User Guide

VT1708A
VIA HD Audio Adeck For Windows 2000, Windows XP & Server 2003

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Revision 1.1e

Revision History

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1.1e	Jun.13.07	PW	Initial public release

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Introduction

Audio Deck (Adeck) is a Windows based program which co-works with the VIA HD Audio driver and the VIA HD Audio chip. With the advanced audio control interface, users can make the best use of the VIA Audio chip and create powerful customized sound environments.
The main features of Adeck include:

- Supports various sound enhancement settings with detailed user customization
- Supports active jack detection
- Supports jack Function configuration
- Supports configurations for independent headphone and re-direct headphone
- Supports set sampling rate of S/PDIF input/output device
- Supports hot Keys
- Supports multi-language
- Supports speaker testing
- Supports multi-device selection for playback and recording

System Requirement

Adeck only supports the VIA HD audio chip series with VIA HD audio driver installed.

Minimum System Requirement

- Intel Pentium III 1.0GHz or above
- Minimum of 256MB of RAM
- Minimum of 10MB of available hard disk space
- Microsoft Windows XP Professional Service Pack 1 or above

Recommended System Requirement

- Intel Pentium 4 2.0GHz or above
- 512MB of RAM or above
- Microsoft Window XP Professional Service Pack 2 with DirectX 9.0C

Display Mode

Simple Mode

Once Adeck has been launched, the panel will be displayed in the center of windows desktop. The Adeck system is initialized using the simple mode (see Figure 1). In this mode, the user only has limited control and audio information. The basic controls include: master volume and mute. The basic audio information includes: peak meter, number of channels, S/PDIF out status or sound effect status, etc.

Figure 1 - Simple Mode Adeck

If the user needs to control the sound effects in detail, he can click on the buttons located on the lower part of the panel. These buttons are labeled: Speaker, Mixer, Effect, Jack, S/PDIF and Info. When any of the buttons are activated, the Adeck system will enter full mode for detailed control.
To exit Adeck, the user can simply click on the Power button.

Full Mode

In the full mode, the bottom part of Adeck expands. Depending upon the button that was selected, different panels will be displayed in the expanded portion. Figure 2 shows an example of Adeck in Full Mode.

Figure 2 - Full Mode Adeck

Panel Detail

Adeck consists of two parts; A top and bottom panel. In the simple mode, only the top panel will be fully shown. In the full mode, both the top and bottom panel will be fully expanded.

Top Panel

The top panel consists of several parts as shown in Figure 3.

Volume control: This is the global volume control. The global volume is controlled using a slider. Scrolling the slider to the left decreases the volume. Scrolling the slider to the right increases the volume.

Mute button: This is the global mute control. When the mute button is activated, all speakers connected to the system will be silenced.

Channels Display: On the right of the peak meter, there is a display showing the number of audio channels that is being used in the system. The number of channels can be changed in the speaker configuration panel.

Peak Meter: The volume peak meter is located to the left of the channel display. The number of peak meters changes according to the number of channels used in the system.

S/PDIF Output Status: The S/PDIF output status is located to the right of the Channel Display. If "Digital PCM" is shown, that indicates the audio system will allow a PCM music stream output from the S/PDIF output jack.

Bass Management Indicator: The Bass Management Indicator is located below the Channel Display. If it is enabled, "BM" will be visible. Notice that the "Bass Management" and "Equalizer" functions can not be enabled at the same time.

Equalizer Indicator: The Equalizer Indicator is located to the right of the Bass Management Indicator. If it is enabled, "EQ" will be visible. As mentioned earlier, the Equalizer and Bass Management functions can not be enabled at the same time.

Configuration Panels: On the bottom of the top panel, there is a row of buttons. When any of the buttons are activated (except the "Power" button), the bottom panel expands to show the selected panel.

Power Button: When the Power button is activated, Adeck will hide itself in the system tray.

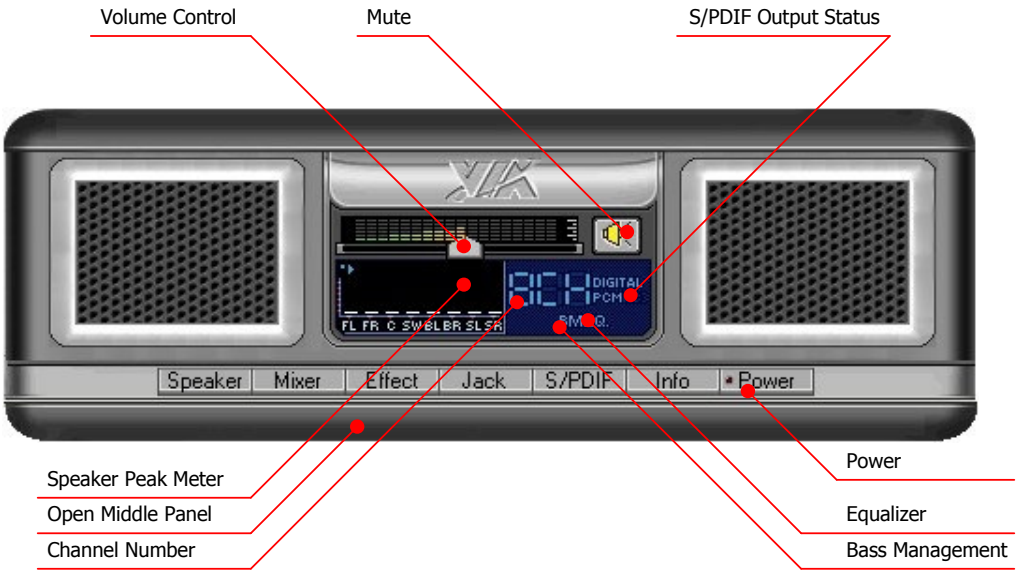

Figure 3 - Top Panel

Bottom Panel

The Bottom Panel is beneath the top panel. The contents of the Bottom Panel are dependent upon the button that activated to it. Even if the Bottom Panel is already expanded, the contents can still be changed by selecting another button from the bottom of the Top Panel.

Speaker Configuration Panel: As Figure 4 shows, it contains the channel configuration and output volume control. To test a speaker to see if it is connected, single-click on the desired speaker. To test all speakers, just click the Test button.

Mixer Configuration Panel: As Figure 7 shows, it contains the basic Playback Mixer and Recording Mixer volume controls. Additionally, the user can select which playback or recording device to be active.

Effects Configuration Panel: As Figure 11 shows, there are two sound enhancement functions that can be selected: "Equalizer" or "Bass Management".

Jack Configuration Panel: As Figure 15 shows, the user can re-task every jack's usage and active jack detection. The user can also configure the headphone to receive the same audio signals as the front speakers.

S/PDIF Configuration Panel: As Figure 19 shows, the user can configure the S/PDIF related control.

System Information Panel: As Figure 21 shows, the user can view the system information and set the preferred language. Additionally, the user can program the hot keys.

