CM108AH

USB PnP Sound Device

Advanced Driver Software Architecture TM

Software User Manual for Vista/Win7

Rev. 0.7
June 06, 2012

Revision History

Revision	Date	Description
0.1	2010/02/02	First release
0.2	2010/02/11	Modified
0.3	2010/03/08	Modified 2.1.1, 2.2.3
0.4	2010/06/15	Modified 2.1.2
0.5	2010/09/01	Add Appendix A - Multi-Lingual Supporting List
0.6	2011/12/13	P7 Updated the Uninstall dialog P13 Updated VSS 7.1 dialog P15 Updated HP setting dialog P29 Updated Sound Recorder dialog P32 Updated Multi-language descrption
0.7	2012/06/06	1. Updated C-Media UI Logo 2. Updated Sound effect license logo 3. Add “Mix With Wave” function (P20)

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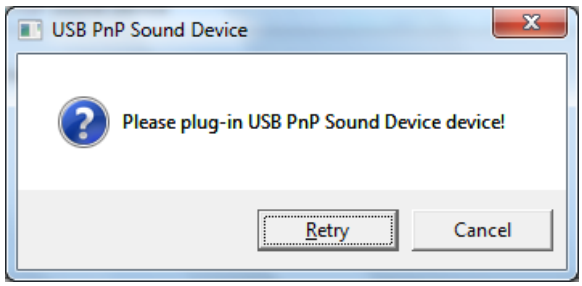
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SECTION 1 Installing the Software of CM108AH

Ensure that you have plug-in the USB audio card before installing CM108AH USB PnP Sound Device driver. Otherwise, driver installation error may occur.

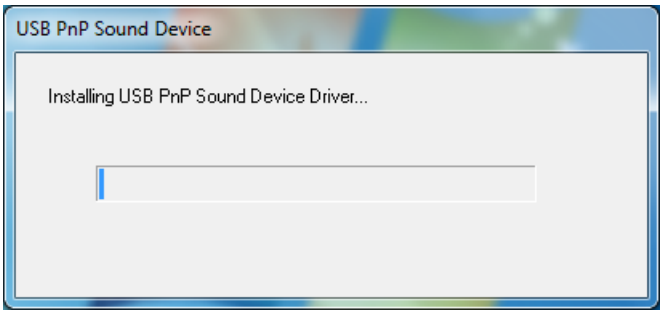
❖ Please make sure your CM108AH USB PnP Sound Device is plug-in. Otherwise you will see follow dialog.



1.1 Installation

❖ Insert C-Media CM108AH USB PnP Sound Device driver CD. Double click the setup.exe file if auto run is disabled. Press “Cancel” if you want to quit installation.

❖ Start Driver installing, please press “Next” button to next step as following diagram.

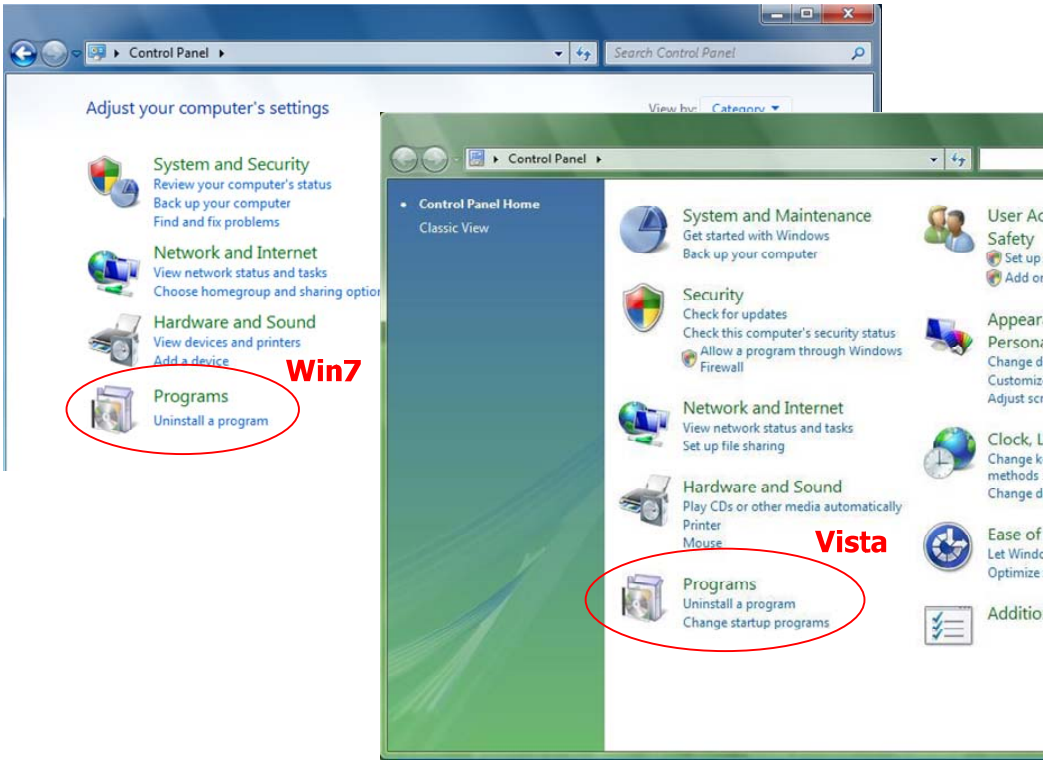


❖ Install complete. It is recommended that you restart your computer.

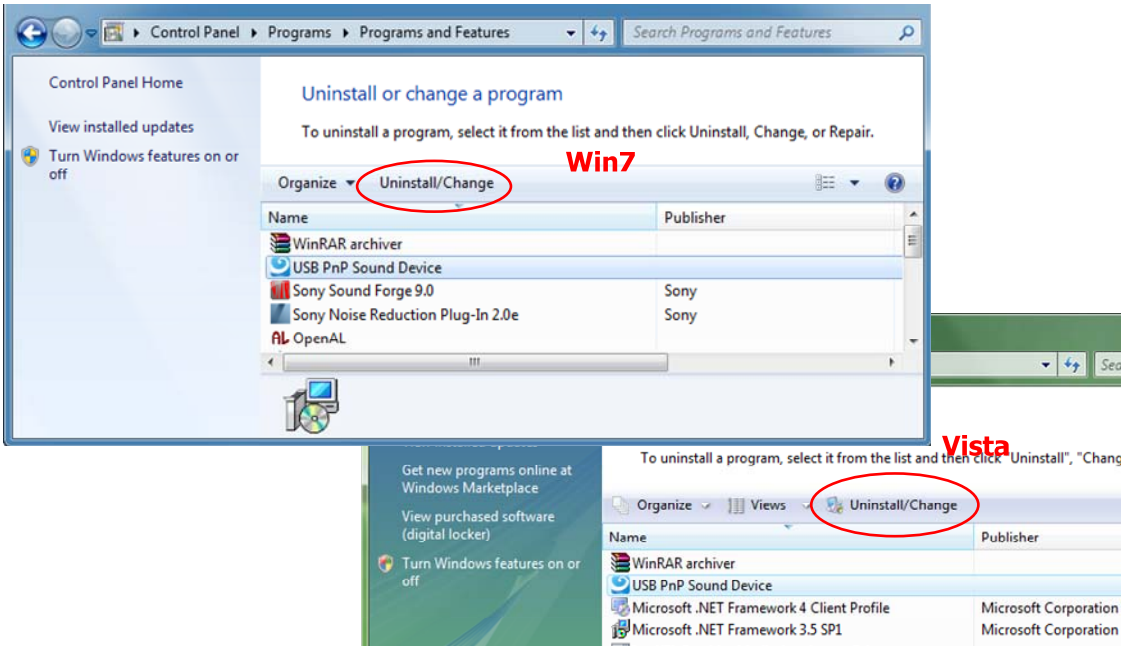


1.2 Un-Installation

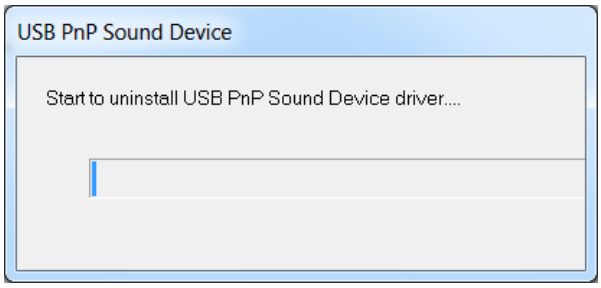
❖ Double click the “Programs/Uninstall a program” item from Windows Control Panel.



