HIGH-RESOLUTION WIRELESS DIGITAL SOUND PROCESSOR

PXE-X09

Contents

Operation Instructions

Warning

Warning

This symbol is intended to alert you. It may cause serious injury or death if neglected by you.

Please immediately stop using the product if any problem occurs.

Please send the product to the designated Alpine dealers or nearby Alpine service centers for repairing.

Do not use any functions that may divert your attention when driving.

Only use such functions that distract you when the car stops. Make sure that you park your car in a safe place before using such functions. Otherwise, it may cause accidents.

Keep the audio volume to a level that will not block out outside traffic noises.

It's dangerous or may cause accidents, if the audio volume is too loud to hear the sirens of emergency vehicles or road sirens (e.g. at the intersection of railway line). In addition, loud sound may hurt your hearing.

Do not disassemble or modify the product.

Otherwise, it may cause accidents, fire or electric shock.

Keep children away from small parts, such as bolts and screws.

Swallowing them may result in serious injury. In case of swallow, please consult a physician immediately.

This product only applies to 12 V -type vehicles.

Otherwise, it may cause fire, electric shock or other injury.

Attention

This symbol is intended to alert you. It may cause injury or damage devices if you don't pay attention.

Important Instructions

Product Cleaning

Please clean the product by a dry soft cloth regularly. Clean the product only with a soft cloth dampened with water, if the dirt is not easily removed. Other solvents may be soluble.

Temperature

Please ensure the in-vehicle temperature between +60°C and -20°C before use.

Maintenance

Should you meet any problems, please do not attempt to undertake repairs yourself. Please send the product to Alpine dealers or nearby Alpine service centers for repairing.

Installation Location

Do not install PXE-X09 in the following places:

- Under the direct Sunlight or near heating sources
- A very humid place or near water source
- Dusty place
- A place of violent vibration

Attention

Alpine is not liable for any documents loss, including lost documents when using this product.

Precautions

You can use PXE-X09 mobile phone app or PC software to tune and set up the PXE-X09. The control with the two methods differs slightly and thus will be discussed in different chapters. The function list is as follows:

Function List

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Note: Operations on PC are only available to dealers and the manufacturer.

List of Accessories

The packing shall include the following accessories; if any of them is missing, please contact your dealer or the manufacturer as soon as possible.

Accessories	Quantity
Bluetooth module	1 (set)
Wired Controller	1 (set)
Fixing support	4 (pcs)
PCA connector	16 (pcs)
Power cable	1 (pc)
USB 3.0 cable	1 (pc)
Truss head screw	4 (pcs)
Round head screw	8 (pcs)
Manual	1

Bluetooth module ×1

Wired Controller ×1

Fixing support ×4

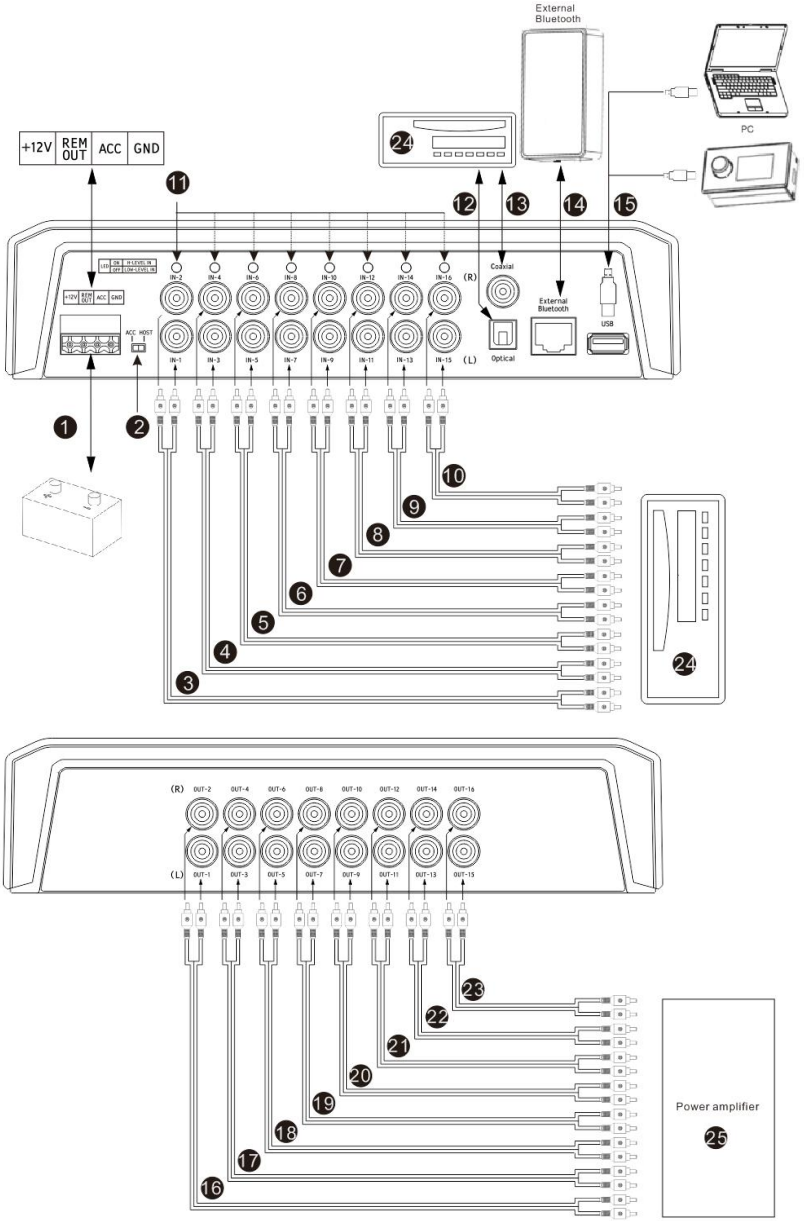
PCA connector ×16

Power cable ×1

USB 3.0 cable ×1

Introduction to the DSP

1. Connections



2. Introduction to the Connectors and Functions

① Power Connector

+12V	REM OUT	ACC	GND

② Input selection switch

When the switch is turned to “ACC”, the DSP will be started by ACC; when the switch is turned to “HOST”, the DSP will be started by high level input signal IN-1.

③④⑤⑥⑦⑧⑨⑩ High and low level mixed input Connectors

The high or low level inputs can be set through the wired controller, PC or mobile phone app. When it is set to the high level, it can be connected with the high level output (speakers) of in-car CD or DVD players; when it is set to low level, it can be connected with the low level output (audio signals) of in-car CD or DVD players to play low level signals.

⑪ 8 groups of low-level input indicators

When the high and low level mixed input connector is set to high level input, the LED indicator of the corresponding connection is on; when it is set to low level input, the LED indicator of the corresponding connection is off.

⑫⑬ Optical and Coaxial Connections

When the optical or coaxial input cable of in-car CD or DVD player is connected, the sound source of the DSP is switched to digital input, and optical or coaxial digital signals can be played. Note: Please use coaxial cables with the impedance of 75Ω.