Configuration Panels

Speaker Configuration Panel

As Figure 4 shows, the Speaker Configuration Panel is divided into two parts. On the left side, the user can select the number of audio channels. There are up to 8 channels available. Once a channel configuration is selected the right side of the panel will change accordingly.
On the right side of Speaker Configuration Panel, the user can adjust the volume level for each speaker separately. Speaker positions can also be changed. To test a speaker, single-click on the speaker to hear the test audio clip. A Test button is also provided through which a user can test all the speakers accordingly.
Below side of the speaker configuration on the right side, there is a check box for Center/LFE Swapping. This function is used to swap the center speaker and LFE speaker audio streams.

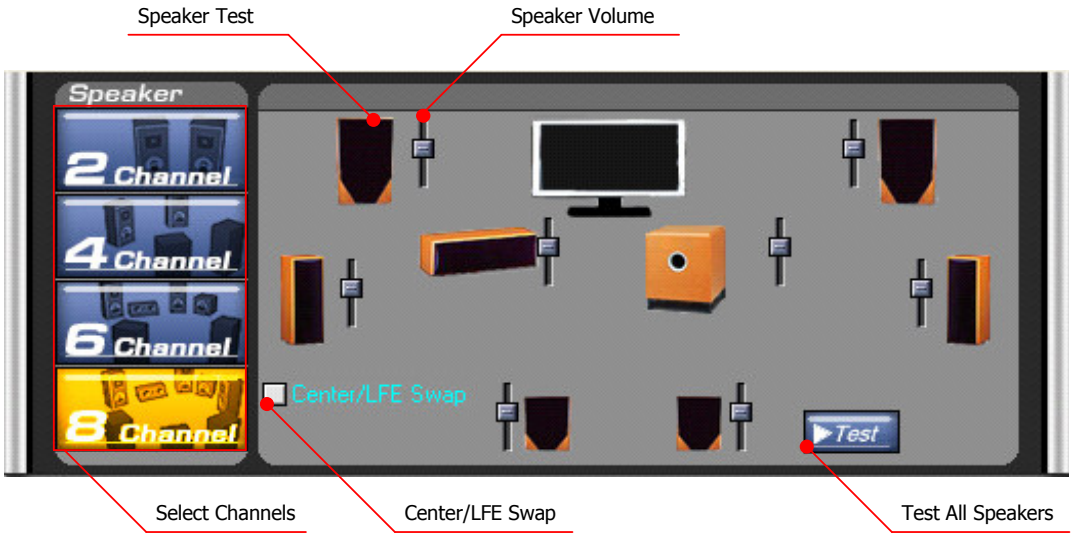

Figure 4 - Speaker Configuration Panel

If the "Independent Headphone" feature has been enabled, the maximum number of channels will be six as shown in Figure 5. To control the headphone volume, click on the headphone icon at the bottom-right corner.

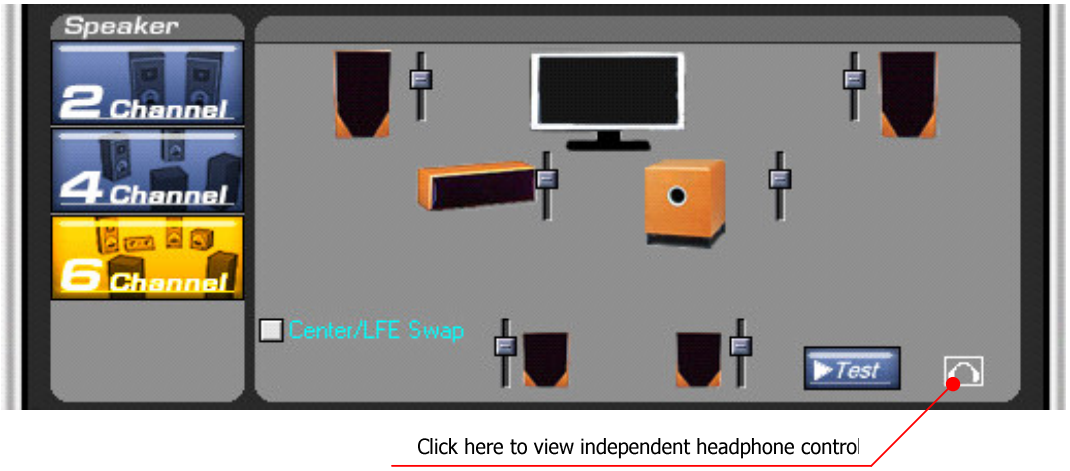

Figure 5 – Speaker Configuration Panel with Independent Headphone Enabled

The headphone volume controls are as shown in Figure 6. To switch back to the speaker volume controls, click on the speaker icon at the bottom-right corner.

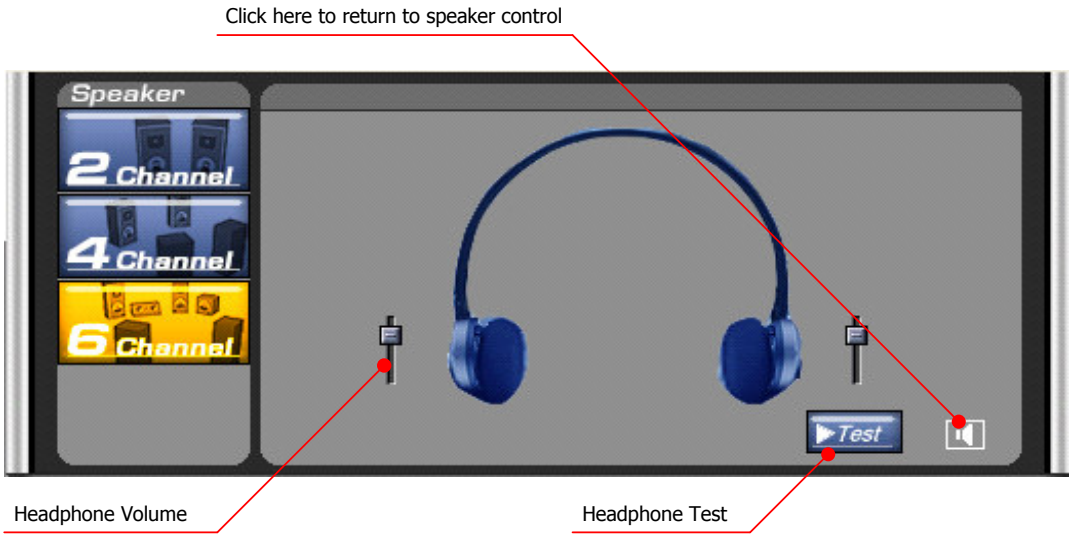

Figure 6 - Headphone Volume Setting in Speaker Control Panel

Mixer Configuration Panel

On the Mixer Configuration Panel, there are four mixer devices that can be selected: playback, recording, headphone and microphone.
Figure 7 shows the Playback Mixer. Each of the Playback items has a volume, balance and mute control. The user can also select the default playback device from a drop-down menu.
On the bottom-left of the playback mixer, there is an analog to line out control check box. User could redirect the analog input sources (Microphone, Line In, Front Microphone etc.) to line out by checking this feature.