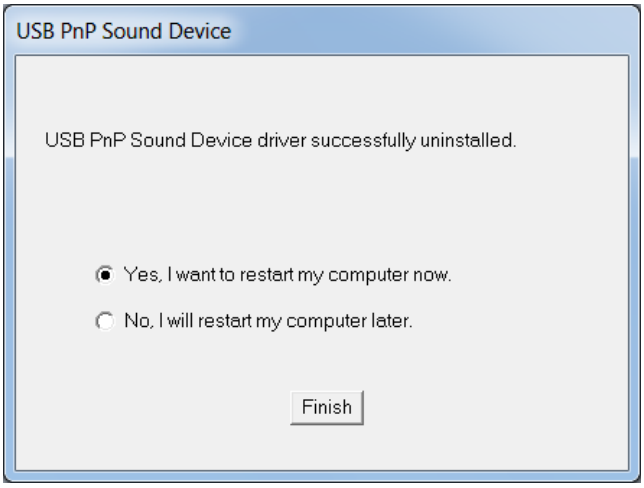
❖ Select “USB PnP Sound Device” item, and then click “Uninstall/Change” button.



❖ Start uninstalling process.



❖ Uninstall driver successfully, it is recommend restarting your computer to completely remove driver.



SECTION 2 Audio Control Panel (CPL) Introduction

2.0 Open CM108AH USB PnP Sound Device Software CPL

After the driver installing and rebooting, you will find the CM108AH USB PnP Sound Device software CPL icon on the system tray bar.

❖ You are able to open the CPL by double-clicking on the icon as following diagram.

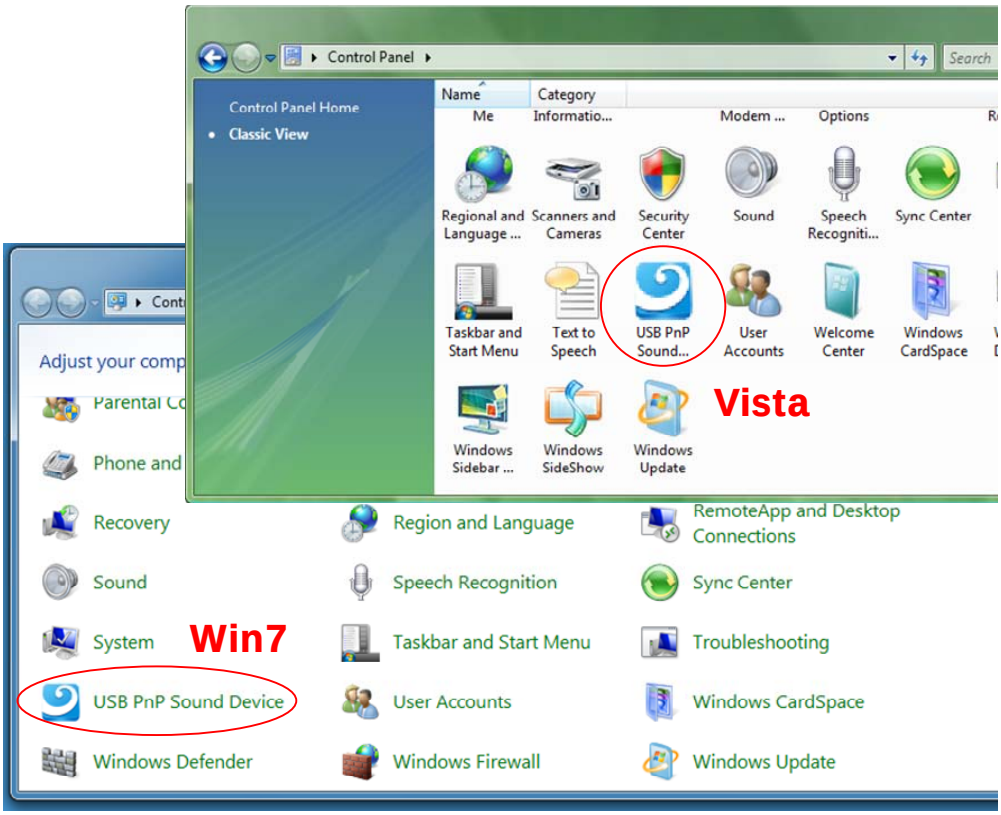
Win7 System Tray



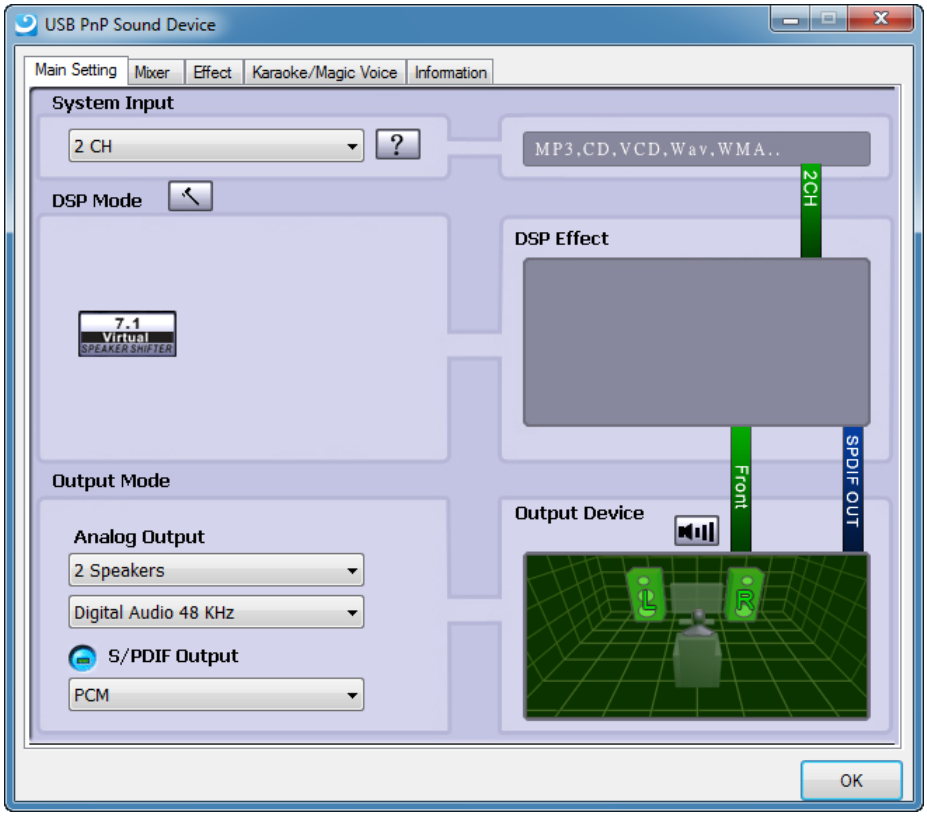
Vista System Tray



❖ If the tray icon does not appear in your system tray, please go to the Windows control panel and double click the “USB PnP Sound Device” CPL icon to open it.

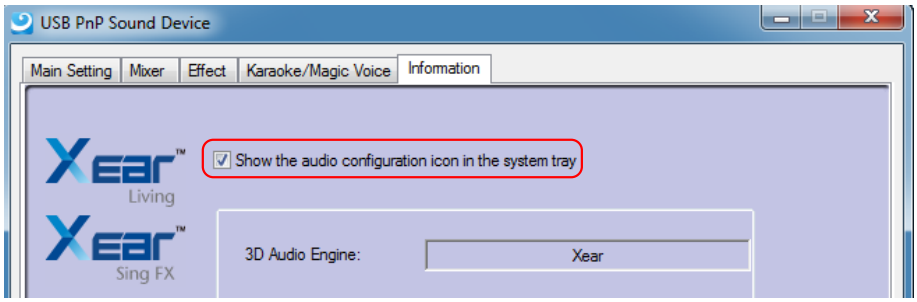


❖ The CM108AH USB PnP Sound Device control panel will appear as below diagram.



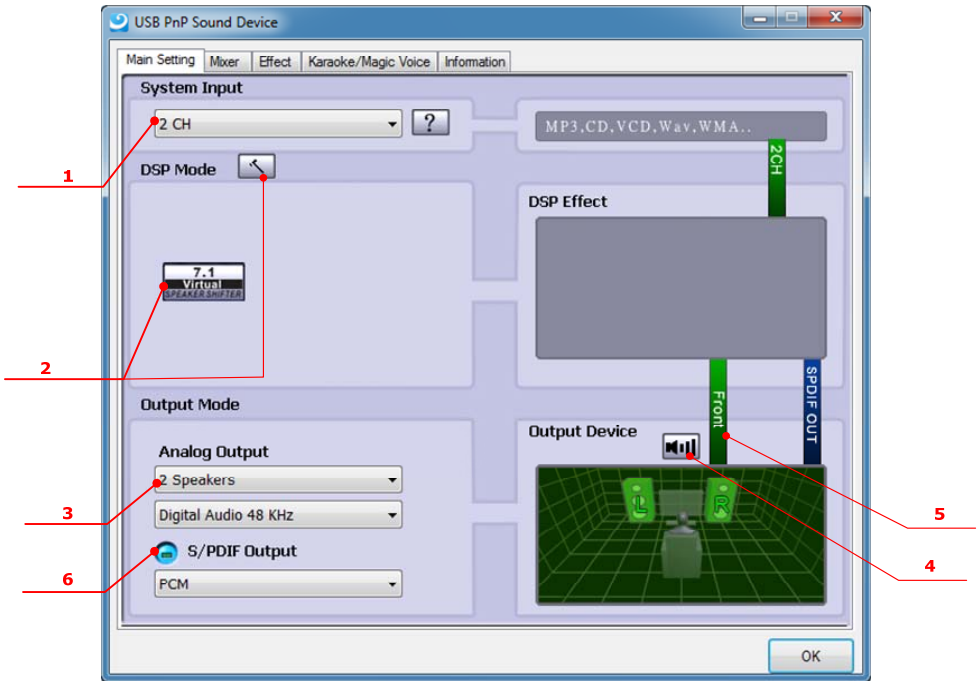
❖ How to make CPL icon visible in the system tray?

