AXAGON

USER MANUAL

USB **7.1 SOUND**box

ADA-71

TABLE OF CONTENTS:

The external 7.1-channel USB audio adapter AXAGON ADA-71 adds a lot of audio inputs and outputs to the computer. Adapter lets you connect 7.1, 5.1, 4.0, 2.1 or 2.0 stereo speakers, stereo headphones or microphone. In addition, analog and also S/PDIF optical and S/PDIF coaxial digital inputs are available for PCM recording of an external signal such as music instruments or DVD players. The digital S/PDIF optical / coaxial output allows you to connect it to your home cinema system or surround sound decoder receiver. With sophisticated software, you can easily change the settings of surround effects, equalizer, microphone inputs or Karaoke features.

DESCRIPTION OF CONNECTORS AND CONTROLS
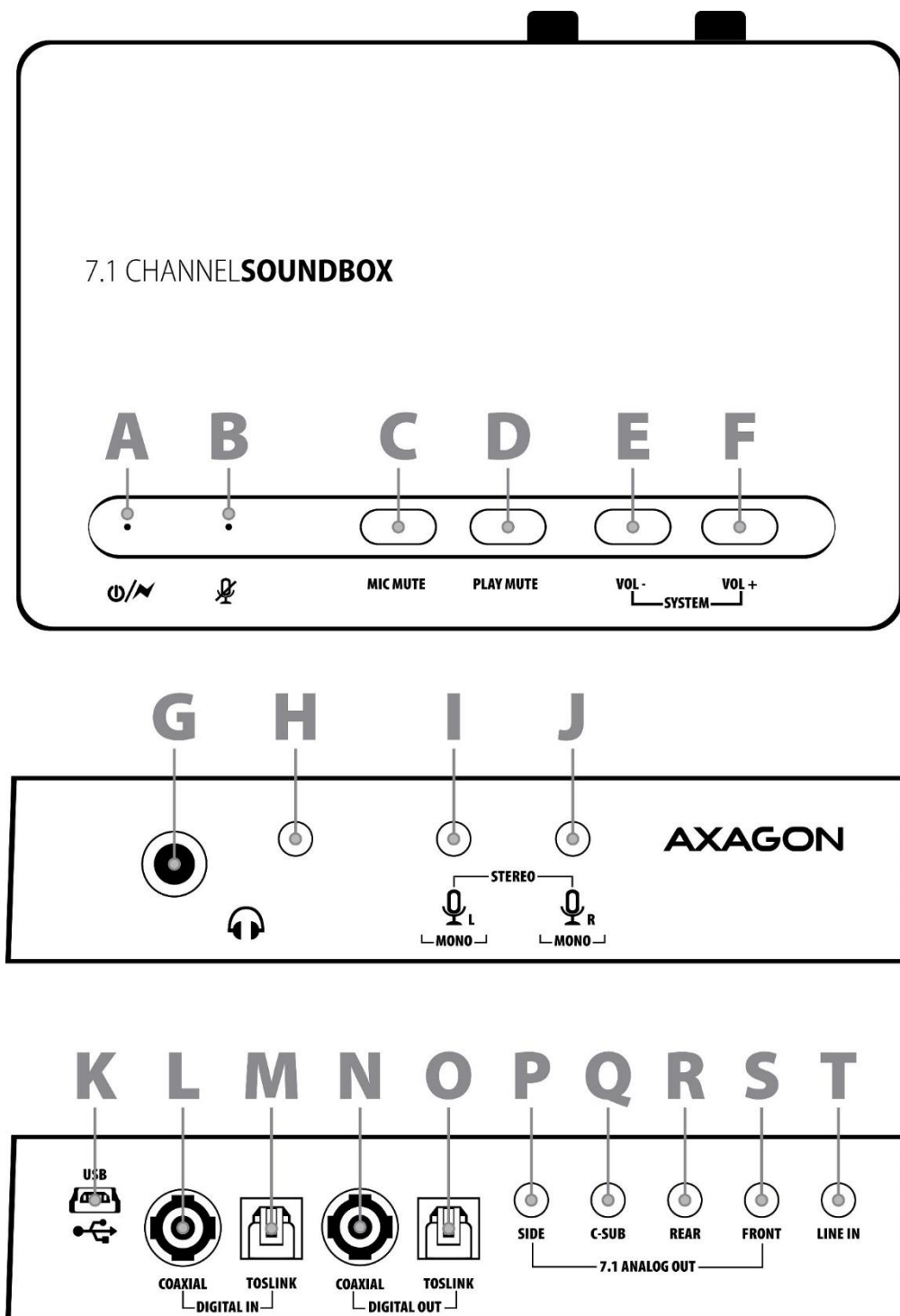
A LED light indicates the audio adapter connection. Lights up when the adapter is connected to the USB port, flashes when data transfer.

B LED light indicates the mute of the microphone.

C Microphone Input Mute Button.

D Full audio mute button.

E Sound volume up button.

F Sound volume down button.

G Stereo output for 6.3mm headphones.

H Stereo output for 3.5mm headphones.

I Left Mono Microphone Input.

J Right mono microphone input.

K Mini USB connector to connect to your computer.

L Coaxial input for recording digital PCM signal.

M S/PDIF optical input for recording digital PCM signal.

N Coaxial digital output for connecting the sound card to the amplifier.

O S/PDIF optical digital output for connecting the sound card to the amplifier.

P Output for left / right side speaker.

Q Output for center / subwoofer.

R Output for left / right rear speaker.

S Left / right front speaker output. Stereo output for 2-channel speakers.

T Line in stereo input for recording an analogue signal.

INSTALLATION AND CONNECTION THE SOUND ADAPTER

1. Connect the required accessories / devices to the audio adapter connectors - such as speakers, microphone and SPDIF (**FIGURE 1**).

2. Connect the adapter to the computer's USB port.

3. Download the latest SW with driver from http://www.axagon.eu/products/ada-71. When the download is complete, unpack the downloaded file. Run setup.exe to start the installation.

4. Restart the computer after the installation is complete.

5. Check the successful installation in the "Device Manager" (**FIGURE 2**).

FIGURE 1. Connectors on the front and rear of the audio adapter.

FIGURE 2. Checking the successful installation in the "Device Manager".

THE DEFAULT AUDIO DEVICE SETTING

The Audio Adapter is automatically set as the default device for audio playback and recording. If this does not happen or you want to change the settings, follow the instructions:

1. In the "Windows notification area", right-click the speaker icon and select "Playback Device" (**FIGURE 3**).
2. Right-click the desired device and select "Set as the default device" (**FIGURE 4**).
3. Confirm with OK.

FIGURE 3. The default audio device setting.
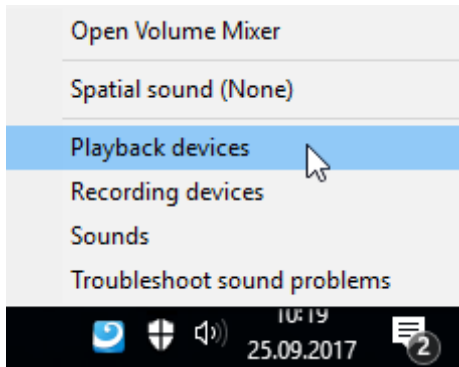
FIGURE 4. The default audio device setting.
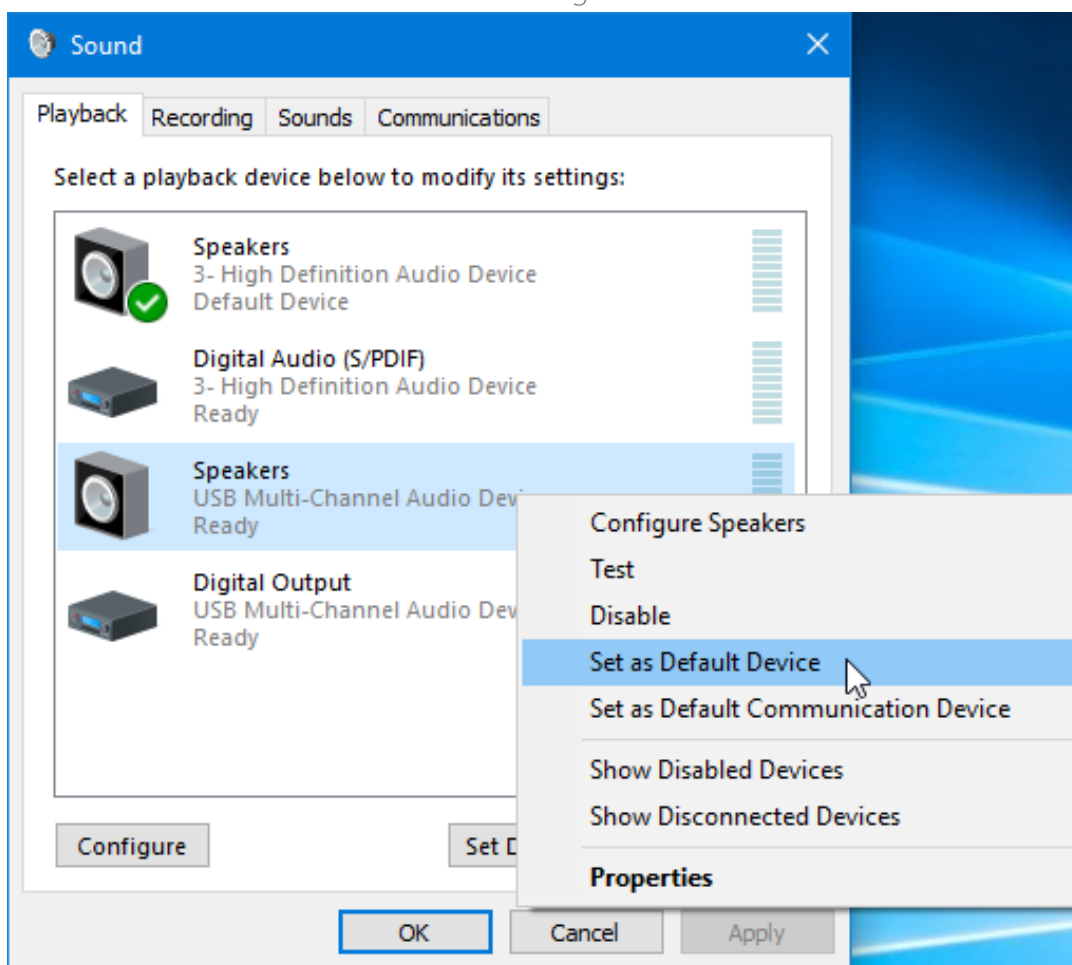
CONFIGURATION APPLICATION LAUNCH

1. Open the application's configuration interface using the "USB Multi-Channel Audio Device" icon in the "notification area" (**FIGURE 5**).