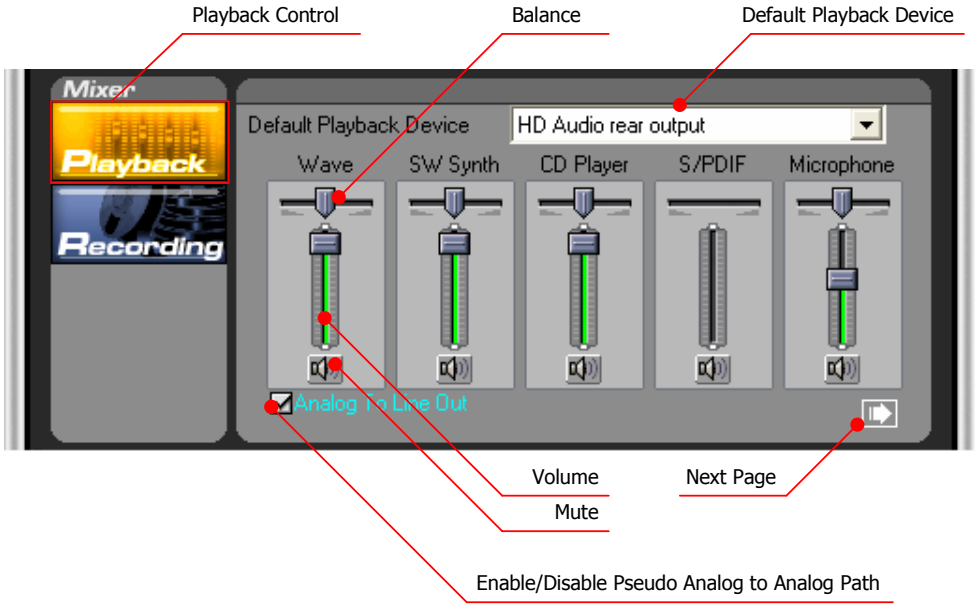

Figure 7 - Mixer Configuration Panel -- Playback Device Setting

On the Recording Mixer, all possible input devices are shown. Figure 8 shows the Recording Mixer. Each of the Recording items has a volume, balance and item select. Please note that there can only be one source at any given time. On the bottom-left side of this page, there are Mic 20db boost control and Front Mic 20db boost control check boxes. User could enlarge the recording sound by checking on this feature. On the bottom-right is an AEC (acoustic echo cancellation) control check box. User can check this box to enable AEC function. There is also a peak meter to show the volume of the audio input.

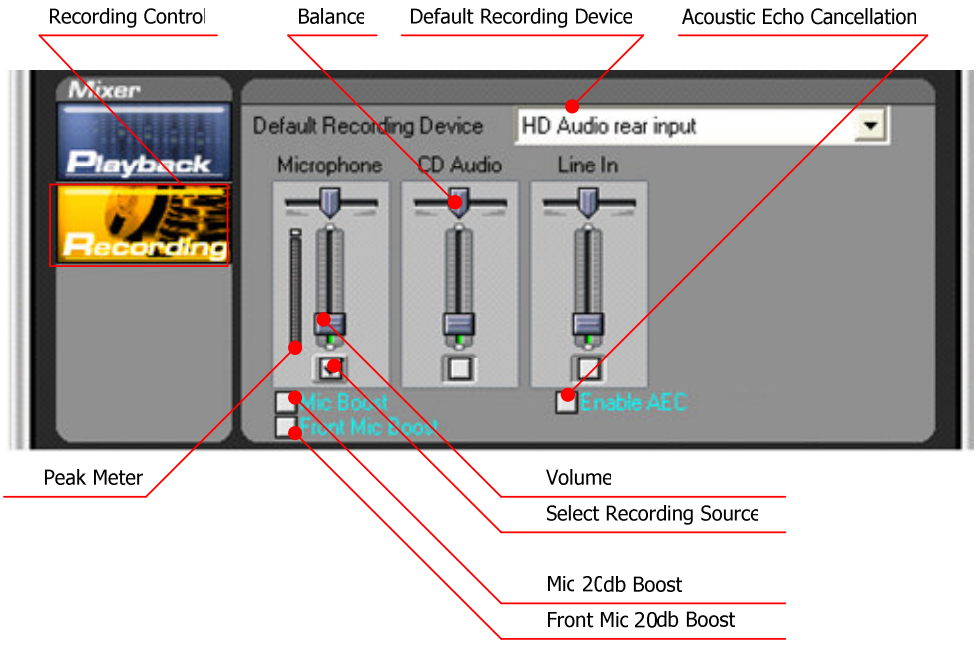

Figure 8 - Mixer Configuration Panel - Recording Device Setting

The "Headphone" and "Front Microphone" configuration panels may or may not be shown depending on the user's computer system. The "Headphone" mixer controls work the same way as the "Playback" mixer controls, but it is only visible when the "Independent Headphone" feature is enabled.

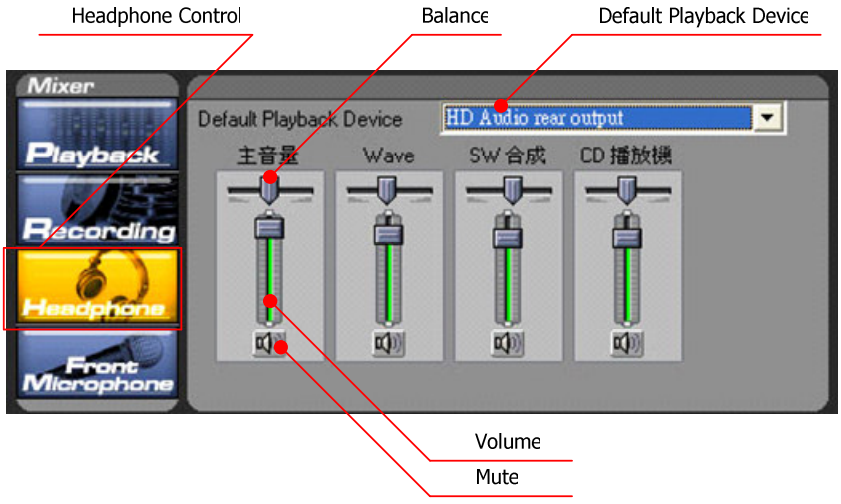

Figure 9 - Mixer Configuration Panel - Headphone

The "Front Microphone" configuration panel is shown in the figure below contains on mixer control because the front microphone only has one input jack.

