////////ALPINE®

16-Channel High Sound Quality Audio Processor

PXE-X09

Contents

Operating Instructions

⚠ **Warning**
This symbol means important instructions. Failure to heed them can result in serious injury or death.

HALT USE IMMEDIATELY IF A PROBLEM APPEARS.
Please return the device to your authorized Alpine dealer or the nearest Alpine Service Center for repairing.

DO NOT OPERATE ANY FUNCTION THAT TAKES YOUR ATTENTION AWAY FROM SAFELY DRIVING YOUR VEHICLE.
Any function that requires your prolonged attention should only be performed after coming to a complete stop. Always stop the vehicle in a safe location before performing these functions. Failure to do so may result in an accident.

KEEP THE VOLUME AT A LEVEL WHERE YOU CAN STILL HEAR OUTSIDE NOISES WHILE DRIVING.
Excessive volume levels that obscure sounds such as emergency vehicle sirens or road warning signals (train crossings, etc.) can be dangerous and may result in an accident. Listening at loud volume levels in a car may also cause hearing damage.

DO NOT DISASSEMBLE OR ALTER.
Doing so may result in an accident, fire or electric shock.

KEEP SMALL OBJECTS SUCH AS BOLTS OR SCREWS OUT OF THE REACH OF CHILDREN.
Swallowing them may result in serious injury. If swallowed, consult a physician immediately.

USE THIS PRODUCT FOR MOBILE 12V APPLICATIONS.
Use for other than its designed application may result in fire, electric shock or other injury.

⚠ **Caution**
This symbol means important instructions. Failure to heed them can result in injury or material property damage.

PRODUCT CLEANING
Use a soft dry cloth for periodic cleaning of the Product. For more severe stains, please dampen the cloth with water only. Anything else has the chance of dissolving the paint or damaging the plastic.

TEMPERATURE
Be sure that the temperature inside the vehicle is between +60°C and -20°C before turning your unit on.

INSTALLATION LOCATION
Make sure this unit will not be installed in a location subjected to:
• Direct sunlight and heat
• High humidity and water
• Excessive dust
• Excessive vibrations

MAINTENANCE
If you have problems, do not attempt to repair the device yourself. Return it to your Alpine dealer or the nearest Alpine Service Center for repairing.

AUTHENTICATION
BLUETOOTH® word and figurative marks are the trademarks of Bluetooth SIG, Inc., and Alpine Electronics, Inc. has been duly authorized to use such trademarks.

Information to Be Known before Reading

You may use PXE-X09 mobile phone software or computer software to tune and set up the PXE-X09 device. As these two modes have different ways of control, they are described in separate sections. The specific list of functions is as below:

List of functions

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Note: Computer operation is to be done by the dealers and the manufacturer only.

List of accessories

The following accessories shall be supplied in the packing box, depending on the model you buy. If anything is not available, please notify your dealer or the manufacturer as soon as possible.

Accessory	Quantity
Bluetooth module	1
Line controller	1
Fixing bracket	4
RCA plug	16
Power cord	1
USB3.0 extension cable	1
Truss head screw	4
Round head screw	8
Owner's Manual	1

Bluetooth module × 1

Line controller × 1

Fixing bracket × 4

RCA plug × 16

Power cord × 1

USB3.0 extension cable × 1

Introduction to the Device

1. Diagram of the connectors
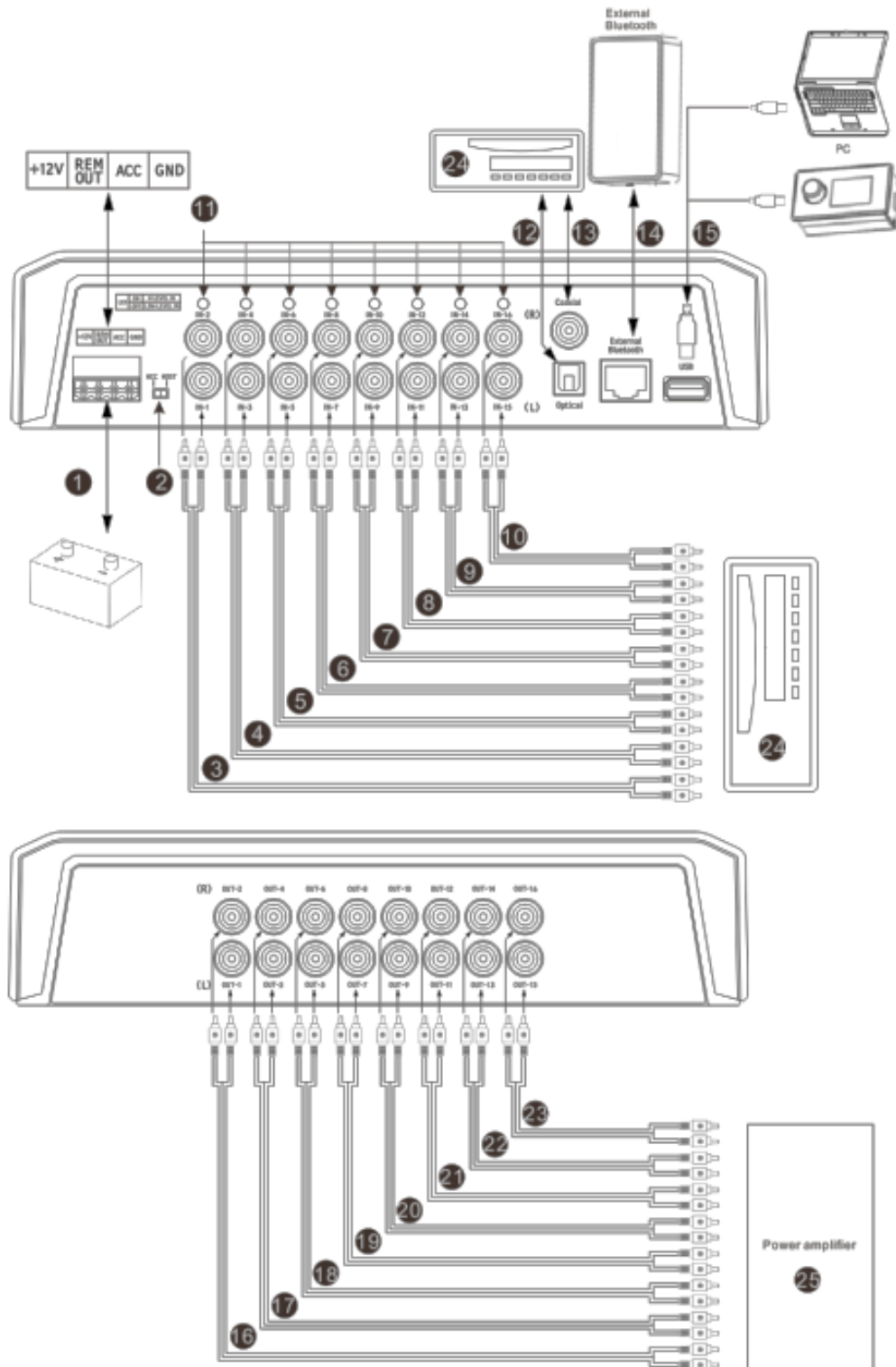
2. Introduction to the connectors and functions

① **Power connector**

+12V	REM OUT	ACC	GND

② **Input selector switch**

The device is started by ACC when the switch is in the ACC position; it is started by the high-level input signal IN-1 when the switch is in the HOST position.

③④⑤⑥⑦⑧⑨⑩ **High/low level mixed input connector**

You may set the high or low level input through a line controller, computer or mobile phone tuning software. When the input is set as high level, you may connect it to the high-level output (siren line) of an onboard CD or DVD player; when the input is set as low level, you may connect it to the low-level output (audio signal line) of an onboard CD or DVD player to play low-level signals.

⑪ **8 sets of high/low level input indicator**

When the high/low level mixed input connector is set as high level input, the LED indicator of corresponding connector will light up; when the connector is as low level input, the LED indicator of corresponding connector will not light up.