⑭ External Bluetooth interface

Lossless music can be played through Bluetooth connection. Start the PXE-X09 mobile phone app and turn the Bluetooth of your mobile phone; the Bluetooth indicator is on.

⑮ USB 3.0 Connection

You can use a USB 3.0 cable to connect with PC or the wired controller to adjust the volume, select sound source and load data.

⑯⑰⑱⑲⑳㉑㉒㉓ Low level output connections

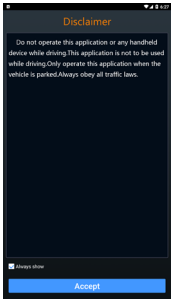
8 groups of low level outputs that can be connected to the external power amplifier.

㉔ Car CD or DVD player

㉕ External power amplifier

Mobile Phone App Instructions

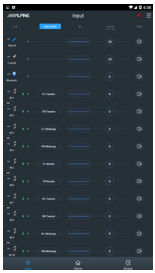
For iPhone users, search and download PXE-X09 Tuning App from App Store; for Android users, please scan the QR code on the cover, download and installed the app.
After the PXE-X09 app is installed, start PXE-X09. Open “Settings” → “Turn on Bluetooth” → “Search Devices” → “DSP-HD-...” from your mobile phone and click to connect. Or directly start the app to search Bluetooth automatically, and click to connect “DSP-HD-...”; when it progresses to 100%, the connection is established successfully.
Then start the PXE-X09 app on your phone, it will connect to the DSP automatically. **It will enter the Alpine startup page. Read the Disclaimer carefully and then click “Accept” to enter the main interface.**



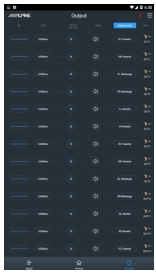
Introduction to the Main Interface

There are 3 control interfaces: Input, Home and Output. The default page is Home.

Home interface



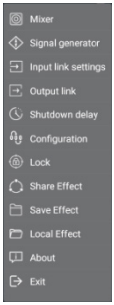
Input interface



Output interface

Connecting to the DSP

1. If the Bluetooth icon “” is red, it indicates the Bluetooth is not connected; if it is green, it indicates that the Bluetooth is connected.
2. Click “” to enter “Mixer”, “Signal generator”, “Input link settings”, “Output link”, “Shutdown delay”, “Configuration wizard”, “Lock”, “Share effect”, “Save effect”, “Local effect”, “About”, and “Exit”.
   a. Select “Mixer” to enter the mixer setting interface. You can adjust the volume of each sound source of channels to carry out the mixing.
   b. Select “Signal generator” to test output signals when no music is played. When “Generator output” is selected for the output signal, pink noise, white noise, sinusoid and sinusoid (positive half-cycle) occur. Volume range: -60 dB-0 dB; frequency range: 20 Hz-20 kHz. When music is selected, the music will be played. Music output is set by default.



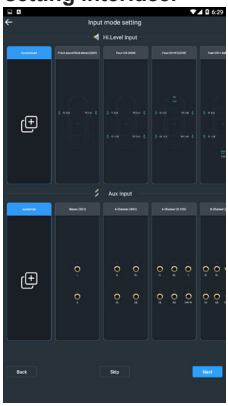
   c. Select “Input link settings” to set the function to be tuned. There are five options: Channel EQ, X-Over, Channel phase, Channel volume, and Channel mute.
   d. Select “Output link settings” to set the function to be tuned. There are six options: Channel EQ, X-Over, Channel delay, Channel phase, Channel volume, and Channel mute.

e. Select “Shutdown delay” to set the shutdown delay. The range of the shutdown delay: 0-255s.
f. Select “Configuration wizard” to enter the wizard for configuring the main sound source, input mode, and output mode.
g. Select “Lock” to enter a 6-digit password to encrypt the tuned sound effect data. Click “Unlock” to enter the correct password to decrypt the locked data. The initial password is “888888”.
h. Select “Share effect” to share a sound effect or all sound effects.
i. Select “Save effect” to enter the file name and notes and save a sound effect or all sound effects.
j. Select “Local effect” to load the sound effect files stored on your phone.
k. Select “About” to check the device version.
l. Select “Exit” to close the app.

Setting the Input Mode

Click “Input mode” to enter the high level and low level input setting interface. Select the high level or low level input mode by moving the slider left or right. Click “Clear all” to enter the customization operation interface.

Note: the “Clear all” button is invalid in the customized setting interface.



1. High level input selection:
   (1) Front Sound Field Stereo (2CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range.
   (2) Four-CH (4CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range.
   (3) Four-CH + FC (5CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
   IN 5 is set to Subwoofer.
   (4) Four-CH + Left and Right FC (6CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
   Left and Right channels of IN 5 and 6 are set to Subwoofer.
   (5) Two Front Channels + Rear Channels (6CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range.
   (6) Two Front Channels + Rear Channels + FC (7CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
   IN 7 is set to Subwoofer.
   (7) Two Front Channels + Rear Channels + Left and Right FC (8CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
   Left and Right channels of IN 7 and 8 are set to Subwoofer.
   (8) Two Front Channels + Rear Channels + Center Channel + Left and Right FC (9CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
   Left and Right channels of IN 7 and 8 are set to Subwoofer;
   IN 9 is the center channel and set to Full-range.
   (9) Two Front Channels + Rear Channels + Center Channel + FC (8CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;

Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
IN 7 is the center channel and set to Full-range;
In 8 is set to Subwoofer.

(10) Three Front Channels + Two Rear Channels + Center Channel + FC (12CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Woofer;
IN 11 is the center channel and set to Full-range;
IN 12 is set to Subwoofer.

(11) Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (13CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Woofer;
Left and Right channels of IN 11 and 12 are set to Subwoofer;
IN 13 is the center channel and set to Full-range.

(12) Three Front Channels + Rear Channels + Center Channel + FC (10CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
IN 9 is the center channel and set to Full-range;
IN 10 is set to Subwoofer.

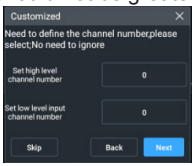
(13) Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (11CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
Rear Left and Rear Right channels of IN 9 and 10 are set to Subwoofer;
IN 11 is the center channel and set to Full-range.

(14) Three Front Channels + Rear Channels + FC (9CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
IN 9 is set to Subwoofer.

(15) Three Front Channels + Rear Channels + Left and Right FC (10CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
Left and Right channels of IN 9 and 10 are set to Subwoofer.

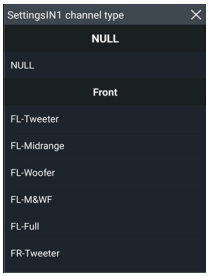
(16) Three Front Channels + Three Rear Channels + Center Channel High/Low + Left and Right FC (16CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Midrange;
Rear Left and Rear Right channels of IN 11 and 12 are set to Woofer;
IN 13 is the center channel and set to Tweeter;
IN 14 is the center channel and set to Woofer;
Left and Right channels of IN 15 and 16 are set to Subwoofer.