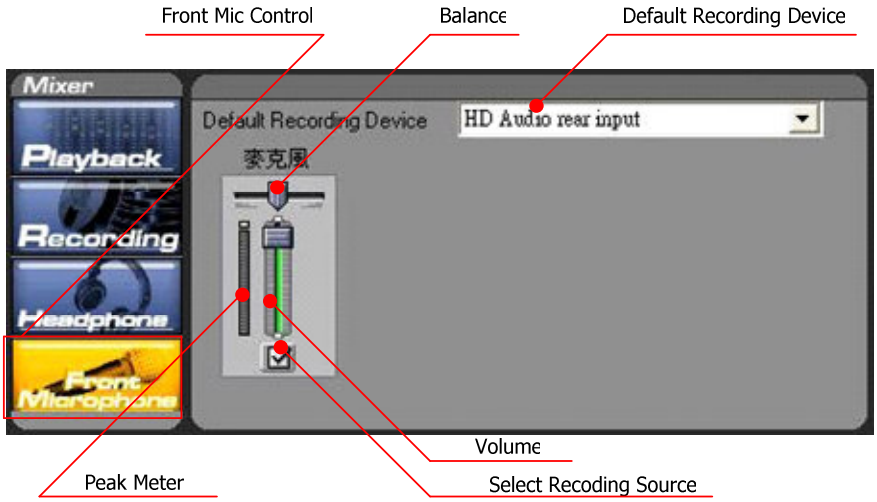

Figure 10 - Mixer Configuration Panel - Front Microphone

Effects Configuration Panel

There are two sound enhancement controls in Adeck: "Equalizer" and "Bass Management".
When the Equalizer is selected, the user will see the 10 bands from 31Hz to 16kHz. The equalizer settings will only take effect after the user enables it by pressing the "On/Off" button above the equalizer.
There are seven preset equalizer settings that can be selected: Classical, Dance, Pop, Rock, Vocal, Jazz and Party. Additionally, the user can create custom settings and save them for later use. To save the current equalizer setting, click on the "Save" button. To delete a setting, select the setting to be deleted from the drop-down menu and click on the "Delete" button.

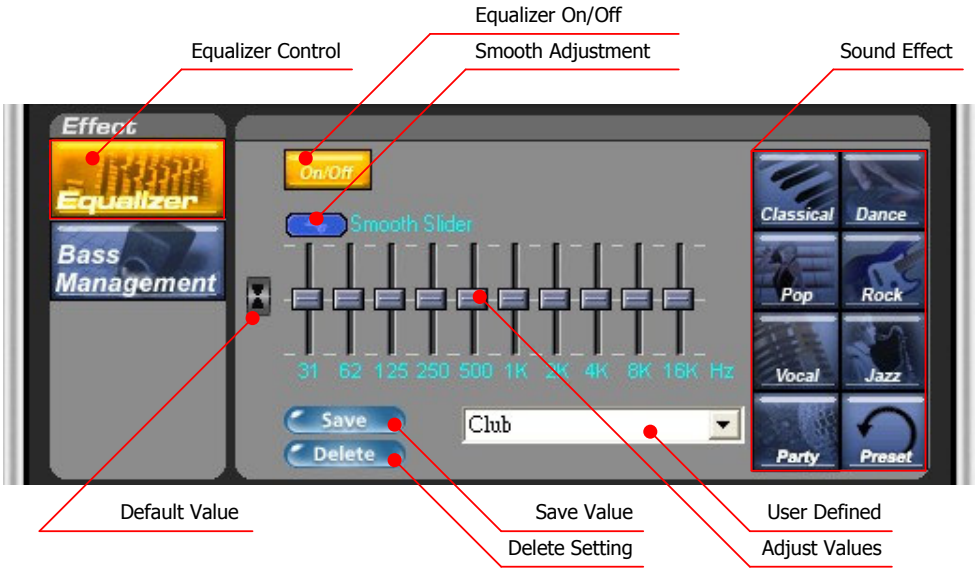

Figure 11 - Effects Configuration Panel - Equalizer

Figure 12 shows an example of an adjustment being made to the 500Hz band without the "Smooth Slider" enabled.

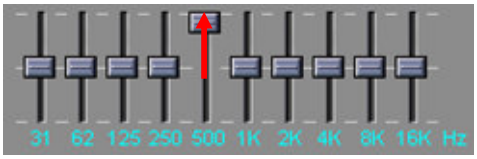

Figure 12 - Equalizer Setting with Smooth Slider Disabled

If "Smooth Slider" is enabled, any adjustment to any of the Equalizer bands will cause the surrounding bands to be affected so as to produce a smoother sound.

Figure 13 - Equalizer Setting with Smooth Slider Enabled

Figure 14 shows the "Bass Management" features. The user can enable the "Bass Management" features by clicking on the "On/Off" button at the top of the "Bass Management" controls. The "Bass Management" feature allows the user to control the low frequency limits for the speakers. When the low frequency limit is set for a speaker, any audio signal below the limit will be automatically channeled to the subwoofer. Each speaker (except for the subwoofer) can be configured to have a different low frequency limit. For example, if the user wants to set the low frequency limit for front-left speaker to 310Hz, then the user can click on the picture of the front-left speaker and change the "Cutoff Frequency" to 310Hz.
Additionally, the user can enhance the bass by checking the "Bass Boost" checkbox.

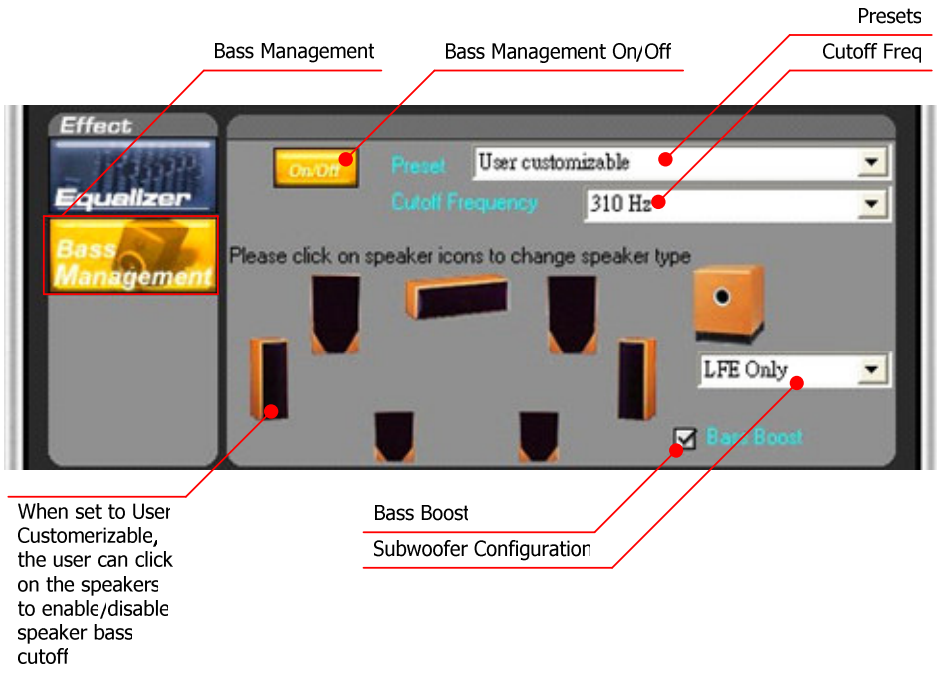

Figure 14 – Effects Configuration Panel – Bass Management

Jack Configuration Panel

The Jack Configuration Controls enable the user to configure all the audio jacks on the computer system. The "Back Panel" lists all the jacks at the rear side of the computer system. The "Front Panel" lists all the jacks at the front side of the computer system. In general, the multi-channel playback and recording jacks will be listed in the "Back Panel" controls. And the "Headphone" and "Front Mic" will be list on "Front Panel".