⑫ ⑬ **Optical fiber and coaxial connector**

The device plays optical fiber or coaxial digital signal when you switch the audio source to digital input by connecting it to the optical fiber or coaxial cable of an onboard CD or DVD player.

Note: Please choose the coaxial cable with impedance of 75 Ω.

⑭ **External Bluetooth connector**

Bluetooth can be used to play non-destructive music and connect PXE-X09 mobile phone tuning software. When the Bluetooth connection succeeds, the Bluetooth indicator will remain ON.

⑮ **USB 3.0 connector**

You may adjust the volume, select the audio source and recall the data by connecting the device to a compute or line controller through the USB 3.0 cable.

⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ **Low level output connector**

8 sets of low level output may connect an external power amplifier.

㉔ **Onboard CD or DVD player**

㉕ **External power amplifier**

Mobile Phone Software Operation Instructions

An iPhone user may search PXE-X09 Tuning App in the APP Store to download and install it; an Android user may directly scan the QR Code on the front cover to download and install it.

Start the PXE-X09 device when PXE-X09 APP is successfully installed on a mobile phone. Open the "Setup" screen on the mobile phone → "Start Bluetooth" → "Search device" → "DSP-HD-…", click to connect. Or directly open the mobile phone software for PXE-X09 to search Bluetooth automatically. Click to connect "DSP-HD-…". The display of 100% data synchronization means a successful connection.

Now, when you open the mobile phone software for PXE-X09, the unit will be connected automatically. **Enter the Alpine screen -> Carefully read the disclaimer, and click "Accept" to enter the homepage.**

Introduction to the interface

There are 3 control interfaces for different functions, i.e. Input, Homepage, and Output. The default is to enter the Homepage screen.

Homepage

Input   Output

Connections

1. When the Bluetooth icon [ ] shows a red color, the mobile phone Bluetooth is not connected; when it shows a green color, the mobile phone Bluetooth is connected.

2. Click [ ] to proceed the operations including [Mixer], [Signal Generator], [Input Debugging Setting], [Output Debugging Setting], [Turn-off Delay], [Configuration Wizard], [Encryption], [Share Sound Effect], [Save Sound Effect], [Local Sound Effect], [About] and [Exit].

   a. Choose [Mixer] to enter the mixer setup screen to adjust the volume of each audio source in the channels for the purpose of audio or frequency mixing.

   b. Choose [Signal Generator] to test whether the output signal works well when no music is playing. When "Generator Output" is chosen as output signal, the signal has pink noise, white noise, sinusoid or sine wave (positive half cycle). The adjustable range of volume: -60dB~0dB; the adjustable range of frequency: 20Hz~20kHz. The output is music when you choose music output as the output signal. The default is music output.

   c. Choose [Input Debugging Setting] to set the input functions to be debugged, where five options are available, i.e. Channel EQ, Crossover, Channel Phase, Channel Volume and Channel Mute.

d. Choose [Output Debugging Setting] to set the output functions to be debugged, where six options are available, i.e. Channel EQ, Crossover, Channel Delay, Channel Phase, Channel Volume and Channel Mute.

e. Choose [Turn-off Delay] to set the turn-off delay time: 0- 255s.

f. Choose [Configuration Wizard] to initiate the configuration guide for main source, high/low level input type and output type.

g. Choose [Encryption] to encrypt the adjusted sound effect data by entering a 6-digit password. The encrypted data can be decrypted by clicking [Decryption] to enter the correct password. The initial password is "888888".

h. Choose [Share Sound Effect] to select single group or complete sharing.

i. Choose [Save Sound Effect] to enter the file name and remarks and select single group or complete saving.

j. Choose [Local Sound Effect] to recall the sound effect files saved in the mobile phone.

k. Choose [About] to check the version number of the device.

l. Choose [Exit] to turn off the mobile phone software.

Input type selection

Click [Input Type] to enter the high/low level input selection screen. Swipe left/right to choose high or low level input type. Tap the [One Click Clean] button to enable the input type customization operation.

Note: The [One Click Clean] button does not work in the customization mode.

1. High level input selection

   (1) Stereo in the front sound field (2CH):
   Input 1 and 2 are front left and right full-range speakers.

   (2) 4-channel full range (4CH):
   Input 1 and 2 are front left and right full-range speakers;
   Input 3 and 4 are rear left and right full-range speakers.

   (3) 4-channel full range + front middle (5CH):
   Input 1 and 2 are front left and right full-range speakers;
   Input 3 and 4 are rear left and right full-range speakers;
   Input 5 is a front middle speaker.

   (4) 4-channel full range + subwoofer (5CH):
   Input 1 and 2 are front left and right full-range speakers;
   Input 3 and 4 are rear left and right full-range speakers;
   Input 5 is a subwoofer.

   (5) 4-channel full range + left and right subwoofer (6CH):
   Input 1 and 2 are front left and right full-range speakers;
   Input 3 and 4 are rear left and right full-range speakers;
   Input 5 and 6 are left and right subwoofers.

   (6) Front 2-way active crossover + rear full range (6CH):
   Input 1 and 2 are front left and right high-frequency speakers;
   Input 3 and 4 are front left and right medium/low-frequency speakers;
   Input 5 and 6 are rear left and right full-range speakers.

   (7) Front 2-way active crossover + rear full range + subwoofer (7CH):
   Input 1 and 2 are front left and right high-frequency speakers;
   Input 3 and 4 are front left and right medium/low-frequency speakers;
   Input 5 and 6 are rear left and right full-range speakers;
   Input 7 is a subwoofer.

   (8) 4-channel full range + front middle + left and right subwoofers (7CH):
   Input 1 and 2 are front left and right full-range speakers;
   Input 3 and 4 are rear left and right full-range speakers;
   Input 5 and 6 are left and right subwoofers;
   Input 7 is a front middle speaker.

   (9) Front 2-way active crossover + rear full range + left and right subwoofers (8CH):
   Input 1 and 2 are front left and right high-frequency speakers;
   Input 3 and 4 are front left and right medium/low-frequency speakers;
   Input 5 and 6 are rear left and right full-range speakers;
   Input 7 and 8 are left and right subwoofers.

   (10) Front 2-way active crossover + rear full range + front middle + subwoofer (8CH):
   Input 1 and 2 are front left and right high-frequency speakers;
   Input 3 and 4 are front left and right medium/low-frequency speakers;
   Input 5 and 6 are rear left and right full-range speakers;
   Input 7 is a front middle speaker;
   Input 8 is a subwoofer.

(11) Front 2-way active crossover + rear full range + front middle + left and right subwoofers (9CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers;
Input 7 and 8 are left and right subwoofers;
Input 9 is a front middle speaker.

(12) Front 3-way active crossover + rear full range + subwoofer (9CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 is a subwoofer.

(13) Front 3-way active crossover + rear full range + left and right subwoofers (10CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 and 10 are left and right subwoofers.

(14) Front 3-way active crossover + rear full range + front middle + subwoofer (10CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 is a front middle speaker;
Input 10 is a subwoofer.

(15) Front 3-way active crossover + rear full range + front middle + left and right subwoofers (11CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 and 10 are left and right subwoofers;
Input 11 is a front middle speaker.

(16) Front 3-way active crossover + rear 2-way active crossover + front middle + subwoofer (12CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right low-frequency speakers;
Input 11 is a front middle speaker;
Input 12 is a subwoofer.

(17) Front 2-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (12CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right high-frequency speakers;
Input 7 and 8 are rear left and right medium/low-frequency speakers;
Input 9 and 10 are front middle and rear middle speakers;
Input 11 and 12 are left and right subwoofers.

(18) Front 3-way active crossover + rear 2-way active crossover + front middle + left and right subwoofers (13CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are left and right subwoofers;
Input 13 is a front middle speaker.

(19) Front 3-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (14CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are front middle and rear middle speakers;
Input 13 and 14 are left and right subwoofers.

