

AP series DSP PC tuning software instruction**1: Software installation**

Please download “AP Setup 2.7” tuning software from our website: www.soundmagus.com

Install the software according to the following steps. (The following installation process is based on Windows 7 OS, Model AP12 PRO)。

Software only run in Microsoft® Windows® system.

Configuration requirement for PC:

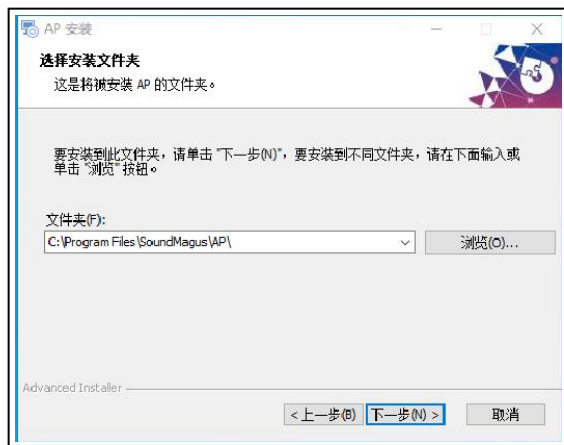
- Operating system: Windows XP, Windows7, Windows8, Windows10/
- CPU:1.6GHz or higher
- Memory card: 1GB or higher
- Hard disk: 512MB or more space
- PC Display resolution: 1280*768 or higher

1. 1: Software installation:

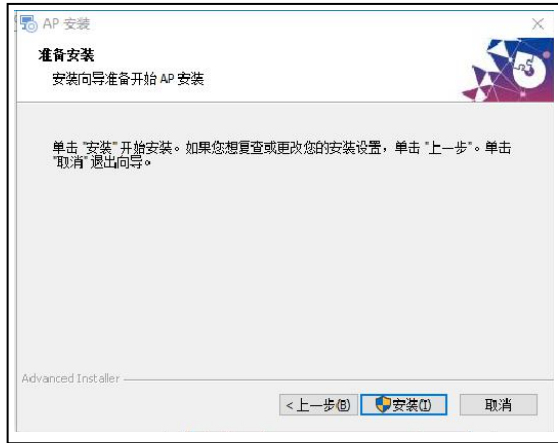
1. 1. 1: Double click “AP setup2.7” with the left mouse button, and the system will enter the preparation and installation process。

**1. 1. 2: Copyright notice page: click “next”.**

1. 1. 3: Installation path: if you use the default installation path of the system, click “next”. If you want to define the installation path by yourself, click “Browse” to the specified installation path, and then click “next”.



1. 1. 4: Installation confirmation: click "Install".



1. 1. 5: Installation process: waiting for file installation to complete.



1. 1. 6: If there is a virus prompt during installation, please select "allow the program to run" and tick "do not prompt again".

Note: if "block all program operations" will cause this installation to be unsuccessful (file will be quarantined).



1. 1. 7: Complete the installation: click "finish" to complete the software installation.

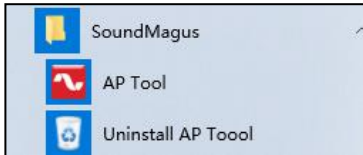


1. 1. 8: After completion, the software shortcut icon will be automatically generated on the desktop.

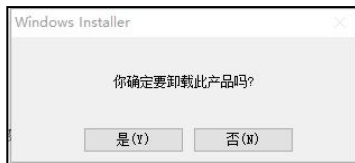


2: Software uninstall:

Click the start menu in the lower left corner of the computer,
Locate the Soundmagus folder, click open and select the uninstall AP tool option,



Click "yes" to uninstall the software.