In the "Back Panel" controls, shown in Figure 15, the jacks can be distinguished by the different colors used to identify each jack. The user should be able to find matching colors at the rear of the computer system. Each of the jacks can be re-assigned. The user can easily revert to the default setting by clicking on the "Default" button.

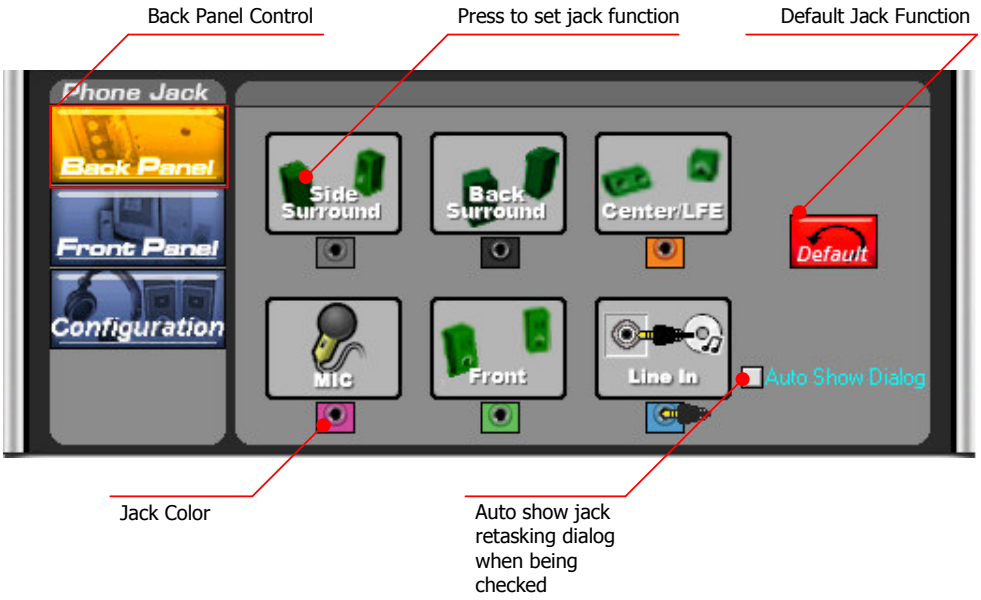

Figure 15 – Jack Configuration Panel – Back Panel

The "Front Panel" controls usually only has two jacks listed: "Headphone" and "Front Mic".

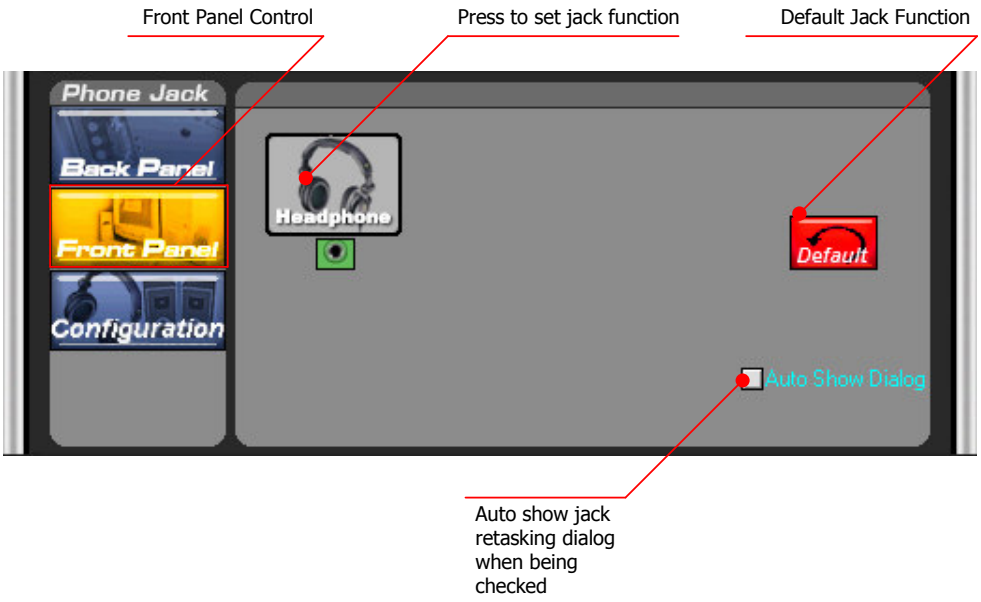

Figure 16 - Jack Configuration Panel – Front Panel

When a new device is plugged-in, a new panel will be displayed if the "Auto Show Dialog" checkbox is selected. Figure 17 shows an example of a jack being plugged into the green jack. When the jack insertion is detected, Adeck will be displayed. The user will see a red arrow indicating the jack insertion event. An extension of the panel will also be displayed. There the user can assign the jack to any available function. Functions that are not available will not have a checkbox next to it.

