

AVS4YOU Programs Help



AVS Media Player

www.avs4you.com

© Online Media Technologies, Ltd., UK. 2004 - 2009 All rights reserved

Contact Us

If you have any comments, suggestions or questions regarding **AVS4YOU** programs or if you have a new feature that you feel can be added to improve our product, please feel free to contact us.

When you register your product, you may be entitled to technical support.

General information:	info@avs4you.com
Technical support:	support@avs4you.com
Sales:	sales@avs4you.com
Help and other documentation:	help@avs4you.com

Technical Support

AVS4YOU programs do not require any professional knowledge. If you experience any problem or have a question, please refer to the **AVS4YOU Programs Help**. If you cannot find the solution, please contact our support staff.

 **Note:** only registered users receive technical support.

AVS4YOU staff provides several forms of automated customer support:

- **AVS4YOU Support System**

You can use the **Support Form** on our site to ask your questions.

- **E-mail Support**

You can also submit your technical questions and problems via e-mail to support@avs4you.com.

 **Note:** for more effective and quick resolving of the difficulties we will need the following information:

- Name and e-mail address used for registration
- System parameters (CPU, hard drive space available, etc.)
- Operating System
- The information about the capture, video or audio devices, disc drives connected to your computer (manufacturer and model)
- Detailed step by step describing of your action

Please do **NOT** attach any other files to your e-mail message unless specifically requested by AVS4YOU.com support staff.

Resources

Documentation for your AVS4YOU software is available in a variety of formats:

In-product (.chm-file) and Online Help

To reduce the size of the downloaded software installation files the in-product help was excluded from the installation although you can always download it from our web-site for your convenience. Please, visit AVS4YOU web-site at <http://www.avs4you.com/OnlineHelp/index.aspx> to download the latest available version of the help executable, run it and install into the AVS4YOU programs folder. After that you will be able to use it through the **Help** menu of the installed AVS4YOU software.

Online Help include all the content from the In-product help file and updates and links to additional instructional content available on the web. You can find the **Online Help** at our web-site - <http://www.avs4you.com/OnlineHelp/index.aspx>. Please note, that the most complete and up-to-date version of AVS4YOU programs help is always on the web.

PDF Documentation

The offline help is also available as a pdf-file that is optimized for printing. All PDF help files are available for download at the programs pages at AVS4YOU web-site (both <http://www.avs4you.com/index.aspx> and <http://www.avs4you.com/OnlineHelp/index.aspx>). To be able to read and print AVS4YOU PDF help files you will need to have a PDF reading program installed.

User Guides

You have access to a wide variety of resources that help you make the most of your AVS4YOU software. The step-by-step user guides will be of help not only to the novice users but also to the users that face a certain task to be performed and look for a way to do it. Please, visit our **User Guides** section of AVS4YOU web-site at <http://www.avs4you.com/Guides/index.aspx> to read the detailed instructions for various software and tasks

Technical Support

Visit the **AVS4YOU Support** web-site at <http://support.avs4you.com> to ask your questions concerning AVS4YOU software installation, registration and use. Feel free to also use our e-mail address support@avs4you.com.

Downloads

Visit the **Downloads** section - <http://www.avs4you.com/downloads.aspx> - of our web-site to find free updates, tryouts, and other useful software. We constantly update the software, new versions of the most popular programs and new software are also frequently released.

Overview

AVS Media Player is a fully functional software media player that has all the features and controls of a common hardware player. Our software has a number of great possibilities, which makes watching digital video easy and pleasant. It will let the user experience the full spectrum of video on a personal computer or TV screen (if the computer's video card output is connected to the TV input).

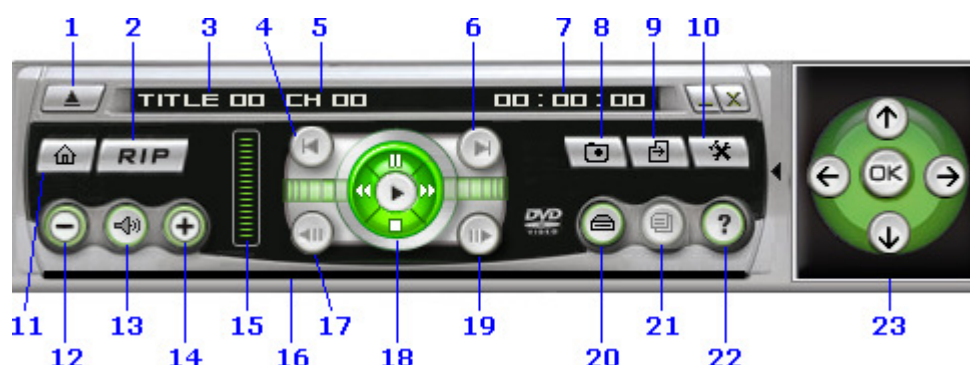
AVS Media Player has a simple user-friendly interface that allows you to start watching movies with no additional software and special knowledge on video.

AVS Media Player allows the user to watch different types of video media files. All you need is to choose the source files that you would like to watch and click **Play**. See the **Supported video file formats** section of the **Appendix** to find out the list of the formats supported by the **AVS Media Player**.

If you like to listen to music you can use the **AVS Media Player** software to listen to the audio files and to watch the visualizations meanwhile. The program supports most of the audio formats known nowadays.

To start **AVS Media Player** go to **Start** menu and choose **All Programs -> AVS4YOU -> Video -> AVS Media Player**.

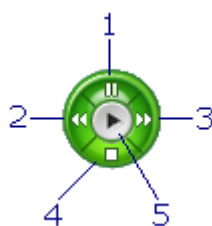
Main Controls



	Button (Control)	Details
1	Eject button	Ejects the disk from the computer CD/DVD-ROM drive
2	Rip button	Launches the AVS Video to GO application to let the user rip a movie and save it in one of the supported video formats.
3	Title indicator	Shows the number of the current title of the movie
4	Jump to previous file button	Quick jump to the previous file in the file playback list (See the Audio files playback section for more detail).
5	Chapter indicator	Shows the number of the current chapter of the movie
6	Jump to next file button	Quick jump to the next file in the file playback list (See the Audio files playback section for more detail).
7	Elapsed time (hours: minutes: seconds) indicator	Shows the time elapsed from the beginning of the media file playback
8	Snapshot button	Lets you take a snapshot of the current video file frame (See Preferences section for more detail).
9	Playlist button	Opens media files playlist (See Video files playback and Audio files playback sections for more detail).

10	Preferences button	Opens the Preferences window to let the user set the program parameters (See Preferences section for more detail)
11	AVS4YOU home page link	Links directly to AVS4YOU web site
12	Volume down button	Decreases the sound volume strength
13	Mute/Unmute button	Switches the sound on or off
14	Volume up button	Increases the sound volume strength
15	Volume indicator	Shows the current sound volume value and lets change the volume strength
16	Navigation slider	Indicates the playback progress. The user can click and drag the slider to jump to a different playback point in time.
17	Step backward button	Lets the user step one frame backward (See Step frame functions section for more detail)
18	Playback controls	The buttons used for movie playback (See Playback controls section for more detail)
19	Step forward button	Lets the user step one frame forward (See Step frame functions section for more detail)
20	Select source button	Lets the user choose the movie source (See Video files playback and Audio files playback sections for more detail)
21	Menu button	Lets the user choose the movie menu (See Menus section for more detail)
22	Help button	Opens this help file
23	Navigation pad	Lets the user navigate through the menus (See Navigation pad section for more detail)


Playback Controls



	Button	Details
1	Pause	Use this button to pause the media file during playback.
2	Fast backward	Use this button to search the media file in fast reverse mode.
3	Fast forward	Use this button to search the media file in fast forward mode.
4	Stop	Use this button to stop the media file during playback. If you press this button twice the file will be unloaded and you will need to load it again or open another file to resume playback.