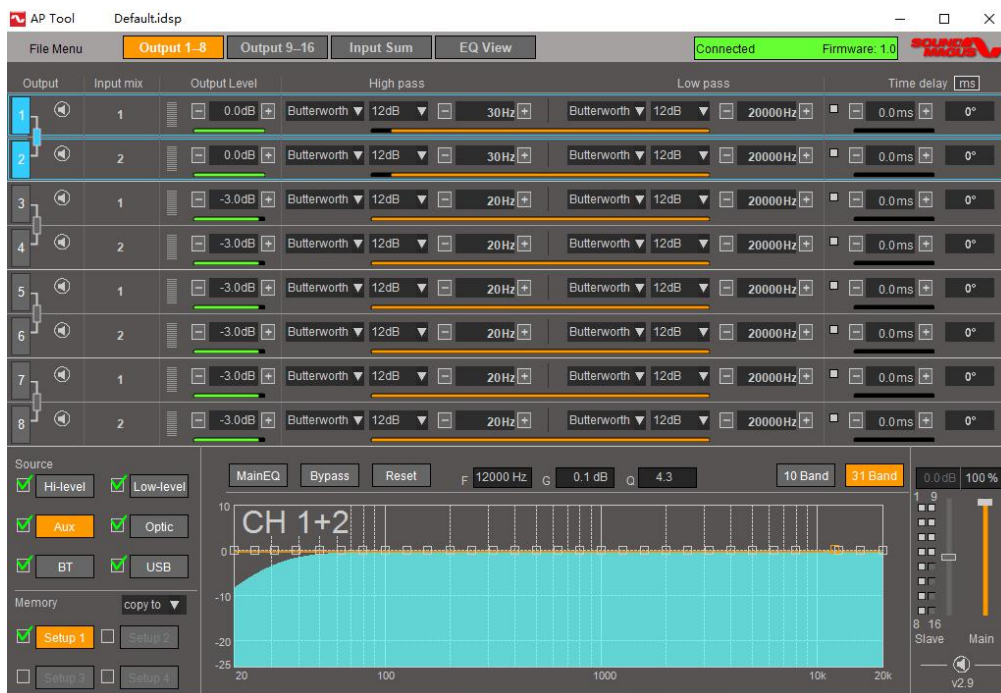
The software will automatically uninstall.

3: Open software and connecting:

3. 1: Click "SOUNDMAGUS AP tool" on the desktop to open the tuning software.



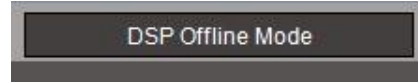
3. 2: After the tuning software is turned on, the tuning software detects that AP12 Pro is turned on and the USB connection is normal, it will automatically connect the tuning software with AP12 pro, load the current data of ap12 Pro into the PC tuning software interface, and display the firmware version number in the upper right corner of the software.



3. 3: After connecting successfully (the device information prompt box prompts the firmware version information), and the color of the bottom frame changes from gray to green. If the background color is gray, it shows that the DSP is offline.

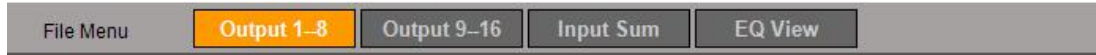


(On-line model)



(Offline Mode)

4: Software function introduction:



4. 1: File function introduction:

4. 1. 1: Open Config file: To load the preset setting file stored in the PC.

Click it to open the file path interface to choose the setting file.

The software will pop up "whether to write this configuration in to DSP and delete the current configuration?".

Select "yes" to write the selected preset setting file. Select "no" to exit the write status.



4. 1. 2: Save config file: Export all settings files under all current input sources to personal computer, and the files are saved in the computer as ****. idsp.

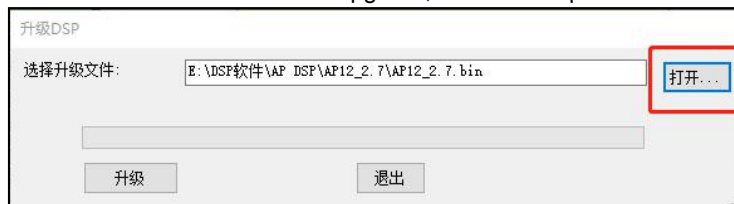
4. 1. 3: Save as: The current configuration can be saved as another file. It can have the same name as the source file, but it can only have the same name in different folders. It cannot have the same name in the same folder