FIGURE 5. Configuration application launch.
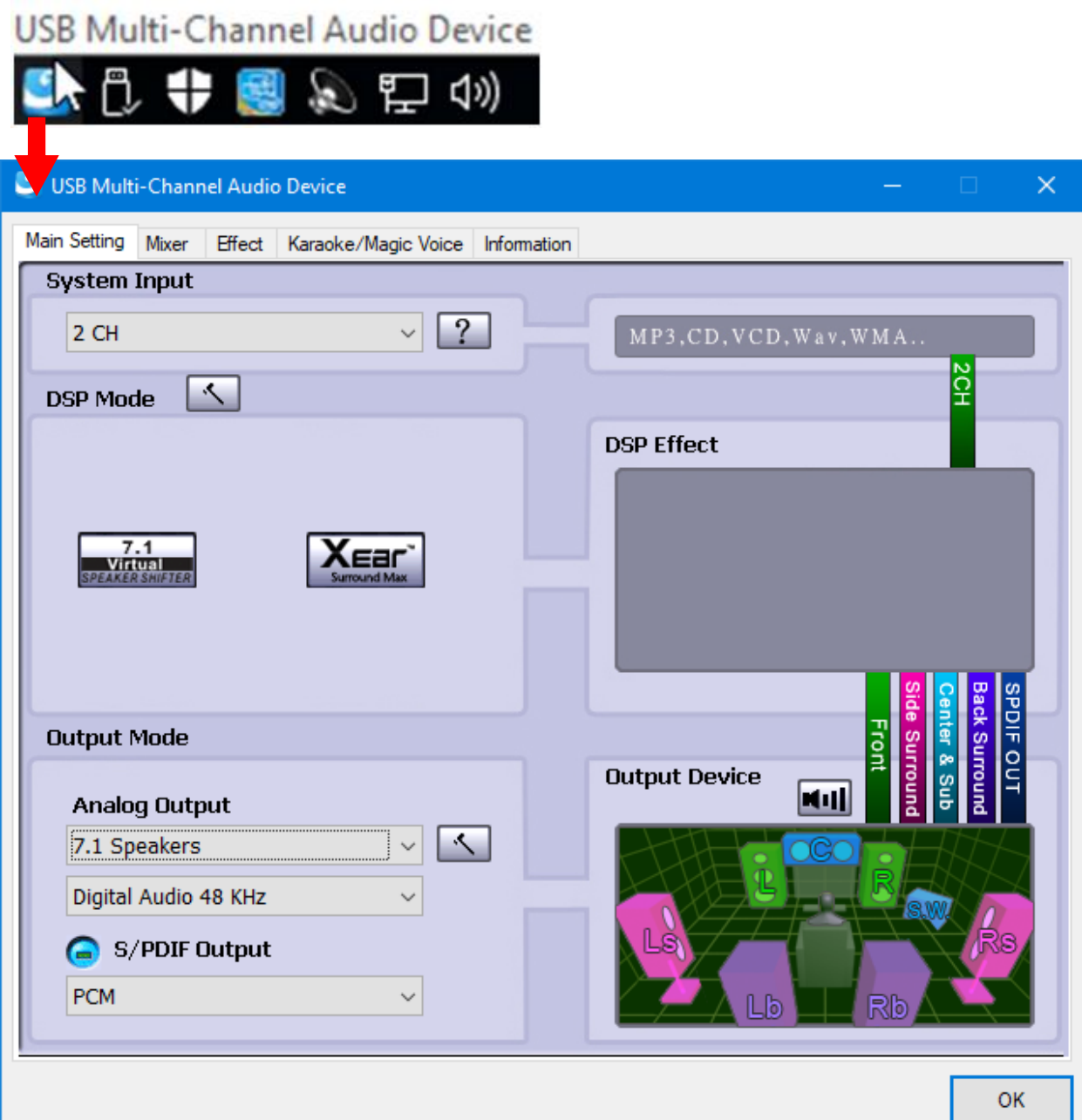
SELECT THE NUMBER OF ANALOG OUTPUT SPEAKERS

1. Start the "USB Multi-Channel Audio Device" configuration application.

2. Select the desired option under "Analog Output" section (**FIGURE 6**).

FIGURE 6. Select the number of analog output speakers.
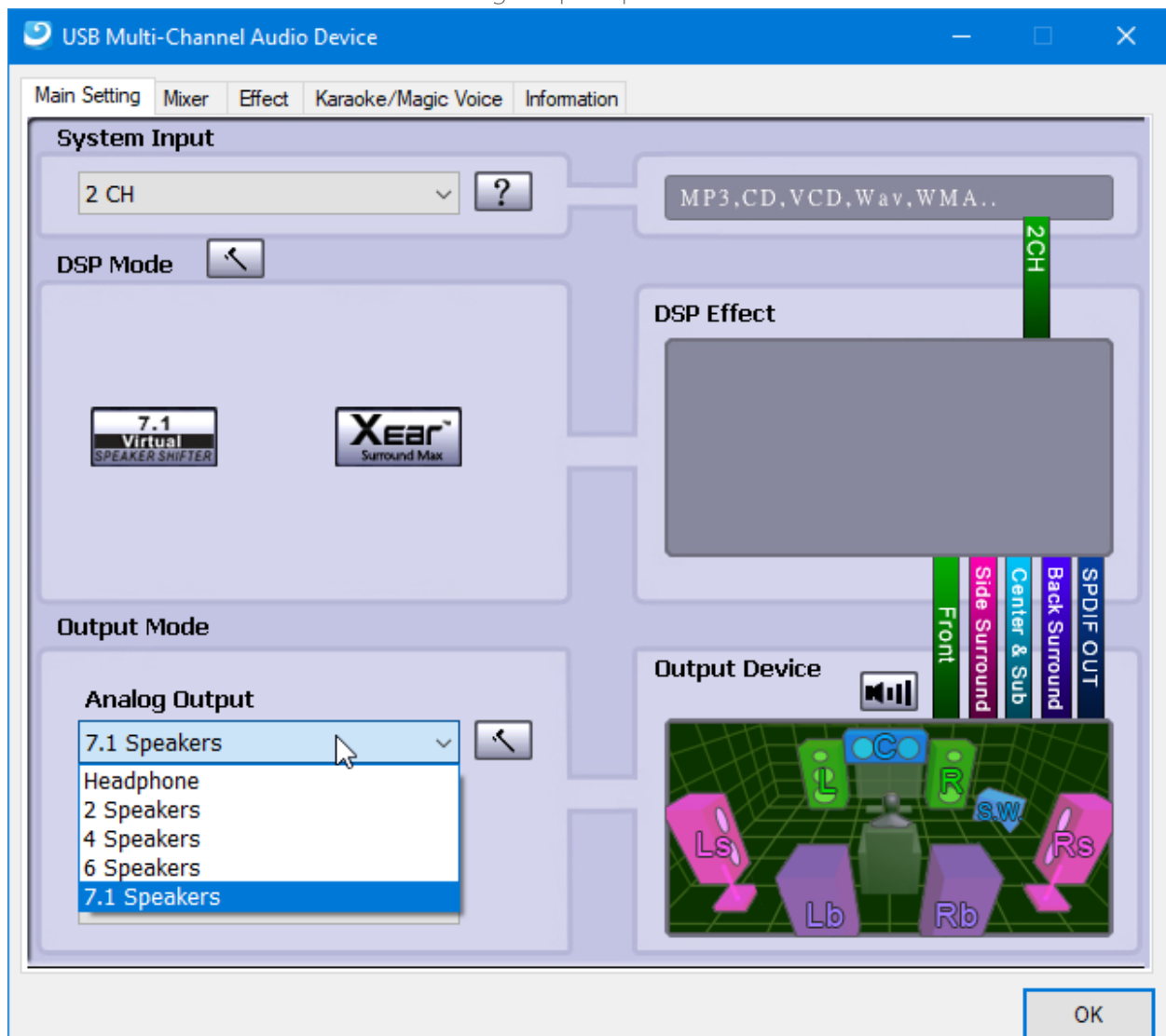
SELECT THE NUMBER OF SYSTEM INPUT CHANNELS

Changing the number of system input channels affects analogue output. The default setting is 2 channels, they are suitable for e.g. MP3 music etc. For multichannel sound 5.1 or 7.1 from e.g. DVD you need to choose the appropriate variant:

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Select the desired option in the "System Input" section (**FIGURE 7**).