5	Play	Use this button to: 1. start playback when the Player is in stop mode; 2. resume playback when paused or in frame step mode; 3. return to normal playback when in fast forward or fast rewind mode.
---	-------------	---

Menus

Press the **Menu**  button to choose between the movie menus:

- **Root menu** - shows the root menu of the movie;
- **Title menu** - lets the user choose the title of the movie to watch, if there are several titles in the video;
- **Chapter menu** - lets the user go directly to the specific chapter.
- **Audio menu** - lets the user choose the desired audio language from the present in the movie;
- **Subtitle menu** - lets the user choose the subtitles to be displayed during the movie playback (if there are several of them) or switch the subtitles off;
- **Angle menu** - lets the user choose the desired angle (if there are several) to watch the movie;

 **Note:** not all the menus might be available depending on their presence or absence in the video.

Navigation Pad



For the user's convenience the **Navigation pad** can be used to navigate through the menus, just like on a common Media Player remote control.

Use the arrow buttons to choose among the menu entries.

To confirm the choice use the **OK** button.

Keyboard Shortcuts

Main window keyboard shortcuts

Button (Button combination)	Function
-	Volume down
+	Volume up
E	Ejects the disc from the current active drive

F	Fast forward
M	Mute/Unmute sound
N	Jump to next file
O	Open menu
P	Jump to previous file
R	Fast backward
S	Stop
U	Step forward
Y	Step backward
Enter (Space)	Play
Space	Pause/Play
Ctrl + O	Open video file
Alt + Enter	Go to full screen
Ctrl + X	Close the application and finish the work with the AVS Media Player
F1	Help file

Playlist window keyboard shortcuts

Button (Button combination)	Function
X	Playback of the currently selected file in the playlist
C	Pause the currently selected file in the playlist
V	Stop the currently selected file in the playlist
Shift+Ctrl+O	Add a new folder to the playlist
Ctrl+O	Add new files to the playlist
Ctrl+L	Load a previously saved playlist to the playlist window
Ctrl+S	Save the current playlist
Ctrl+N	Create a new playlist
Delete	Delete the selected file(s) from the playlist



Note: you need to activate the playlist window to use these playlist window shortcuts.


Supported Video File Formats


Most of the commonly used media file formats are supported by **AVS Media Player**:


Format	Playback support
AVI - Audio Video Interleave (.avi) <ul style="list-style-type: none"> • Uncompressed • Cinepak • Xvid • DivX • MJPEG • MS MPEG-4 • etc. 	+
Windows Media Video (.wmv, .asf)	+
MPEG - Motion Picture Experts Group (.mpg, .mpeg, .mpe, .dat, .mp4) <ul style="list-style-type: none"> • MPEG-1 • MPEG-2 • MPEG-4 	+
Mobile Phones video formats (.3gp, .3g2, .3gpp, 3gp2, .mp4)	+
Quick Time movie (.qt, .mov)	+

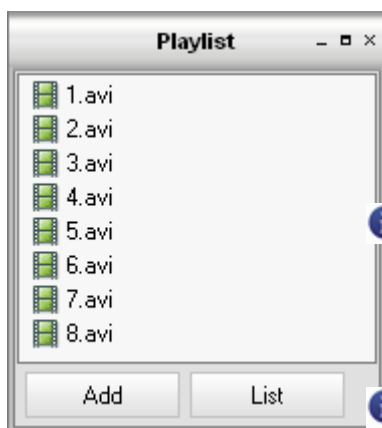
Video Files Playback

Watching video files is simple. To start playback of a video file located on a disc it is necessary to do the following:

1. Insert a disc into the CD/DVD-ROM drive. Click **Play**. Make sure that the source is correct. If not, click the **Select source**  button and choose the right drive.
2. The video file will begin playing.
3. To **Stop** or **Pause**, click them accordingly (see **Playback controls**).

The same can be done to play the video file from the personal computer hard disk drive. Click the **Select source**  button and choose **Open Video File...** option. If you would like to add several video files you can select them with the mouse and click **Open**. The playlist with the added files will open to show you the list of files that are going to be played.

The other way to open video files is use the **Playlist**  button. When you click this button the playlist window will open:



You can add files using the **Add** button and delete the files from the list choosing the file name and clicking the right mouse button to select the **Delete** options, or using the **Delete** button on the keyboard. It is also possible to drag-and-drop the files from the Windows Explorer to the **Playlist** directly using the mouse.


Note: if the video file contains more than one language stream you can choose between the available languages with the help of **Express Menu** - click the right mouse button on the player main window and select **Audio Streams - Track 1** or **Track 2**.


Note: you can change the order of the files on the playlist at your own choosing and select several files at once. To do that, press the control button and select the files you need. After that you can move all these files upwards or downwards as related to the unselected files. You can also delete these selected files using the **Delete** button on the keyboard or the **Playlist express menu**.


You can also use the **Playlist express menu** to facilitate control of the **Playlist** items.

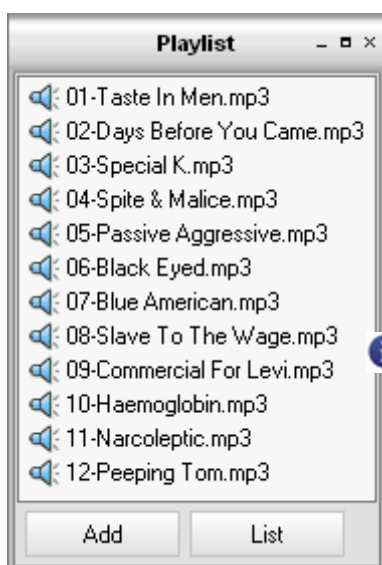
Audio Files Playback

To start playback of audio files located on a disc it is necessary to do the following:

1. Insert a disc into the CD/DVD-ROM drive. Click **Play**. Make sure that the source is correct. If not, click the **Select source**  button and choose the right drive.
2. The audio file will begin playing.
3. To **Stop** or **Pause**, click them accordingly (see **Playback controls**).

The same can be done to play the audio files from the personal computer hard disk drive. Click the **Select source**  button and choose **Open Audio File...** option. If you would like to add several audio files you can select them with the mouse and click **Open**. The playlist with the added files will open to show you the list of files that are going to be played.

The other way to open audio files is use the **Playlist**  button. When you click this button the playlist window will open:



You can add files using the **Add** button and delete the files from the list choosing the file name and clicking the right mouse button to select the **Delete** options, or using the **Delete** button on the keyboard. It is also possible to drag-and-drop the files from the Windows Explorer to the **Playlist** directly using the mouse.

To jump to the next file in the playlist you can double-click it with the mouse or use the **Jump to next file** button of the **main controls panel**. To return to the previous file use the **Jump to previous file** button of the **main controls panel**.

Note: you can change the order of the files on the playlist at your own choosing and select several files at once. To do that, press the control button and select the files you need. After that you can move all these files upwards or downwards as related to the unselected files. You can also delete these selected files using the **Delete** button on the keyboard or the **Playlist express menu**.

You can also use the **Playlist express menu** to facilitate control of the **Playlist** items.

Preferences

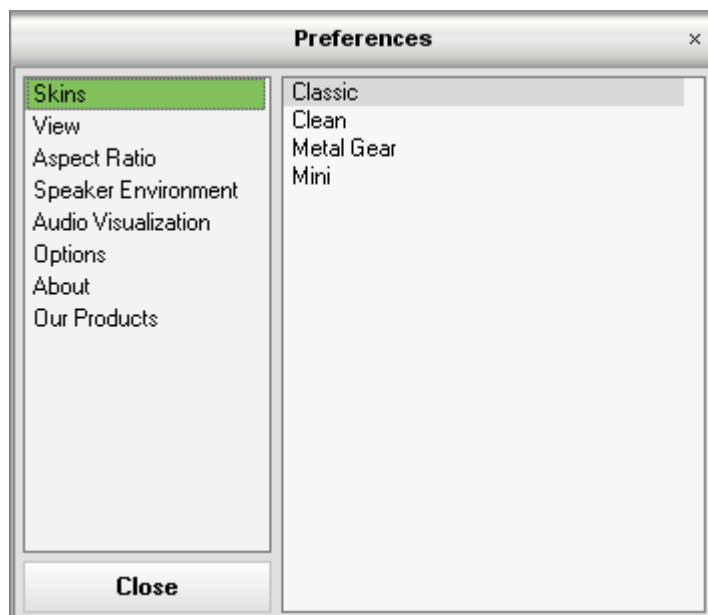
You can change the main system settings using the **Preferences** window. To activate the window please click the **Preferences** button. The window contains the following main items:



- **Skins** - lets the user select the skins to change the appearance of the **AVS Media Player** program.
- **View** - lets the user select the **AVS Media Player** windows that will be open.
- **Aspect Ratio** - lets the user select the aspect ratio of the video file.
- **Speaker Environment** - lets the user select the number and configuration of the speakers.
- **Audio Visualization** - lets the user select the visualization type used during audio files playback.
- **Options** - lets the user adjust the additional parameters.
- **About** - shows the information about the **AVS Media Player** program.
- **Our Products** - shows the information about other **AVS4YOU** products.