4. 1. 4: Firmware upgrade: update the firmware of DSP to the latest version。

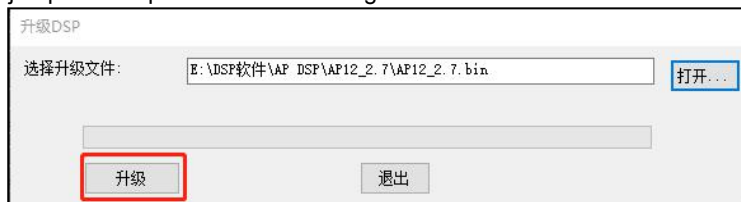
4. 1. 4. 1: Connect AP12 PRO to PC with Online mode

4. 1. 4. 2: Click the main menu - save the configuration file, and save all the current settings of AP12 PRO to PC according to the requirements of 3.1.2

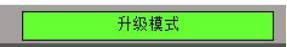
4. 1. 4. 3: Click the File menu - firmware upgrade, click the file path selection icon。



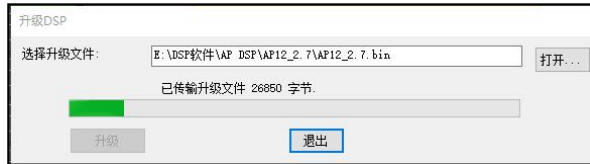
4. 1. 4. 4: Select the path stored in the PC and select the file "ap12_2.7. Bin ", and then click" open ", the system will automatically jump to the update firmware dialog box.



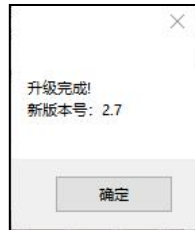
Note: "AP12_2.7.bin" is just an example, the actual firmware version updates according to product status.

4. 1. 4. 5: Click"Upgrade" button, At this time, we need to **unplug the USB cable, and then plug it in**, the system will automatically enter the "upgrade mode"  ; the software will automatically delete all settings and update the firmware; select "exit" software to interrupt the firmware upgrade.

4. 1. 4. 6: The update progress of the firmware is displayed on the progress bar



4. 1. 4. 7: After the update, a prompt box will pop up and click "OK" to complete the firmware update



4. 1. 4. 8: Click the File menu - open config file, and load all the settings saved before firmware upgrade into AP12 pro.

4. 1. 5: Factory reset: restore the current status of ap12pro to factory settings;

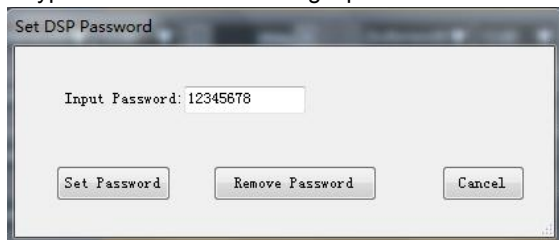
Click "yes" to restore to factory setting status.

Click "no" to interrupt the process and maintain the current status

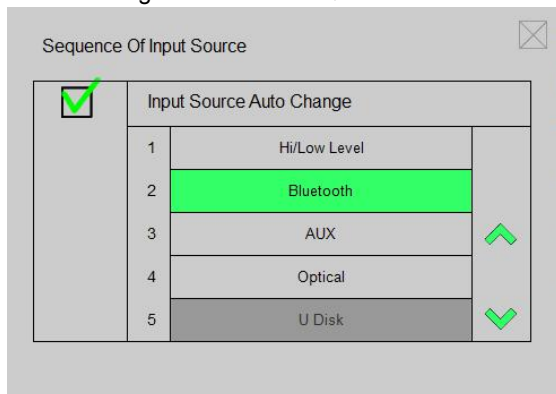


4. 1. 6: Language: support simplified Chinese and English.

4. 1. 7: Encrypted DSP: can set the login password of the tuning file, and can set up to 8-digit password protection.



4. 1. 8: Input source priority: the priority of the selected sound source can be adjusted. When using this function, tick "√" in front of the automatic switching of sound source.



4. 2: Input configuration:

4. 1. 1: The intersection of input and output axis is the corresponding relationship between audio input and output.