FIGURE 7. Select the number of system input channels.
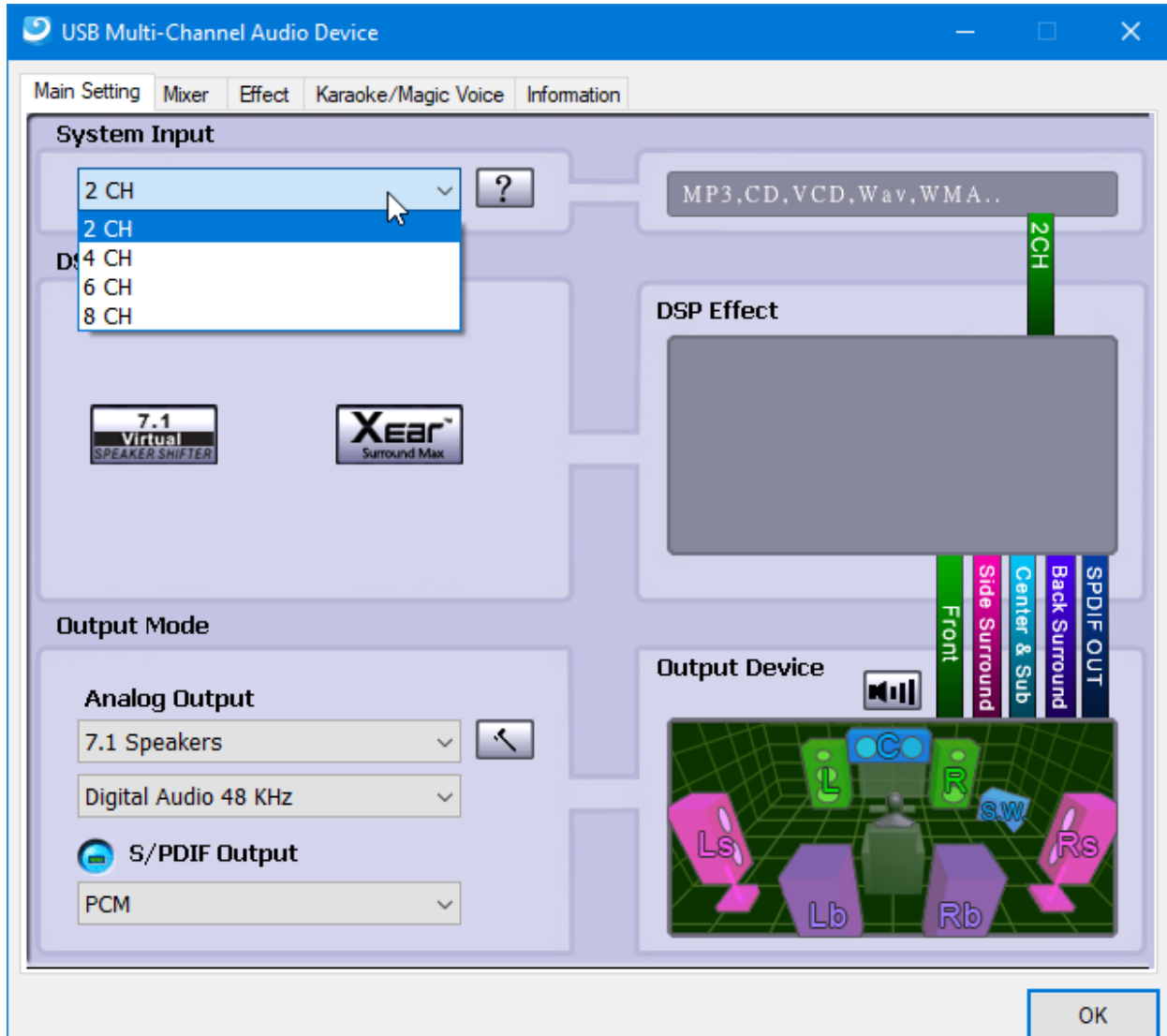
XEAR SURROUND MAX FEATURE

The audio adapter allows you to play two-channel (stereo) audio from all speakers in the 4.0, 5.1 or 7.1 speakers configuration. Enabling this feature will be stereo music, for example from mp3, played from all speakers. A prerequisite is set the multi-channel audio e.g. 7.1 in the "Analog output" section in the configuration application.

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Click the "Xear Surround Max" button in the "DSP Mode" section (**FIGURE 8**).
Gray button = feature off, blue button = feature on.

FIGURE 8. Turning Xear Surround Max feature on / off.
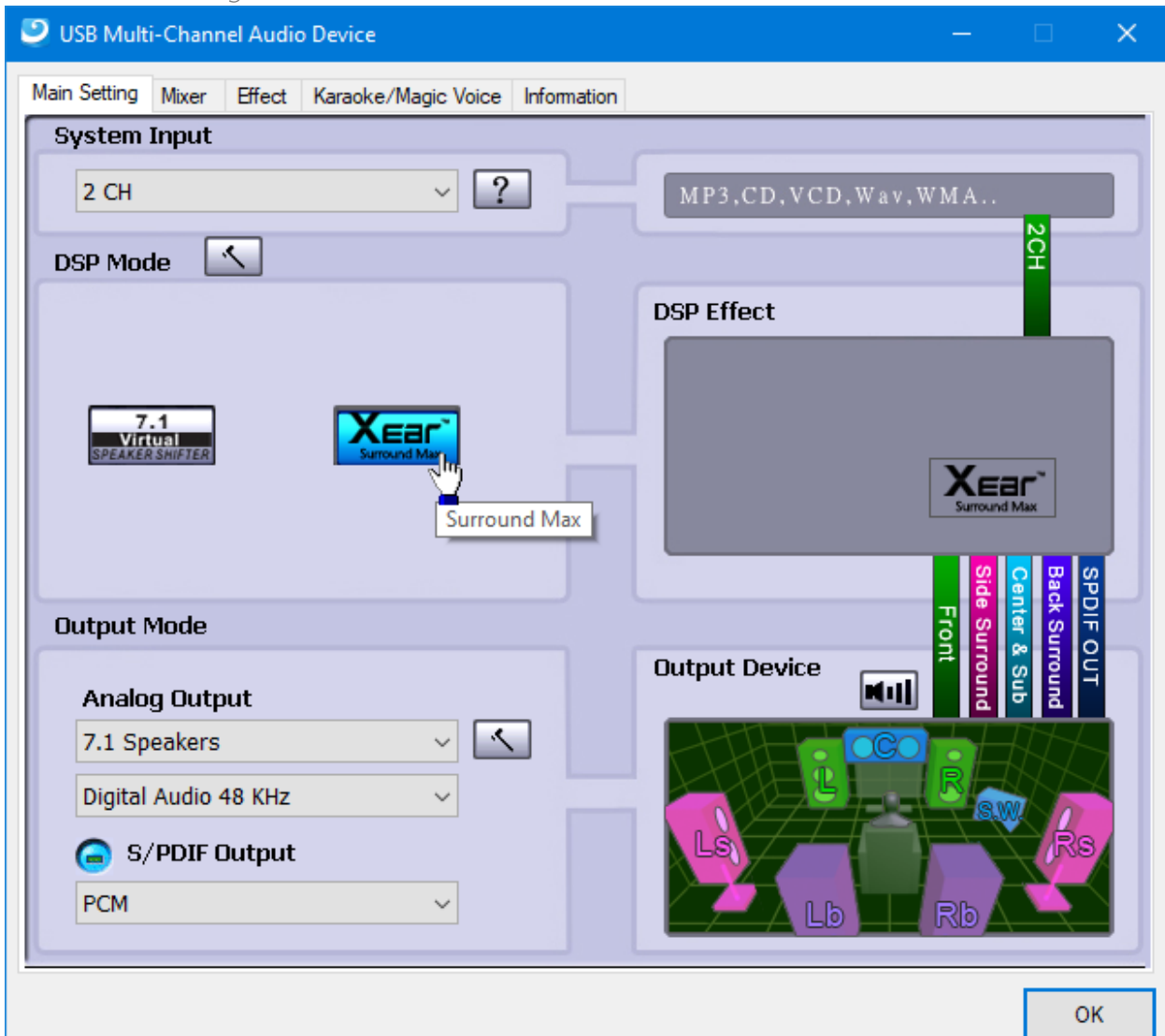
ADVANCED MULTICHANNEL SOUND SETTINGS

The audio adapter allows advanced multichannel audio settings such as swap of center and bass output, adjust the volume of individual speakers or move the speakers within the virtual space. The setting is done via the "USB Multi-Channel Audio Device" configuration application.

Swap speakers and bass enhancement setting:

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Use the setup button in the "Analog output" section (**FIGURE 9**) to open the setup window. Here you can activate "Swap center/bass output", "Swap side/back surround output" or "Bass Enhancement".

FIGURE 9. Swap speakers and bass enhancement settings.
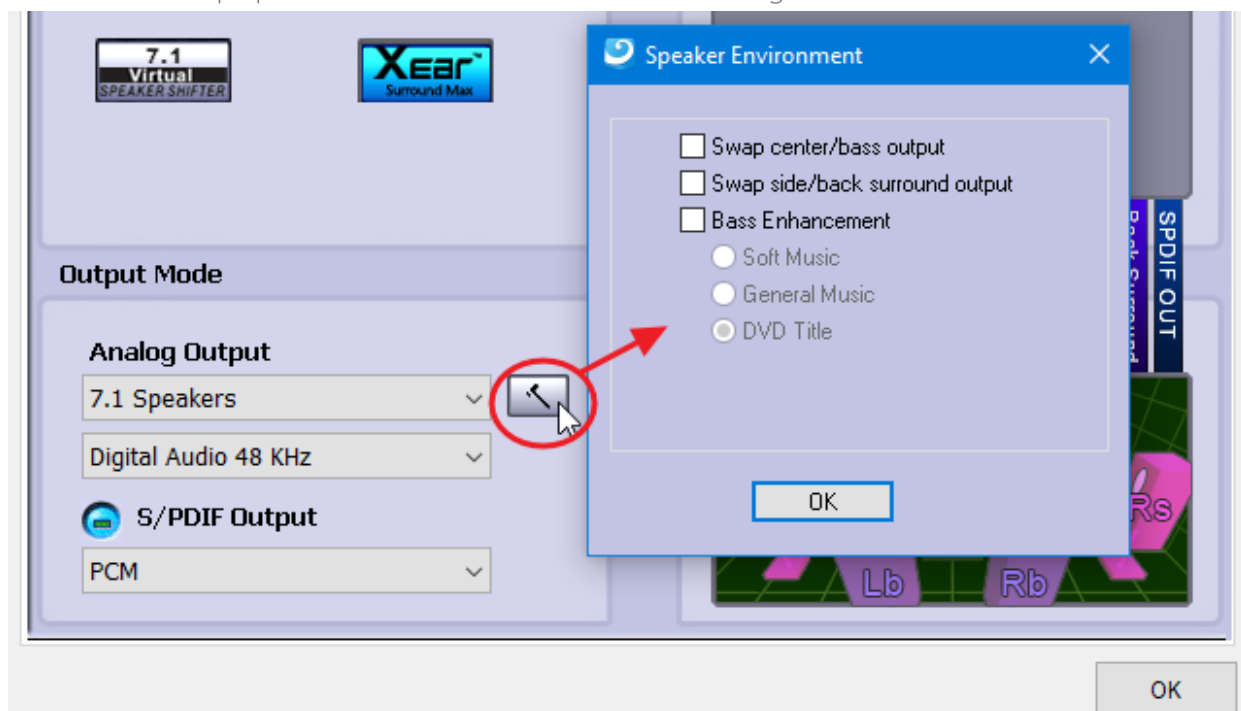
Adjust the speakers volume:

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Click the "Speaker" button in the "Output Device" section (**FIGURE 10, point 1**), here you can adjust the volume of each speaker (**FIGURE 10, point 2**).
Press the "Reset" button to set the values to their defaults (**FIGURE 10, point 3**).
3. Press the "Speaker" button again (**FIGURE 10, point 1**) to deactivate the volume adjustment mode.

FIGURE 10. Adjust the speakers volume.
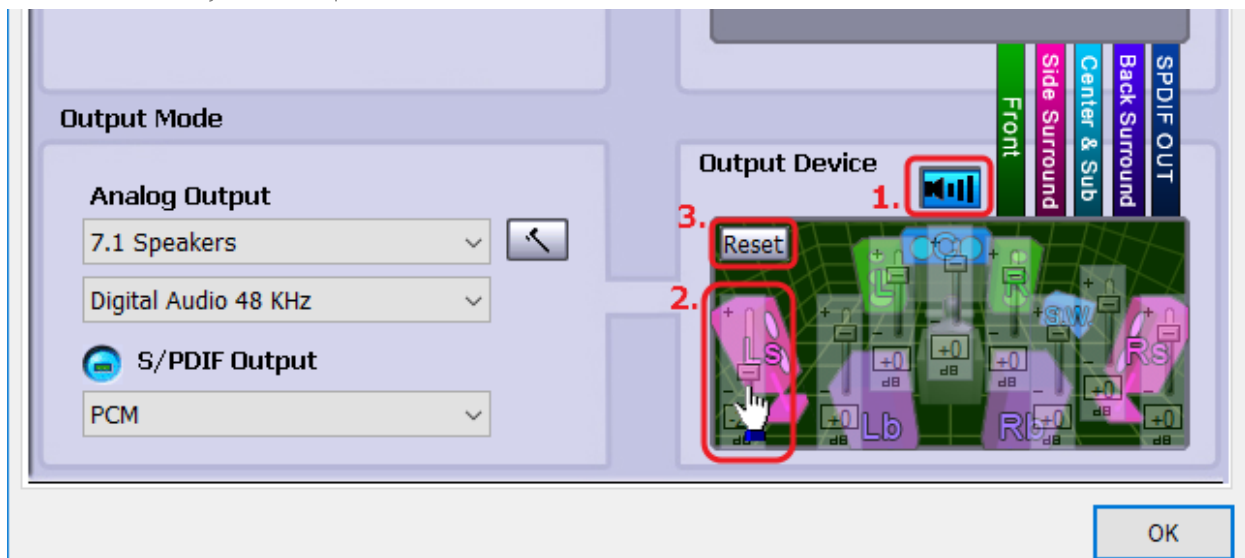
Shifting the speakers within the virtual space:

Move the speaker to change the position in the virtual space. Move the speaker closer or further from the center, it will increase / decrease the volume of the speaker.
This setting works for all analog output modes i.e. headphones and speakers.

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Click the "7.1 Virtual Speaker Shifter" button in the "DSP Mode" section
(**FIGURE 11, point 1**).
3. Use the setup button in the "DSP Mode" section (**FIGURE 11, point 2**) to start the configuration.
4. Use the buttons to attenuate / amplify all speakers, to move all the speakers at once, to move the speakers manually or to return to the default settings. The volume values can be read below the configuration window.

FIGURE 11. Shifting the speakers within the virtual space.
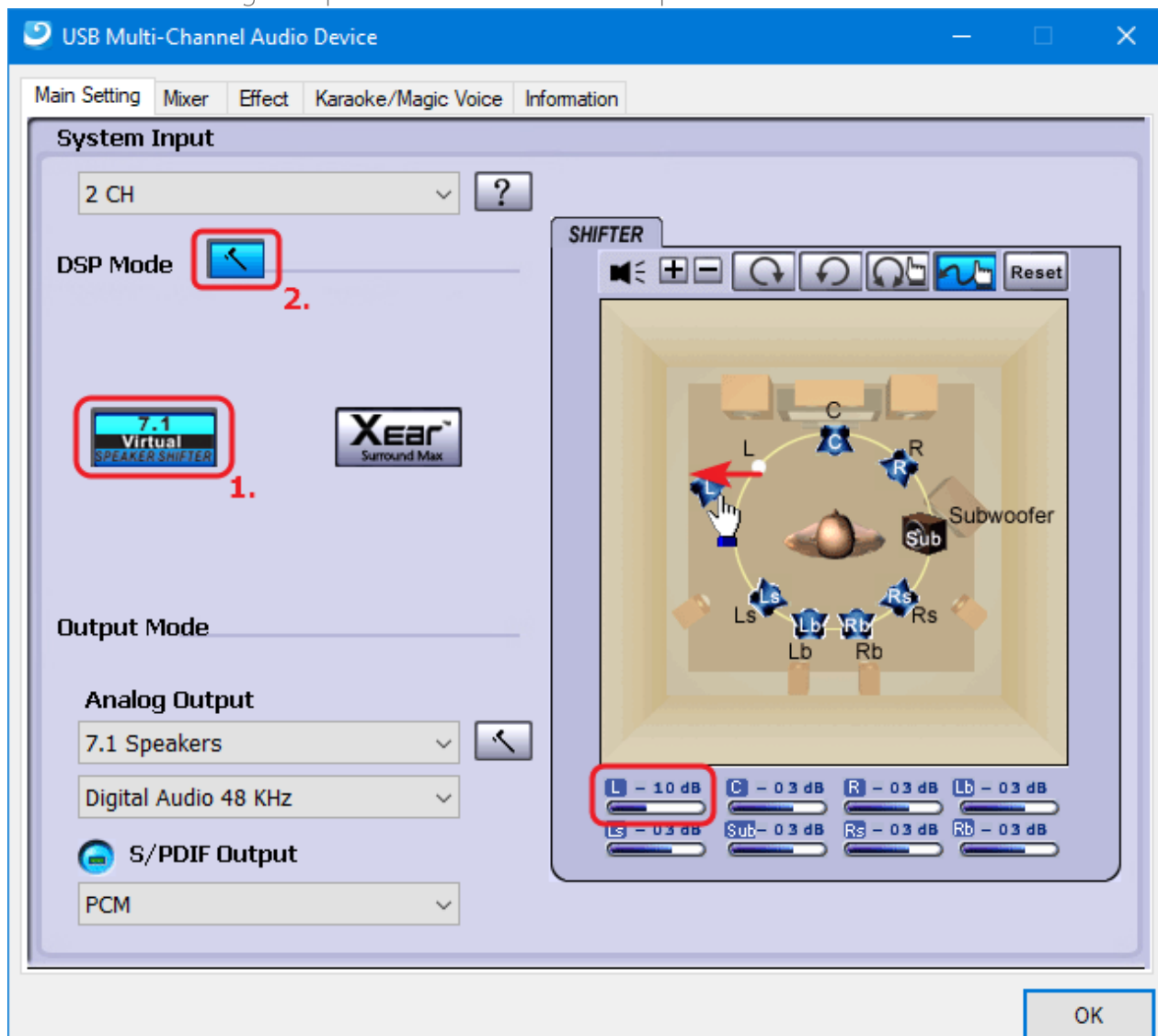
MIXER, VOLUME ADJUSTMENT AND SELECTION OF SOUND RECORDING DEVICES

The "USB Multi-Channel Audio Device" configuration application is linked with Windows audio settings. Change the settings only in one place, ideally in the configuration application. Here you can activate and deactivate individual inputs and outputs, adjust the volume / sensitivity of outputs and inputs.

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Go to the "Mixer" tab (**FIGURE 12**).
3. Use the button under slider bar to activate / deactivate the corresponding input / output. Use the slider to adjust the volume / sensitivity of the respective input / output.
4. In the "VOL" section, you are working with playback devices, in the "REC" section with audio recording devices. Only one device can be selected for sound recording.