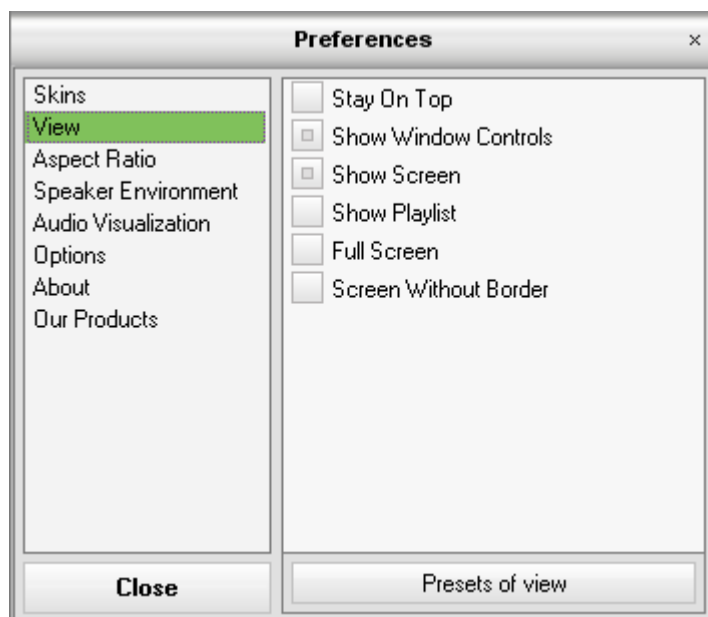
Skins

AVS Media Player supports skins and lets the user select the appearance that is liked better. To do that please select the **Skins** item in the **Preferences** window and choose the available skins from the list:



View

Use the **View** item to select the main **AVS Media Player** windows that will be open or closed during the playback:



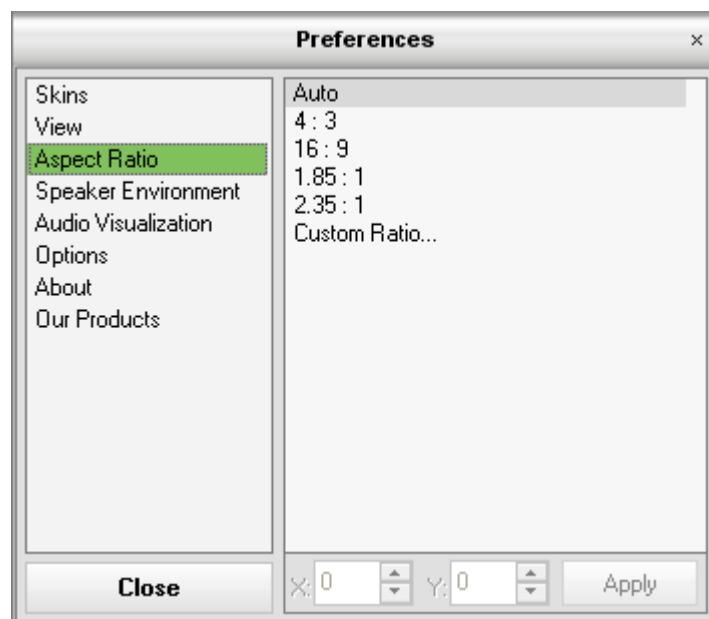
- **Stay on top** - use this option to make **AVS Media Player** stay on top of all the other applications.
- **Show window controls** - use this option to show or hide the **main controls** panel.
- **Show screen** - use this option to show or hide the main screen window.
- **Show playlist** - use this option to show or hide the **Playlist** window.
- **Full screen** - use this option to change the view mode to full screen when the player is in the **Window** mode and to **Window** mode from the **Full screen** mode.
- **Screen without border** - use this option to hide the borders of the **AVS Media Player** screen window.



Note: you can also save the selected view settings as a preset to use them in future and quickly switch between your preferences. To do that click the **Presets of view** button and enter the name of a new preset to save it. After that you can save the preset clicking the appropriate button. To load the previously saved preset select it from the drop-down list and click Load. The same is done for deleting the unnecessary presets, simply select the preset and click the **Delete** button.

Aspect Ratio

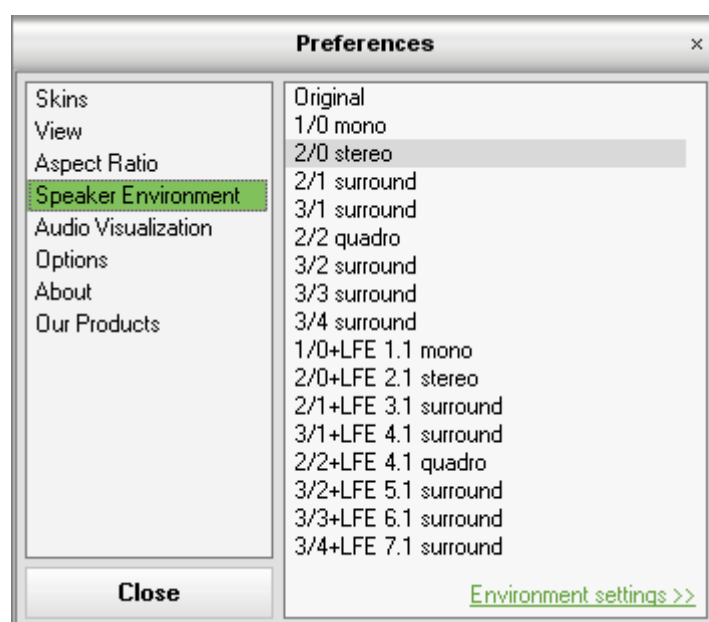
Aspect Ratio - the ratio of the horizontal and vertical sides to each other. You can select the available variants of aspect ratio values from the list or set an aspect ratio of your own:



- **Auto** - use this option to let the **AVS Media Player** select the aspect ratio automatically.
- **4:3** - use this option to set the aspect ratio fit 4:3 screen.
- **16:9** - use this option to set the aspect ratio fit 16:9 wide screen.
- **1.85:1** - use this option to set the aspect ratio fit 1.85:1 wide screen.
- **2.35:1** - use this option to set the aspect ratio fit 2.35:1 wide screen.
- **Custom Ratio...** - use this option to set the custom aspect ratio. You can select the ratio of X (width) to Y (height) of the video image and click the **Apply** button to accept the changes.

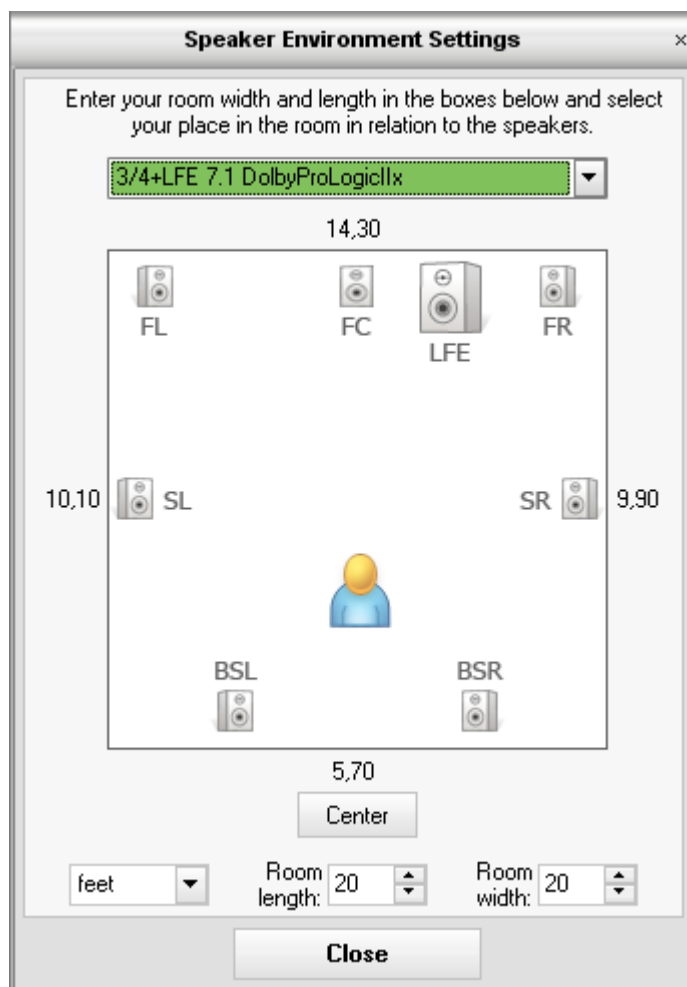
Speaker Environment

You can set the number of the channels for your media files if it does not coincide with the number of the speakers your computer has connected to it. The program will on-the-fly automatically convert the audio component of the media file to suit the hardware better:



You can select any of the variants above and listen to the one selected to see which sounds best.