Activate status;



Inactive status;

4. 1. 2: In the input mix configuration interface, the input flat proportion of AP12pro can be adjusted according to the output level of the sound source, and the input proportion can be adjusted in the range of 1% ~ 100%.

4. 1. 2. 1: Input setup example:

As shown in Figure 1, the audio signal of output channel 1 comes from input channel 1. Similarly, input channel 2 → output channel 2, input channel 3 → output channel 3, input channel 6 → output channel 6. For example, if channel 7 / 8 is a mixed output mode, the audio signal representing output channel 7 comes from input channel 1 / Channel 2 mixed. Similarly, the audio signal of output channel 8 comes from input channel 1 / Channel 2 mixed.



Figure 2 shows that the audio signal of output channel 1 comes from input channel 1,3,5 mixed. Similarly, output channel 2 comes from input channel 2,4,6 mixed, output channel 3 comes from input channel 1,3,5 mixed.....

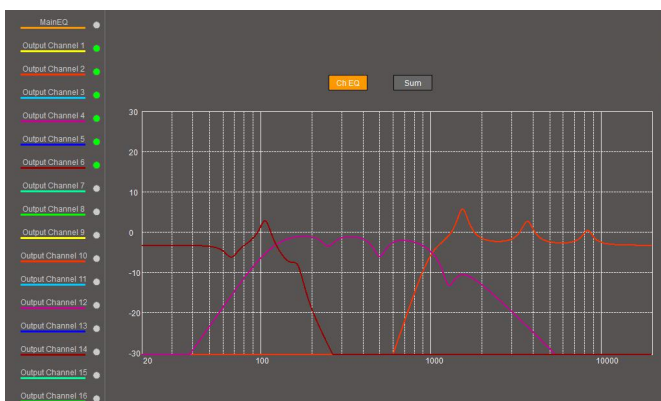


Note: The AP Series software supports up to 16 channels of DSP tuning. The Input Sum interface 1 shows channel 1-channel 8, and the Input Sum interface 2 shows channel 9-channel 16. Two interfaces can be switched through buttons

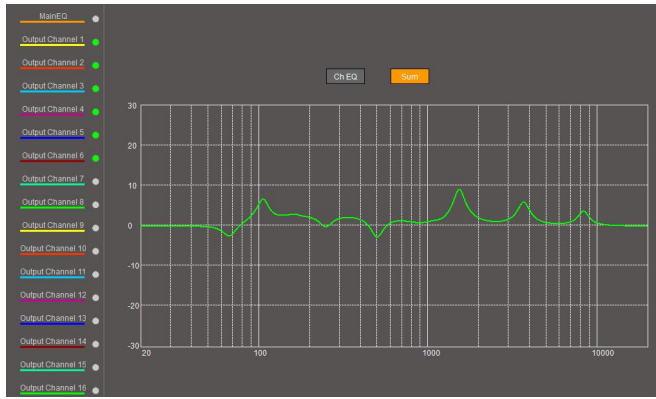
4.3: EQ view

4. 2. 1: EQ curve display: it includes channel output level, channel EQ curve, main EQ curve and analog actual output summation curve.

The following figure shows the channel EQ display status:



The figure below shows the total curve of analog actual output:



4.4: Output level, left and right channel joint adjustment, channel mute:

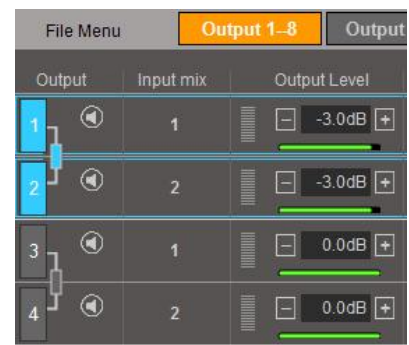
4. 4. 1: Output level: the default output level value of the product is -3dB.

The user can fine tune according to the actual tuning scene.

The closer the listener is, the larger the attenuation setting should be.

The left and right channels should not be too different.

The power of -3dB is nearly to half of that. Each channel can set the output level value independently by clicking the button of + and -, and the range is -40 - 0dB.