FIGURE 12. Audio mixer, volume adjustment and selection of recording devices.
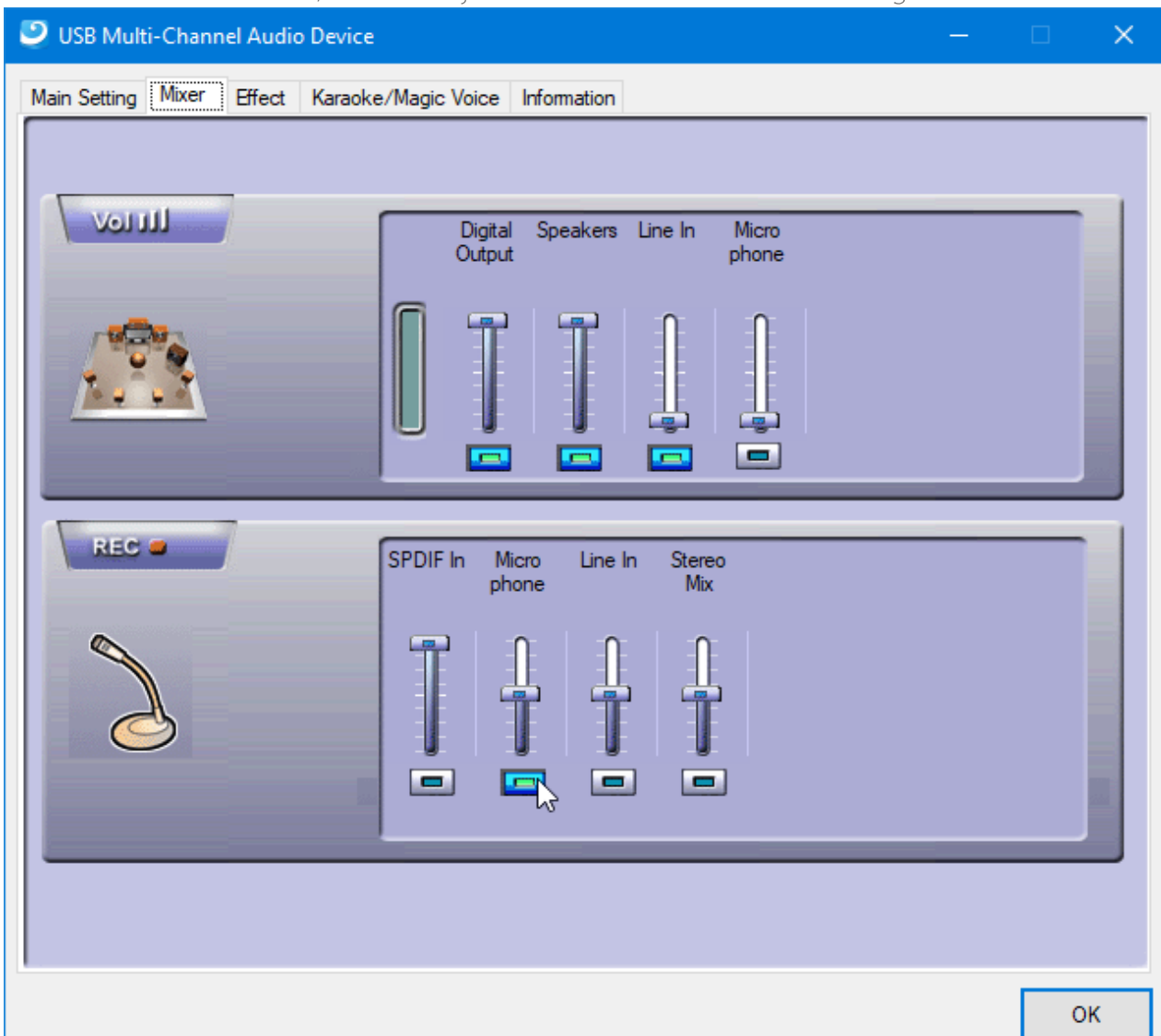
THE OPTICAL OUTPUT SETTING FOR DOLBY DIGITAL AND DTS SURROUND PLAYBACK.

The ADA-71 audio adapter allows to route Dolby® Digital 5.1 surround sound (AC3) and DTS® from the computer through the optical output to the home theater system or surround sound decoder receiver. Thanks to the "pass-through" feature, sound passes through the audio adapter without any change. To enable this feature, do the following:

1. In the "Windows notification area", right-click on the speaker icon and select "Playback device", see the chapter "*THE DEFAULT AUDIO DEVICE SETTING*".
2. Right-click on "Digital Output USB Multi-Channel Audio Device" and select "Set as Default Device" (**FIGURE 13**).
3. Confirm with OK.

FIGURE 13. The optical output setting for Dolby Digital and DTS surround playback.
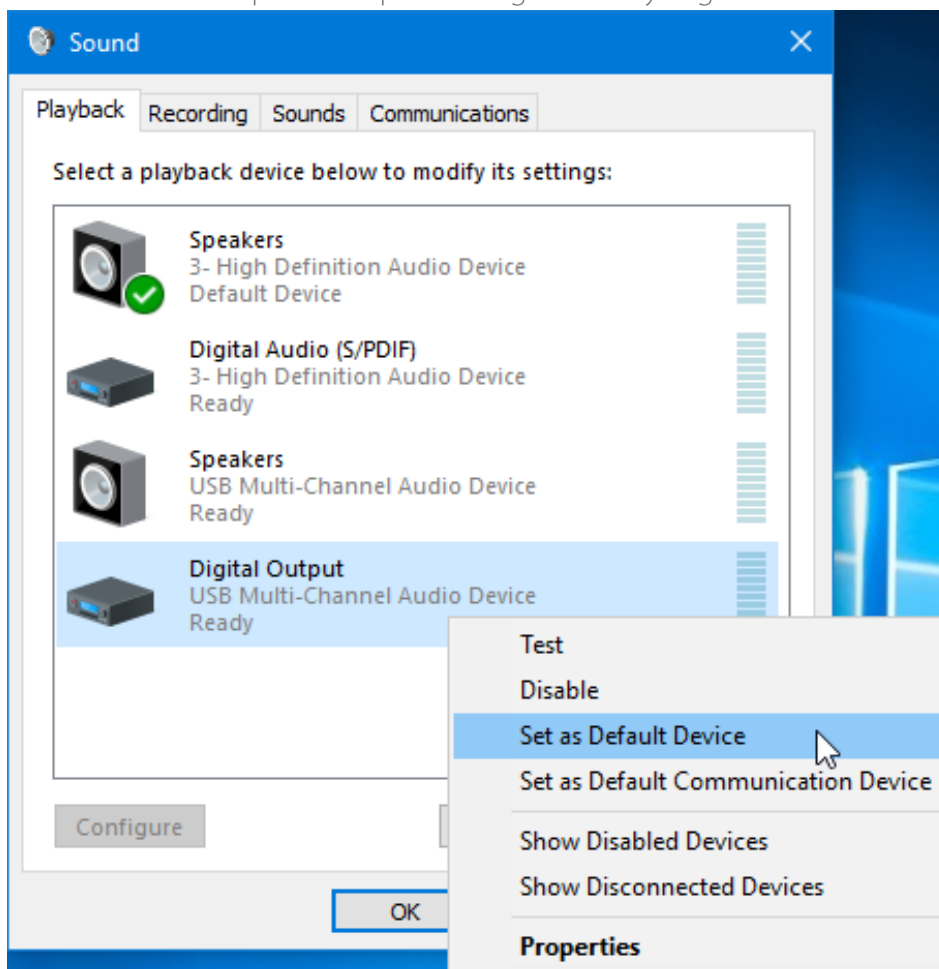
On some Windows operating systems, Dolby® Digital or DTS® support is not integrated. You need to use one of the media players supporting these features - such as Media Player Classic.
There is example how to set up the Media Player Classic - Home Cinema.

Download latest version: http://mpc-hc.org/ and install the program. Once the installation is complete, you need to set the player to route the desired audio formats (AC3, DTS, etc...) to the optical output of the sound card without any change. To do this follow these steps:

1. While the media player is running, open the "View" menu and select "Options ..." (**FIGURE 14**).
2. Select "Internal Filters" (**FIGURE 15, point 1**) item. In the filter list, check "DTS/AC3" item (**FIGURE 15, point 2**).
3. Use the "Audio decoder" button (**FIGURE 15, point 3**) to open detailed settings. Here, in the "Bitstreaming (S/PDIF, HDMI)" section, select the desired formats (**FIGURE 16, point 1**) and save with the "OK" button (**FIGURE 16, point 2**).
4. When finished, exit and restart the Media Player Classic - Home Cinema.
5. Test the functionality by playing a DVD or Dolby® Digital 5.1 surround sound (AC3) and DTS® format.
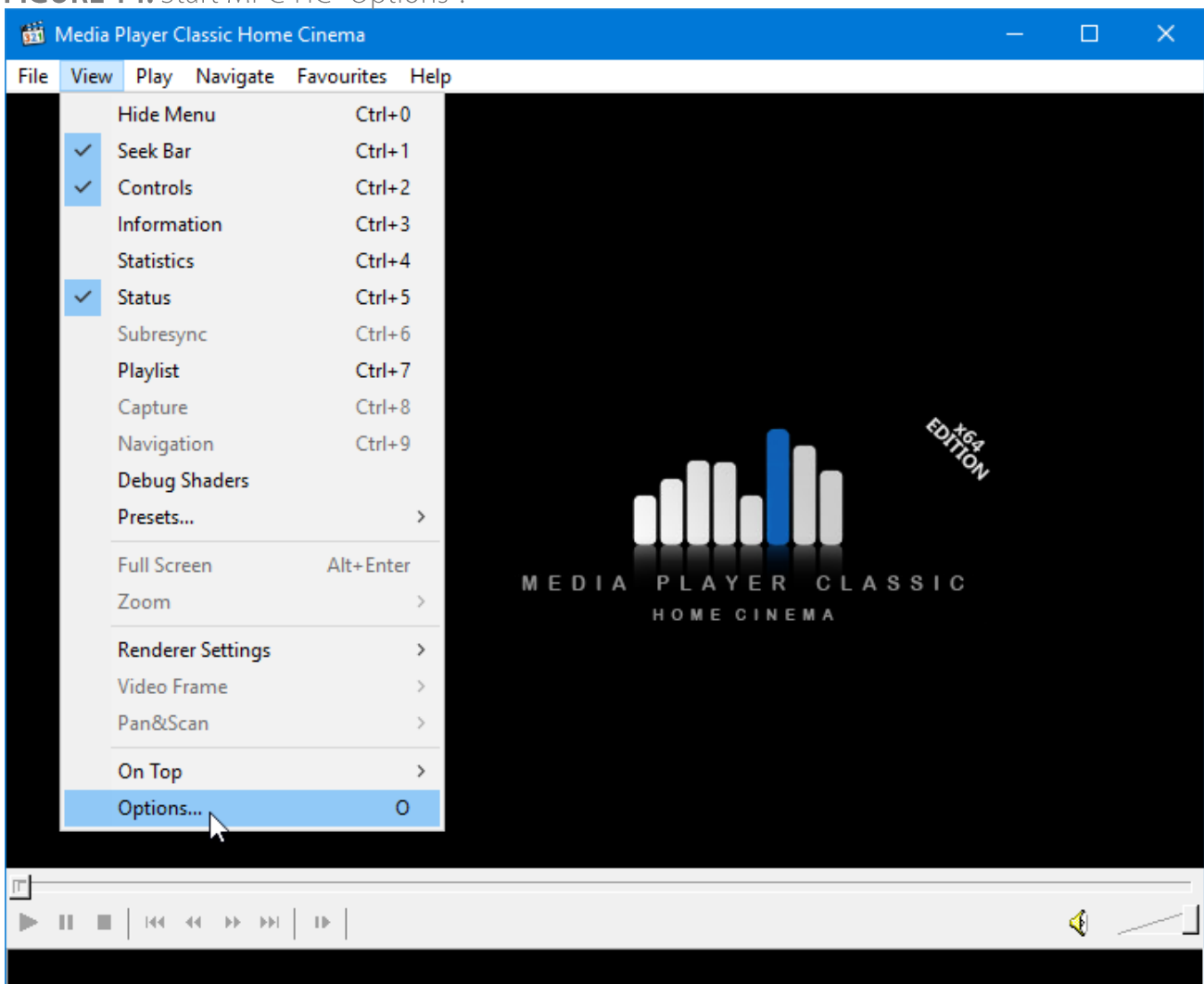
FIGURE 14. Start MPC-HC "Options".