1. Open CM108AH USB PnP Sound Device software control panel.
2. Go to “Information” page.
3. Check “Show the audio configuration icon in the system tray.”



2.1 “Main Setting” Page Function Introduction

You can control the USB Audio various playback device configuration as below diagram.



1. System Input selector. (Please refer to 2.1.1)
2. Analog Output –DSP Mode. (Please refer to 2.1.2)
3. Analog Output – Headphone Configuration (Please refer to 2.1.3)
4. Analog Output – Digital Volume control (Please refer to 2.1.4)
5. Audio System Status Bar (Please refer to 2.1.5)
6. S/PDIF Output (Please refer to 2.1.6)

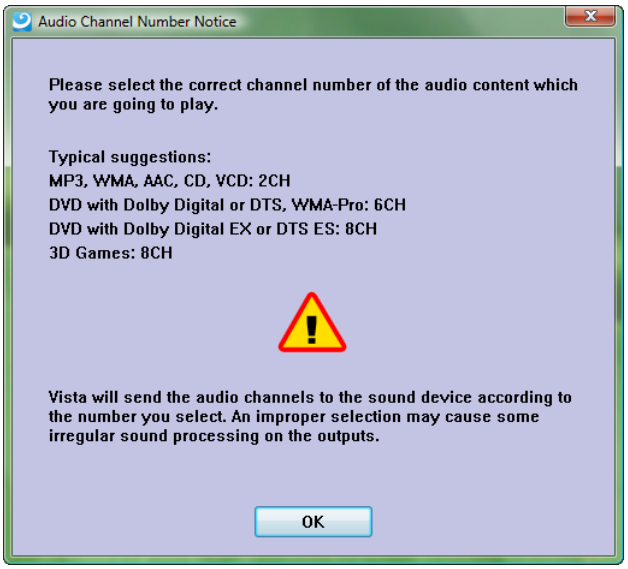
2.1.1 System Input Device Options (For Vista and Win7 only)

The System Input option is to select the correct channel number for the audio content which you are going to play in order to have a precise audio output.

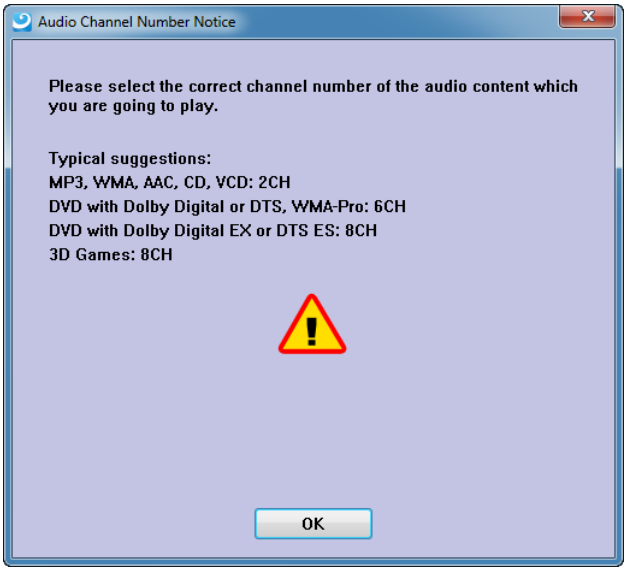


Users can have a better concept by clicking the Information icon (?), and refer to below dialog windows.

For Vista



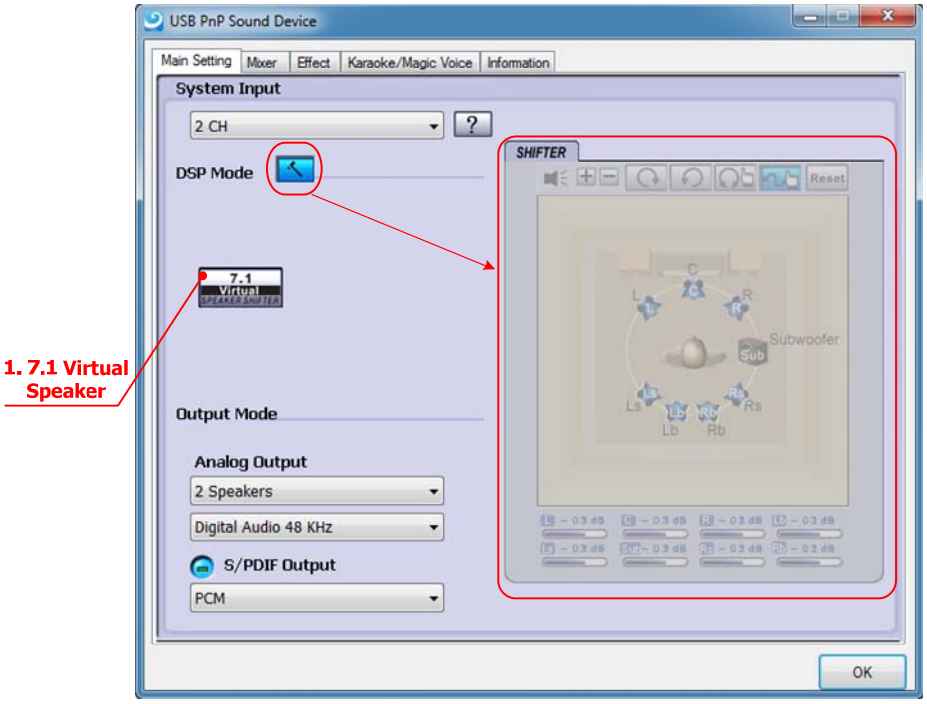
For Win7



2.1.2 Analog Output – DSP Mode

CM108AH USB PnP Sound Device Driver provides two DSP modes.

The button () allows users switch DSP Effect Advanced Setting on or off.
When the DSP Mode is turned on, users can see the DSP working layout to the right.

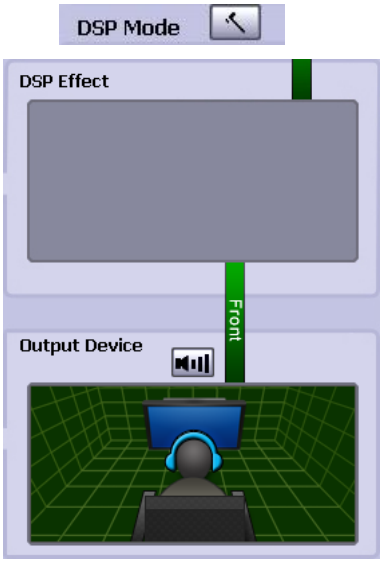


When the DSP Mode is turned on, users can see the DSP working layout. When the DSP Mode is off, the standard speaker test mode will be resumed.

DSP mode turned ON

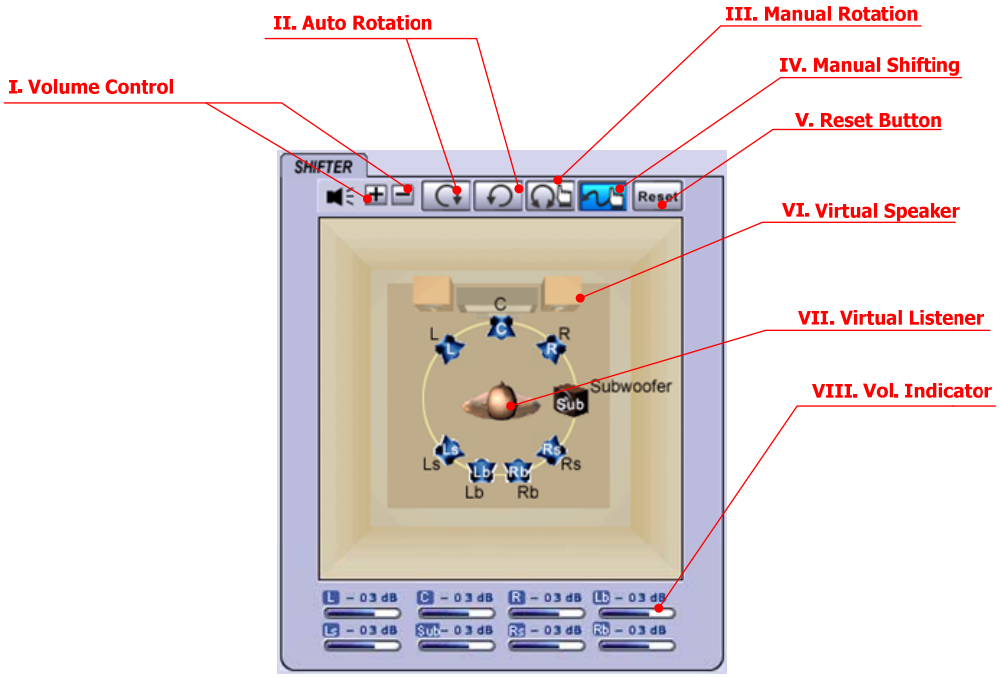


DSP Mode turned OFF



1. 7.1 Virtual Speaker

When the DSP Mode is turned on, click the button () to enable the DSP Effect as below diagram.

