-L HP Butter-W Sub-R HP Butter-W
18dB/Oct 18dB/Oct
20Hz 20Hz
LP Butter-W LP Butter-W
18dB/Oct 18dB/Oct
500Hz 500Hz
Delay
XOver
Output
EQ

XOver


Back
Output
FL 60
FR 60
RL 60
RR 60
Sub-L 60
Sub-R 60
0°
L
Link F-LR
Link R-LR
Link SUB-LR
M
Delay
XOver
Output
EQ

Ouput


Back
EQ
N
EQ 1 2 3 4 5
O
dB 0.0dB 0.0dB 0.0dB 0.0dB 0.0dB
Q 2.515 2.515 2.515 2.515 2.515
Freq 31Hz 65Hz 125Hz 250Hz 500Hz
Work
Reset EQ
Restore EQ
P
FL
FR
RL
RR
Sub-L
Sub-R
Q
Delay
XOver
Output
EQ

EQ

3. XOver Interface

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

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

J. Slope selection:
6dB/Oct,12dB/Oct,18dB/Oct,24dB/Oct, 30dB/Oct and OFF can be selected.

K. Frequency Range:20Hz~20kHz.

4. Channel interface

Channel selection, volume, mute, forward and reverse, and joint adjustment operation.

L. 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.Type selection for each output channel.

M. Channel joint debugging settings:
Click the joint debugging button to bring up the joint debugging window and select the joint debugging method. Click the reset button to reset the output channel type so that the output can be customized. Click the lock button to lock the current channel.

5. 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 10 EQ, 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: -20dB~+20dB.
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 10-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 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.

Q. CH1~CH6 channel selection.

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FOR COMPLETE AUDIO SETTINGS INSTRUCTIONS

nakamichi.global nakamichi.caraudio

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