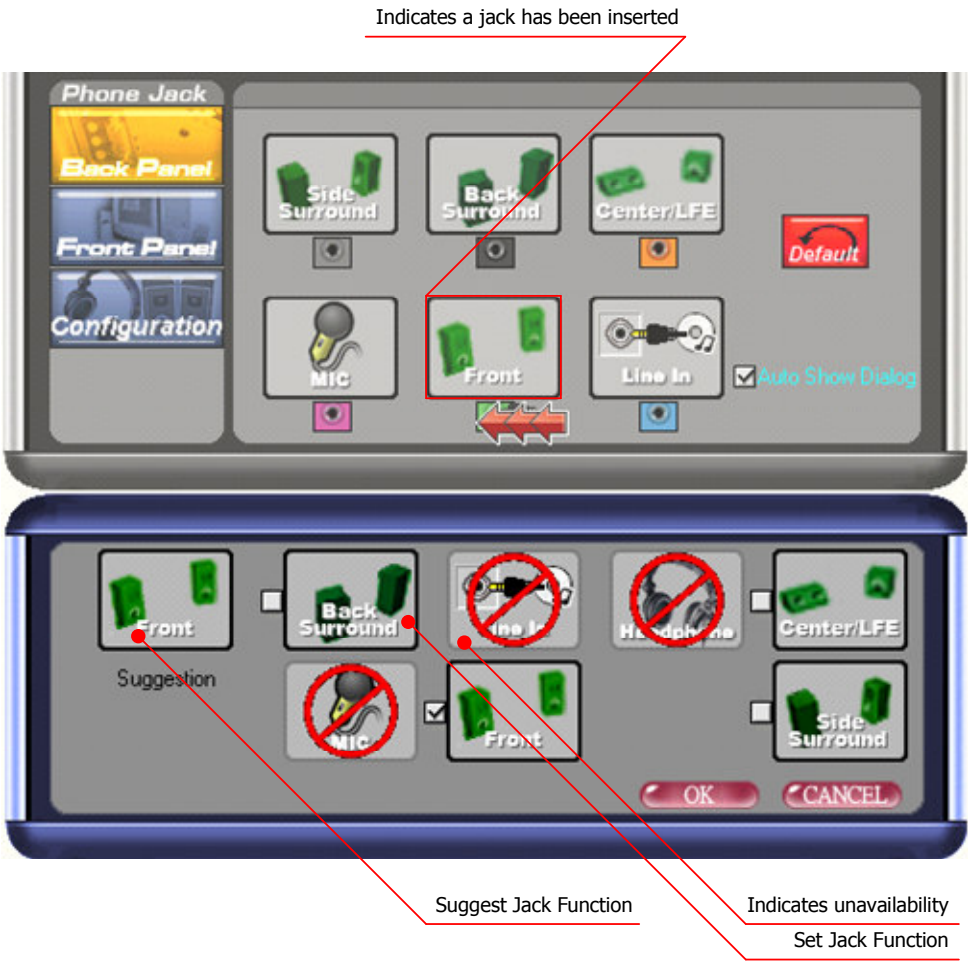

Figure 17 - Jack Configuration Panel – Jack Detect Event Occur

The Headphone Configuration Panel is shown in Figure 18. There are two headphone configurations that can be chosen: "Independent Headphone" or "Redirected Headphone".
The "Independent Headphone" feature enables the user to play separate music on the headphone and speaker. For example, the user can use a multi-channel device (such as 5.1 surround sound) to watch a movie while simultaneously using the independent headphone feature to make phone calls through a VoIP Internet phone.
The "Redirected Headphone" feature enables the user to hear the same audio that is being channeled to the front speakers. In this mode, once the headphone has been inserted the audio will be redirected from the speakers to the headphone.
Please note that the "Independent Headphone" function requires two channels. Therefore, only six channels will be available if "Independent Headphone" is being used.

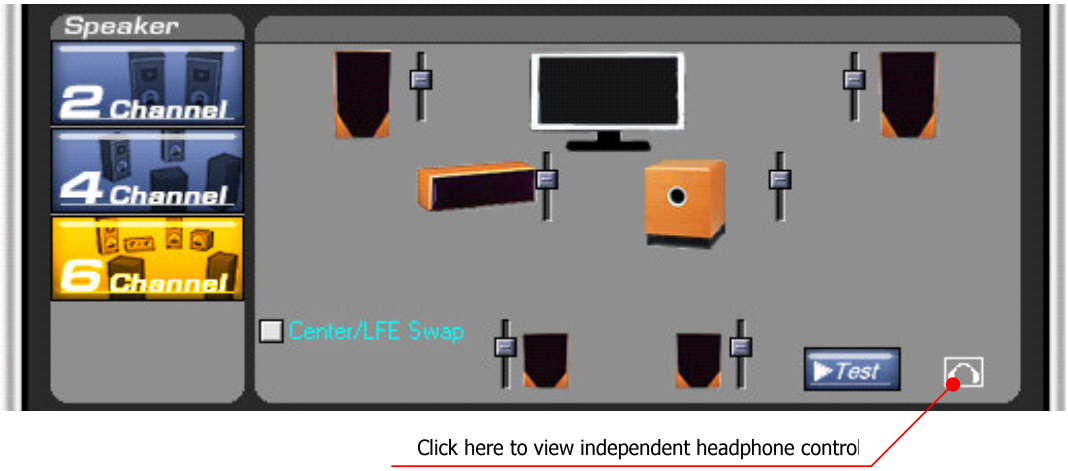

Figure 18 - Jack Configuration Panel - Headphone Configuration

S/PDIF Configuration Panel

The S/PDIF Configuration Panel enables the user to configure S/PDIF related control.
The "S/PDIF Out" panel allows the user to enable S/PDIF output support and select the S/PDIF output sampling rate. Please note that some S/PDIF decoders do not support 176.4 and 192kHz. Before enabling these higher sampling rates, please checking the external S/PDIF decoder first.

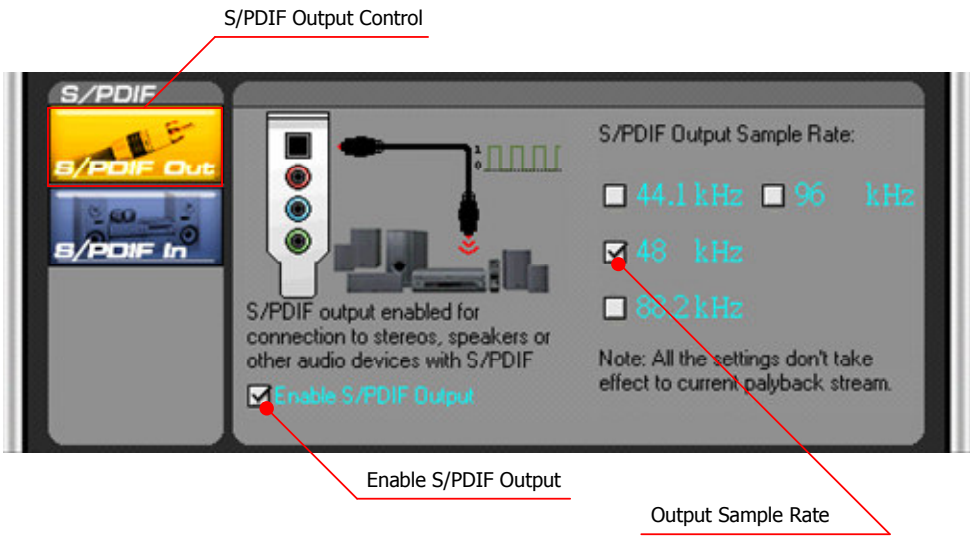

Figure 19 – S/PDIF Configuration Panel – S/PDIF Out

The "S/PDIF In" panel allows the user to select the S/PDIF input sampling rate. For optimal performance, the selected sampling rate should match the sampling rate of the incoming stream.

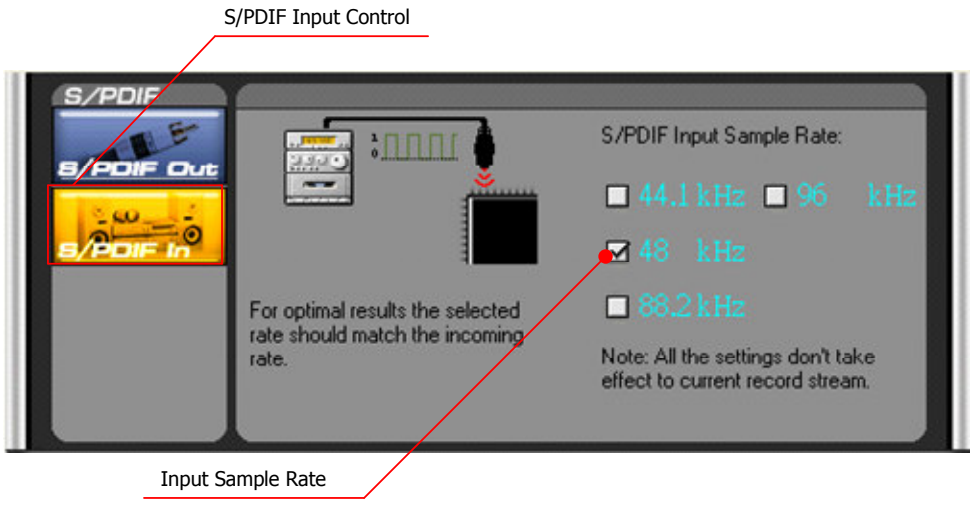

Figure 20 – S/PDIF Configuration Panel – S/PDIF In

System Information Panel

The System Information Panel displays the current system information, allows the user to select the language for Adeck and enables the user to visit the VIA web site.