You can also click the **Environment settings>>** link to open the **Speaker Environment Settings** window:



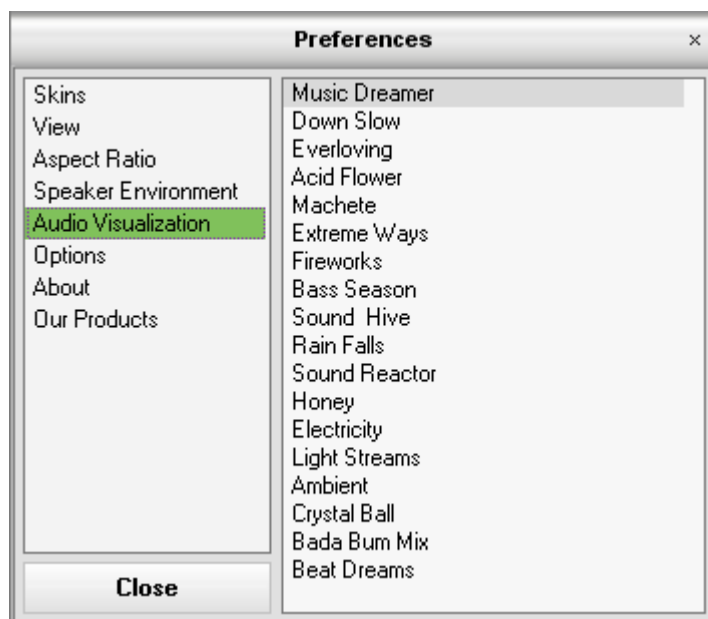
The number and configuration of speakers is selected from the upper drop-down box. The speakers will be displayed schematically together with the user position in the room:

- FL** - Front Left speaker
- FC** - Front Center speaker
- LFE** - Low-Frequency Effects (subwoofer) speaker
- FR** - Front Right speaker
- SL** - Surround Left speaker
- SR** - Surround Right speaker
- BSL** - Back Surround Left speaker
- S** - Surround (rear) speaker
- BSR** - Back Surround Right speaker

You can select between the measurement units - **feet** and **meters** and adjust the room **length** and **width**. After that you can use the mouse to move the figure of the listener to establish the position in the room. You will see the distances between the listener and the speakers change and the sound change together with them. To place the listener into the center of the room place the **Center** button.

Audio Visualization

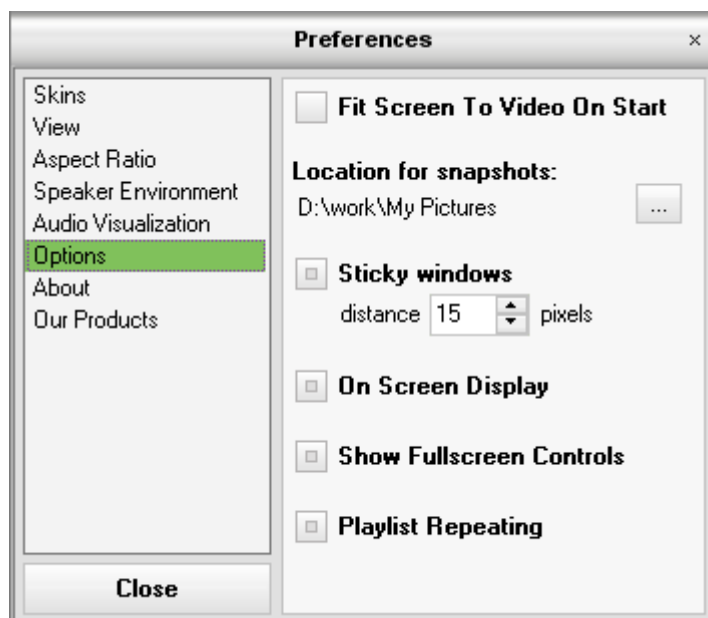
When you playback audio files it might be very useful to switch on visualization, that will be shown in the main screen window. You can select the visualization type:



Switch the main screen window on to view the visualization or off if you prefer to hide the visualization window.

Options

There are several options that can be changed to make it more comfortable when you watch a video or take snapshots of the video file being played:



- **Fit screen to video on start** - use this option to change the screen window size so that it represented the full dimensions of the video picture.
- **Location for snapshots** - use this option to select the location for the snapshots taken. The windows standard explorer window will open to let you choose the directory for the snapshot output files.
- **Sticky windows** - use this option to make the **AVS Media Player** windows stick to each other and to the desktop borders. You can also select the distance in pixels within which the windows will start to stick to each other.
- **On Screen Display** - use this option show the information on the **AVS Media Player** screen during playback, pause or any other operation with video.
- **Show Fullscreen Controls** - use this option to get access to the **AVS Media Player** controls when the FullScreen mode is selected. You will need to move your mouse to the bottom of the screen for the controls to pop up.

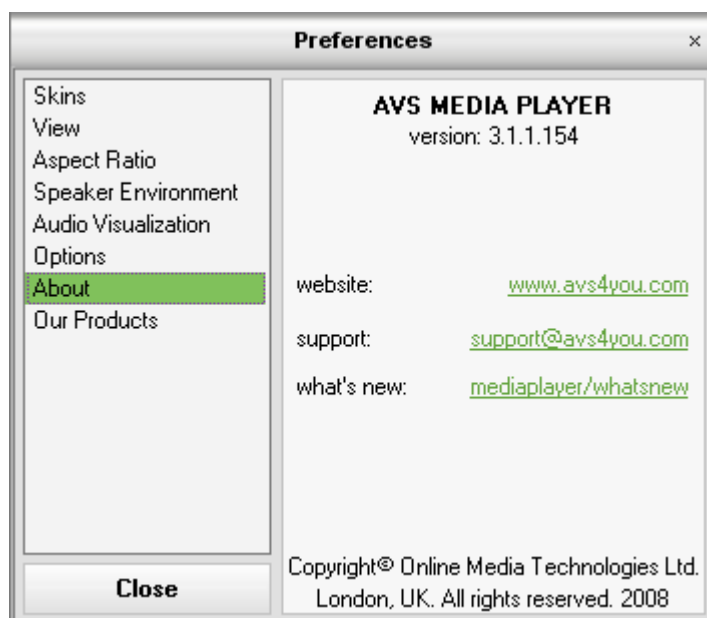


Note: the snapshots will be saved in the BMP format and will have the following file name:

- **For a video file** - video file name + frame number in brackets (e.g. **My video (frame 39).bmp**).