(20) Front 3-way active crossover + rear 2-way active crossover + left and right surround + front middle + rear middle + left and right subwoofers (16CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are left and right surround speakers;
Input 13 and 14 are front middle and rear middle speakers;
Input 15 and 16 are left and right subwoofers.

(21) Front 3-way active crossover + rear 3-way active crossover + front middle high-frequency + front middle + left and right subwoofers (16CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;

Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium-frequency speakers;
Input 11 and 12 are rear left and right low-frequency speakers;
Input 13 is a front middle high-frequency speaker;
Input 14 is a front middle speaker;
Input 15 and 16 are left and right subwoofers.

(22) Front 3-way active crossover + rear 3-way active crossover + front middle + rear middle + left and right subwoofers (16CH):

Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium-frequency speakers;
Input 11 and 12 are rear left and right low-frequency speakers;
Input 13 and 14 are front middle and rear middle speakers;
Input 15 and 16 are left and right subwoofers.

2. Low level input selection

(1) Stereo (2CH):
Input 1 and 2 are front left and right full-range speakers.

(2) 4 channels (4CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers.

(3) 6 channels (5.1CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 is a front middle speaker;
Input 6 is a subwoofer.

(4) 8 channels (7.1CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 is a front middle speaker;
Input 6 is a subwoofer;
Input 7 and 8 are left and right surround speakers.

3. High/low level customization

The sum of high and low level input channels is not more than 16 channels.

(1) High and low level input switching: Click [HI] or [AUX] to switch between high and low levels (the green triangle symbol means that the input is main source).

(2) Input type selection: Click [ ]. Swipe up/down to select the input channel type when a dialog box pops up. The front options are high-frequency, medium-frequency, low-frequency, medium/high-frequency, medium/low-frequency, and full-range speakers; the rear options include high-frequency, medium-frequency, low-frequency, and full-range speakers; the middle options are high-frequency, low-frequency, full-range and rear middle speakers; the subwoofer options are left subwoofer, right subwoofer, and subwoofer; the surround options include left surround and right surround speakers.

Output type selection

Click [Output Type] to enter the output type selection screen. Swipe left/right to choose the output type. Tap the [One Click Clean] button to enable the output type customization operation.

Note: The [One Click Clean] button does not work in the customization mode.

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1. **Stereo in the front sound field (2CH):**
    Output 1 and 2 are front left and right full-range speakers.
2. **4-channel full range (4CH):**
    Output 1 and 2 are front left and right full-range speakers;
    Output 3 and 4 are rear left and right full-range speakers.
3. **4-channel full range + front middle (5CH):**
    Output 1 and 2 are front left and right full-range speakers;
    Output 3 and 4 are rear left and right full-range speakers;
    Output 5 is a front middle speaker.
4. **4-channel full range + subwoofer (5CH):**
    Output 1 and 2 are front left and right full-range speakers;
    Output 3 and 4 are rear left and right full-range speakers;
    Output 5 is a subwoofer.
5. **4-channel full range + left and right subwoofers (6CH):**
    Output 1 and 2 are front left and right full-range speakers;
    Output 3 and 4 are rear left and right full-range speakers;
    Output 5 and 6 are left and right subwoofers.
6. **Front 2-way active crossover + rear full range (6CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers.
7. **Front 2-way active crossover + rear full range + subwoofer (7CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 is a subwoofer.
8. **4-channel full range + front middle + left and right subwoofers (7CH):**
    Output 1 and 2 are front left and right full-range speakers;
    Output 3 and 4 are rear left and right full-range speakers;
    Output 5 and 6 are left and right subwoofers;
    Output 7 is a front middle speaker.
9. **Front 2-way active crossover + rear full range + left and right subwoofers (8CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 and 8 are left and right subwoofers.
10. **Front 2-way active crossover + rear full range + front middle + subwoofer (8CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 is a front middle speaker;
    Output 8 is a subwoofer.
11. **Front 2-way active crossover + rear full range + front middle + left and right subwoofers (9CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 and 8 are left and right subwoofers;
    Output 9 is a front middle speaker.
12. **Front 3-way active crossover + rear full range + subwoofer (9CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 is a subwoofer.
13. **Front 3-way active crossover + rear full range + left and right subwoofers (10CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 and 10 are left and right subwoofers.
14. **Front 3-way active crossover + rear full range + front middle + subwoofer (10CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 is a front middle speaker;
    Output 10 is a subwoofer.
15. **Front 3-way active crossover + rear full range + front middle + left and right subwoofers (11CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 and 10 are left and right subwoofers;
    Output 11 is a front middle speaker.
16. **Front 3-way active crossover + rear 2-way active crossover + front middle + subwoofer (12CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right low-frequency speakers;
    Output 11 is a front middle speaker;
    Output 12 is a subwoofer.

17. **Front 2-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (12CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right low-frequency speakers;
Output 5 and 6 are rear left and right high-frequency speakers;
Output 7 and 8 are rear left and right low-frequency speakers;
Output 9 and 10 are front middle and rear middle speakers;
Output 11 and 12 are left and right subwoofers.

18. **Front 3-way active crossover + rear 2-way active crossover + front middle + left and right subwoofers (13CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right medium-frequency speakers;
Output 5 and 6 are front left and right low-frequency speakers;
Output 7 and 8 are rear left and right high-frequency speakers;
Output 9 and 10 are rear left and right low-frequency speakers;
Output 11 and 12 are left and right subwoofers;
Output 13 is a front middle speaker.

19. **Front 3-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (14CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right medium-frequency speakers;
Output 5 and 6 are front left and right low-frequency speakers;
Output 7 and 8 are rear left and right high-frequency speakers;
Output 9 and 10 are rear left and right low-frequency speakers;
Output 11 and 12 are front middle and rear middle speakers;
Output 13 and 14 are left and right subwoofers.

20. **Front 3-way active crossover + rear 2-way active crossover + left and right surround + front middle + rear middle + left and right subwoofers (16CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right medium-frequency speakers;
Output 5 and 6 are front left and right low-frequency speakers;
Output 7 and 8 are rear left and right high-frequency speakers;
Output 9 and 10 are rear left and right medium/low-frequency speakers;
Output 11 and 12 are left and right surround speakers;
Output 13 and 14 are front middle and rear middle speakers;
Output 15 and 16 are left and right subwoofers.

21. **Front 3-way active crossover + rear 3-way active crossover + front middle high-frequency + front middle + left and right subwoofers (16CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right medium-frequency speakers;
Output 5 and 6 are front left and right low-frequency speakers;
Output 7 and 8 are rear left and right high-frequency speakers;

Output 9 and 10 are rear left and right medium-frequency speakers;
Output 11 and 12 are rear left and right low-frequency speakers;
Output 13 is a front middle high-frequency speaker;
Output 14 is a front middle speaker;
Output 15 and 16 are left and right subwoofers.

22. **Front 3-way active crossover + rear 3-way active crossover + front middle + rear middle + left and right subwoofers (16CH):**
Output 1 and 2 are front left and right high-frequency speakers;
Output 3 and 4 are front left and right medium-frequency speakers;
Output 5 and 6 are front left and right low-frequency speakers;
Output 7 and 8 are rear left and right high-frequency speakers;
Output 9 and 10 are rear left and right medium-frequency speakers;
Output 11 and 12 are rear left and right low-frequency speakers;
Output 13 and 14 are front middle and rear middle speakers;
Output 15 and 16 are left and right subwoofers.

23. **Customizing the output type**
Choose the number of output channels from 1~16.
Click [ ]. Swipe up/down to set the output channel type when a dialog box pops up. The front options are high-frequency, medium-frequency, low-frequency, medium/high-frequency, medium/low-frequency, and full-range speakers; the rear options include high-frequency, medium-frequency, low-frequency, and full-range speakers; the middle options are high-frequency, low-frequency, full-range and rear middle speakers; the subwoofer options are left subwoofer, right subwoofer, and subwoofer; the surround options include left surround and right surround speakers.