4. 4. 2: Output level range adjustment method:

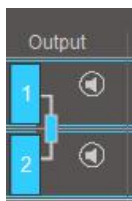
Support mouse click and select to directly fill in the number adjustment;

Support mouse click or continuous click "+" - "to adjust;

Support moving from value to value with arrows controls (up/down) on the PC keyboard; up/down is increase/decrease with step value 0.1dB.

4. 4. 3: Left and right channel group adjustment: This function synchronizes the data of left channel or right channel to another channel; when the left-right Group function is turned on, it is based on the last selected channel. Channel 1 / 2 is a group, channel 3 / 4 is a group, channel 5 / 6 is a group, and so on-

Default is Group status.



(Group)



(Not Group)



(Mute not activated)



(Mute activated)

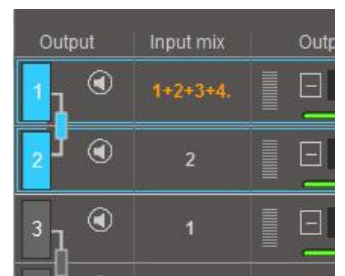
4. 4. 4: Mute: Single channel mute optional function.

When activated, the corresponding channel is muted.

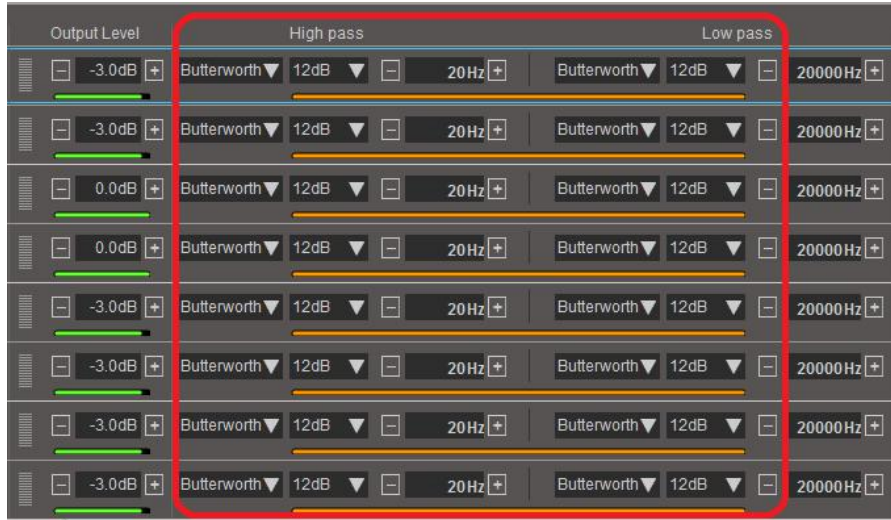
Note: To mute all channels, you can just click the space key on the PC keyboard to activated.

4. 4. 5: Input mix: display the corresponding relationship of input sound sources channel;

It can display 4 channels of sound sources, and the number will be displayed in orange when exceeding 4 channels. When the mouse arrow is placed on the channel, all other channels not displayed will be automatically displayed.



4. 5: Xover & EQ interface:



4. 5. 1: Xover setup:

Default is the full frequency state range from 20Hz - 20kHz.

You can set the frequency range by manually adjusting the value.

There is an orange progress bar below each channel to show the frequency range of the current channel.

Adjustment method of input frequency range:

- A. Support mouse click and select to directly fill in the number adjustment;
- B. Support mouse click or continuous click "+" - "to adjust;
- C. Support moving from value to value with arrows controls (up/down) on the PC keyboard

4. 5. 2: Filter mode option: Butterworth and Linkwitz Default is Butterworth.

Click the pull-down arrow to pop up the pull-down menu, and select filter mode.



4. 5. 3: HP SLOPE/LP SLOPE Option.

HP SLOPE: 6/12/18/24/30/36/42/48 dB/Oct. (Butterworth)

12/18/24/30/36/42/48 dB/Oct. (Linkwitz)

LP SLOPE: 6/12/18/24/30/36/42/48 dB/Oct. (Butterworth)

12/18/24/30/36/42/48 dB/Oct. (Linkwitz)

Default value is 12dB.