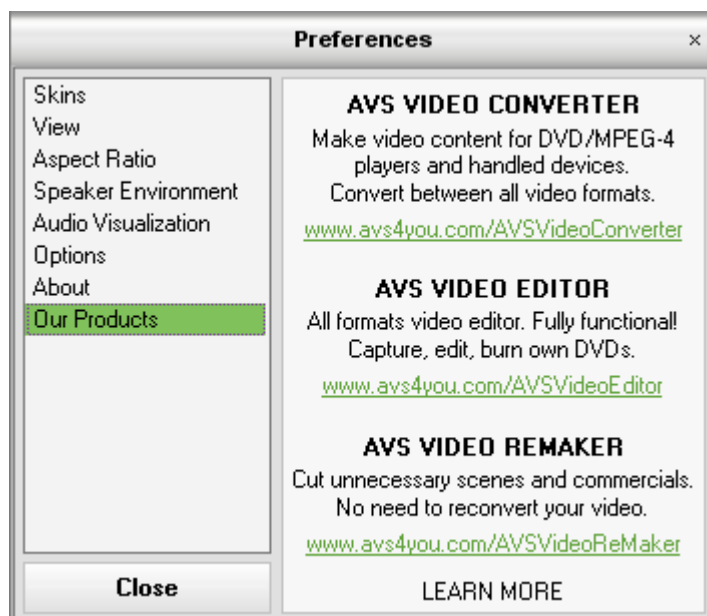
About

Here you can see the information on the **AVS Media Player** version, **AVS4YOU** web site address and e-mail addresses:





Our Products

Here you can see the information about other **AVS4YOU** products and find links to the web pages with these products:



Jump Functions

During playback it is possible to skip some file or to return to the other files:


- To advance to the next file, click the **Next File**  button.
- To go back one file, click the **Previous File**  button.

The same can be done using the **Hotkeys**:

- Press **<N>** on the keyboard to advance to the next file.
- Press **<P>** on the keyboard to go back one file.

Step Frame Functions

These functions are available anytime:


1. Click the **Step forward**  or **Step backward**  button to freeze the video.
2. Click the **Step forward**  button again to advance to the next frame.
3. Click the **Step backward**  button to return to the previous frame.
4. To return to normal playback mode, click the **Play** button.

The same can be done using the **Hotkeys**:

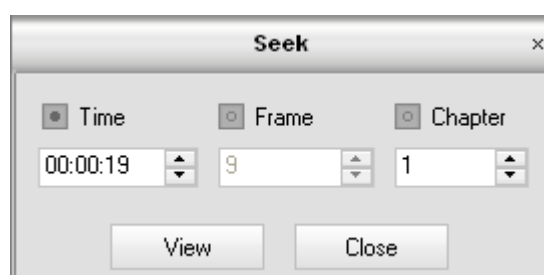
1. Press the **<U>** or **<Y>** buttons on the keyboard to freeze the video. Press **<U>** again to advance the video to the next frame.
2. Press the **<Y>** button to return to the previous frame.
3. To return to normal playback mode, press the **<Space>** bar or **<Enter>**.

There is no audio in this mode.

After you have clicked on either of the **Step** functions, playback will be paused.

 **Note:** this function steps backward but will only return to the I-frames within a group of frames. In other words, stepping forward will result in a greater number of frames than stepping backward.

Search Function



[Time search] [Frame search]

Time search

It is possible to find a specific place in the movie if its exact time is known. To do that it is necessary to:

1. Open the **Search panel** selecting the **Search** item in the **Express menu**.
2. Choose the **Time search** option.
3. Enter the desired time using the mouse clicks or entering the digits from the keyboard.
4. Press the **View** button to go to the chosen scene.

Frame search







To find a specific place in the movie by its frame number it is necessary to:

1. Open the **Search panel** selecting the **Search** item in the **Express menu**.
2. Choose the **Frame search** option.
3. Enter the desired frame number using the mouse clicks or entering the digits from the keyboard.
4. Press the **View** button to go to the chosen scene.

Basic and Navigation Controls

Express menu is a quick and handy feature. It can be activated by clicking on the right button of the mouse when the cursor is positioned on the video window. Express menu buttons are grouped.

The first group is **Basic and navigation controls**. It consists of the following entries:

- **Playback** - use this option to control the playback of the media files in the **AVS Media Player** program:
 - **Play** - use this option to start playback when the player is in the **Stop** mode and to resume playback when the player is in **Pause** or **Step frame** mode. It is the same as to press the **Play**  button of the **AVS Media Player**.
 - **Pause** - use this option to pause the playback when the player is in the **Play** mode to pause the media file playback. It is the same as to press the **Pause**  button of the **AVS Media Player**.
 - **Stop** - use this option to stop the playback when the player is in the **Play** mode to cancel the media file playback. It is the same as to press the **Stop**  button of the **AVS Media Player**.
 - **Previous file** - use this option to go to the previous file when the player is in the **Play** mode. It is the same as to press the **Previous file**  button of the **AVS Media Player**.
 - **Next file** - use this option to go to the next file when the player is in the **Play** mode. It is the same as to press the **Next file**  button of the **AVS Media Player**.
- **Volume** - use this option to change the loudness of the volume when the player is in the **Play** mode. It is the same as to press the **Volume control** buttons of the **AVS Media Player**. The submenus include **Volume up**, **Volume down** and **Mute** options.
- **Eject** - use this option to eject the disc from the computer disc drive. It is the same as to press the **Eject**  button of the **AVS Media Player**.
- **View** - use this option to select the appearance of the **AVS Media Player** program:
 - **Stay on top** - use this option to make **AVS Media Player** stay on top of all the other applications.
 - **Controls** - use this option to show or hide the **main controls** panel.

- **Screen** - use this option to show or hide the main screen window.
- **Playlist** - use this option to show or hide the **Playlist** window.
- **Go to** - use this option to get access to the submenu with the list of all available **Titles** and **Chapters** to freely navigate among them.
- **Search** - use this option to search a specific place in the movie based on its time in the movie, frame number or chapter number. The option brings up the **Search panel**.
- **Playlist** - use this option to open **Playlist window**.
- **FullScreen** - use this option to change the view mode to full screen when the player is in the **Window** mode and to **Window** mode from the **Full screen** mode. It is the same as to press the **Alt + Enter** button combination.
- **Snapshot** - use this option to take the snapshot of the current video file frame. It is the same as to take the **Snapshot** button of the **AVS Media Player**. See the **Preferences** section for more detail on this.

System Controls

Express menu is a quick and handy feature. It can be activated by clicking on the right button of the mouse when the cursor is positioned on the video window. Express Menu buttons are grouped.

The second group is **System controls**. It consists of the following entries:

- **Speaker Environment Calibration...** - use this option to open the **Speaker environment calibration** window and set your position in the room in relation to the speakers.
- **Speaker Configuration** - use this option to switch between main work modes:
 - **Original** - in the **Original** mode the sound of the movie and audio file will remain unchanged thus letting the you enjoy the advantages of the multichannel sound in case you have a multichannel acoustic system.
 - **2 (Stereo)** - it might be a good idea to use this mode if you watch the movie and listen to audio using stereo headphones or stereo speakers. **AVS Media Player** convert the sound to two channels to fit your headphones or speakers.
 - **3.1 (Stereo to Surround)** - use this mode to watch a movie and listen to audio with the stereo soundtrack on a 3.1 surround acoustic system to experience the full spectrum of the surround sound.
 - **5.1 (Stereo to Surround)** - use this mode to watch a movie and listen to audio with the stereo soundtrack on a 5.1 surround acoustic system to experience the full spectrum of the surround sound.
 - **7.1 (Stereo to Surround)** - use this mode to watch a movie and listen to audio with the stereo soundtrack on a 7.1 surround acoustic system to experience the full spectrum of the surround sound.
 - **More Presets** - use this mode to select additional presets from the list of available ones. See the **Preferences** section for more detail on this.
- **Aspect Ratio** - the ratio of the horizontal and vertical sides to each other. The possible values include:
 - **Auto** - use this option to let the **AVS Media Player** select the aspect ratio automatically.
 - **4:3** - use this option to set the aspect ratio fit 4:3 screen.
 - **16:9** - use this option to set the aspect ratio fit 16:9 wide screen.
 - **1.85:1** - use this option to set the aspect ratio fit 1.85:1 wide screen.
 - **2.35:1** - use this option to set the aspect ratio fit 2.35:1 wide screen.
 - **Custom Ratio...** - use this option to set the custom aspect ratio. See the **Preferences** section for more detail on this.
- **Source** - use this option to open the source menu that lets you choose the following source paths for the video files:


- **DVD or CD drives available on your computer** - use this option to playback video files from your DVD/CD drive.



Note: the **DMA mode** should be enabled for proper work of the Media Player in this mode.

- **Open Video File...** - use this option to open a video file on a CD/DVD disc or on your personal computer hard disk drive. See the **Video files playback** section for more detail.
- **Open Audio File...** - use this option to open an audio file on a CD/DVD disc or on your personal computer hard disk drive. See the **Audio files playback** section for more detail.
- **Preferences** - use this option to set the additional **AVS Media Player** settings. See the **Preferences** section for more detail on this.