2. Low level input selection:
   (1) Stereo (2CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range.
   (2) Four-CH (4CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range.
   (3) Six-CH (5.1CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
   IN 5 is the center channel and is set to Full-range
   IN 6 is set to Subwoofer.
   (4) Eight-CH (7.1CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
   IN 5 is the center channel and is set to Full-range;
   IN 6 is set to Subwoofer;
   IN 7 and 8 are left and right surround.
3. Customization of high level and low level
   The sum of the number of high level channels and the number of low level channels should not be greater than 16.



(1) Shift between high and low level inputs: Click “HI” or “AUX” to shift between high level and low level inputs (the green triangle symbol indicates the input mode is the main sound source).

(2) Input mode selection: Click “NULL” and select the input channel type from the popup dialog box by moving the slider up and down. For front channels, options include Tweeter, Midrange, Woofer, Mid-tweeter, Mid-bass, and Full-range; for rear channels, options include Tweeter, Midrange, Woofer, and Full-range; FC options include left subwoofer and right subwoofer, and subwoofer; surround options include left and right surround.



Setting the Output Mode

Click “Output Mode” to enter the output mode setting interface. Select the output mode by moving the slider left and right. Click “Clear all” to enter the customization operation interface.
Note: the “Clear all” button is invalid in the customized setting interface.

1. **Front Sound Field Stereo (2CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range.
2. **Four-CH (4CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range.
3. **Four-CH + FC (5CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range;
   OUT 5 is set to Subwoofer.

4. **Four-CH + Left and Right (6CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range;
   Left and Right channels of OUT 5 and 6 are set to Subwoofer.
5. **Two Front Channels + Rear Channels (6CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range.
6. **Two Front Channels + Rear Channels + FC (7CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   OUT 7 is set to Subwoofer.
7. **Two Front Channels + Rear Channels + Left and Right FC (8CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   Left and Right channels of OUT 7 and 8 are set to Subwoofer.
8. **Two Front Channels + Rear Channels + Center Channel + Left and Right FC (9CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 4 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   Left and Right channels of OUT 7 and 8 are set to Subwoofer;
   OUT 9 is the center channel and set to Full-range.
9. **Two Front Channels + Rear Channels + Center Channel + FC (8CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   OUT 7 is the center channel and set to Full-range;
   OUT 8 is set to Subwoofer.
10. **Three Front Channels + Two Rear Channels + Center Channel + FC (12CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
    Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
    Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
    Rear Left and Rear Right channels of OUT 9 and 10 are set to Woofer;
    OUT 11 is the center channel and set to Full-range;
    OUT 12 is set to Subwoofer.
11. **Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (13CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
    Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
    Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
    Rear Left and Rear Right channels of OUT 9 and 10 are set to Woofer;
    Left and Right channels of OUT 11 and 12 are set to Subwoofer;
    OUT 13 is the center channel and set to Full-range.
12. **Three Front Channels + Rear Channels + Center Channel + FC (10CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
    Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
    Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
    OUT 9 is the center channel and set to Full-range;
    OUT 10 is set to Subwoofer.
13. **Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (11CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
    Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
    Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;

Rear Left and Rear Right channels of OUT 9 and 10 are set to Subwoofer;
OUT 11 is the center channel and set to Full-range.

14. **Three Front Channels + Rear Channels + FC (9CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
OUT 9 is set to Subwoofer.

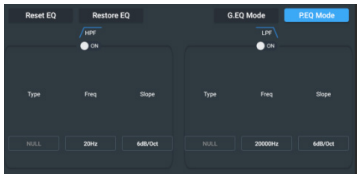
15. **Three Front Channels + Rear Channels + Left and Right FC (10CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
Left and Right channels of OUT 9 and 10 are set to Subwoofer.

16. **Three Front Channels + Three Rear Channels + Center Channel High/Low + Left and Right FC (16CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of OUT 9 and 10 are set to Midrange;
Rear Left and Rear Right channels of OUT 11 and 12 are set to Woofer;
OUT 13 is the center channel and set to Tweeter;
OUT 14 is the center channel and set to Woofer;
Left and Right channels of OUT 15 and 16 are set to Subwoofer.

17. **Customized output mode:**
Select the number of channels to be set (1-16).
Click "NULL" to set the output channel in the popup dialog box by moving the slider up and down. For front channels, options include Tweeter, Midrange, Woofer, Mid-tweeter, Mid-bass, and Full-range; for rear channels, options include Tweeter, Midrange, Woofer, and Full-range; FC options include left subwoofer and right subwoofer, and subwoofer; surround options include left and right surround.

Setting the Crossover

Click the icon "  " under EQ to enter the EQ edit and Crossover setting window. The crossover tuning area provides tuning of Tweeter and woofer channels.

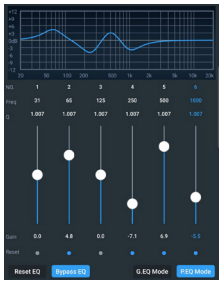


1. Mode setting: Linkwitz-Riley, Bessel and Butterworth.
2. Frequency setting: Move the slider left and right or press "+" / "-" to set the frequency. Adjustment range: 20 Hz-20000 Hz.
3. Slope setting: Options include 6 dB/Oct, 12 dB/Oct, 18 dB/Oct, 24 dB/Oct, 30 dB/Oct, 36 dB/Oct, 42 dB/Oct, and 48 dB/Oct.

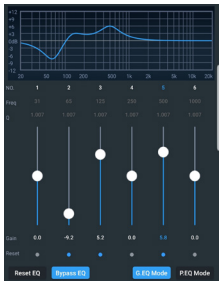
Note: When the slope is set to 6 dB/Oct, the type displays "Null".

Setting the Channel EQ

1. Input EQ edit area
The input EQ has two interfaces: Graphic EQ and Parameter EQ.



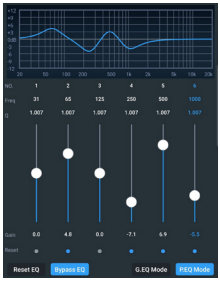
P.EQ interface



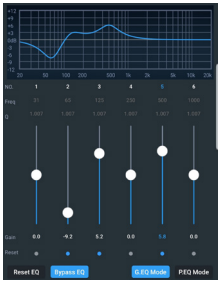
G.EQ interface

There are 10 input EQ values. Move the slider up and down or click a gain value to display the gain adjustment box and then move the slider left and right or press “+”/“-” to set the gain; click a Q value to display the Q value adjustment box and then move the slider left and right or press “+”/“-” to set the Q value; click a frequency value to display the frequency adjustment box and then move the slider left and right or press “+”/“-” to set the frequency.
Frequency range: 20 Hz-20 kHz;
Q value range: 0.404-28.852;
Gain range: -12 dB-+12 dB.
Note: In the Graphic EQ interface, the gain is adjustable, while the frequency and the Q value cannot be adjusted; in the Parameter EQ interface, the frequency, Q value and gain can be adjusted.