Crossover setup

Click the icon [ ] under EQ to enter the EQ Edit and Crossover Setup screen. The crossover debugging section has high pass and low pass adjustment.


1. Type setup: Linkwitz-Riley, Bessel, and Butterworth.

2. Frequency setup: The frequency can be set by swiping left/right or pressing the "+" or "-" button. The adjustable range: 20Hz~20000Hz.

3. Slope (gradient) setup: The options include 6dB/Oct, 12dB/Oct, 18dB/Oct, 24dB/Oct, 30dB/Oct, 36dB/Oct, 42dB/Oct, and 48dB/Oct.
Note: When the slope is 6dB/Oct, the type shows "blank".

Channel EQ setup

1. Input EQ Edit section

   Input EQ has two interfaces: "Graphic Equalizer" and "Parametric Equalizer".
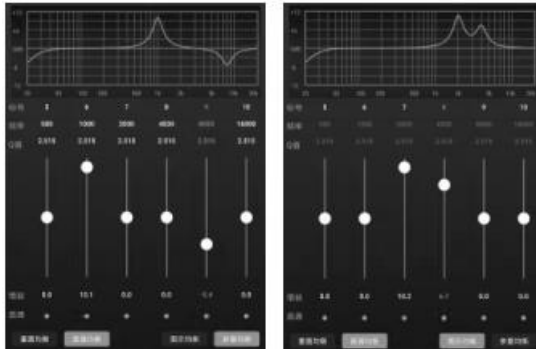
Parametric Equalizer   Graphic Equalizer

There are 10 adjustable EQ segments for input. Adjust gain by dragging the slider up/down or clicking the gain value and dragging the slider left/right when the gain adjustment window pops up or pressing the "+"/ "-" button; adjust Q value by clicking the Q value and dragging the slider left/right when the Q value adjustment window pops up or pressing the "+"/ "-" button; adjust frequency by clicking the frequency value and dragging the slider left/right when the frequency adjustment window pops up or pressing the "+"/ "-" button.
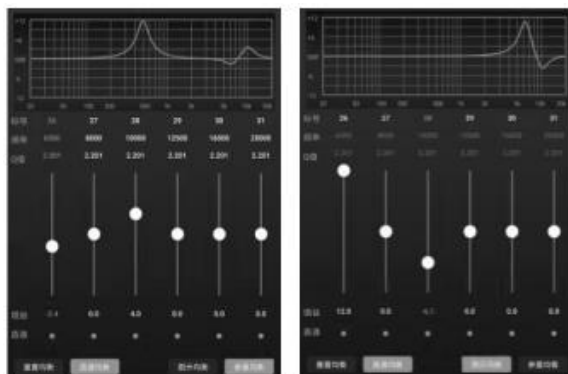
Adjustable range of frequency: 20Hz~20kHz

Adjustable range of Q value: 0.404~28.852

Adjustable range of gain: -12.0 dB ~+12.0 dB

Note: On the Graphic Equalizer screen, gain is adjustable while frequency and Q value are non-adjustable; on the Parametric Equalizer screen, frequency, Q value and gain are all adjustable.

2. Output EQ Edit section

   Output EQ has two interfaces: "Graphic Equalizer" and "Parametric Equalizer".


Parametric Equalizer   Graphic Equalizer

There are 31 adjustable EQ segments for output. The frequency, Q value and gain adjustment method and range for output EQ are the same as input EQ.

Equalizer setup

1. When adjusting EQ, the "Pass through Equalizer" button appears.

2. Pass through Equalizer: When the channel equalizer turns on, the button [ ] shows up. Click [Pass through Equalizer] to disable all equalizers of the current channel (pass through).

3. When clicking "OK", the button returns to [Recover Equalizer] status [ ]. When clicking [Recover Equalizer] again, all equalizers of the current channel return to the previous ON status.

   Note: The data shown upon clicking the "Pass through Equalizer" button can be recovered by clicking "Recover Equalizer"; the data shown upon clicking the Pass-through Small Dot cannot be recovered by clicking "Recover Equalizer".

4. When clicking [Reset Equalizer] [ ], the parameters of all equalizers for the current channel return to their initial status: Input Q Value = 2.515, Output Q Value = 2.201, Gain = 0.0dB.

5. You can switch to [Graphic Equalizer] by clicking [Parametric Equalizer]. In the Parametric Equalizer mode, frequency, Q value and gain are adjustable. However, in the Graphic Equalizer mode, only the gain of equalizer can be adjusted while frequency and Q value are fixed.
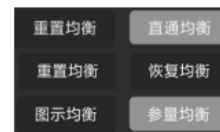
Setting channel phase and volume

Click the icon [ ] under Volume. When a dialog box pops up, you can set the volume and positive/negative phase switching of channels.

1. Phase: Click the positive phase icon [ ] or the negative phase icon [ ] to achieve positive/negative phase switching.

2. Volume: Swipe the screen or click "+" or "-" to adjust the volume. The adjustable range: -60dB~6dB.

3. Mute: Click the siren icon [ ] to mute the channels [ ].

Channel debugging setting

From the options, choose the input and output functions to be debugged jointly.

Click the debugging button [ ]. When the options pop up, set the debugging group of the channel. The debugging button shows the debugging group [ ] set currently. The channels with the same number are in a debugging group.

Delay setting

Click the delay button [ ] to set the output signal delay.

1. Delay unit: millisecond, centimeter, inch;
   Delay range: 0.000~20.000 ms; 0~692 cm; 0~273 in.
2. When clicking the icon, the Delay Setup window pops up. Drag the slider left/right or press the "+" or "-" button to set delay.

Setting the presets

The device has memory space for 6 groups of preset sound effect. You can save and recall the sound effect data and swipe left/right to select the presets.

Setting the master volume and audio source

The output signal master volume adjustment, audio source selection and display sections.

1. Adjusting the master volume: Drag the volume slider up/down or press the "+" or "-" button to adjust the volume. The adjustable range: 0~35. The default is 27.
2. Mute button: Click the siren button [ ] to mute the total volume [ ]. Click the button again to cancel Mute (when you adjust the total volume, Mute is cancelled automatically).
3. Main source selection: Click the button under Main Source. When a window pops up, select the main source: optical fiber, coaxial cable, Bluetooth, high level or low level.
4. Auxiliary source selection: Auxiliary source is similar to audio mixing.
   (1) The more attenuation main source has, the less master volume becomes. The adjustable options: 30%, 50%, 80%, 100% and OFF.
   (2) Click the button under Auxiliary Source. When a window pops up, choose the overlapped source: optical fiber, coaxial cable, Bluetooth, high level, low level or OFF.
   Notes: An auxiliary source cannot overlap with the current input source. Otherwise, the auxiliary source will not work. Optical fiber and coaxial cable cannot be jointly available for overlap.

Copy and paste function

When holding the Input or Output Channel section, the Copy screen pops up. Choose the channel to be copied, and click "OK" to copy EQ, volume and mute of the channel.

Computer Software Operation Instructions

This function may be used by the manufacturer and dealers only.
After installing the PXE-X09 software on a computer, you may tune and set up the PXE-X09 unit from the computer.