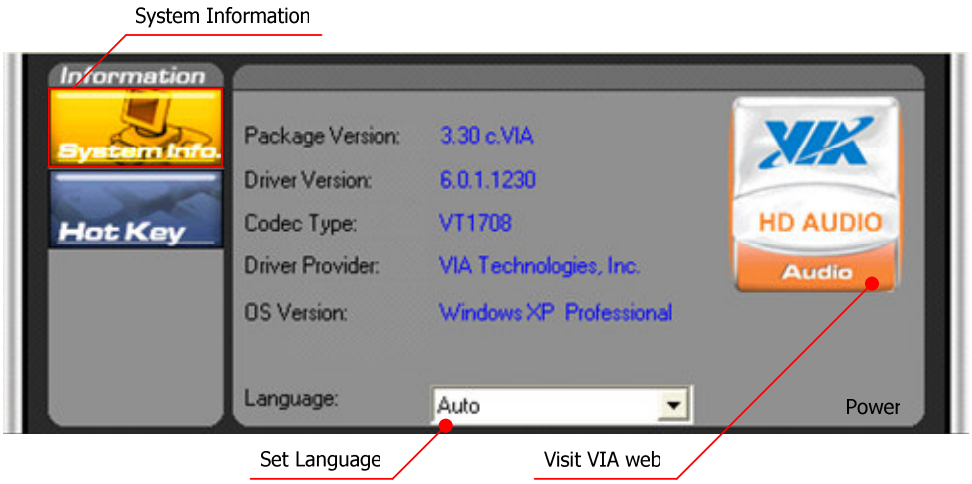

Figure 21 - System Information Panel

The "Hot Key" Configuration Panel allows the user to set hot keys for controlling the volume and muting. To use the hot keys, "Enable Hot Key Function" must first be checked.

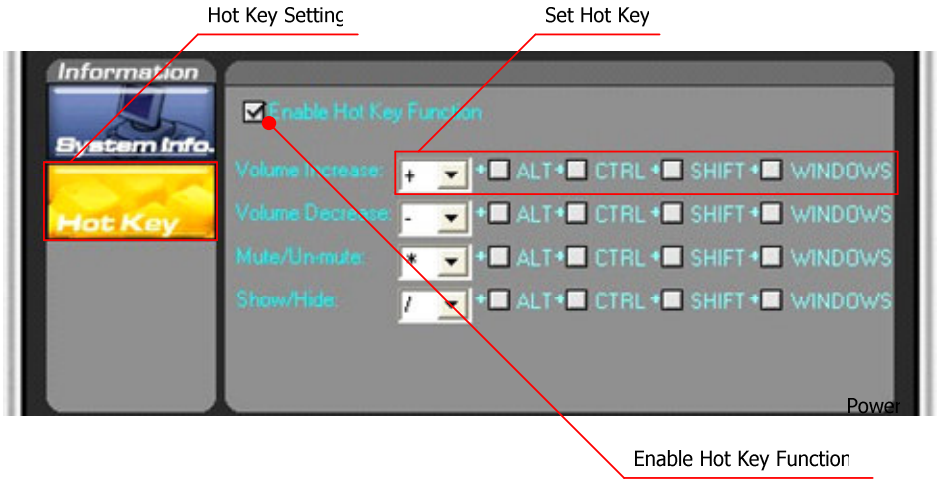

Figure 22 - Hot Key Configuration Panel

When a hot key is pressed, the screen will show a green volume control bar at the bottom of the screen and a mute/un-mute icon at the top-right corner of the screen. The on-screen display can be hidden by pressing the "Show/Hide" hot key.

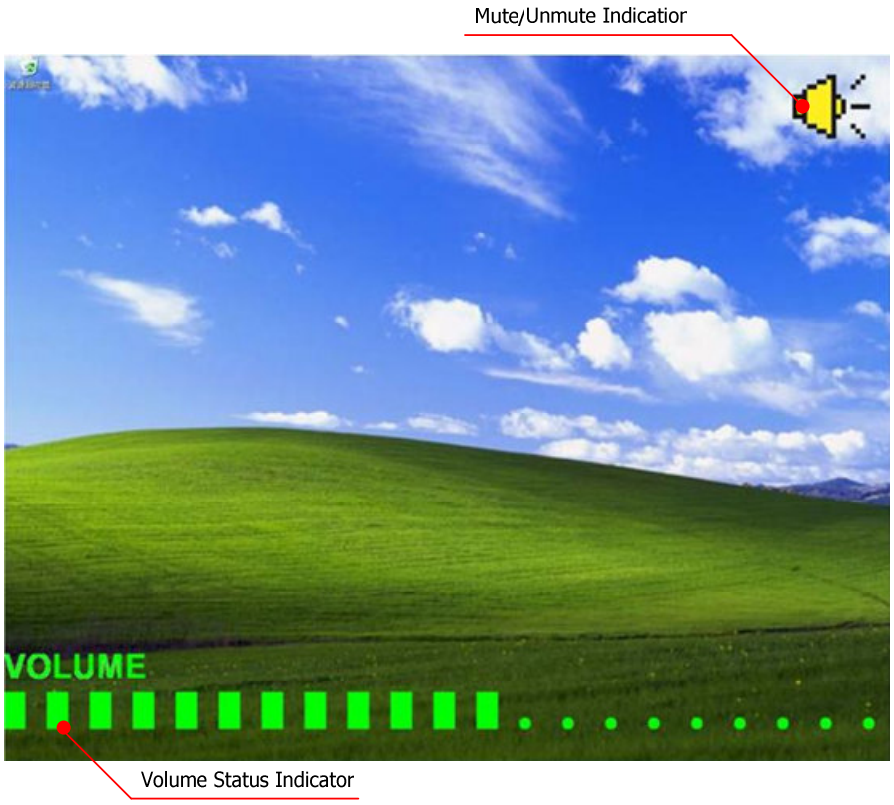

Figure 23 - Hot Key - Set Volume with Hot Key

Tool Tips

Whenever the user moves mouse curser over any interactive item, Adeck will pop out a message box that will notify user regarding the usage of the item.

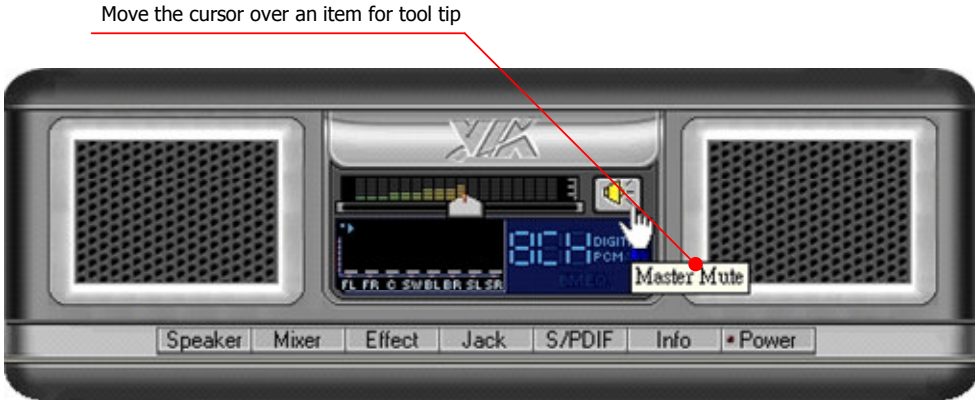

Figure 24 - Tool Tip

Task Bar

Figure 25 shows Adeck after it has been enabled. The user can single-click the system tray icon to show the Adeck application.