2. Output EQ edit area
   The output EQ has two interfaces: Graphic EQ and Parameter EQ.



P.EQ interface

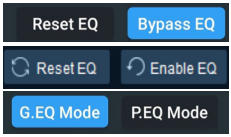


G.EQ interface

There are 31 output EQ values. The adjustment method and range of the frequency, Q value and gain are similar to the adjustment of the input EQ.

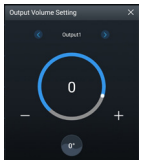
Setting the Equalizer

1. When the EQ is being adjusted, the Direct EQ button appears.
2. Direct EQ: When the channel EQ is enabled, the Disable EQ button appears. Click “Direct EQ” disable all the equalizers of the current channel.
3. Click “Yes”, and the button will then change to “Reset EQ” Enable EQ. Click “Reset EQ”, and all the equalizers of the current channel will be reset to the previous state. **Note: The state enabled by clicking “Direct EQ” can be reset by clicking “Reset EQ”, while the state enabled by clicking the circle cannot be reset by clicking “Reset EQ”.**
4. Click “Reset EQ” Reset EQ, all the equalizers of the current channel are reset to the initial state: the input Q value is 2.515, the output Q value is 2.201, and the gain is 0.0 dB.
5. Click P.EQ to shift to G.EQ. In the P.EQ mode, the frequency, Q value, and gain can be adjusted, while in the G.EQ mode, the frequency and Q value are fixed and only the gain of the EQ can be adjusted.



Setting the Channel Phase and Volume

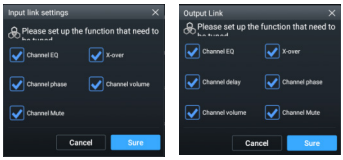
Click “0” under the volume to set the channel volume or shift the channel phase in the popup dialog box.



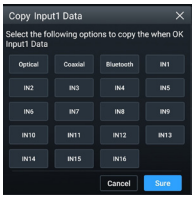
1. Phase: Click the positive phase icon “+” or the negative phase icon “-” to switch between the positive and negative phases.
2. Volume: Move the slider or click “+” / “-” to adjust the volume; the volume range: -60 dB–6 dB).
3. Mute: Click the volume icon “” to mute the channel “”.

Setting the Channel Link

Set the input or output functions to be tuned in the interface;

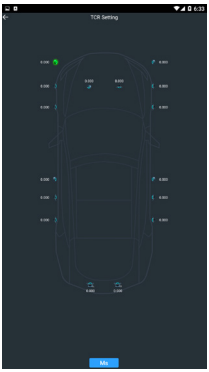


Click “Sure” to select the channel for link setting from the popup dialog box. Then the link icon next to the channel will be green “”, indicating the link setting is enabled.



Setting the Delay

Click the delay button "5.292ms" to set the output signal delay.



1. Delay unit: ms, cm, in;
   Delay range: 0.000-20.000 ms;
   0-692 cm;
   0-273 in.
2. Click the icon to display the delay setting box, and then move the slider left and right or press "+"/"-" to set the delay.

Sound Effect Presets

The DSP provides a storage space for 6 groups of sound effect presets for storing and loading sound effect data. Move the slider left and right to select a sound effect preset.

Setting the Master Volume and Sound Source

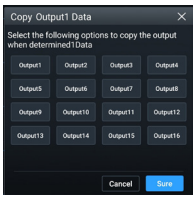
Master volume adjustment, sound source selection, and output signal display section.

1. Adjusting the master volume: Adjust the volume by either dragging the volume slider, or by pressing "+"/"-", from 0 to 35. The volume is set at 27 by default.
2. Mute button: Click the "" button to set the main volume to mute "" or click it again to unmute (adjusting the master volume will unmute it automatically).
3. Main sound source selection: Click the buttons under the main sound source and select the source from the popup window. Select the main sound source from the popup window: Optical, Coaxial, Bluetooth, High Level, and Low Level.
4. Auxiliary sound source selection: Auxiliary sound sources are mixed in a similar fashion.
   (1) The higher the attenuation of the main sound source, the lower the master volume. The available values are: 30%, 50%, 80%, 100%, and Off.
   (2) Click the keys under the auxiliary sound source and select from the popup window. Options include Optical, Coaxial, Bluetooth, High Level, Low Level, and Off.

   Note: When a sound source is selected, it cannot then be selected again as the auxiliary sound source; doing so causes the auxiliary sound source to be invalid. Optical and Coaxial cannot be selected at the same time.

Copy and Paste Function

Click the input or output channel area to display the Copy box; select a channel to be copied and then press "Confirm" to copy the EQ, volume, and mute settings of the channel.



Software Instructions

Important Instructions for Software Installation

- **The software can only run on Mic**rosoft® Windows® platforms.
  Recommended specifications
  Operating system: Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10
  CPU: 1.6 GHz or higher
  Memory: 1 GB or higher
  Hard disk: 512 MB or more
  PC resolution: 1280*768 or higher
- Before connecting PXE-X09 to PC, please install the PXE-X09 software correctly.

Introduction to the Main Interface

Start the PXE-X09 software and enter the startup interface, as shown in Figure 1. Select the main sound source, high and low level input and output modes, or skip to the volume adjustment interface, as shown in Figure 2.

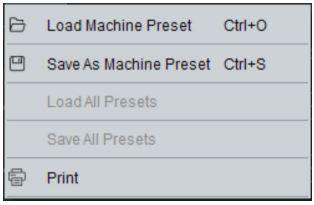
Figure 1

Figure 2

Connecting to the DSP

1. Before the DSP is connected, the connection icon is in red “ ”; after it is connected, the connection icon is in green “ ”.
2. Menu area: File, Option and Lock

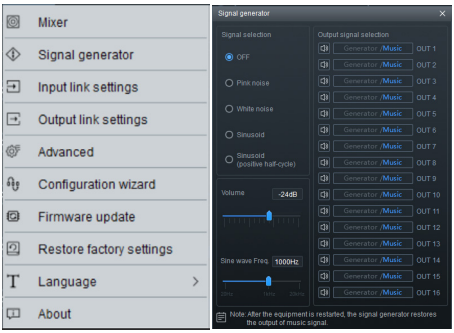
(1) Click “File”:



a. Select “Load PC Presets File”: load the preset file previously saved on your PC as the current working scenario of the DSP;
b. Select “Save as PC Presets File”: Save the current working scenario data of the DSP on your PC for future use;
c. Select “Load All Presets”: Load all data files previously saved on your PC to the DSP (all data files of the DSP include all data, including current working scenarios, preset scenarios, output channel configuration data, etc.) to copy all the data of a DSP that had been well adjusted to the currently connected DSP;
d. Select “Save All Presets”: Save all data files of the connected DSP to your PC (all data files of the DSP include all the data, including current working scenarios, preset scenarios, output channel configuration data, etc.) for use on other DSP in the future. This operation will not alter any data on the currently connected DSP.
e. Select “Print” to print the current output configuration as a PDF or edit the configuration.