Note: selecting the **Source** menu entry is the same as to press the **Select source**  button of the **AVS Media Player**.

Menu Controls

Express menu is a quick and handy feature. It can be activated by clicking on the right button of the mouse when the cursor is positioned on the video window. Express menu buttons are grouped.

The third group is **menu controls**. It consists of the following entries:

- **Audio Language** - use this option to quickly switch between the available languages of the movie when the player is in the **Play** mode. You can also use this option to choose between the available languages of any video file if the file contains several languages.
- **Subtitle** - use this option to quickly switch between the available subtitles of the movie when the player is in the **Play** mode. The option also allows to switch the subtitles on or off.
- **Disc menus** - use this option to quickly switch to the available movie menus. It is the same as to press the **Menu**  button of the **AVS Media Player**.
- **Audio Streams** - use this option if your video file contains more than one audio track. You can select **Track 1** and **Track 2**, for instance, if your video movie has two audio streams in it.

Additional Player Controls

Express menu is a quick and handy feature. It can be activated by clicking on the right button of the mouse when the cursor is positioned on the video window. Express menu buttons are grouped.




The fourth group is **Additional player controls**. It consists of the following entries:

- **Help** - use this option to open this **Help file**. It is the same as to press the **Help** button of the **AVS Media Player**.
- **About the AVS Media Player** - use this option to open the **information window** about the **AVS Media Player**.
- **Exit <Ctrl + X>** - use this option to close the application and finish the work with the **AVS Media Player**. It is the same as to click the close box in the upper-right hand corner of the **AVS Media Player**.

Playlist Express Menu

Playlist express menu is a quick and handy feature. It can be activated by clicking on the right button of the mouse when the cursor is positioned on the **Playlist** window. Express menu buttons are grouped.

The first group is **Playback controls**. It consists of the following entries:

- **Play** - use this option to start playback when the player is in the **Stop** mode and to resume playback when the player is in **Pause** or **Step frame** mode. It is the same as to press the **Play**  button of the **AVS Media Player**.
- **Pause** - use this option to pause the playback when the player is in the **Play** mode to pause the media file playback. It is the same as to press the **Pause**  button of the **AVS Media Player**.
- **Stop** - use this option to stop the playback when the player is in the **Play** mode to cancel the media file playback. It is the same as to press the **Stop**  button of the **AVS Media Player**.

The second group is **Playback order** options. It consists of the following entries:

- **Shuffle** - use this option to randomize the media files playback order.

The third group is **Files management controls**. It consists of the following entries:

- **Add** - use this option to add files and folders with files to the playlist:
 - **Add folder** - use this option to add folders with media files to the playlist.
 - **Add files** - use this option to add separate media files to the playlist.
- **Playlist** - use this option to perform operations with the file lists:
 - **Add list** - use this option to add a playlist to the current one in the **Playlist** window.
 - **Load list** - use this option to load a previously saved playlist.
 - **Save list** - use this option to save the current list of the media files as a playlist.
 - **New list** - use this option to start creating a new playlist.
 - **Sort list** - use this option to change the order of the files on the list and to sort them alphabetically.
- **Remove** - use this option to remove different files and groups of files:
 - **Remove selected** - use this option to delete the selected files from the playlist.
 - **Remove all** - use this option to delete all the files from the playlist and clear it.
 - **Crop** - use this option to delete all unselected files from the playlist and leave only selected ones.
- **View** - use this option to select the appearance of the **AVS Media Player** program:
 - **Stay on top** - use this option to make **AVS Media Player** stay on top of all the other applications.
 - **Controls** - use this option to show or hide the **main controls** panel.
 - **Screen** - use this option to show or hide the main screen window.
 - **Playlist** - use this option to show or hide the **Playlist** window.

The fourth group is **Preferences controls**. It consists of the following entries:

- **Preferences** - use this option to set the additional **AVS Media Player** settings. See the **Preferences** section for more detail on this.

Enabling the DMA Mode

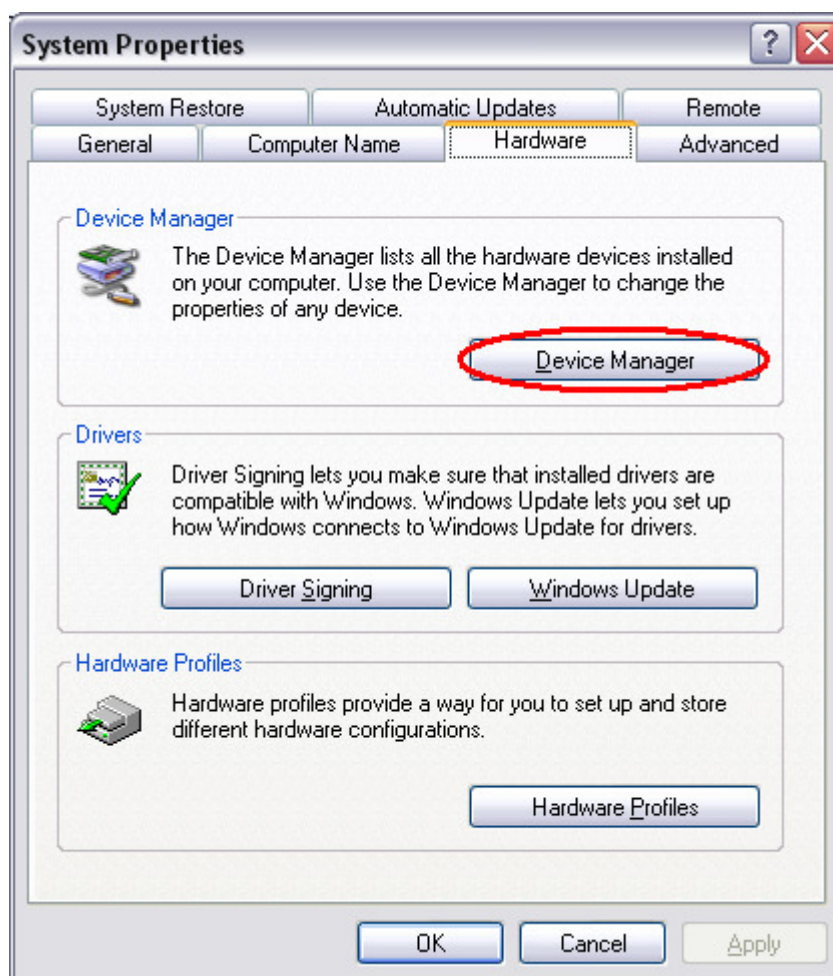
DMA mode - Direct Memory Access - allows certain hardware subsystems within a computer to access system memory for reading and/or writing independently of the CPU. Many hardware systems use DMA including disk drive controllers, graphics cards, network cards, and sound cards.

DMA is an essential feature of all modern computers, as it allows devices of different speeds to communicate without subjecting the CPU to a massive interrupt load. Otherwise, the CPU would have to copy each piece of data from the source to one of its registers, and then write it back again to the new location. During this time the CPU would be unavailable for other tasks.