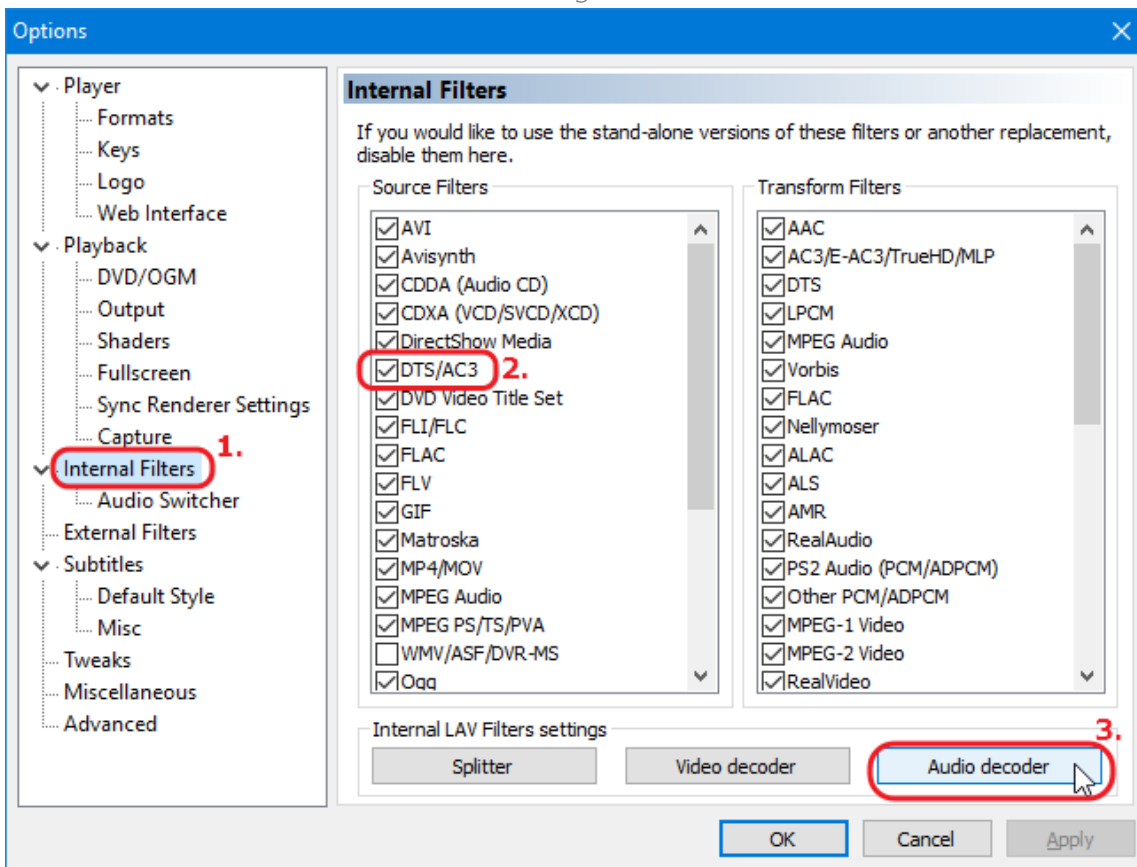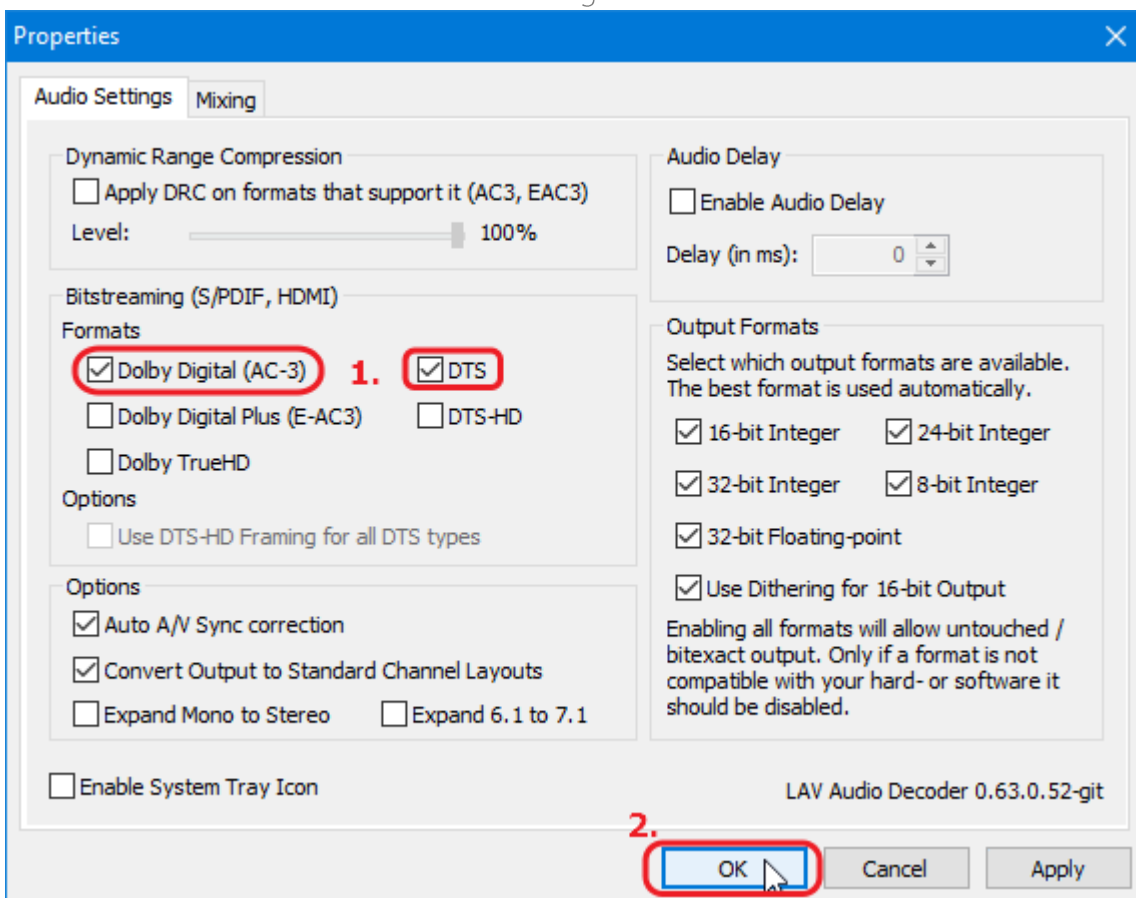**FIGURE 15.** MPC-HC Internal Filters Settings.

FIGURE 16. MPC-HC Audio decoder settings.

SOUND EFFECTS, EQUALIZER AND KARAOKE FEATURES

The ADA-71 audio adapter allows enhanced sound effects such as virtual environment settings (concert hall, etc.), equalizer, Karaoke and Magic Voice. Effects are set using the "USB Multi-Channel Audio Device" configuration application.

Virtual environment and equalizer settings:

1. Start the "USB Multi-Channel Audio Device" configuration application.

2. Go to the "Effect" tab (**FIGURE 17**).

3. In the "Environment" section you can choose from several kinds of environments such as Concert Hall, Cave and more. To deactivate the effect, select "Generic" or deactivate the effect button.

4. You can resize the virtual environment in the "Environment Size" section. This setting is related to the virtual environment in the "Environment" section. The default setting is the middle button.

5. In the "Equalizer" section, you can choose from existing preferences, customize values and save or delete preferences.