Software installation precautions

- The software may be used in the Microsoft® Windows® system only.
  Recommended specifications
  Operating system: Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10
  CPU: 1.6GHz or higher
  Memory card: 1GB or more
  Hard disc: 512MB or more available space
  Computer resolution: 1280*768 or higher
- Please properly install the PXE-X09 computer software before connecting the PXE-X09 unit to a computer.
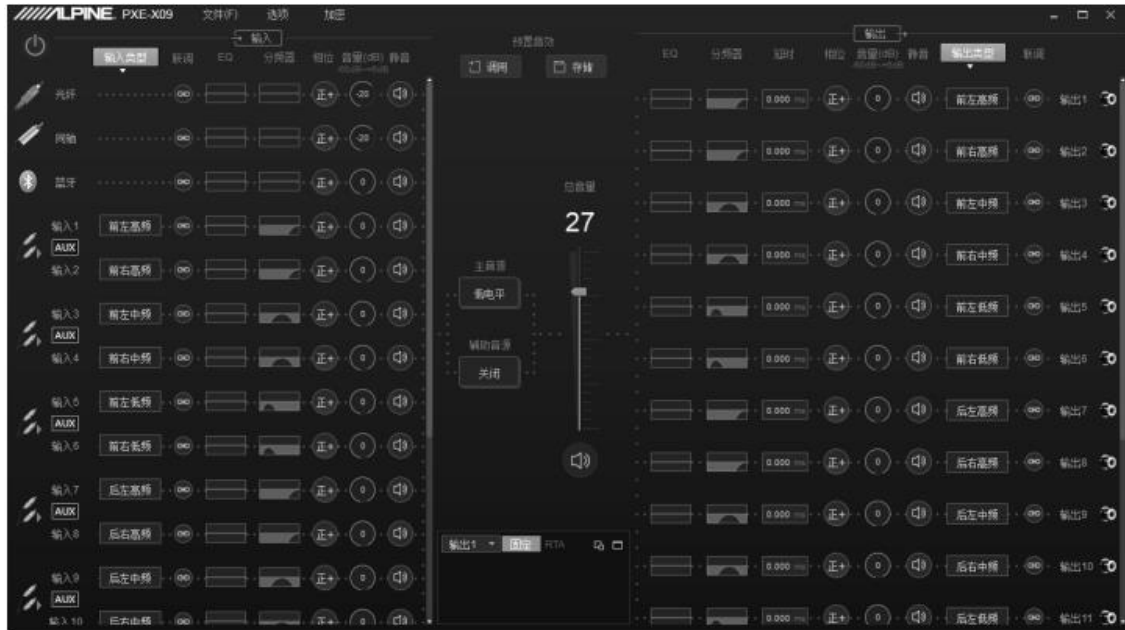
Introduction to the interface

Turn on the PXE-X09 computer software to enter the startup interface.
Choose the main source, high/low level input or output mode or skip this step to enter the tuning interface.

Startup Interface

Homepage

Connections

1. Before the unit is connected, the connection icon appears red [⏻]; when the unit is successfully connected, the connection icon appears green [⏻].

2. Menu section: File, Option, and Encryption.

(1) Touch [File]:

a. Choose [Upload scenario file in computer]: Upload a scenario file previously stored in computer as current working scenario of the unit;

b. Choose [Save as scenario file in computer]: Store current working scenario of the unit in computer for future recall;

c. Choose [Upload scenarios of the whole unit]: Upload the data files of the whole unit previously stored in computer to the unit (data files of the whole unit include all data such as current working scenario, preset scenarios of the unit, and output channel configuration data), i.e. duplicating all data of the previously debugged unit to the unit currently connected;
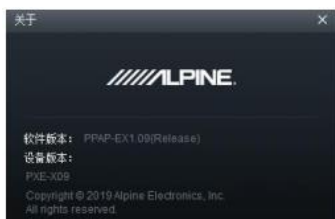
d. Choose [Save scenarios of the whole unit]: Save all data of the connected unit as computer files (data files of the whole unit include all data such as current working scenario, preset scenarios of the unit, and output channel configuration data) for future recall in case of whole unit duplication. This operation will not change any data of the currently connected unit;

e. Choose [Print] to directly print the current output configuration list, export PDF files or edit the configuration list.

(2) Touch [Option]:

a. Choose [Mixer] to enter the mixer setup screen, where you may adjust the volume of each audio source in the channels for the purpose of audio or frequency mixing.

b. Choose [Signal Generator] to test whether the output signal works well when no music is playing. When "Generator Output" is chosen as output signal, the signal has pink noise, white noise, sinusoid or sine wave (positive half cycle). The adjustable range of volume: -60dB~0dB; the adjustable range of frequency: 20Hz~20kHz. The default is music output.

When the dialog box pops up, enter a 6-digit password to encrypt the well-tuned sound effect data. The data to be encrypted include EQ frequency, Q value and gain as well as delay, channel, corresponding equalizer and other tuning data. Only the currently used set of sound effect data is encrypted. Not all data of the whole unit are encrypted. The encrypted sound effect data can be stored as presets or computer files. Neither reproduction nor transfer influences the encryption status. The encrypted data can be decrypted by clicking [Decryption] to enter the correct password. The initial password is "888888".

Note: Please keep the password firmly in mind. The data cannot be decrypted if you forget the password.

Input type selection

Click [Input Type] to enter the high/low level input selection screen. Scroll the mouse wheel or drag the scroll bar to choose high or low level input type. Tap the [One Click Clean] button to enable the input type customization operation.

Note: The [One Click Clean] button does not work in the customization mode.

c. Choose [Input Debugging Setting] to set the input functions to be debugged, where five options are available, i.e. Channel EQ, Crossover, Channel Phase, Channel Volume and Channel Mute.

d. Choose [Output Debugging Setting] to set the output functions to be debugged, where six options are available, i.e. Channel EQ, Crossover, Channel Delay, Channel Phase, Channel Volume and Channel Mute.

e. Choose [Advanced Setting] to turn on or off the flowing water light, and set the turn-off delay time: 0- 255s.

f. Choose [Configuration Wizard] to initiate the configuration guide for high/low level input type and output type.

g. Choose [Firmware upgrade]. When a dialog box pops up, choose the upgrading file and click the "Upgrade" button to upgrade the firmware. When the upgrading progress reaches 100%, it means a successful firmware upgrading. Click [OK] to exit firmware upgrade. When the upgrade is finished, the unit will make an automatic restart.

h. Choose [Restore factory settings]. All settings of the unit will return to the factory default.

i. Choose [Language] to switch between Chinese and English languages.

j. Choose [About] to check the version number of the unit.

(2) Click [Encryption]:

1. High level input selection

    (1) Stereo in the front sound field (2CH):
        Input 1 and 2 are front left and right full-range speakers.

    (2) 4-channel full range (4CH):
        Input 1 and 2 are front left and right full-range speakers;
        Input 3 and 4 are rear left and right full-range speakers.

    (3) 4-channel full range + front middle (5CH):
        Input 1 and 2 are front left and right full-range speakers;
        Input 3 and 4 are rear left and right full-range speakers;
        Input 5 is a front middle speaker.

    (4) 4-channel full range + subwoofer (5CH):
        Input 1 and 2 are front left and right full-range speakers;
        Input 3 and 4 are rear left and right full-range speakers;
        Input 5 is a subwoofer.

(5) 4-channel full range + left and right subwoofer (6CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 and 6 are left and right subwoofers.

(6) Front 2-way active crossover + rear full range (6CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers.

(7) Front 2-way active crossover + rear full range + subwoofer (7CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers;
Input 7 is a subwoofer.

(8) 4-channel full range + front middle + left and right subwoofers (7CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 and 6 are left and right subwoofers;
Input 7 is a front middle speaker.

(9) Front 2-way active crossover + rear full range + left and right subwoofers (8CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers;
Input 7 and 8 are left and right subwoofers.

(10) Front 2-way active crossover + rear full range + front middle + subwoofer (8CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers;
Input 7 is a front middle speaker;
Input 8 is a subwoofer.

(11) Front 2-way active crossover + rear full range + front middle + left and right subwoofers (9CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right full-range speakers;
Input 7 and 8 are left and right subwoofers;
Input 9 is a front middle speaker.

(12) Front 3-way active crossover + rear full range + subwoofer (9CH):
Input 1 and 2 are front left and right high-frequency speakers;

Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 is a subwoofer.

(13) Front 3-way active crossover + rear full range + left and right subwoofers (10CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 and 10 are left and right subwoofers.

(14) Front 3-way active crossover + rear full range + front middle + subwoofer (10CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 is a front middle speaker;
Input 10 is a subwoofer.