4. 6: EQ setup:

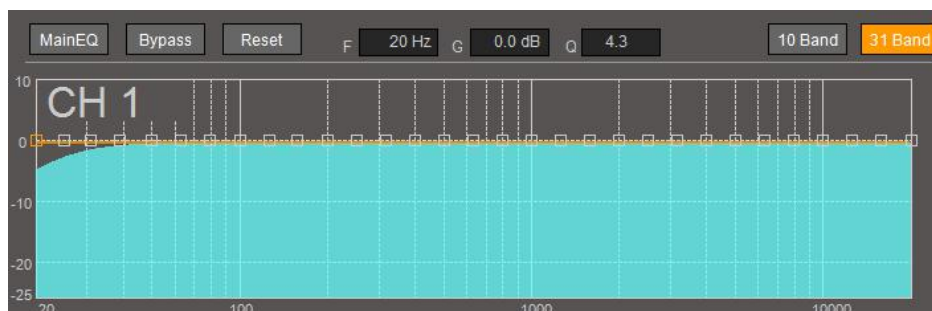
3 practical EQ mode

10 band /31band/ Main EQ.

Frequency adjustment range: 20Hz~20000Hz

Q value range: 0.1~20 Qts

Gain: -25dB~10dB

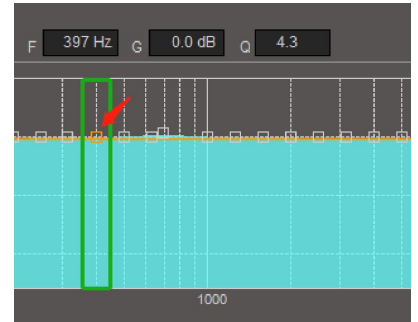


4. 6. 1: EQ function introduction:

“ F ” is the currently selected EQ frequency point.

“ G ” is the amplitude of the frequency increase, adjustable range +10dB~ -25dB;

“ Q ” Increase band width for bass, 0.1~20 adjustable.




4. 6. 2: F、G、Q can be adjusted in three ways:

a: Directly type the data to be set in the box of the corresponding item;

b: Select the small box of the frequency point to be modified with the mouse, as indicated by the red arrow in the right figure (the selected small box will turn orange) and drag the setting directly;

c: After selecting the frequency point to be modified with the arrow, use the up, down, left and right function keys on the keyboard to adjust.

4. 7: Output channel delay setting:

4. 7. 1: Delay unit: cm /inch/ms 3 option. Click  to switch the option.

4. 7. 2: Adjust the output delay time, default is 0ms.

Adjust the output delay distance. the time and distance change synchronously.

No matter the time or distance is adjusted, the 3 option changes synchronously.

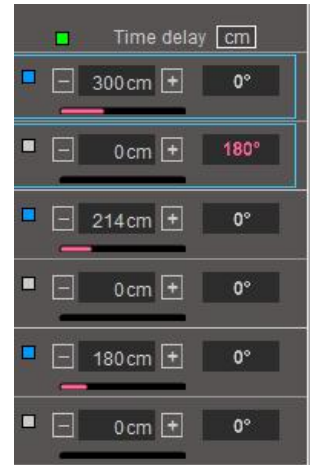
The delay time 0-25ms can be adjusted.

The method of delay value adjustment:

A.Support mouse click and select to directly fill in the number adjustment;

B.Support mouse click or continuous click "+" - "to adjust;

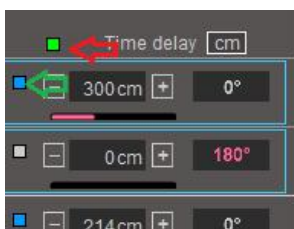
Support moving from value to value with arrows controls (up/down) on the PC keyboard



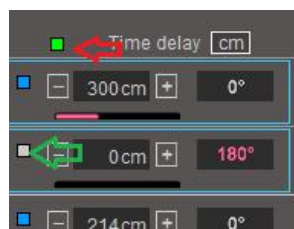
(Delay function area)

4. 7. 3: The effect comparison switch before and after the delay setting is controlled by clicking the green small box (as red arrow pointed) with the mouse arrow. In the green display state, the delay function is turned on, and the set delay effect takes effect. In the gray display state, the delay is turned off.