FIGURE 17. Virtual environments and equalizer settings.
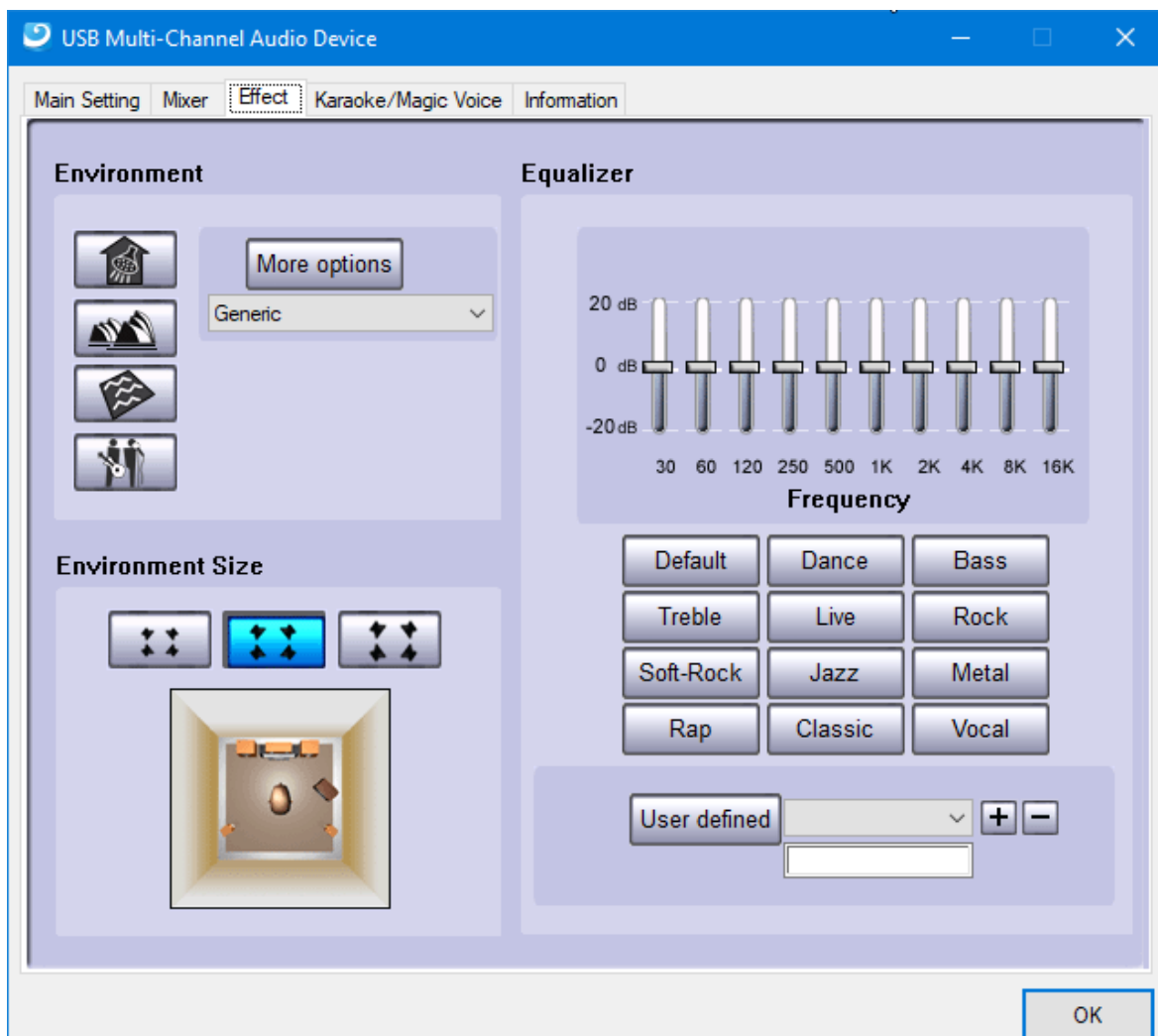
Set Karaoke and Magic Voice feature:

The "Magic Voice" feature allows you to change your voice according to preset options such as "Man, Woman, Monster", etc. "Microphone Echo" adds echo to voice. "Key Shifting" changes the tone of the playback sound. "Vocal Cancellation" reduces the level of voice / vocal of played music.

1. Start the "USB Multi-Channel Audio Device" configuration application.
2. Go to the "Karaoke / Magic Voice" tab (**FIGURE 18**).
3. Press the "ON" button to turn on / off the feature settings, set the default values by pressing the "Reset" button.
4. At the top section, you can turn on / off the "Magic Voice" or "Microphone Echo" feature. Use the slider to set the desired level.
5. At the bottom section, you can turn on / off the "Key Shifting" "Vocal Cancellation" feature. Use the sliders to set the desired level.

FIGURE 18. Set Karaoke and Magic Voice feature.

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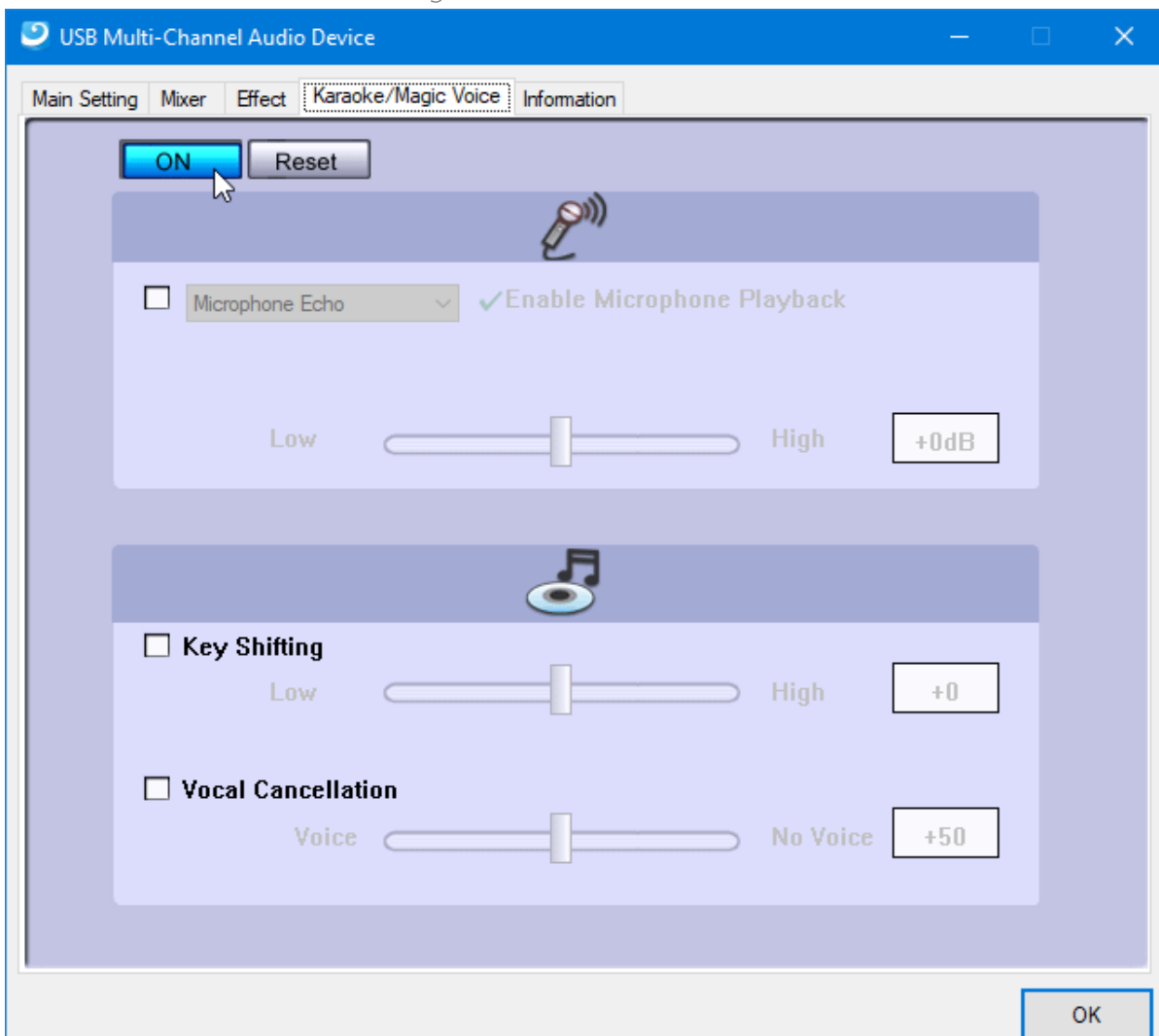
"LISTEN TO THIS DEVICE" FEATURE

If you want to listen to the sound of the microphone or line-in input on the speakers / earphones, you must activate the "Listen to this device" feature. To turn on / off the feature, do the following:

1. In the "Windows notification area", right-click the speaker icon and select "Recording Device (**FIGURE 19, point 1**).

2. Right-click "Microphone" or "Line In" and select "Properties" (**FIGURE 19, point 2**).

3. Select the "Listen" tab (**FIGURE 20, point 1**) and activate or deactivate listening using the "Listen to this Device" checkbox (**FIGURE 20, point 2**).

You can also choose the playback device to listen to the sound (**FIGURE 20, point 3**).