(15) Front 3-way active crossover + rear full range + front middle + left and right subwoofers (11CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right full-range speakers;
Input 9 and 10 are left and right subwoofers;
Input 11 is a front middle speaker.

(16) Front 3-way active crossover + rear 2-way active crossover + front middle + subwoofer (12CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right low-frequency speakers;
Input 11 is a front middle speaker;
Input 12 is a subwoofer.

(17) Front 2-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (12CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium/low-frequency speakers;
Input 5 and 6 are rear left and right high-frequency speakers;
Input 7 and 8 are rear left and right medium/low-frequency speakers;
Input 9 and 10 are front middle and rear middle speakers;
Input 11 and 12 are left and right subwoofers.

(18) Front 3-way active crossover + rear 2-way active crossover + front middle + left and right subwoofers (13CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are left and right subwoofers;
Input 13 is a front middle speaker.

(19) Front 3-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (14CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are front middle and rear middle speakers;
Input 13 and 14 are left and right subwoofers.

(20) Front 3-way active crossover + rear 2-way active crossover + left and right surround + front middle + rear middle + left and right subwoofers (16CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium/low-frequency speakers;
Input 11 and 12 are left and right surround speakers;
Input 13 and 14 are front middle and rear middle speakers;
Input 15 and 16 are left and right subwoofers.

(21) Front 3-way active crossover + rear 3-way active crossover + front middle high-frequency + front middle + left and right subwoofers (16CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium-frequency speakers;
Input 11 and 12 are rear left and right low-frequency speakers;
Input 13 is a front middle high-frequency speaker;
Input 14 is a front middle speaker;
Input 15 and 16 are left and right subwoofers.

(22) Front 3-way active crossover + rear 3-way active crossover + front middle + rear middle + left and right subwoofers (16CH):
Input 1 and 2 are front left and right high-frequency speakers;
Input 3 and 4 are front left and right medium-frequency speakers;
Input 5 and 6 are front left and right low-frequency speakers;
Input 7 and 8 are rear left and right high-frequency speakers;
Input 9 and 10 are rear left and right medium-frequency speakers;
Input 11 and 12 are rear left and right low-frequency speakers;
Input 13 and 14 are front middle and rear middle speakers;
Input 15 and 16 are left and right subwoofers.

2. Low level input selection

(1) Stereo (2CH):
Input 1 and 2 are front left and right full-range speakers.

(2) 4 channels (4CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers.

(3) 6 channels (5.1CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 is a front middle speaker;
Input 6 is a subwoofer.

(4) 8 channels (7.1CH):
Input 1 and 2 are front left and right full-range speakers;
Input 3 and 4 are rear left and right full-range speakers;
Input 5 is a front middle speaker;
Input 6 is a subwoofer;
Input 7 and 8 are left and right surround speakers.

3. High/low level customization

The sum of high and low level input channels is not more than 16 channels.

(1) High and low level input switching: Click [HI] or [AUX] to switch between high and low levels (the green triangle symbol means that the input is main source).

(2) Input type selection: Click [ ]. Set the input type when the Input Type Setup window pops up.

The front options are high-frequency, medium-frequency, low-frequency, medium/high-frequency, medium/low-frequency, and full-range speakers; the rear options include high-frequency, medium-frequency, low-frequency, and full-range speakers; the middle options are high-frequency, low-frequency, full-range and rear middle speakers; the subwoofer options are left subwoofer, right subwoofer, and subwoofer; the surround options include left surround and right surround speakers.

Output type selection

Click [Output Type] to enter the output mode setup screen. Scroll the mouse wheel or drag the scroll bar to choose output type. Tap the [One Click Clean] button to enable the output type customization operation.

Note: The [One Click Clean] button does not work in the customization mode.

1. **Stereo in the front sound field (2CH):**
   Output 1 and 2 are front left and right full-range speakers.
2. **4-channel full range (4CH):**
   Output 1 and 2 are front left and right full-range speakers;
   Output 3 and 4 are rear left and right full-range speakers.
3. **4-channel full range + front middle (5CH):**
   Output 1 and 2 are front left and right full-range speakers;
   Output 3 and 4 are rear left and right full-range speakers;
   Output 5 is a front middle speaker.
4. **4-channel full range + subwoofer (5CH):**
   Output 1 and 2 are front left and right full-range speakers;
   Output 3 and 4 are rear left and right full-range speakers;
   Output 5 is a subwoofer.
5. **4-channel full range + left and right subwoofers (6CH):**
   Output 1 and 2 are front left and right full-range speakers;
   Output 3 and 4 are rear left and right full-range speakers;
   Output 5 and 6 are left and right subwoofers.

6. **Front 2-way active crossover + rear full range (6CH):**
   Output 1 and 2 are front left and right high-frequency speakers;
   Output 3 and 4 are front left and right medium/low-frequency speakers;
   Output 5 and 6 are rear left and right full-range speakers.
7. **Front 2-way active crossover + rear full range + subwoofer (7CH):**
   Output 1 and 2 are front left and right high-frequency speakers;
   Output 3 and 4 are front left and right medium/low-frequency speakers;
   Output 5 and 6 are rear left and right full-range speakers;
   Output 7 is a subwoofer.
8. **4-channel full range + front middle + left and right subwoofers (7CH):**
   Output 1 and 2 are front left and right full-range speakers;
   Output 3 and 4 are rear left and right full-range speakers;
   Output 5 and 6 are left and right subwoofers;
   Output 7 is a front middle speaker.
9. **Front 2-way active crossover + rear full range + left and right subwoofers (8CH):**
   Output 1 and 2 are front left and right high-frequency speakers;
   Output 3 and 4 are front left and right medium/low-frequency speakers;
   Output 5 and 6 are rear left and right full-range speakers;
   Output 7 and 8 are left and right subwoofers.
10. **Front 2-way active crossover + rear full range + front middle + subwoofer (8CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 is a front middle speaker;
    Output 8 is a subwoofer.
11. **Front 2-way active crossover + rear full range + front middle + left and right subwoofers (9CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium/low-frequency speakers;
    Output 5 and 6 are rear left and right full-range speakers;
    Output 7 and 8 are left and right subwoofers;
    Output 9 is a front middle speaker.
12. **Front 3-way active crossover + rear full range + subwoofer (9CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 is a subwoofer.
13. **Front 3-way active crossover + rear full range + left and right subwoofers (10CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 and 10 are left and right subwoofers.

14. **Front 3-way active crossover + rear full range + front middle + subwoofer (10CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 is a front middle speaker;
    Output 10 is a subwoofer.

15. **Front 3-way active crossover + rear full range + front middle + left and right subwoofers (11CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right full-range speakers;
    Output 9 and 10 are left and right subwoofers;
    Output 11 is a front middle speaker.

16. **Front 3-way active crossover + rear 2-way active crossover + front middle + subwoofer (12CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right low-frequency speakers;
    Output 11 is a front middle speaker;
    Output 12 is a subwoofer.

17. **Front 2-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (12CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right low-frequency speakers;
    Output 5 and 6 are rear left and right high-frequency speakers;
    Output 7 and 8 are rear left and right low-frequency speakers;
    Output 9 and 10 are front middle and rear middle speakers;
    Output 11 and 12 are left and right subwoofers.

18. **Front 3-way active crossover + rear 2-way active crossover + front middle + left and right subwoofers (13CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right low-frequency speakers;
    Output 11 and 12 are left and right subwoofers;
    Output 13 is a front middle speaker.

19. **Front 3-way active crossover + rear 2-way active crossover + front middle + rear middle + left and right subwoofers (14CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right low-frequency speakers;
    Output 11 and 12 are front middle and rear middle speakers;
    Output 13 and 14 are left and right subwoofers.

20. **Front 3-way active crossover + rear 2-way active crossover + left and right surround + front middle + rear middle + left and right subwoofers (16CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right medium/low-frequency speakers;
    Output 11 and 12 are left and right surround speakers;
    Output 13 and 14 are front middle and rear middle speakers;
    Output 15 and 16 are left and right subwoofers.