This function is hidden by default. Use the shortcut key Ctrl + Alt + P to call up this function.



Channel Delay function takes effect



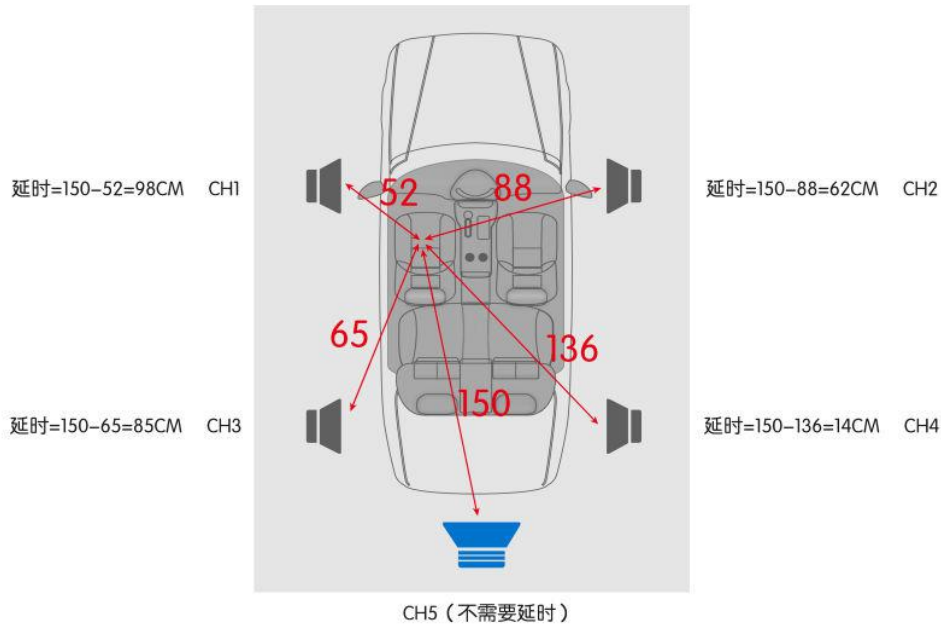
Channel Delay function turn off

4. 7. 4: Delay group control function: Click the small white box in the channel bar (as green arrow pointed). When displayed in blue, the channel is selected. As shown in the above figure (delay function area), 1-3-5 channels can be adjusted uniformly by clicking the "+" "-" .

4. 7. 5: Delay setting tips:

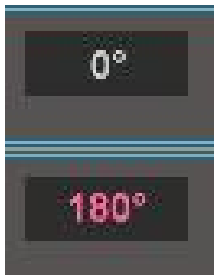
4. 7. 5. 1: Select the farthest speaker as the delay setting reference point, and measure the distance from the speaker to the tip of the nose. This speaker does not need to set the delay.

4. 7. 5. 2: Then measure the distance from other speakers to the tip of nose, use the farthest speaker distance - the distance from the current speaker, and fill the result into the delay setting (see the example below)



4. 8: Phase: phase adjustment

0 / 180 degree selection, default is 0 degree



4. 9: Input sound source selection:

This DSP provides 6 kinds of sound sources to choose from.

Tick "✓" the sound source option and it will take effect.

If the sound source does not need to be used, don't tick it.

This software has the function of automatically switching the input source, or can select the remote controller (or wireless remote control) to manually switch, and can set the priority of the audio source through the software (as described in 4.1.8)



When you choose to use the "auto switch of sound source" function, AP12 Pro will automatically select the sound source according to the priority level of the sound source. When the first sound source input is not detected, it will automatically switch to the next sound source.