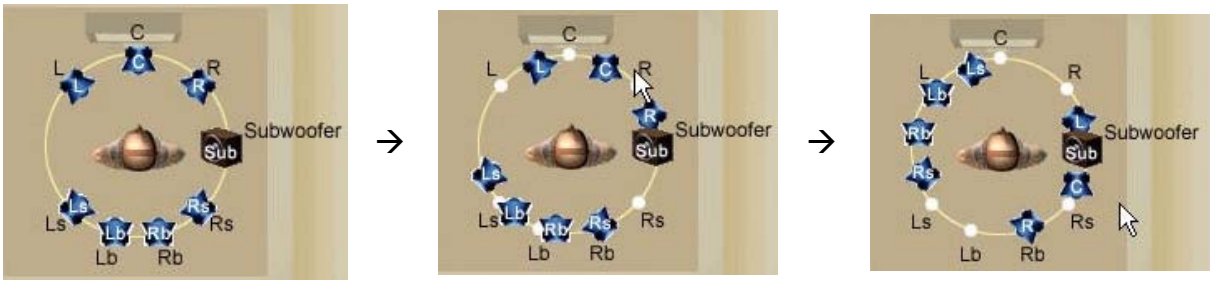


I. Volume Control:

Increase / decrease the volume of all channels by 1 dB for one step. (+4dB~-17dB)

II. Auto Rotation Mode:

The virtual speakers rotate clockwise or counterclockwise slowly. For example, if clockwise is selected:



T=0 T=0.25 sec T= 1 sec

III. Manually Rotation Mode:

Use mouse to rotate the virtual speakers on the screen manually.

IV. Manual Shifting (Free Moving Mode):

Use pointer and click-and-drag to move the location of individual virtual speakers.

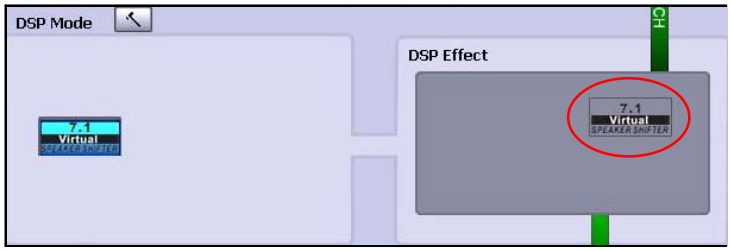
V. Reset:
Reset the location of virtual speakers / virtual listener to default.

VI. Virtual Speaker:
Each virtual speaker virtualizes one channel of the 7.1 channel speakers in the real world.

VII. Virtual Listener:
The virtual listener virtualizes your position.

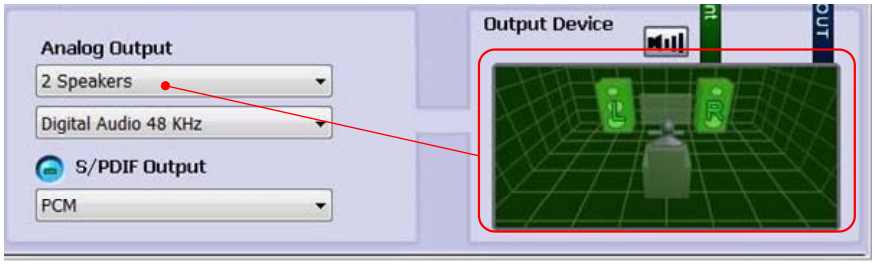
VIII. Volume indicator:
Indicate value for each channel.

❖ When the DSP Mode is turned on, click the button () to enable the DSP Effect. The effect icon will be displayed in the DSP Effect section to the right.



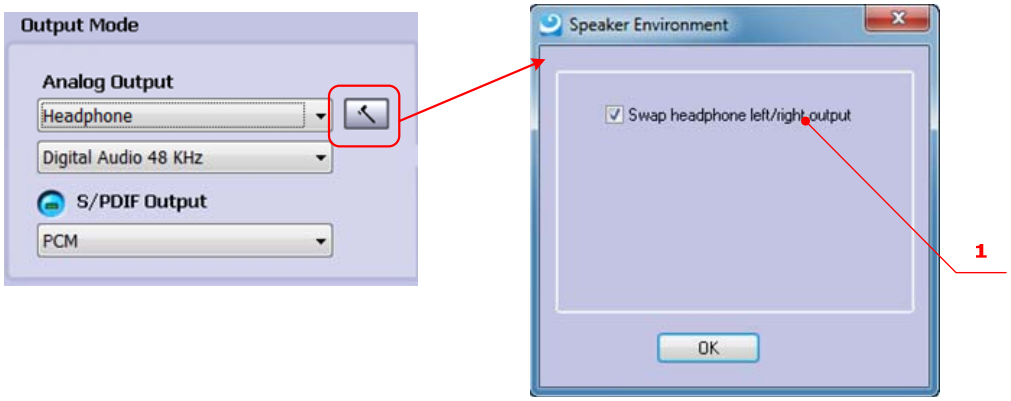
2.1.3 Analog Output – Speaker/HP Configuration and Sound Testing

CM108AH USB PnP Sound Device provides a stereo Headphone output.

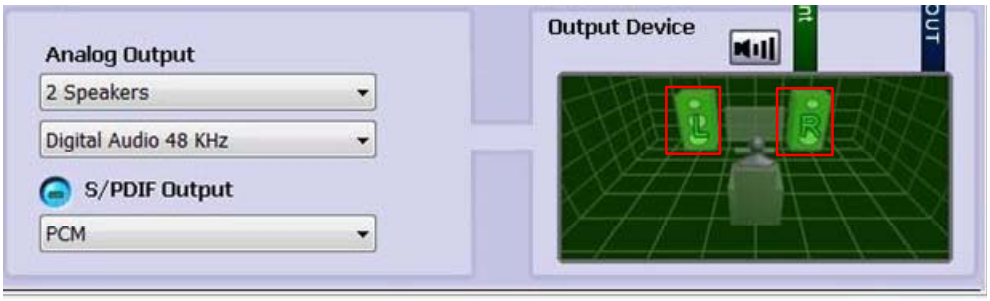


Click the Advanced settings button () to set the advanced Headphone setting.

- ❖ Advanced settings – Headphone
  1. Swap headphone left/right output

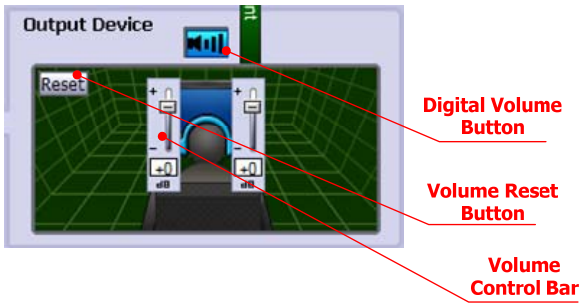


- ❖ Manual Sound Testing:
  Click the Headphone/Speaker diagram to test sound output sound by manual.



2.1.4 Speaker/Headphone Output – Volume Control

CM108AH USB PnP Sound Device CPL provides the volume control function, Click the "Digital Volume" Button () to enable the volume control bar as following diagram.



❖ Volume Control Bar:

Use the volume control bar to adjust sound value for Headphone.

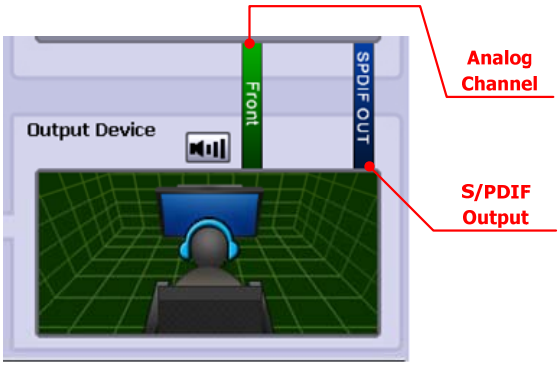
❖ Volume Reset Button:

Click the "Reset" Button to return Headphone sound value to default setting.

2.1.5 Audio System Status Bar

CM108AH USB PnP Sound Device CPL provides a status Bar to indicate the Audio system status.

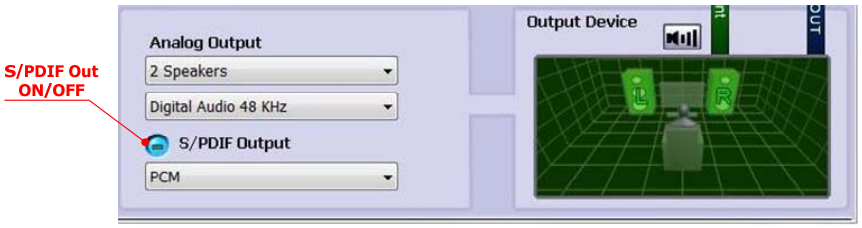
❖ Analog Channel – Indicate the audio system status of Analog Output.