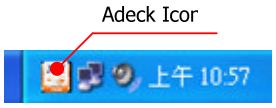

Figure 25 – Task Bar Icon for Adeck

If the user right-clicks the Adeck system tray icon, a small menu will be displayed as shown in Figure 26. The user can either open Adeck by selecting "VIA HD Audio Deck" or close Adeck by selecting "Exit".

Figure 26 – Task Bar Icon with Right Click

Magic 5.1

When there are only 3 jacks at the rear of the computer system , Adeck system will enable Magic 5.1 automatically. The user can use Magic 5.1 function to retask "Line Input" to "Line Output" for multi-stream Devices, when there are only 3 jacks at the rear of the computer system. Figure 27 shows "Line In" Jack will be retasked to "Back Surround Output" Jack when 4 Channel.

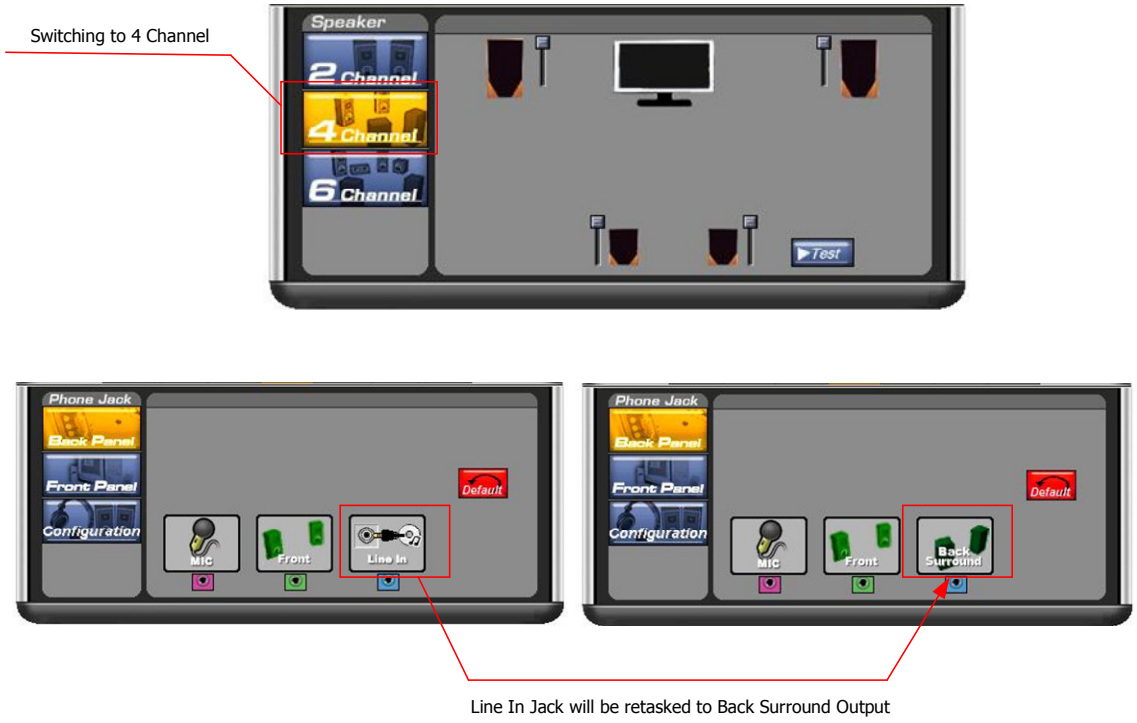

Figure 27 – Magic 5.1 – Switching to 4 Channel

Figure 28 shows "Line In" Jack will be retasked to "Back Surround Output" Jack, and "Microphone" Jack will be retasked to "Center/LFE Output" Jack when 6 Channel.

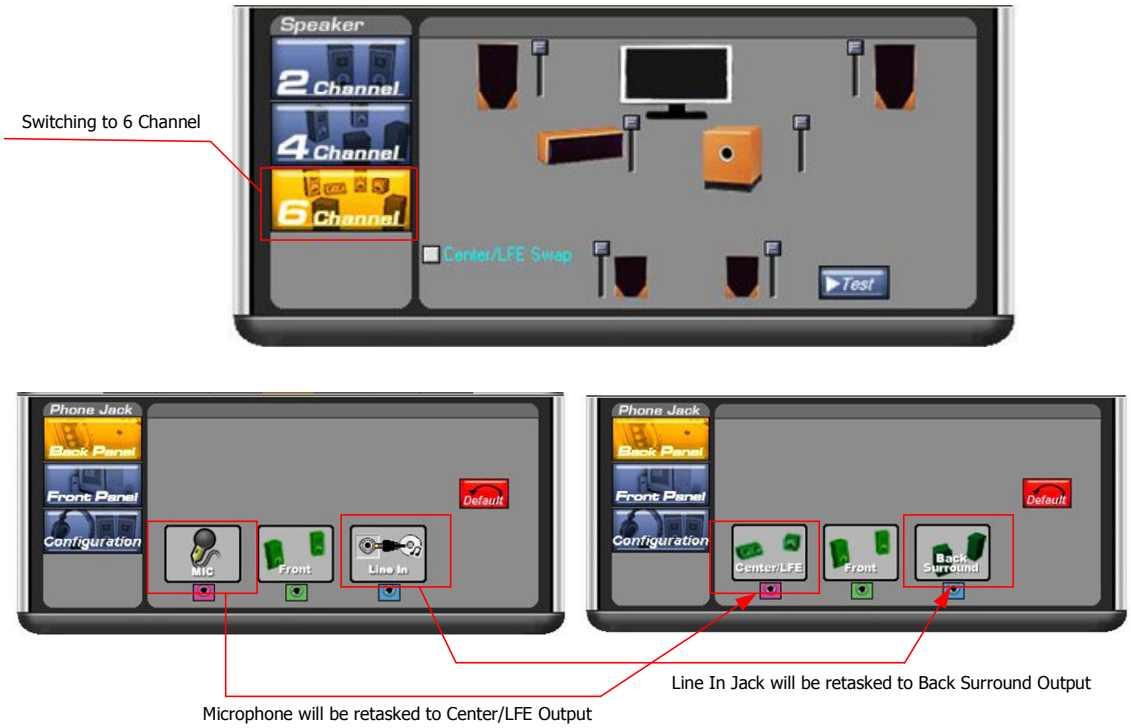

Figure 28 – Magic 5.1 – Switching to 6 Channel

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