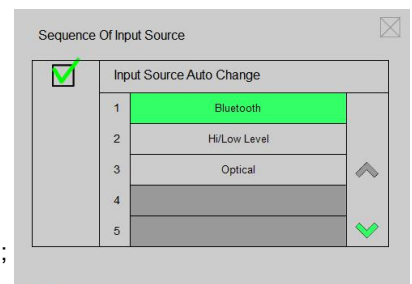
Example of automatic switching of sound source:

As shown in the right figure: the Input Source Auto Change is selected.

The first priority audio source is "Bluetooth", and other audio sources are "high / low level", "optical fiber" When Bluetooth is connected to

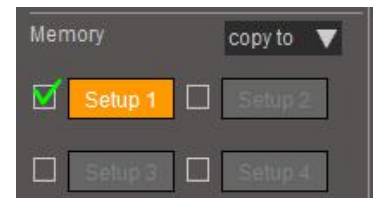
AP12 PRO and playing music, AP12 PRO will play the music signal from "Bluetooth"; When "Bluetooth" is disconnected or music is suspended, AP12 PRO waits for 3-5 seconds; and if there is still no music signal, the system will automatically switch the sound source

to "high level / low level". If there is no music signal in "high level / low level", the system will automatically switch the sound source to "optical fiber" , and so on until there is signal. On the contrary, if the "optical" signal is currently playing, when the "Bluetooth" music is transmitted, it will automatically switch back to the "Bluetooth" signal from the "optical".



4. 10: Copy and store preset values:

4. 10. 1: Four sets of presets are provided, which are saved according to different functional features, and can be switched with remote controller. By default, only the setup1 preset is enabled. If you need to use two or more modes, you need to click it “√”

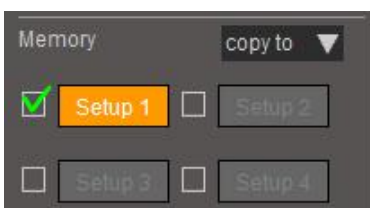


4. 10. 2: The group preset button is a mutually exclusive button. When one of the presets is selected, the function feature can be adjusted and saved separately.

4. 10. 3: Copy configuration from current preset to other preset: this function provides the ability to copy one preset in storage to another preset (including filter setting / equalizer setting / delay setting / output level).

4. 10. 4: The following figure is an example of data copied from setup1 to setup2::

Click setup1 first, and then click the small triangle on the right of "copy to", select setup2, the system will pop up the copy prompt, select "OK", all the filter settings / equalizer settings / delay settings that have been set in setup1 will be copied to setup2. If you choose cancel, the copy will exit.



4. 11: Volume:

Volume adjustment is have “Main” and “Slave”, which are mutually exclusive buttons.

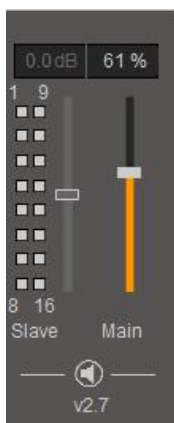
Main: Adjust the volume of all channels of DSP at the same time;

Slave: Adjust the volume for a specific group or channel. The Slave volume function can only take effect when the specified channel is chosen. The Slave volume function needs to be used with the remote controller. For details, please refer to "Remote control instructions"

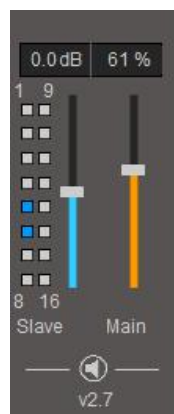
Default value for Main volume: 66%

Default value for Slave volume: 0dB

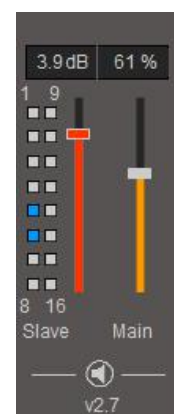
Double click the volume push button to return it to default value.



Slave volume not activated



Slave volume activated



Red color alert when slave volume over 3dB

Note:

Because the default setting of the main volume is 66%, if the configuration is completed, the output of the first power on will be relatively small. The tuner needs to adjust the main volume step by step according to the input of the sound source. If the volume is increased rapidly, the speaker may be damaged because the output volume is too large momentarily.