2.1.6 S/PDIF Output – S/PDIF Output Switch

CM108AH USB Multi-Channel Audio Device support Digital Output. Click "S/PDIF Enable button" ( ) to enable it.

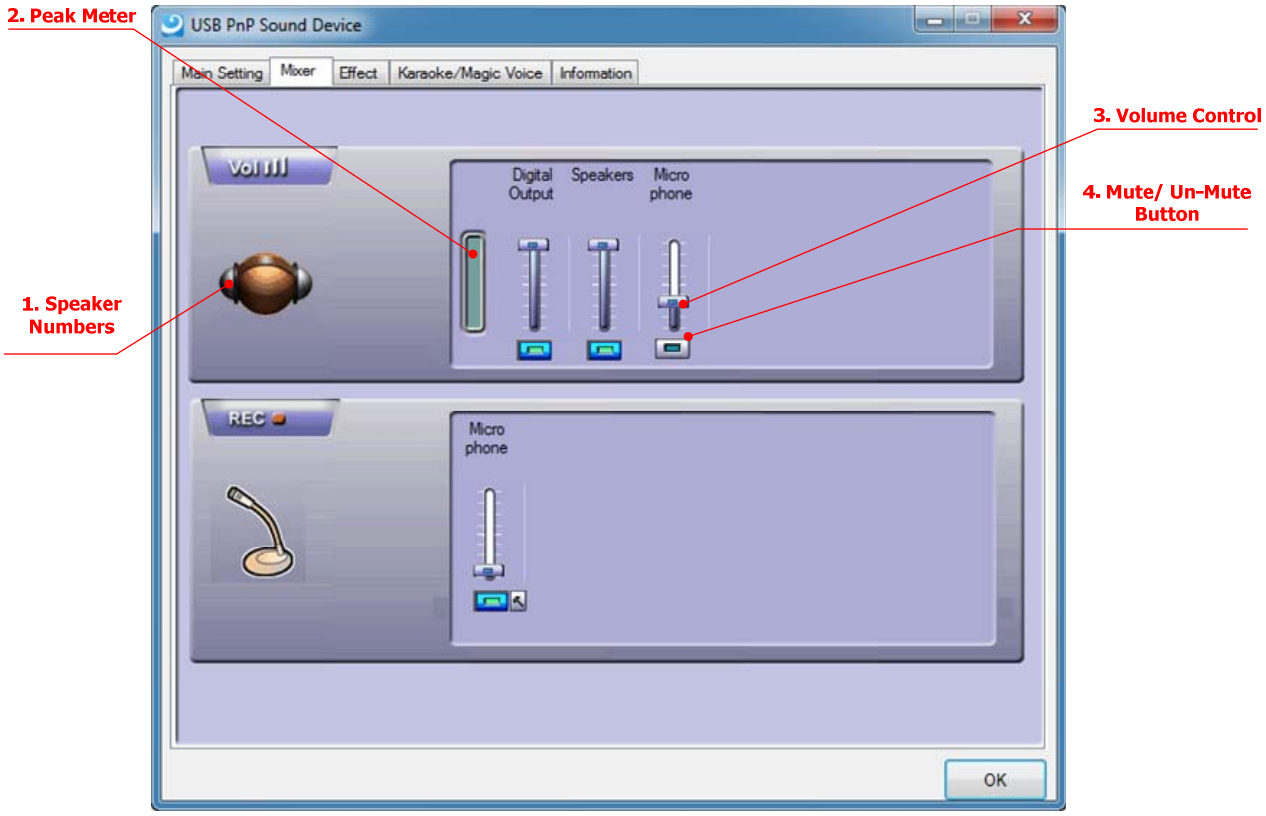
❖ **Digital Audio 48 KHz – 48KHz 2CH digital PCM Data Output.**



2.2 "Mixer" Page Function Introduction

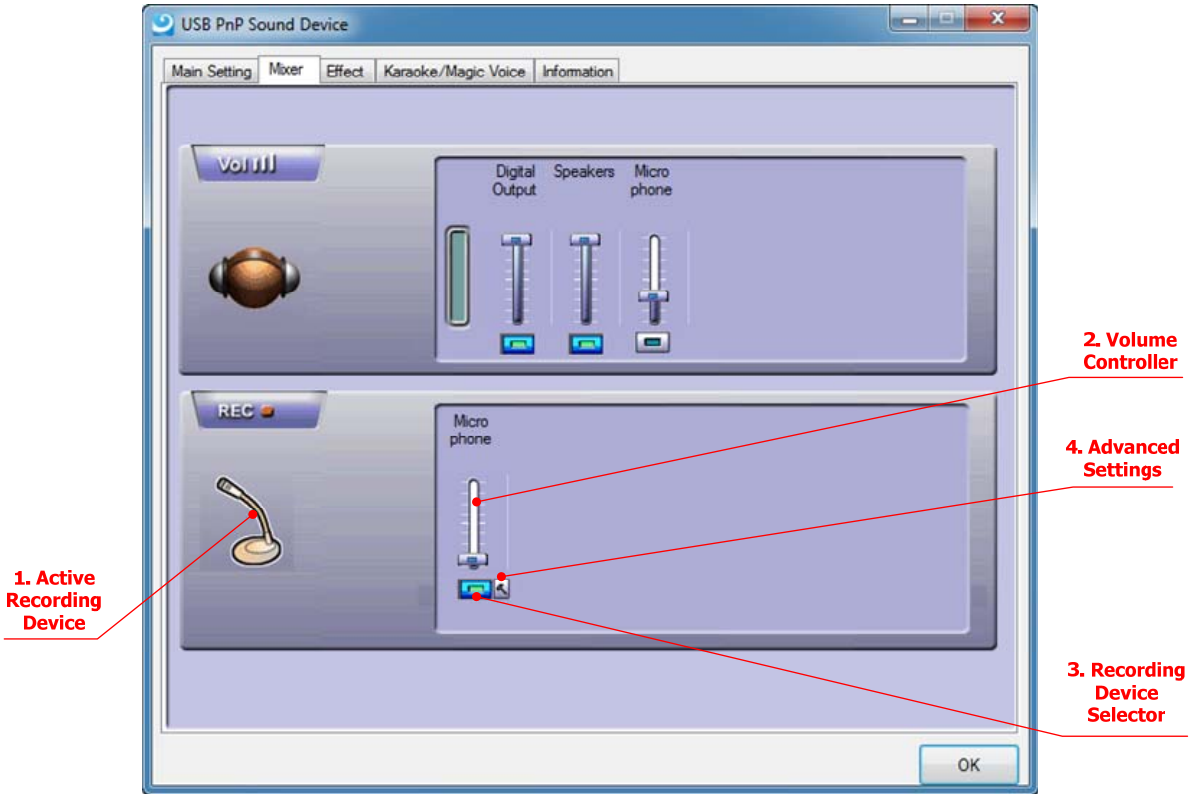
The built-in mixer lets users control volume / recording / monitoring (A-A path).

2.2.1 Playback and A-A path Mixer



1. Playback configuration:
   Indicate the Speaker or Headphone device.
2. Peak Meter:
   Indicate the instantaneous level of an audio signal.
3. Volume Control:
   User can control individual playback device sound volume or A-A path volume.
4. Mute/ Un-Mute Control:
   User can control individual playback device into mute/un-mute.
   - Mute → Button is un-lighted ( ).
   - Un-Mute → Button is lighted ( ).

2.2.2 Recording Mixer

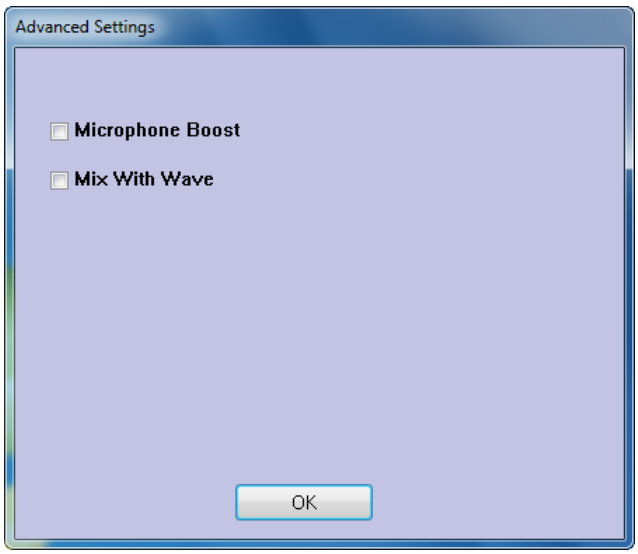


1. Active Recording Device:
   Indicate the recording resource device.
2. Volume Controller:
   User can control recording value by individual recording device.
3. Recording Device Selector:
   User can click selector to set the Recording source.
   - Unavailable → Button is un-lighted ( ).
   - Available → Button is lighted ( ).