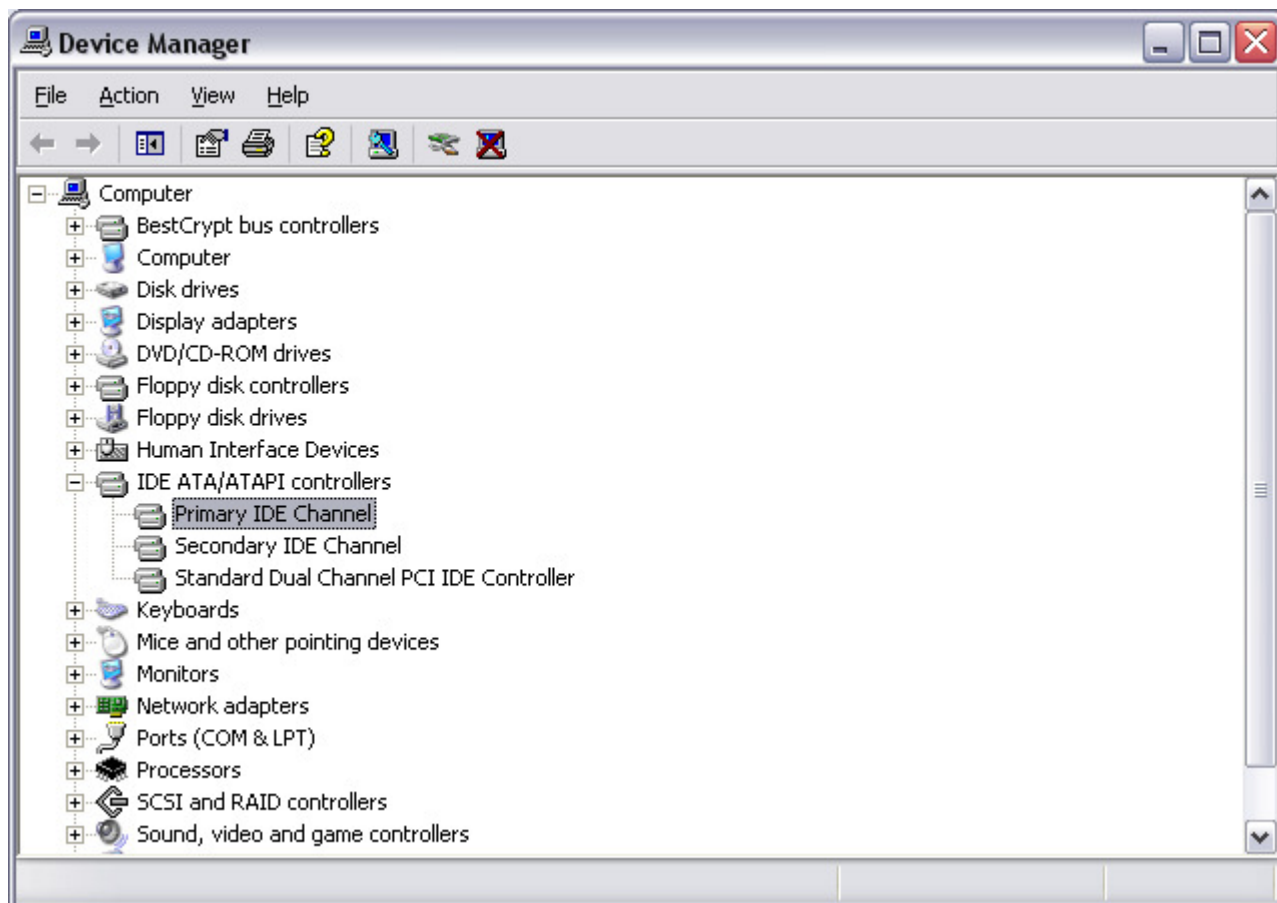
A DMA transfer essentially copies a block of memory from one device to another. While the CPU initiates the transfer, the transfer itself is performed by the DMA Controller. A typical example is moving a block of memory from external memory to faster, internal (on-chip) memory. Such an operation does not stall the processor, which as a result can be scheduled to perform other tasks. It is essential in providing so-called zero-copy implementations of peripheral device drivers as well as functionalities such as network packet routing, file copy, streaming video over a network, etc.

To enable the DMA mode you should do the following:

1. Go to the Windows **Start** menu and select **Control Panel**;
2. In the **Control Panel** window choose the **System** icon, double-click it to open the system properties window;
3. In the **Hardware** tab there is a **Device Manager** button:

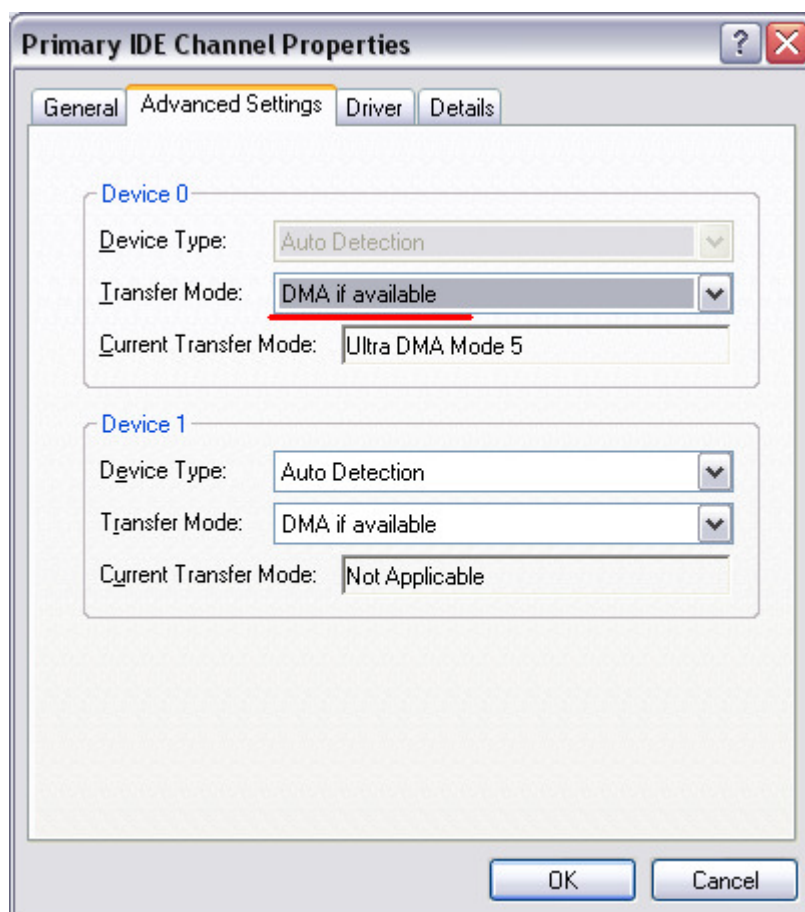


You should click it to open the **Device Manager** window:

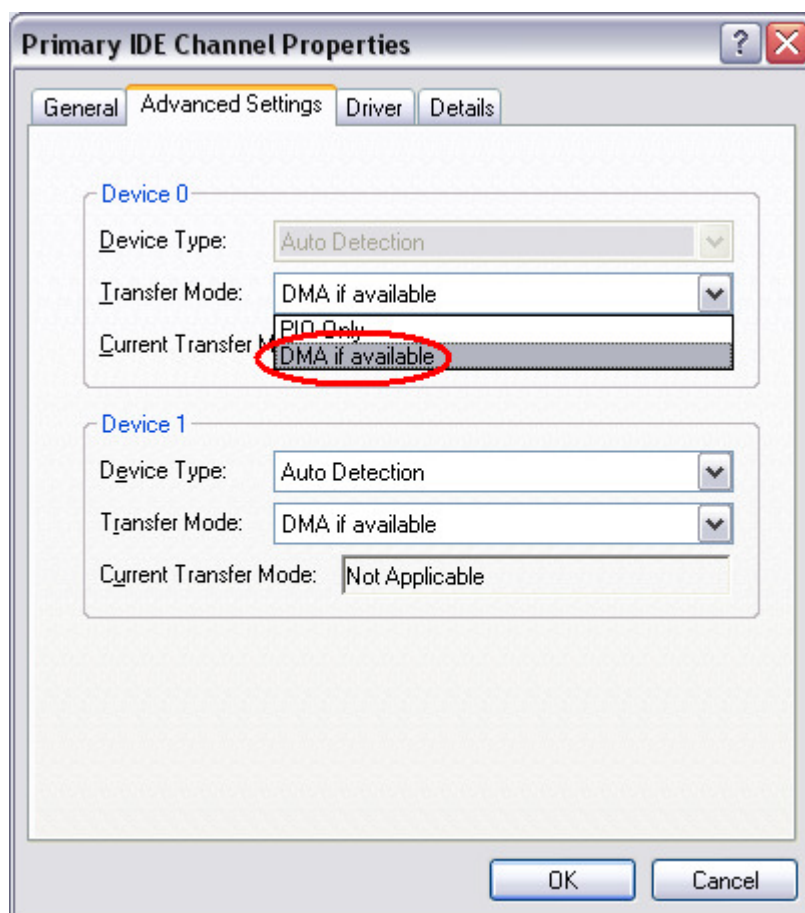


Here you should find **IDE ATA/ATAPI controllers** among the other devices and click the "+" in front of it to open the list of available IDE channels that the controller has.