21. **Front 3-way active crossover + rear 3-way active crossover + front middle high-frequency + front middle + left and right subwoofers (16CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right medium-frequency speakers;
    Output 11 and 12 are rear left and right low-frequency speakers;
    Output 13 is a front middle high-frequency speaker;
    Output 14 is a front middle speaker;
    Output 15 and 16 are left and right subwoofers.

22. **Front 3-way active crossover + rear 3-way active crossover + front middle + rear middle + left and right subwoofers (16CH):**
    Output 1 and 2 are front left and right high-frequency speakers;
    Output 3 and 4 are front left and right medium-frequency speakers;
    Output 5 and 6 are front left and right low-frequency speakers;
    Output 7 and 8 are rear left and right high-frequency speakers;
    Output 9 and 10 are rear left and right medium-frequency speakers;
    Output 11 and 12 are rear left and right low-frequency speakers;
    Output 13 and 14 are front middle and rear middle speakers;
    Output 15 and 16 are left and right subwoofers.

23. **Customizing the output mode:**
   Choose the number of output channels from 1~16.

Click [空]. Set the output mode when a dialog box pops up. The front options are high-frequency, medium-frequency, low-frequency, medium/high-frequency, medium/low-frequency, and full-range speakers; the rear options include high-frequency, medium-frequency, and full-range speakers; the middle options are high-frequency, medium-frequency, and full-range speakers; the subwoofer options are left subwoofer, right subwoofer, and subwoofer; the surround options include left surround and right surround speakers.

Crossover setup

Click the icon [▬] under Crossover to enter the Crossover Edit window. The crossover debugging section has high pass and low pass adjustment.
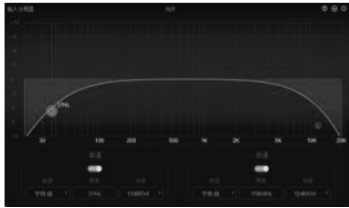
1. Type setup: Linkwitz-Riley, Bessel, and Butterworth.

2. Frequency setup: The frequency can be adjusted by directly entering a figure, scrolling the mouse wheel, pressing the up/down button on the keyboard or clicking "H" or "L" and holding the left mouse button to drag it. The adjustable range: 20Hz~20000Hz.

3. Slope (gradient) setup: Options in the dropdown include 6dB/Oct, 12dB/Oct, 18dB/Oct, 24dB/Oct, 30dB/Oct, 36dB/Oct, 42dB/Oct, and 48dB/Oct.
   Note: When the slope is 6dB/Oct, the type shows "blank".

Channel EQ setup

Click the icon [▬] under EQ to enter the EQ Edit window.

1. Input EQ Edit section

   Input EQ has two interfaces: "Graphic Equalizer" and "Parametric Equalizer".
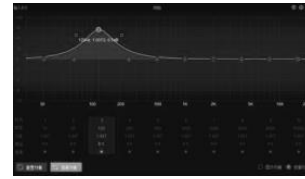
Parametric Equalizer

Graphic Equalizer

There are 10 adjustable EQ segments for input. When the mouse is moved to the desired digit, drag up/down to adjust the equalizer gain and drag left/right to adjust the equalizer frequency; when the mouse is moved to the left/right green box, press the left/right button and drag the slider to adjust the Q value of equalizer. You can also set the frequency, Q value and gain by directly entering a figure, scrolling the mouse wheel, or pressing the up/down button on the keyboard.
Adjustable range of frequency: 20Hz~20kHz;
Adjustable range of Q value: 0.404~28.852;
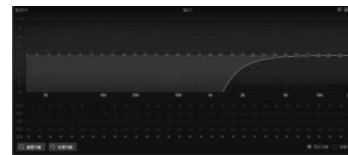Adjustable range of gain: -12 dB ~+12 dB
Note: On the Graphic Equalizer screen, gain is adjustable while frequency and Q value are non-adjustable; on the Parametric Equalizer screen, frequency, Q value and gain are all adjustable.

2. Output EQ Edit section

   Output EQ has two interfaces: "Graphic Equalizer" and "Parametric Equalizer".
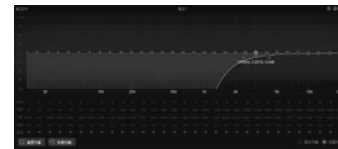

Parametric Equalizer

Graphic Equalizer

There are 31 adjustable EQ segments for output. The frequency, Q value and gain adjustment method and range for output EQ are the same as input EQ.

Equalizer setup

1. When adjusting EQ, the "Pass through Equalizer" button appears.
2. Pass through Equalizer: When the channel equalizer turns on, the button [直通均衡] shows up. Click [Pass through Equalizer] or Pass-through Small Dot to disable all equalizers of the current channel (pass through).
3. When clicking "OK", the button returns to [Recover Equalizer] status [恢复均衡]. When clicking [Recover Equalizer] again, all equalizers of the current channel return to the previous ON status. **Note: The data shown upon clicking the "Pass through Equalizer" button can be recovered by clicking "Recover Equalizer"; the data shown upon clicking the Pass-through Small Dot cannot be recovered by clicking "Recover Equalizer".**
4. When clicking [Reset Equalizer], the parameters of all equalizers for the current channel return to their initial status: Frequency distributed evenly, Input Q Value = 2.515, Output Q Value = 2.201, Gain = 0.0dB.
5. When clicking [Parametric Equalizer], the alert "Switch from GEQ to PEQ?" pops up. Pressing OK will switch to [Graphic Equalizer]. When clicking [Graphic Equalizer], the alert "Switch from PEQ to GEQ?" pops up. Pressing OK will switch to [Parametric Equalizer]. In the Parametric Equalizer mode, frequency, Q value and gain are adjustable. However, in the Graphic Equalizer mode, only the gain of equalizer can be adjusted while frequency and Q value are fixed.

Setting channel phase and volume
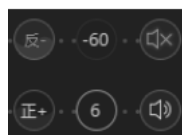
1. Phase: Click the positive phase icon [正+] or the negative phase icon [反-] to achieve positive/negative phase switching. When moving the mouse to phase icon, you can directly view the phase curve.

2. Volume: You can set the channel volume by directly entering a figure, scrolling the mouse wheel, or pressing the up/down button on the keyboard. The default is 0 dB (adjustable range: -60dB~6dB).
3. Mute: Click the siren icon [🔊] to mute the channels [🔇].

Channel debugging setting

Five functions are optional for input debugging setting, i.e. Channel EQ, Crossover, Channel Mute, Channel Phase, and Channel Volume; six functions are optional for output debugging setting: Channel EQ, Crossover, Channel Mute, Channel Phase, Channel Volume, and Channel Delay.

1. Setting the function to be debugged:
   (1) Set the input or output function to be debugged among the options;
   (2) When clicking debugging setting by touching the right mouse button in the Input Channel section, the Input Debugging Setting window pops up. When clicking debugging setting by touching the right mouse button in the Output Channel section, the Output Debugging Setting window pops up.

2. Debugging setting: Click the debugging button [调试]. Set the debugging group of the channel from the options that pop up. The debugging button displays the currently set debugging group [1]. The channels with identical number are debugging channels.

Delay setting

When clicking the delay button [0.052 ms], the output signal delay adjustment section pops up.
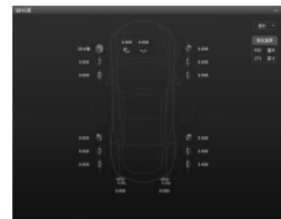
1. Delay unit: millisecond, centimeter, inch;
   Delay range: 0.000~20.000 ms; 0~692 cm; 0~273 in.

2. Adjust the delay by directly entering a figure, scrolling the mouse wheel, or pressing the up/down button on the keyboard.

Setting the presets

Recall and store the presets. Click [Recall] or [Store] to set 6 groups of presets.