(2) Click “Option”:

a. Select “Mixer” to enter the mixer setting interface. You can adjust the volume of each sound source of channels to carry out the mixing.
b. Select “Signal generator” to test output signals when no music is played. When “Generator output” is selected for the output signal, pink noise, white noise, sinusoid and sinusoid (positive half-cycle) occur. Volume range: -60 dB – 0 dB; frequency range: 20 Hz – 20 kHz. Music output is set by default.



c. Select “Input link settings” to set the function to be tuned. There are five options: Channel EQ, X-Over, Channel phase, Channel volume, and Channel mute.

d. Select “Output link settings” to set the function to be tuned. There are six options: Channel EQ, X-Over, Channel delay, Channel phase, Channel, volume and Channel mute.

e. Select “Advanced” to turn the flow lamp on or off. The range of the shutoff delay: 0 - 255s.

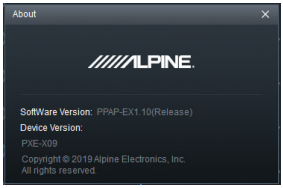
f. Select “Configuration wizard” to enter the high level, low level, or output configuration wizard.

g. Select “Firmware update”, select the update file from the popup dialog box, and then click “Update” to update the firmware. When the update progress reaches 100%, it means the firmware is updated successfully. Click “Confirm” to exit the firmware update. After the update, the DSP will be restarted automatically.

h. Select “Restore factory settings”. All the settings of the DSP will be reset to the factory defaults.

i. Select “Language” to switch between Chinese and English.

j. Select “About” to check the device version.



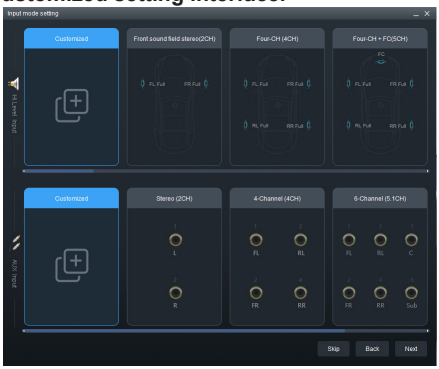
(3) Click “Lock”:
Enter a 6-digit password in the popup dialog box to encrypt the tuned sound effect data. You can encrypt the EQ frequency, Q value and gain value data. The tuning data as delay time, channel, and phase equalizer settings will also be encrypted. The encryption is only effective for the sound effect data currently used, instead of all the data of the DSP. The encrypted sound effect data can be saved as the preset sound effects or PC files. Copying or transmission will not decrypt the data. Click “Unlock” to enter the correct password to decrypt the locked data. The initial password is “888888”.

Warning! Please remember your password; otherwise, the encrypted data cannot be unlocked.

Setting the Input Mode

Click “Input mode” to enter the high level and low level input setting interface. Select high or low level input mode by scrolling your mouse wheel or dragging the scroll bar. Click “Clear all” to enter the customization operation interface.

Note: the “Clear all” button is invalid in the customized setting interface.



1. High level input selection
   (1) Front Sound Field Stereo (2CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range.
   (2) Four-CH (4CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range.
   (3) Four-CH + FC (5CH):
   Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
   IN 5 is set to Subwoofer.

(4) Four-CH + Left and Right FC (6CH):
Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
Left and Right channels of IN 5 and 6 are set to Subwoofer.

(5) Two Front Channels + Rear Channels (6CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range.

(6) Two Front Channels + Rear Channels + FC (7CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
IN 7 is set to Subwoofer.

(7) Two Front Channels + Rear Channels + Left and Right FC (8CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
Left and Right channels of IN 7 and 8 are set to Subwoofer.

(8) Two Front Channels + Rear Channels + Center Channel + Left and Right FC (9CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
Left and Right channels of IN 7 and 8 are set to Subwoofer;
IN 9 is the center channel and set to Full-range.

(9) Two Front Channels + Rear Channels + Center Channel + FC (8CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Mid-bass;
Rear Left and Rear Right channels of IN 5 and 6 are set to Full-range;
IN 7 is the center channel and set to Full-range;
In 8 is set to Subwoofer.

(10) Three Front Channels + Two Rear Channels + Center Channel + FC (12CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Woofer;
IN 11 is the center channel and set to Full-range;
IN 12 is set to Subwoofer.

(11) Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (13CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Woofer;
Left and Right channels of IN 11 and 12 are set to Subwoofer;
IN 13 is the center channel and set to Full-range.

(12) Three Front Channels + Rear Channels + Center Channel + FC (10CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
IN 9 is the center channel and set to Full-range;
IN 10 is set to Subwoofer.

(13) Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (11CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;

Rear Left and Rear Right channels of IN 9 and 10 are set to Subwoofer;
IN 11 is the center channel and set to Full-range.

(14) Three Front Channels + Rear Channels + FC (9CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
IN 9 is set to Subwoofer.

(15) Three Front Channels + Rear Channels + Left and Right FC (10CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Full-range;
Left and Right channels of IN 9 and 10 are set to Subwoofer.

(16) Three Front Channels + Three Rear Channels + Center Channel High/ Low + Left and Right FC (16CH):
Front Left and Front Right channels of IN 1 and 2 are set to Tweeter;
Front Left and Front Right channels of IN 3 and 4 are set to Midrange;
Front Left and Front Right channels of IN 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of IN 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of IN 9 and 10 are set to Midrange;
Rear Left and Rear Right channels of IN 11 and 12 are set to Woofer;
IN 13 is the center channel and set to Tweeter;
IN 14 is the center channel and set to Woofer;
Left and Right channels of IN 15 and 16 are set to Subwoofer.

2. Low level input selection

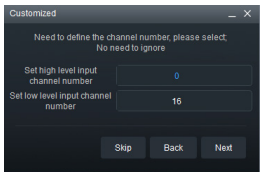
(1) Stereo (2CH):
Front Left and Front Right channels of IN 1 and 2 are set to Full-range.

(2) Four-CH (4CH):
Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range.

(3) Six-CH (5.1CH):
Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
IN 5 is the center channel and is set to Full-range
IN 6 is set to Subwoofer.

(4) Eight-CH (7.1CH):
Front Left and Front Right channels of IN 1 and 2 are set to Full-range;
Rear Left and Rear Right channels of IN 3 and 4 are set to Full-range;
IN 5 is the center channel and is set to Full-range;
IN 6 is set to Subwoofer;
IN 7 and 8 are left and right surround.

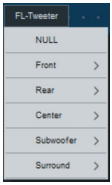
3. Customization of high level and low level
The sum of the number of high level channels and the number of low level channels should not be greater than 16.