4. Advanced Settings:

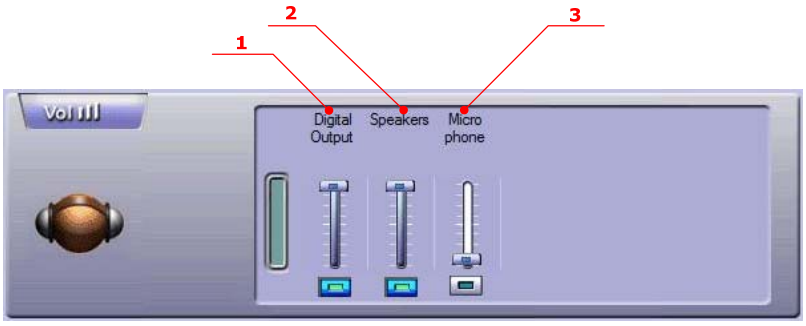
   Click Advanced Settings button ( ), there is a pop windows as below figure:

   - You can check the “Microphone Boost” item to increase the recording of Microphone volume.
   - You can check the “Mix With Wave” item to enable the microphone recording mix with Wave.



2.2.3 Playback Device Introduction

You have several options for controlling volume in this panel, including adjusting the volume level, muting and reducing volume.

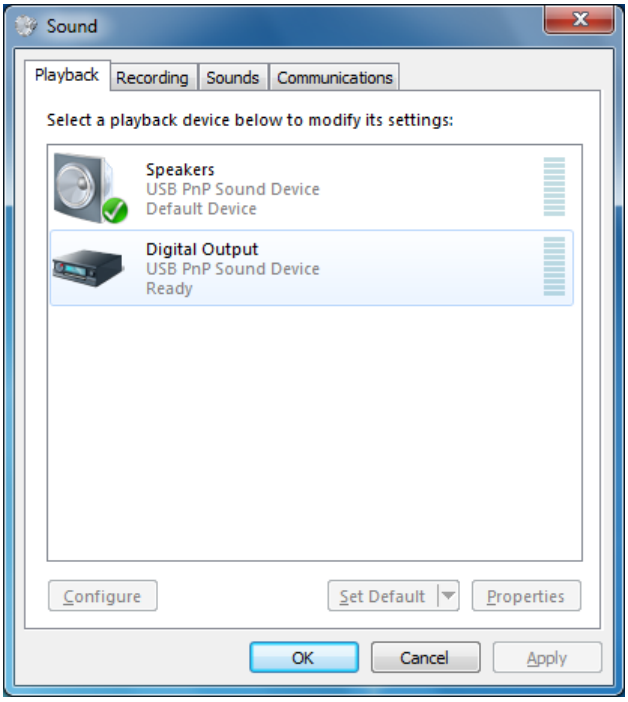


1. Digital Output:

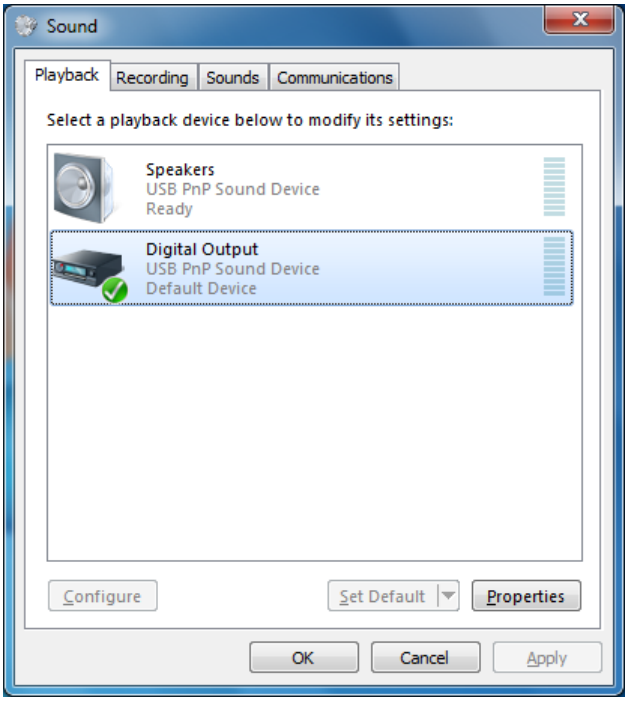
   This volume controlling can adjust the playback device which is default device.

(Please right-clicking on the USB Audio tray Icon on system tray and click on the “Multimedia Properties” to open sound property page to set the playback default device.)

When the Default device is “Speakers” as bloew, the “Digital Output” volume bar is adjusting the volume level for the “Speakers” device.



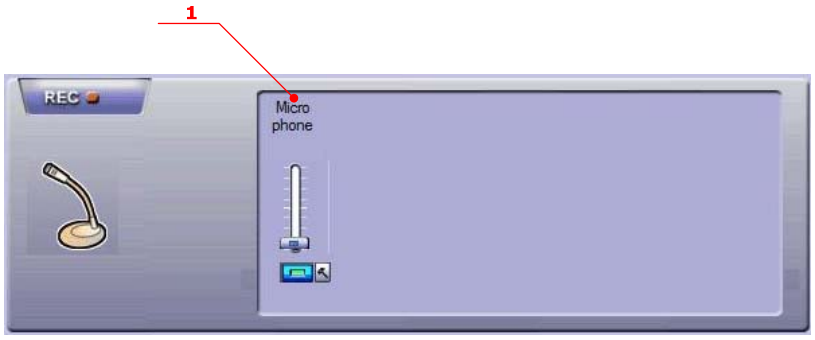
When the Default device is “Digital Output” as bloew, the “Digital Output” volume bar is adjusting the volume level for the “Digital Output” device.



2. Speakers:
   This volume controlling is for “Speakers” device volume level.
3. Microphone:
   The volume controlling is for monitor (A-A path) of “Microphone-in” device. The A-A path is meaning the Microphone-in to Speaker-Out analog loop path.

2.2.4 Recording Device Introduction

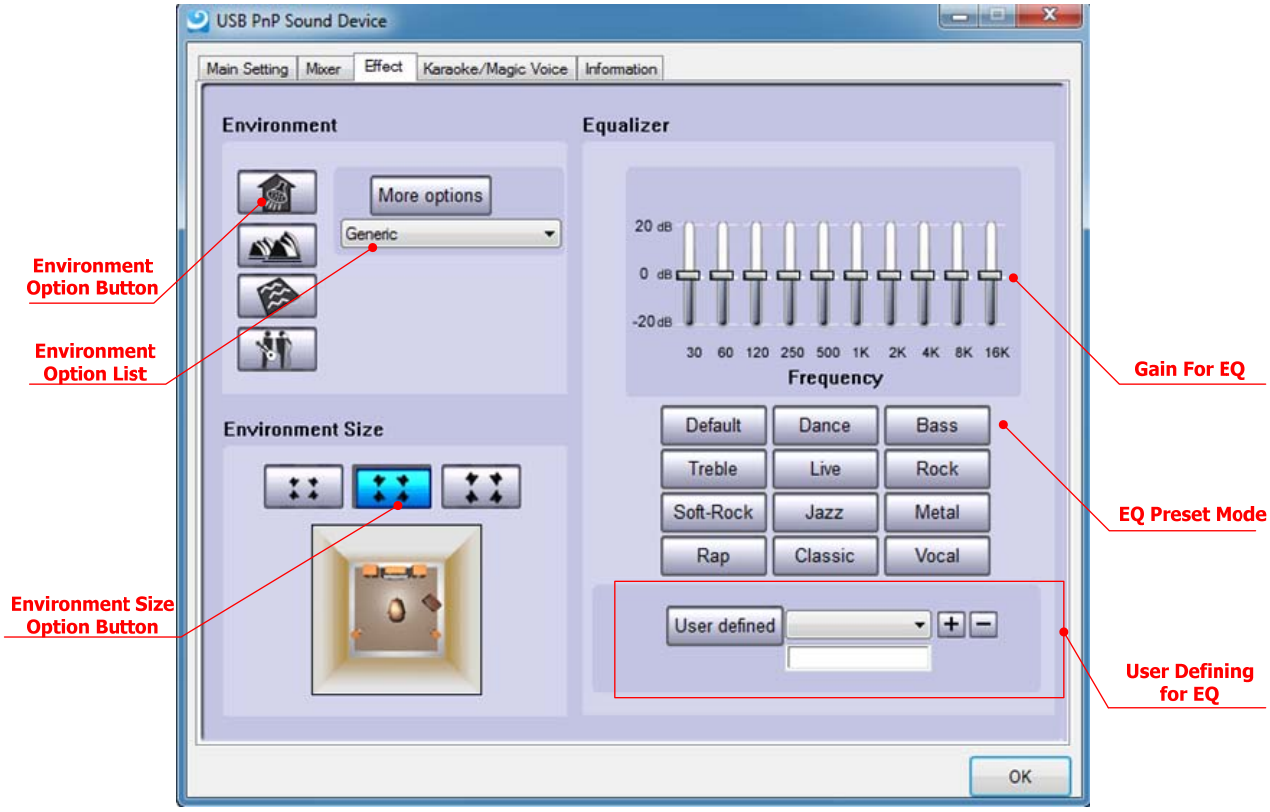
You have several options for controlling volume in this panel, including adjusting the volume level and select the default recording device.