Setting the master volume and audio source

The output signal master volume adjustment, audio source selection and display sections.

1. Adjusting the master volume: Press the left mouse button to drag the volume slider up/down or scroll the mouse wheel to adjust the volume. The adjustable range: 0~35. The default is 27.
2. Mute button: Click the siren button [ ] to mute the total volume [ ]. Click the button again to cancel Mute (when you adjust the total volume, Mute is cancelled automatically).
3. Main source selection: Click the button under Main Source. When a window pops up, select the main source: optical fiber, coaxial cable, Bluetooth, high level or low level.
4. Auxiliary source selection: Auxiliary source is similar to audio mixing.
   (1) The more attenuation main source has, the less master volume becomes. The adjustable options: 30%, 50%, 80%, 100% and OFF.
   (2) Click the button under Auxiliary Source. When a window pops up, choose the auxiliary source: optical fiber, coaxial cable, Bluetooth, high level, low level or OFF.

Notes: When the current source is selected, an auxiliary source cannot overlap with such source. Otherwise, the auxiliary source will not work. Optical fiber and coaxial cable cannot be jointly available for overlap.
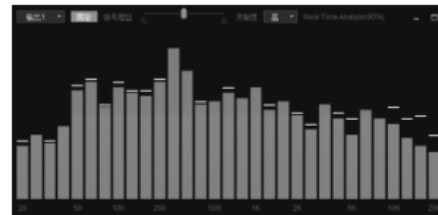
Copy and paste function

In the Output or Input Channel section, click the right mouse button to copy the EQ, volume and Mute of a channel, and paste the EQ, volume and Mute of the said channel to another channel.
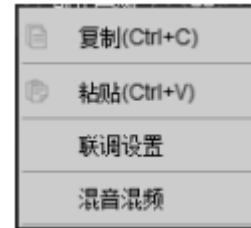
Dynamic display of output channel frequency spectrum

This window displays the output channel frequency spectrum dynamics.

1. Display window: The window can be maximized or zoomed in/out freely.
2. Select the display channel:
   (1) Output: Click the dropdown menu to choose the output channel spectrum dynamics.
   (2) Fixed: Only the spectrum dynamics of currently selected output channel is displayed. It cannot switch to other output channels.
   (3) Follow: It follows the mouse-clicked output channel to switch-display the spectrum dynamics of selected output channel.
   (4) Signal gain: Pressing and holding the mouse to drag the slider left/right can adjust the signal gain.
   (5) Sensitivity: high, medium, low. The higher sensitivity, the more sensitive spectrum.

Line Controller Operation Instructions

This line controller only suits PXE-X09. Before use, correctly connect the line controller to the unit. Be sure the controller can start up the unit properly.

Startup screen

When the line controller starts up the unit normally, it displays the dynamic startup screen as shown in Figure 1.

Figure 1

VOLUME

When the startup finishes, it enters the line controller homepage --- VOLUME as shown in Figure 2-1. Turn the knob to adjust the master volume. A clockwise rotation increases volume, and an anticlockwise rotation reduces volume within the adjustable range of 0~35. Moreover, the line controller is designed to realize Mute operation by short press on the VOLUME screen. The Mute screen is shown in Figure 2-2.

Figure 2-1   Figure 2-2

MAIN SOURCE

Press the knob in homepage for 2~5 seconds to enter the MAIN SOURCE screen as shown in Figure 3. Turn the knob to select main source: optical fiber (Optical), coaxial cable (Coaxial), Bluetooth (BT), high level (Hi.L) or low level (AUX).
Note: The line controller is designed to automatically exit this screen if no operation is performed for approximately 5 seconds and return to the line controller homepage (VOLUME screen).

Figure 3

MIX SOURCE

After selecting the main source, short press the knob to enter the MIX SOURCE screen as shown in Figure 4-1. Turn the knob to select auxiliary source: optical fiber (Optical), coaxial cable (Coaxial), Bluetooth (BT), high level (Hi.L) or low level (AUX). It automatically exits this screen if no operation is performed for approximately 5 seconds and returns to the line controller homepage (VOLUME screen).

Figure 4-1

Note:
(1) When the current source input mode is selected, an auxiliary source cannot overlap with such source. Otherwise, the auxiliary source will not work, as shown in Figure 4-2;
(2) Optical fiber and coaxial cable cannot be jointly available for overlap;
(3) If the software sets the MIX SOURCE function to OFF, the MIX SOURCE screen of the line controller displays "MIX Source closed!" as shown in Figure 4-3.

Figure 4-2   Figure 4-3

SUB W

After selecting MIX SOURCE, short press the knob to enter the SUB W screen as shown in Figure 5. Turn the knob of line controller to adjust subwoofer volume. A clockwise rotation increases volume, and an anticlockwise rotation reduces volume within the adjustable range of 0~15. It automatically exits this screen if no operation is performed for approximately 5 seconds and returns to the line controller homepage (VOLUME screen).
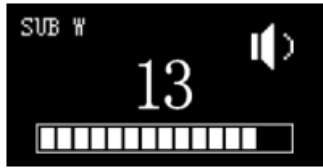
Figure 5

PRESET

After adjusting SUB W, short press the knob to enter the PRESET screen as shown in Figure 6-1. On the screen, the number following PRESET represents the sound effect data currently recalled by the unit.

Figure 6-1

Turn the knob to select the desired sound effect. When the cursor moves to corresponding number, short press the preset button to recall it directly, as shown in Figure 6-2. After the Preset is recalled, it automatically exits this screen and returns to the line controller homepage (VOLUME screen).
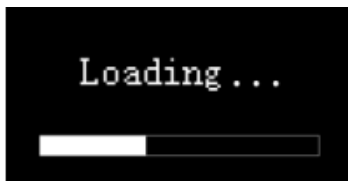

Figure 6-2

Technical Parameter Index

1. Technical specifications

Dynamic range	≥110dB
Signal-to-noise ratio	≥100dB
Noise floor	≤32uVrms
Channel separation	≥110dB
Total harmonic distortion	≤0.005%
Input voltage	High level: 26Vpp; AUX: 8Vpp
Output voltage	8Vpp
AUX input/output sensitivity	1:1 (no power amplification)
Frequency response	20Hz~20kHz
System sampling ratio	24bit/96kHz
Optical fiber/coaxial input sampling ratio	28kHz~216kHz
Input impedance	High level: 240Ω; AUX: 47KΩ
Output impedance	51Ω
Operating voltage	9~16V
Quiescent current	≤3mA (when the unit is OFF)
Standby power consumption	≤0.1W
REM startup input	High level (IN-1) or ACC optional
REM startup output	12V (0.2A)
Startup time	7s
Ambient temperature	-20~60°C
Storage temperature	-40~85°C
Gross weight	2.14kg
Dimensions	246.9mm×211.1mm×58.0mm
Line controllers' screen size	14.7mm×29.42mm

2. Functional parameters

Input signal	16-channel RCA/high-level mixed input, optical fiber/coaxial cable/Bluetooth signal input
Output signal	16-channel RCA audio signal output
Input/output signal gain	Range: Mute, 0 ~ 35
Input/output signal equalizer	Type: Graphic Equalizer and Parametric Equalizer Frequency: 20Hz ~ 20kHz, with a resolution ratio of 1Hz Q value (slope or gradient): 0.404 ~ 28.852 Gain: -12.0dB ~ +12.0dB, with a resolution ratio of 0.1dB
Input/output signal crossover	Each input/out channel equipped with independent high/low-pass filter up to the 8th order Filter type: Linkwitz-Riley, Bessel, Butterworth Filter crossover point: 20Hz ~ 20kHz, with a resolution ratio of 1Hz Filter slope (gradient): 6dB/Oct ~ 48 dB/Oct
Input/output phase	Positive or negative phase (0°/180°)
Output delay	0.000~20.000 ms, 0~692 cm, 0~273 in.
Preset	The unit can store 6 groups of preset sound effect data