(1) Shift between high and low level inputs: Click “HI” or “AUX” to shift between high level and low level inputs (the green triangle symbol indicates the input mode is the main sound source).

(2) Input mode selection: Click “ 

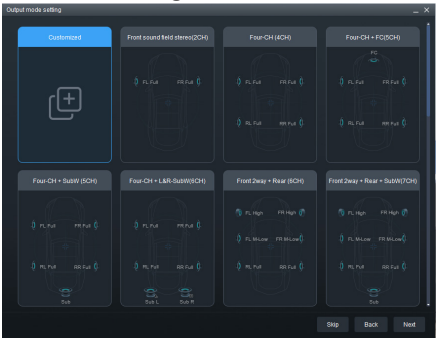
” and set the input mode in the input mode setting dialog box. For front channels, options include Tweeter, Midrange, Woofer, Mid-tweeter, Mid-bass, and Full-range; for rear channels, options include Tweeter, Midrange, Woofer, and Full-range; FC options include left subwoofer and right subwoofer, and subwoofer; surround options include left and right surround.



Setting the Output Mode

Click “Output Mode” to enter the output mode setting interface. Select the output mode by scrolling your mouse wheel or dragging the scroll bar. Click “Clear all” to enter the customization operation interface.

Note: the “Clear all” button is invalid in the customized setting interface.



1. **Front Sound Field Stereo (2CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range.
2. **Four-CH (4CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range.
3. **Four-CH + FC (5CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range;
   OUT 5 is set to Subwoofer.
4. **Four-CH + Left and Right (6CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Full-range;
   Rear Left and Rear Right channels of OUT 3 and 4 are set to Full-range;
   Left and Right channels of OUT 5 and 6 are set to Subwoofer.
5. **Two Front Channels + Rear Channels (6CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range.
6. **Two Front Channels + Rear Channels + FC (7CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   OUT 7 is set to Subwoofer.
7. **Two Front Channels + Rear Channels + Left and Right FC (8CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   Left and Right channels of OUT 7 and 8 are set to Subwoofer.
8. **Two Front Channels + Rear Channels + Center Channel + Left and Right FC (9CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 4 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   Left and Right channels of OUT 7 and 8 are set to Subwoofer;
   OUT 9 is the center channel and set to Full-range.
9. **Two Front Channels + Rear Channels + Center Channel + FC (8CH):**
   Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
   Front Left and Front Right channels of OUT 3 and 4 are set to Mid-bass;
   Rear Left and Rear Right channels of OUT 5 and 6 are set to Full-range;
   OUT 7 is the center channel and set to Full-range;
   OUT 8 is set to Subwoofer.
10. **Three Front Channels + Two Rear Channels + Center Channel + FC (12CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
    Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
    Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
    Rear Left and Rear Right channels of OUT 9 and 10 are set to Woofer;
    OUT 11 is the center channel and set to Full-range;
    OUT 12 is set to Subwoofer.
11. **Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (13CH):**
    Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
    Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;

Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of OUT 9 and 10 are set to Woofer;
Left and Right channels of OUT 11 and 12 are set to Subwoofer;
OUT 13 is the center channel and set to Full-range.

12. **Three Front Channels + Rear Channels + Center Channel + FC (10CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
OUT 9 is the center channel and set to Full-range;
OUT 10 is set to Subwoofer.

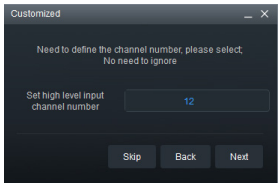
13. **Three Front Channels + Two Rear Channels + Center Channel + Left and Right FC (11CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
Rear Left and Rear Right channels of OUT 9 and 10 are set to Subwoofer;
OUT 11 is the center channel and set to Full-range.

14. **Three Front Channels + Rear Channels + FC (9CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
OUT 9 is set to Subwoofer.

15. **Three Front Channels + Rear Channels + Left and Right FC (10CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Full-range;
Left and Right channels of OUT 9 and 10 are set to Subwoofer.

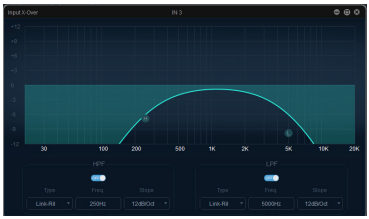
16. **Three Front Channels + Three Rear Channels + Center Channel High/Low + Left and Right FC (16CH):**
Front Left and Front Right channels of OUT 1 and 2 are set to Tweeter;
Front Left and Front Right channels of OUT 3 and 4 are set to Midrange;
Front Left and Front Right channels of OUT 5 and 6 are set to Woofer;
Rear Left and Rear Right channels of OUT 7 and 8 are set to Tweeter;
Rear Left and Rear Right channels of OUT 9 and 10 are set to Midrange;
Rear Left and Rear Right channels of OUT 11 and 12 are set to Woofer;
OUT 13 is the center channel and set to Tweeter;
OUT 14 is the center channel and set to Woofer;
Left and Right channels of OUT 15 and 16 are set to Subwoofer.

17. **Customized output mode:**
Select the number of channels to be set (1-16).
Click "NULL" to set the output mode in the popup dialog box. For front channels, options include Tweeter, Midrange, Woofer, Mid-tweeter, Mid-bass, and Full-range; for rear channels, options include Tweeter, Midrange, and Full-range; center channel options include Tweeter, Midrange, and Full-range; FC options include left subwoofer and right subwoofer, and subwoofer; surround options include left and right surround.



Setting the Crossover

Click the icon "  " under the Crossover to enter the crossover edit window. The crossover tuning area provides tuning of Tweeter and woofer channels.



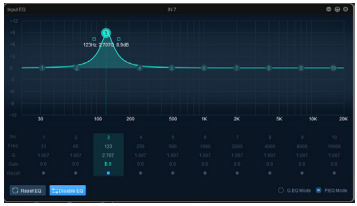
1. Mode setting: Linkwitz-Riley, Bessel and Butterworth.
2. Frequency setting: The frequency can be adjusted by directly entering values, scrolling the mouse wheel, pressing the Up/Down keys or clicking “H” or “L”, or pressing the left key of the mouse to drag the slider. Adjustment range: 20 Hz–20,000 Hz.
3. Slope setting: Select 6dB/Oct, 12 dB/Oct, 18 dB/Oct, 24 dB/Oct, 30 dB/Oct, 36 dB/Oct, 42 dB/Oct, or 48 dB/Oct from the drop-down menu.

Note: When the slope is set to 6 dB/Oct, the type displays “Null”.

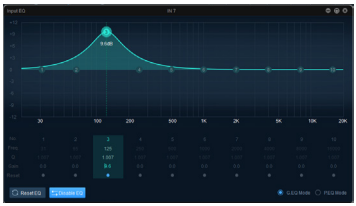
Setting the Channel EQ

Click the icon “[redacted]” under EQ to enter the EQ edit window.