1. Microphone:
   The volume level controlling and default device selector for “Microphone” device, please plug-in the microphone device and select ( ) the “Microphone” being the default device, and start to record sound.

2.3 "Effect" Page Function Introduction

The features in this page provide various sound effects.



❖ Environment

Select an "Environment option button" or "Environment option List" for emulation that is implemented by producing the sound reflection and reverberation.

❖ Environment Size

You can change the "Environment Size Button" to simulate a larger or smaller space (Default is Medium). You feel the changes of space.

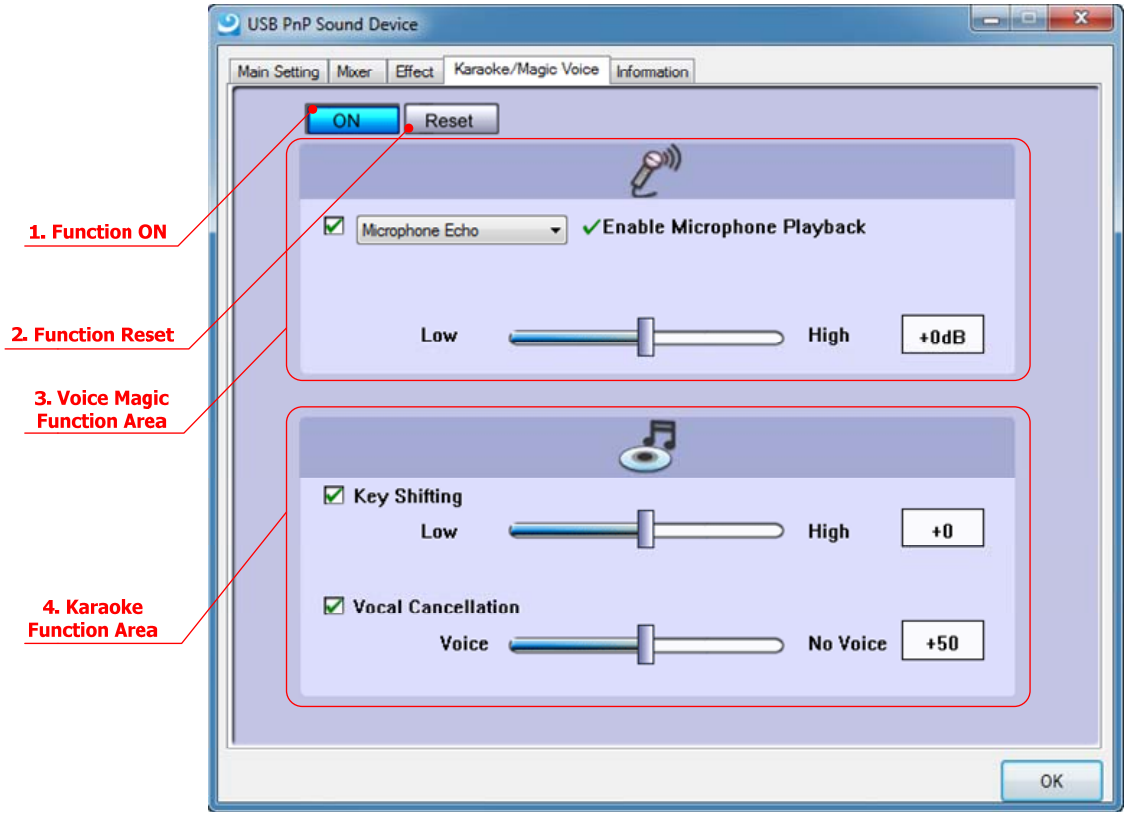
❖ Equalizer (EQ) 10-Band

Select a pre-set mode for equalizer that is designed accordingly. There are 12 preset modes such as Bass, Treble, Live, Rock, Jazz, etc.

You can change the gain setting for each band and then give it a name in the following blank. Click "+" to add your new setting into the "User Defined" list. Click "-" to delete settings.

2.4 "Karaoke and Magic Voice™" Page Function Introduction

These functions let users experience the voice processing. It is also an interesting feature that can be used on VOIP applications and Karaoke speaker systems.



1. Click "ON" button to turn on the voice processing.
2. Click "Reset" button to return all setting to default volume.
3. Magic Voice Function Area – Provide "Microphone Echo" and "Magic Voice" functions. (Please refer to 2.4.1)
4. Karaoke Function Area - Provide "Key Shifting" and "Voice Cancellation" functions. (Please refer to 2.4.2)

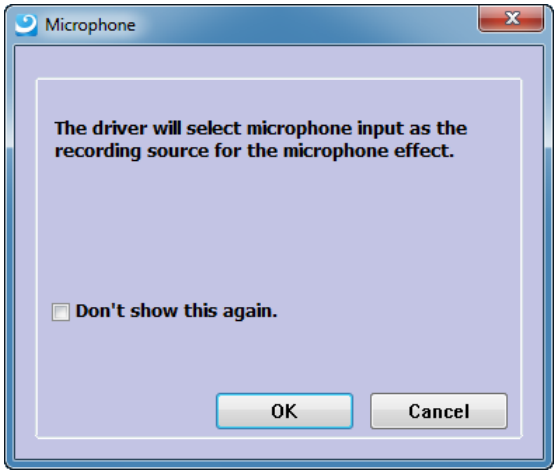
2.4.1 Magic Voice Area

1. Microphone Echo:

When singing a song, you may need the Voice Echo to make the singing more euphonious. You can select “Microphone Echo” to get the effect and adjust the volume of the echo sound. The range is -12dB to +12dB.



At the first time you turn on the function, the driver will select the microphone input as the recording source. Click “OK” to close this window as following.



2. Magic Voice:

When you are talking to your friends over the network like messenger, VOIP, online game applications, you can use “Magic Voice™” effects in the pull-down menu for fun. Only one voice type can be chosen at one time.

When “Magic Voice™” is selected; the layout will be shown as followed. There are five options: Default (None Effect), Monster, and Cartoon, Male, and Female styles.



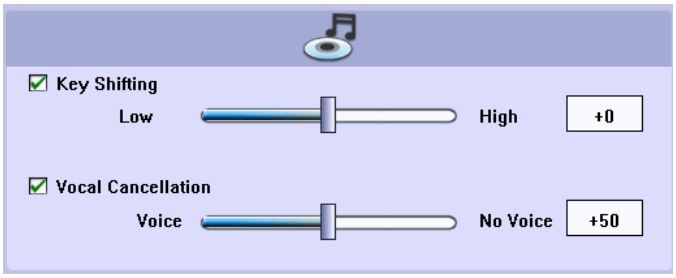
2.4.2 Karaoke Function Area

1. Key-Shifting:

   You can enable Key-Shifting for the Karaoke VCD or the music to make it suitable for your voice pitch. The range is -4 to +4 semitones.

2. Vocal Cancellation:

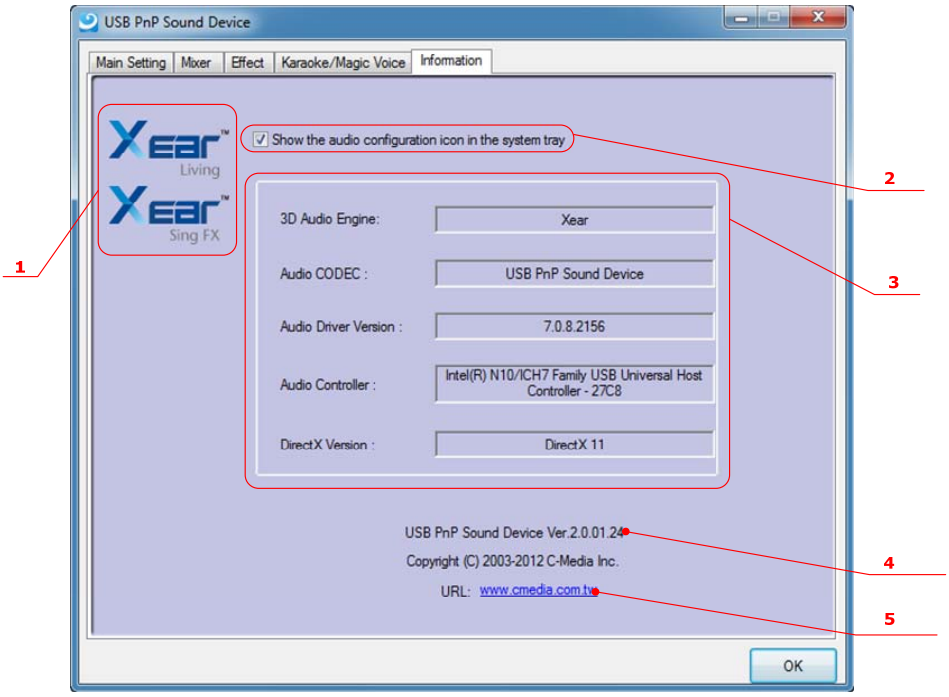
   If the music source includes original singer's voice, try "Vocal Cancellation" function to cancel it (0~100).