4. Confirm the setting with the OK button (**FIGURE 20, point 4**).

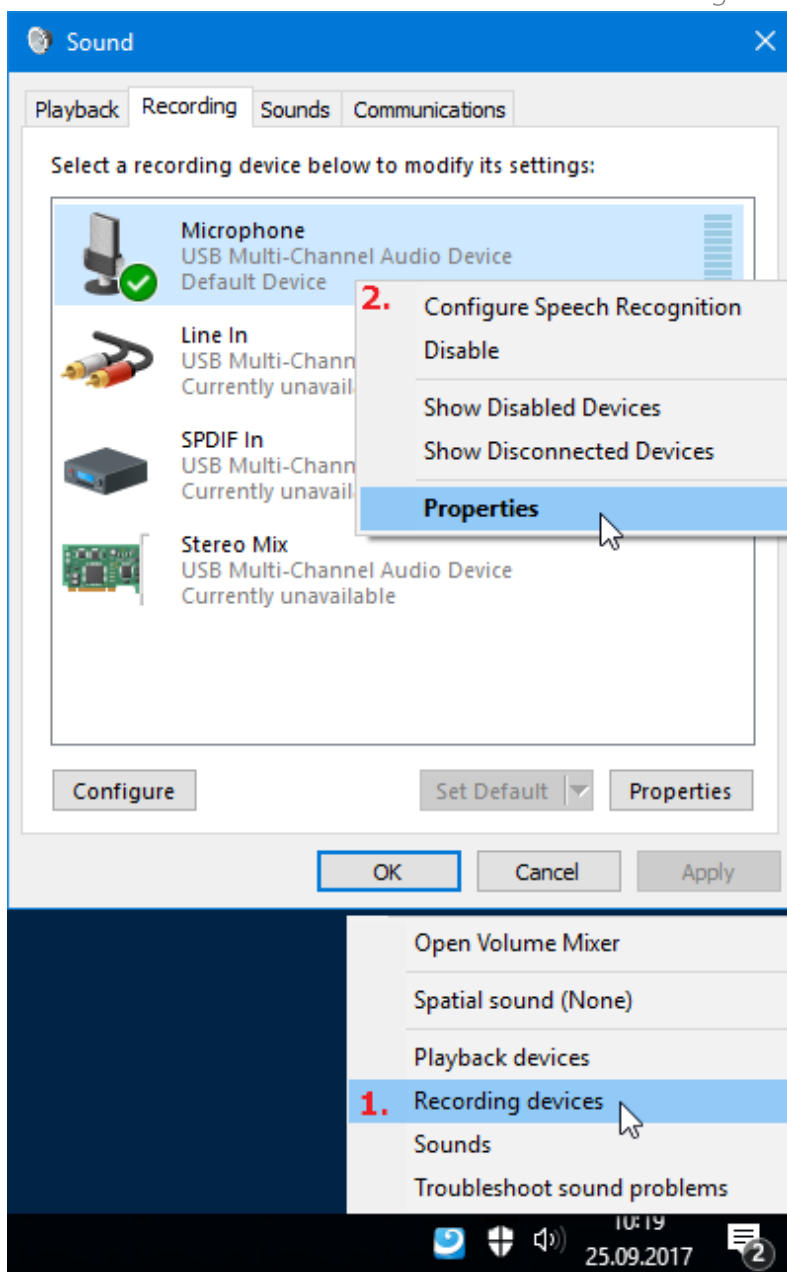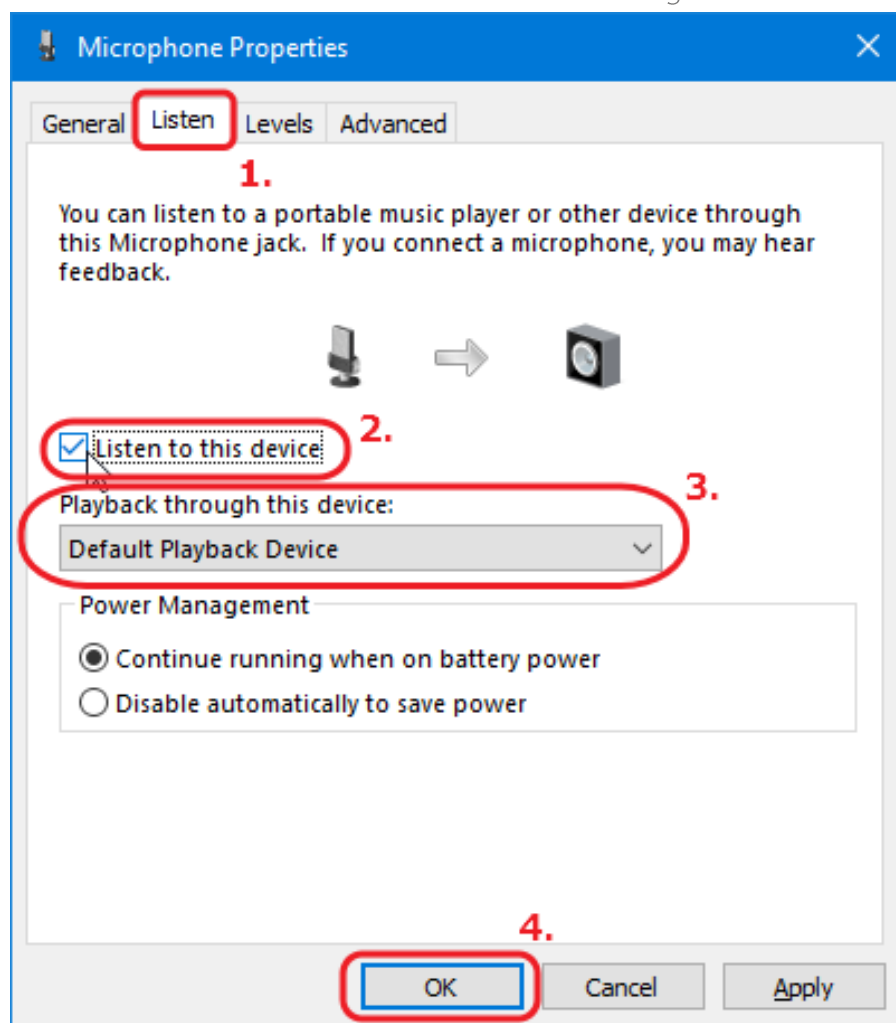**FIGURE 19.** Launch the "Listen to this device" setting.

FIGURE 20. Listen to this device" function settings.

FAQ

1. I have 5.1 speakers connected to the 7.1 audio adapter, but the subwoofer does not play.

a) Try the subwoofer with the "Swap Center / Bass Output" feature enabled. More info in the *ADVANCED MULTICHANNEL SOUND SETTINGS* chapter.

b) Another option is to try to connect a standard audio headset to the "C-SUB" output of the audio adapter, which has a wide frequency range and the subwoofer sounds should be heard. For testing, we recommend using the "Media Player Classic - Home Cinema" freeware, which already has its own AC3 filter.

2. The headphones do not play when connected to the audio adapter.

a) This situation occurs if you do not install the "USB Multi-Channel Audio Device" configuration application after connecting the audio adapter to your computer. Make sure to install it and restart your computer. See chapter *INSTALLATION AND CONNECTION THE SOUND ADAPTER*.

b) Check that "Play mute" is not activated or the volume is set to a non-minimum level.

3. I hear the microphone sound from the speakers / headphones. Where do I turn off the sound?

a) Check the "Listen to this device" setting, see *"LISTEN TO THIS DEVICE" FEATURE* chapter.

b) Check the "Microphone Input" setting, see *SOUND EFFECTS, EQUALIZER AND KARAOKE FEATURES* chapter.

4. It is possible to use audio adapter without a PC, e.g. use it as an amplifier?

An audio adapter cannot be used without a computer. This is because the audio adapter uses the computing operation of the computer, his operating system and the necessary drivers. Therefore, without the PC, the audio adapter cannot operate.

5. The audio adapter is not displayed in "Device Manager".

If the adapter is not displayed in "Device Manager", a USB port may be faulty. Try connecting the adapter to another USB port. Redetection and automatic driver setup should occur. If the situation is the same, plug the adapter into the USB port of another computer to verify its functionality.

6. Do you hear noise from the speaker when connecting a transmitter e.g. from a wireless mouse?

Audio interference is probably caused by a wireless mouse transmitter. We recommend that you place the mouse transmitter further from the audio adapter (preferably on the opposite side of the computer - the USB transmitter on the front PC panel and the USB audio adapter on the back of the PC.) If it is a notebook, then one device is on each side.

7. The sound freezes repeatedly during playback.

a) The problem could be a lack of resources. Check the CPU usage and fill the memory in "Task Manager". If CPU usage is 100% or memory is full, you need to find out why this condition is causing.

b) Another option is to connect the audio adapter to another computer to verify that it is not damaged.

8. The line-in signal is delayed. Is it possible to change it?

The USB audio adapters generally have a higher latency (delay). The solution is to use the ASIO4ALL drivers (http://www.asio4all.com/). ASIO are special sound drivers designed to achieve the lowest latency.

9. When connecting the headphones and the microphone to the USB audio adapter, I hear microphone feedback from the earphones, making Skype calls very uncomfortable.

a) You may have checked "listen to the device checkbox in the microphone properties. Follow the instructions in the *"LISTEN TO THIS DEVICE" FEATURE* chapter.
b) Microphone sensitivity and speaker volume are high. Reduce the microphone sensitivity or speaker volume, or use headphones.

10. It is possible to set the audio adapter to play a song from the speakers and a song that will follow to be played from headphones?

Yes, you can set up playback of two different tracks simultaneously on one computer.
This is primarily a software issue requiring a player that supports redirecting audio to another audio output than is set as the "default" in the OS. This functionality is supported, for example, by the VLC Player.

11. I cannot set 5.1 sound when playing back.

You probably have not configured 5.1 audio in Windows. Please check your settings, see *SELECT THE NUMBER OF SYSTEM INPUT CHANNELS, THE OPTICAL OUTPUT SETTING FOR DOLBY DIGITAL AND DTS SURROUND PLAYBACK or XEAR SURROUND MAX FEATURE* chapters.

WARRANTY CONDITIONS

All AXAGON products have a warranty period of 24 months from the date of receipt of the product by the buyer.

Warranty claims can only be applied to the AXAGON dealer who has supplied the buyer with the device.

The goods must be supplied complete with the claim including, in particular, power adapters, cables, reductions, media with controls and other accessories, preferably in the original packaging.

TECHNICAL SUPPORT

If you have any technical problems with your device, you need more information or technical advice, drivers are missing, etc., visit the AXAGON website at http://www.axagon.eu first.

If you do not find a satisfactory answer here, you can contact our technical support. For technical questions, use the address: support@axagon.cz.

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