1. Input EQ edit area
   The input EQ has two interfaces: Graphic EQ (G.EQ) and Parametric EQ (P.EQ).



P.EQ interface

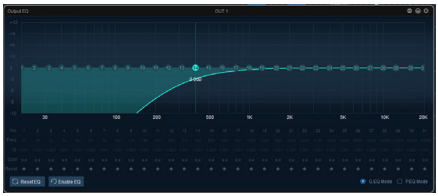


G.EQ interface

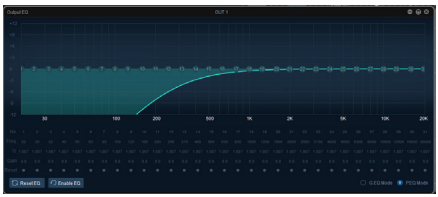
There are 10 input EQ values. Move the mouse to a number and hold, drag up and down to adjust the EQ gains, and drag left and right to adjust the EQ frequency; move the mouse to the green box on the left and right and hold, then drag it left and right to adjust the Q value of the Equalizer. The frequency, Q value, and gains can also be set by directly entering the value, scrolling the mouse wheel or pressing Up/Down keys on the keyboard.
Frequency range: 20 Hz–20 kHz;
Q value range: 0.404-28.852;
Gain range: -12 dB-+12 dB.

Note: In the Graphic EQ interface, the gain is adjustable, while the frequency and the Q value cannot be adjusted; in the Parametric EQ interface, the frequency, Q value and gain can be adjusted.

2. Output EQ edit area
   The output EQ has two interfaces: Graphic EQ and Parametric EQ.



P.EQ interface



G.EQ interface

There are 31 output EQ values. The adjustment method and range of the frequency, Q value and gain are similar to the adjustment of the input EQ.

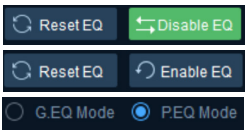
Setting the Equalizer

1. When the EQ is being adjusted, the Direct EQ button appears.
2. Direct EQ: When the channel EQ is enabled, the 

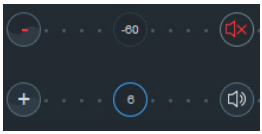
button appears. Click “Direct EQ” or the circle to disable all the equalizers of the current channel.
3. Click “Yes”, the button changes to “Reset EQ” 

. Click “Reset EQ”, all the equalizers of the current channel are reset to the previous state. **Note: The state enabled by clicking “Direct EQ” can be reset by clicking “Reset EQ”, while the state enabled by clicking the circle cannot be reset by clicking “Reset EQ”.**

4. Click “Reset EQ”, all the equalizers of the current channel are reset to the initial state: the frequency is evenly distributed, the input Q value is 2.515, the output Q value is 2.201, and the gain is 0.0 dB.
5. Click “P.EQ”, a warning dialog box appears, indicating “Are you sure you want to switch from the G.EQ mode to the P.EQ mode?”, press “Confirm” to switch to the “P.EQ” mode. Click “G.EQ”, a warning dialog box appears, indicating “Are you sure you want to switch from the P.EQ mode to the G.EQ mode?”, Press “Confirm” to switch to the “P.EQ” mode. In the P.EQ mode, the frequency, Q value, and gain can be adjusted, while in the G.EQ mode, the frequency and Q value are fixed and only the gain of the EQ can be adjusted.



Setting the Channel Phase and Volume

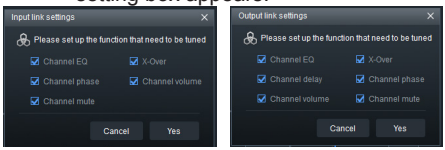


1. Phase: Click the positive phase icon “ ” or the negative phase icon “ ” to switch between the positive and negative phases. Move the mouse to a phase icon to view the curve of the phase.
2. Volume: the channel volume can be set by directly entering the value, scrolling the mouse wheel, or pressing the Up/Down keys on the keyboard. The default volume value is 0dB (Adjustment range: -60 dB–6 dB).
3. Mute: Click the volume icon “ ” to mute the channel “ ”.

Setting the Channel Link

Link: The input link settings include Channel EQ, X-Over, Channel Mute, Channel Phase and Channel Volume; the output link settings include Channel EQ, X-Over, Channel Mute, Channel Phase, Channel Volume, and Channel Delay.

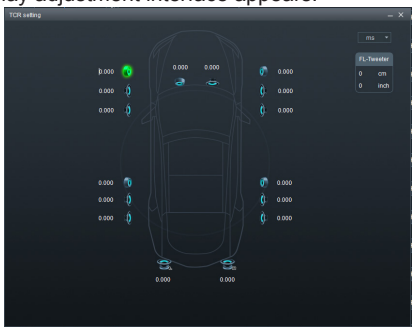
1. Link setting box:
   (1) Set the input or output functions to be tuned in the interface;
   (2) Right-click the link settings in the input channel area, the input link setting box appears; right-click the link settings in the output channel area, the output link setting box appears.



2. Link setting:
   Click the Link button “ ”, the Link button is highlighted (the icon turns blue); indicates that it is in the link state.

Setting the Delay

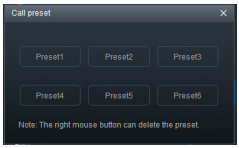
Click the Delay button “ ”, the output signal delay adjustment interface appears.



1. Delay unit: ms, cm, in;
   Delay range: 0.000-20.000 ms;
   0-692 cm;
   0-273 in.
2. The delay can be set by directly entering the value, scrolling the mouse wheel, or pressing the Up/Down keys on the keyboard.

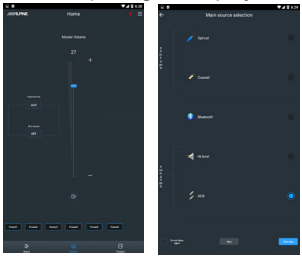
Sound Effect Presets

Loading and storage of sound effect presets. Click “Call” or “Store” to set the six sound effect presets.



Setting the Master Volume and Sound Source

Master volume adjustment, sound source selection, and output signal display section.

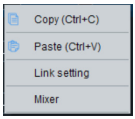


1. Adjusting the master volume: Adjust the volume by either clicking and dragging the volume slider, or by scrolling the mouse wheel, from 0 to 35. The volume is set at 27 by default.
2. Mute button: Click the “” button in the master volume settings section to set the main volume to mute “” or click it again to unmute (adjusting the master volume will unmute it automatically).
3. Main sound source selection: Click the buttons under the main sound source and select the source from the popup window. Options include Optical, Coaxial, Bluetooth, High Level, and Low Level.
4. Auxiliary sound source selection: Auxiliary sound sources are mixed in a similar fashion.
   (1) The higher the attenuation of the main sound source, the lower the master volume. The available values are: 30%, 50%, 80%, 100%, and Off.
   (2) Click the keys under the auxiliary sound source and select from the popup window. Options include Optical, Coaxial, Bluetooth, High Level, Low Level, and Off.