However, the effect doesn't always work, and it depends on the recording method of the source. It's usually not needed for Karaoke VCD or CD, which do not have voice inside generally.

2.5 “Information” Page Introduction

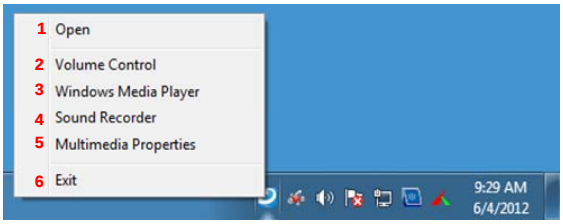
This page records the driver information and the technologies’ trademark logo. You can get both hardware/software details and also legal information references here.



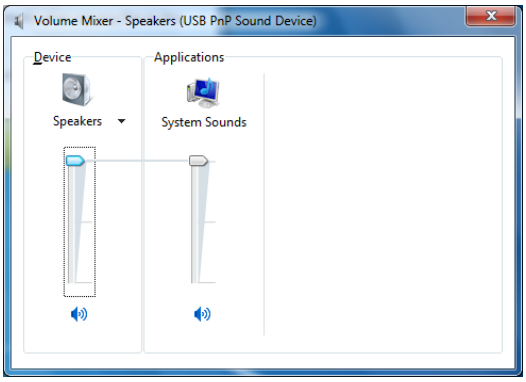
1. Trademark logo placement.
2. Show the audio configuration Icon in the system tray option.
3. Hardware and software information.
4. Control Panel Version.(Ver.2.0.01.24)
5. C-Media Web Site. (URL:www.cmedia.com.tw)

2.6 “Tray Icon” Function Introduction

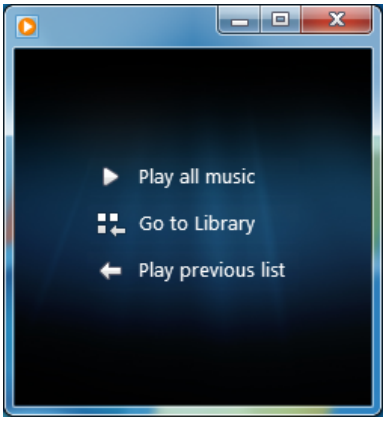
Open the “CPL Tray Icon Function List” by right-clicking on the tray Icon on system tray.



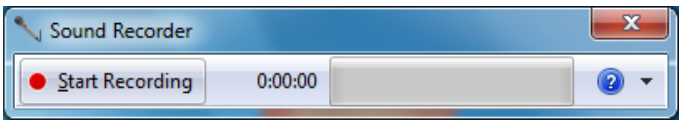
1. Open:
   When click the “Open” item, will restore the USB Audio Software CPL.
2. Volume Mixer:
   When click the “Volume Control” item, will open the Volume Mixer of Windows OS, if you want to separately control the volume of your speakers and other sound devices or programs using this Volume Mixer.



3. Windows Media Player:
   When click the “Windows Media Player” item, will open the Microsoft Windows Media Player.



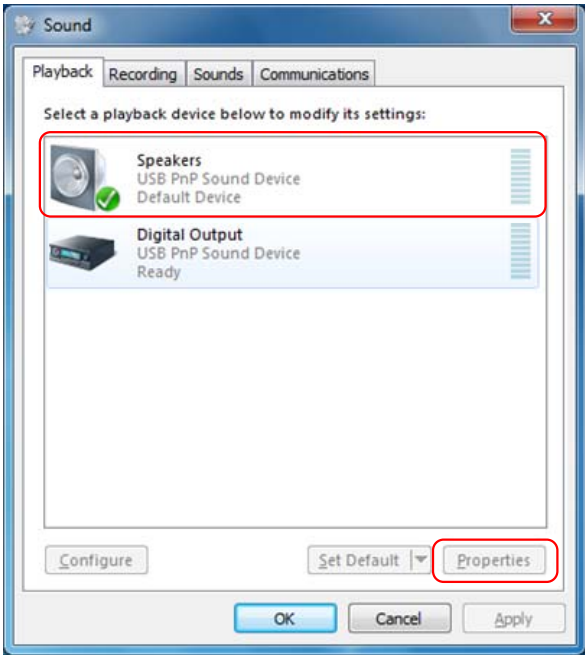
4. Sound Recorder:
   When click the “Sound Recorder” item, will open the Windows build-in default recording program.



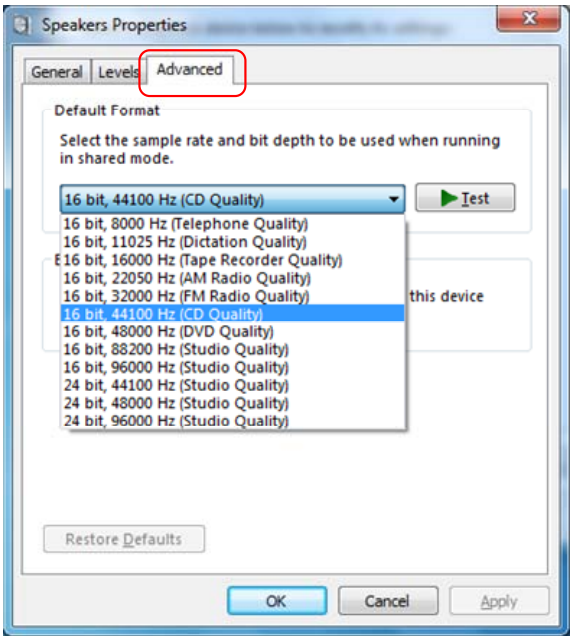
5. Multimedia Properties:
   Open the multimedia properties page of Windows OS, you can select the working sample rate & bit rate on the property page.

   ❖ Playback

   I. Select the “Speakers” device and then click the “properties” button.



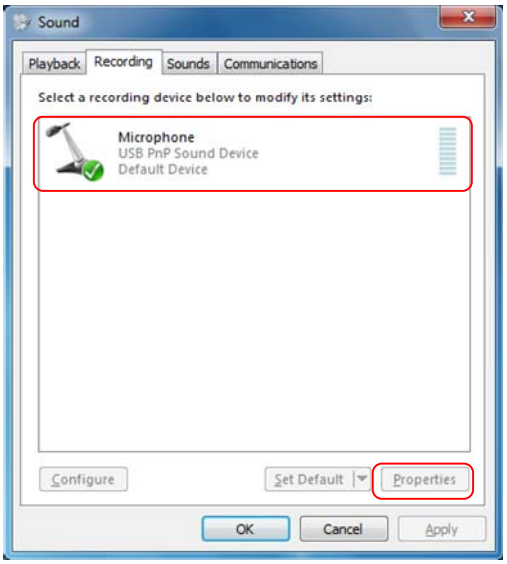
II. Click the tag of “Advanced”, enter the advanced page, and click the dropdown list to open default format support list as below diagram.



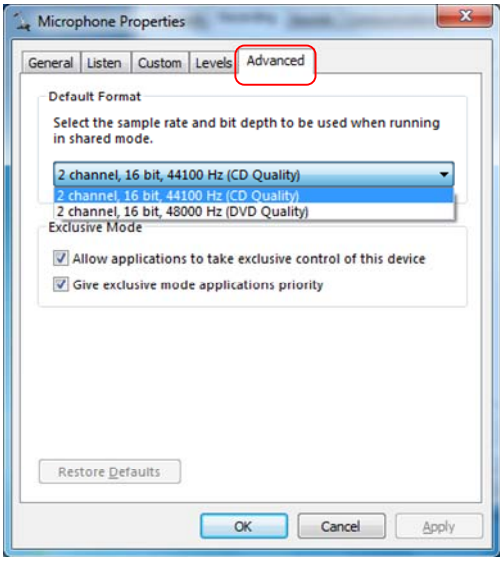
III. Please follow the same step to change the sample rate & bit rate for “Digital-Output” device or other playback device.

❖ Recording

I. Select the Microphone device and then click the “Properties” button.



II. Click the tag of “Advanced”, enter the advanced page, and click the dropdown list to open default format support list as below diagram.



III. Please follow the same step to change the sample rate & bit rate for other recording device.

6. Exit:
When click the “Exit” item, will exit the tray Icon from system tray.

Appendix A - Multi-Lingual Supporting List

C-Media USB/PCI Audio Driver Multi-Lingual Supporting List

- Support 17 languages.
- Detail information:

1	English – English
2	German - Deutsch
3	French - Français
4	Portuguese - Português
5	Spanish - Español
6	Russian - русский язык
7	Italian - Italiano
8	Dutch - Nederlands
9	Indonesian - Bahasa Indonesia
10	Danish - Dansk
11	Chinese - Traditional
12	Chinese - Simplified
13	Korean - 한국어
14	Japanese -日本語
15	Swedish - Svenska
16	Turkish - Türkçe
17	Thai - ไทย

Install program will install the corresponding language package base on the detected OS language.