NDS-10B

DSP BLUETOOTH MODULE

- Bluetooth V4.0 version specification, built-in 16Mb flash memory
- Using CSR's latest CVC voice enhancement technology to make noise reduction and echo cancellation.
- Support multiple audio transmission formats such as SBC, MP3, AAC, APT-X
- Built-in 16-bit stereo codec with digital mode conversion SNR up to 95dB
- Shield is used to reduce interference
- RF power level II, high quality audio, long range reception
- RoHS lead-free production process

PRODUCT CONNECTION

1. Connect the cable of the NDS-10B Bluetooth module to the DSP audio device with the external Bluetooth port. LED flashing fast indicates that the Bluetooth module is in normal startup and is not connected.

2. Open the phone Bluetooth, search for the NDS-10B module name “Nakamichi-DSP” and click the link. LED light flashes slowly: The Bluetooth module is in a successful connection with the mobile phone. The LED lights do not flash when some mobile phones are connected successfully.

3. After the mobile phone connection is successful, the mobile phone music can be transmitted through Bluetooth transmission, or can be debugged through the mobile phone DSP tuning app.

MOBILE TUNING APP INSTRUCTIONS

This APP software description uses NDS4631A as a template. For details of other models, please refer to Nakamichi's official website.

HOME INTERFACE

After the NDS4631A mobile phone software is opened, the preset enters the main interface. Audio file sharing, saving to mobile phone and other operations; can view device and software information, adjust the main volume; select the input source and the type of sound source; encrypt the tuning data; 15 groups of presets Storage and recall of scene files.

DELAY INTERFACE

Sound field positioning output channel delay adjustment

DELAY SETTING

Click the small speaker button for the corresponding orientation to set the front left, front right, rear left, rear right, left bass and right bass settings.

Adjustment range:
0~20ms, 0~692ms

UNIT SWITCHING

Switch between [ms] and [cm]
Millisecond range: 0~20;
Centimeter range: 0~692:
**XOver INTERFACE**
Channel high-low-pass crossover design with high-low-pass independent filter, adjustable: filter type, frequency and Q value [slope]

- **I. TYPE SELECTION**
  Choose from Link-RI, Bessel, Butter-W

- **J. SLOPE SELECTION**

- **K. FREQUENCY RANGE**
  20Hz ~ 20kHz

**OUTPUT INTERFACE**
Set the output channel volume, phase and setting high and low pass filters

- **L. OUTPUT CHANNEL VOLUME**
  You can adjust the volume by sliding the slider left and right. The volume range is 0~60. Mute by clicking the speaker button

- **M. PHASE SETTING**
  Switch between [0°] and [180°]

- **N. JOINT SETTING**
  Click [Link-F-LR], [Link R-LR] or [Link SUB-LR], and the selection dialog box will pop up. F-LR joint adjustment: CH1 or CH2 can be selected. R-LR joint adjustment: CH3 or CH4 can be selected. SUB-LR joint adjustment: CH5 or CH6 can be selected.

**EQ INTERFACE**
Corresponding to the adjustment of the output channel EQ curve (gain, Q value and frequency). Reset equalization, pass-through equalization or recovery equalization operation to set the mode of the equalizer.

- **O. RESET EQ**
  Click [Reset EQ] to restore the parameters of the 31-segment equalizer to the original through mode (the equalizer frequency, Q value and gain are restored to the initial value)

- **P. RESTORE EQ / BYPASS EQ**
  When the channel is adjusted, the button displays [Bypass EQ]; Click [Bypass EQ] all values (frequency, Q value and gain) will return to the initial value, and the button will display [Restore EQ]; Clicking [Restore EQ] all values (frequency, Q value and gain) will restore the value before the pass-through. At this point, the button will display [Bypass EQ]

- **Q. CHANNEL SELECTION**
  You can select from left, front right, rear left, rear right, left bass, and right bass for tuning.

**PRODUCT SPECIFICATION**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Working Frequency Band</td>
<td>2.402-2.480 GHz, ISM Band</td>
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<tr>
<td>Bluetooth</td>
<td>Bluetooth V4.0 Dual Mode</td>
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<td>Master Chip</td>
<td>CSR8870</td>
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<tr>
<td>Power Level</td>
<td>Class II</td>
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<tr>
<td>Effective Distance</td>
<td>10m for Empty Area [Typical]</td>
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<tr>
<td>Transmit Power</td>
<td>+4dBm [Typical]</td>
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<tr>
<td>Receiver Sensitivity</td>
<td>-88dB at 0.1% BER [Typical]</td>
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<tr>
<td>Frequency Deviation</td>
<td>±10K Hz</td>
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<td>Supply Voltage</td>
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<tr>
<td>Net Mass</td>
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<tr>
<td>Box Dimensions</td>
<td>60x22x90mm</td>
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**WHAT’S IN THE BOX**

- NDS-108 Bluetooth Module: 1pc
- User Manual: 2pcs {1 Chinese, 1 English}