Note: When a sound source is selected, it cannot then be selected again as the auxiliary sound source; doing so causes the auxiliary sound source to be invalid. Optical and Coaxial cannot be selected at the same time.

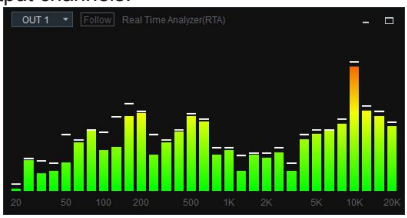
Copy and Paste Function

In the output or input channel section, right-click to copy the EQ, Volume, and Mute values of the channel, and then paste those values to another channel.



Spectral Diagrams of Output Channels

This window shows the spectrum state of the output channels.



1. Display window: The window is scalable and can be set to full screen.
2. Selecting the channel to display:
   (1) Fixed: Only the spectrum of the selected output channel is displayed; it cannot be switched to other output channels.
   (2) Follow: The spectrum of the selected output channel will be displayed.
   (3) Click the dropdown list to select a channel in order to display its spectrum.

Instructions for the Use of the Wired Controller

This wired controller only applies to PXE-X09. Connect the wired controller correctly to the DSP and make sure it is started normally before use.

Startup Screen

After the wired controller is started, the dynamic startup screen appears, as shown in Figure 1.

Figure 1

Master Volume

After it is started, enter the main interface of the wired controller - Master Volume Interface, as shown in Figure 2-1. Turn the button to adjust the master volume. Turning it clockwise can increase the volume, while turning it counterclockwise will reduce the volume. The adjustment range is from 0 to 35. In addition, pressing the master volume interface of the wired controller briefly can mute the DSP. The mute interface is as shown in Figure 2-2.

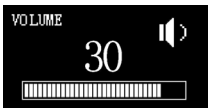


Figure 2-1

Figure 2-2

Main Source

Press and hold the button in the main interface for 2-5 seconds to enter the main source interface, as shown in Figure 3. Turn the button to select the main sound source: Optical, Coaxial, BT (Bluetooth), Hi.L (High Level) and AUX (Low Level). Note: If the wired controller is not operated for about 5 seconds, it will exit from the interface to the main interface (Master Volume Interface).

Figure 3

Mix Source

After selecting the main sound source, press the button briefly to enter the Mix Source interface, as shown in Figure 4-1. Turn the button to select the mix sound source: Optical, Coaxial, BT (Bluetooth), Hi.L (High Level) and AUX (Low Level). If no operation is performed for about 5 seconds, it will exit from the interface to the main interface (Master Volume Interface).

Figure 4-1

Note:

1) When a sound source is selected, it cannot then be selected again as the mix sound source; doing so causes the mix sound source to be invalid, as shown in Figure 4-2.
2) Optical and Coaxial cannot be selected at the same time.
3) If the mix source function of the software is disabled, the Mix Source interface of the wired controller displays “MIX Source closed!”, as shown in Figure 4-3.

Figure 4-2

Figure 4-3

Subwoofer Volume (SUBW)

After selecting the mix sound source, press the button briefly to enter the Subwoofer volume (SUBW) interface, as shown in Figure 5. Turn the button of the wired controller to adjust the subwoofer volume. Turning it clockwise can increase the volume, while turning it counterclockwise will reduce the volume (the adjustment range is from 0 to 15). If no operation is performed for about 5 seconds, it will exit from the interface to the main interface (Master Volume Interface).

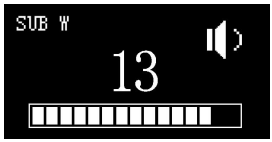


Figure 5

Sound Effect Presets (PRESET)

After adjusting the subwoofer volume, press the button briefly to enter the sound effect presets (PRESET) interface, as shown in Figure 6-1. The number after PRESET refers to the sound effect data currently used by the DSP.

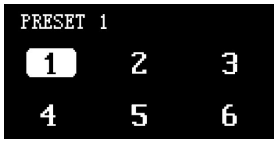


Figure 6-1

Turn the button to select the sound effect. When the cursor moves to a number, press the button briefly to load the sound effect presets, as shown in Figure 6-2. After the data is loaded, it will exit from the interface to the main interface (Master Volume Interface).

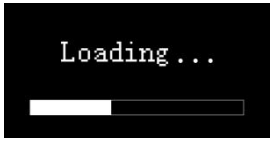


Figure 6-2

Technical Parameters

1. Technical specifications

Dynamic range	≥110dB
Signal 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 (without power amplification)
Frequency response	20 Hz–20 kHz
System sampling rate	24 bit/96 kHz
Optical/Coaxial input sampling rate	28 kHz–216 kHz
Input impedance	High level: 240Ω; AUX: 47KΩ
Output impedance	51Ω
Working voltage	9-16V
Quiescent current	≤3mA (power-off state)
Standby power consumption	≤0.1 W
REM input	High level (IN-1) and ACC optional
REM output	12 V (0.2 A)
Startup time	7s
Ambient temperature	-20-60°C
Storage temperature	-40-85°C
Gross weight	2.34 kg
Dimensions	246.9 mm × 211.1 mm × 58 mm
Size of the wired controller screen	14.7 mm × 29.42 mm

2. Functional parameters

Input signal	16-Channel RCA/High level mixed input, Optical/Coaxial/Bluetooth signal input
Output signal	16-Channel RCA audio signal output
Input/output signal gain	Range: mute, 0-35
Input/output signal EQ	Mode: Graphic EQ and Parametric EQ Frequency: 20 Hz–20 kHz, resolution 1 Hz Q value (slope): 0.404-28.852 Gain: -12 dB to +12 dB, resolution 0.1 dB
Input/output signal crossover	Each input/output channel has at most 8 independent filters. Filter: Linkwitz-Riley, Bessel, and Butterworth. Filter crossover: 20 Hz-20 kHz, resolution 1 Hz Filter slope: 6 dB/Oct to 48 dB/Oct
Input/output phase	Positive phase or negative phase (0°/180°)
Output delay	0.000-20.000 ms, 0-692 cm, 0-273 in.
Sound effect presets	6 groups of preset sound effect data can be stored

Harmful Substances

Name and content of harmful substances contained in the product

Part name	Poisonous or harmful substances or elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chrome (Cr(VI))	Polybrominated biphenyl (PBB)	Polybrominated diphenyl ether (PBDE)
Circuit board components	×	O	O	O	O	O
Enclosure components	O	O	O	O	O	O
Display components	×	O	O	O	O	O
Accessories	×	O	O	O	O	O

This table is prepared in accordance with SJ/T11364.
○: indicates that the content of the harmful substance contained in all homogeneous materials of the component is below the limit set by GB/T26572.
×: indicates that the content of the harmful substance contained in at least one homogeneous material of the component exceeds the limit set by GB/T26572.
For parts labeled with "×", the content exceeds the limit because there is no mature substitute in the industry at present.