4. Double-click the **Primary IDE Channel** caption to open the controller properties window:



In the **Advanced Settings** tab you will see the **Transfer Mode** drop-down box where the current transfer mode is displayed. To change the transfer mode and enable DMA you should open the drop-down box and choose **DMA if available** option:



After that click **OK** to accept the changes you have made. The same can be done for the **Secondary IDE Channel**. After you enabled DMA modes for the IDE channels you can close the device manager window. Sometimes the reboot might be needed to apply all the changes.



Note: not all the controllers allow the user to change the transfer mode. If you install the third party driver for your computer IDE controller see the instructions that go along with the driver software. Usually when the special driver for the controller is installed the DMA mode is enabled automatically by the driver software.

Disc Types

AVS4YOU programs currently support three types of optical disc formats that are available for consumer use. This section will better explain the purpose of these formats and their place in history. With the support of other disc types and formats the corresponding information will be added.

- **Compact Discs**
- **Digital Versatile Discs**
 - **DVDs of different capacities**
 - **DVDs of different medium type**
- **Blu-Ray Discs**

Compact Discs

Digital Audio Compact Discs (CD-DA) were first introduced to the consumer audio market in 1980 by Philips and Sony as an alternative to vinyl records and magnetic tape cassettes. In 1984, Philips and Sony extended the technology to include data storage and retrieval and introduced a new format: the Data Compact Disc (CD-ROM).

Since then, the Compact Disc has dramatically changed the way that we listen music and handle electronic information. With a capacity of up to 700 megabytes of computer data or 80 minutes of high quality audio, the Compact Disc has revolutionized the distribution of every kind of electronic information.

In 1990, Philips and Sony extended the technology again and the Compact Disc became recordable (CD-R). Before the introduction of the CD-R technology, compact discs were produced in commercial replication plants by stamping the media with a pre-recorded master. Today, discs are produced in replication plants where large quantities are required. For small production volumes (up to 500 copies or more, depending on your location and manufacturers in your market), it can be significantly less expensive to master your own discs using commercially available Compact Disc writing drives.

Whether a Compact Disc was stamped at a replication facility or "burned" using a compact disc recorder, it can theoretically be read by any available CD-ROM drive. In reality, some inexpensive media and CD players do not work very well together. Only the physical composition of a commercially replicated disc and a CD-R disc are different. The former is coated with a reflective layer of aluminum resulting in a typical silver color. The latter is coated with a reflective layer behind a thin layer of dye (colors can range from blue, silver, green, and others).

In 1997 Compact Disc ReWritable (CD-RW) - a rewritable optical disc format - was introduced. While a prerecorded compact disc has its information permanently stamped into its polycarbonate plastic substrate, a CD-RW disc contains a phase-change alloy recording layer composed of silver, indium, antimony and tellurium. An infra-red laser beam is employed to selectively heat and melt the crystallized recording layer into an amorphous state or to anneal it at a lower temperature back to its crystalline state. The different reflectance of the resulting areas make them appear like the pits and lands of a prerecorded CD. A CD-RW recorder can rewrite 700 MB of data to a CD-RW disc roughly 1000 times.

A Compact Disc contain blocks (or sectors) of 2352 bytes each, going from the center hole to the outer diameter. The block at logical address 0 (beginning of the disc) is located near the center of the disc; the last addressable block (end of the disc) is located near the outer edge of the disc.

Blank discs are usually available in the following sizes (block sizes approximated).

- 21 minutes = 94500 blocks
- 63 minutes = 283500 blocks
- 74 minutes = 333000 blocks
- 80 minutes = 360000 blocks

Digital Versatile Discs

In January of 1995, Sony was the first to showcase Digital Versatile Disc technology after having announced co-development six months earlier. Three weeks later, Pioneer, Time Warner, and Toshiba announced their own version of DVD, which had major differences from the format developed by Philips and Sony. Immediately disputes started over which format should be used, since each had their own advantages and disadvantages.

The disputes did not stop until May of 1995, when a major report was released by leading hardware and software manufacturers (Apple, Compaq, Fujitsu, HP, IBM, and Microsoft), stating that the two formats were not going to be supported by the industry when there were clear advantages in using one format. The result was a mix of the two formats and the formation of the DVD Forum by all companies involved in the two original formats (Matsushita, Mitsubishi, Pioneer, Philips, Hitachi, JVC, Sony, Thompson, Toshiba, and Time Warner).

In 1996, the specifications for DVD-ROM and DVD-Video were finalized and DVD players began to ship to market. One year later, the DVD Forum worked on the specifications for the first recordable (DVD-R) implementation of DVD. In November of 1997, Pioneer announced the first DVD-R drives, while Matsushita and Toshiba released the first DVD erasable (DVD-RAM) drives.

During 1998, a new coalition was formed to develop re-writable discs specifically for storage of data based on 25-year-old CD patents. This format was initially called DVD+RW and was not allowed to use the DVD logo after the DVD Forum ruled that it could not be used in the branch technology. While the technologies between the two formats are similar, licensing rules dictate differences, some of which can be witnessed in the logo branding of devices and media.

Much like Compact Discs, Digital Versatile Discs are comprised of a continuous spiral of blocks (or sectors) starting from the center hole ending at the outer rim of the disc. The blocks are only of size 2048 bytes, making the format less complicated.

There are several types of DVD discs depending on their **capacity** and on the **medium type**.

The main types of DVDs that differ as to their **capacity** are:

DVD disc types	First side		Second side		Total capacity
	First layer capacity	Second layer capacity	First layer capacity	Second layer capacity	
DVD-5	4.7 Gb	-	-	-	4.7 Gb
DVD-9	4.3 Gb	4.3 Gb	-	-	8.6 Gb
DVD-10	4.7 Gb	-	4.7 Gb	-	9.4 Gb
DVD-14	4.3 Gb	4.3 Gb	4.7 Gb	-	13.3 Gb
DVD-18	4.3 Gb	4.3 Gb	4.3 Gb	4.3 Gb	17.2 Gb

DVD-5 - single sided, single layer (disc capacity about 4.7 Gb, the working surface of such a disc is situated on one side of it and consists of one layer only);

DVD-9 - single sided, double layer (disc capacity about 8.6 Gb, the working surface of such a disc is situated on one side of it and consists of two layers about 4.3 Gb each);

DVD-10 - double sided, single layer on both sides (disc capacity about 9.4 Gb, the working surfaces of such a disc are situated on both its sides and either consists of one layer about 4.7 Gb);

DVD-14 - double sided, double layer on one side and single layer on the other side (disc capacity about 13.3 Gb, the working surfaces of such a disc are situated on both its sides and consist of two layers about 4.3 Gb each on one side and one layer about 4.7 Gb on the other side);

DVD-18 - double sided, double layer on both sides (disc capacity about 17.2 Gb, the working surfaces of such a disc are situated on both its sides and either consists of two layers about 4.3 Gb each).



Note: the DVD capacity is measured in the so called **decimal gigabytes** (one gigabyte is equal to 1000 megabytes). The real size of the DVDs is smaller when measured in the so called **computer gigabytes** or **gibibytes** (one gigabyte is equal to 1024 megabytes).

The disc **medium** can be:

DVD-ROM (read only, industrially manufactured)

A factory-made DVD that is manufactured by a press. The DVD specification Version 1.0 was announced in 1995 and finalized in September 1996. "DVD" was originally an acronym for "digital video disc"; some members of the DVD Forum believe that it should stand for "digital versatile disc", to indicate its potential for non-video applications. Toshiba adheres to the interpretation of "digital versatile disc". The DVD Forum never reached a consensus on the matter, however, and so today the official name of the format is simply "DVD"; the letters do not "officially" stand for anything.

DVD-R (R = Recordable once)

A DVD-Recordable or DVD-R is an optical disc with a larger storage capacity than a CD-R, typically 4.7 GB instead of 700 Mb, although the capacity of the original standard was 3.95 Gb. The DVD-R format was developed by Pioneer in autumn of 1997. It is supported by most DVD players, and is approved by the DVD Forum. A DVD-R can be written to only once.

DVD-RW (RW = ReWritable)

A DVD-RW is a rewritable optical disc with equal storage capacity to a DVD-R, typically 4.7 GB. The format was developed by Pioneer in November 1999 and has been approved by the DVD Forum. Unlike DVD-RAM, it is playable in about 75% of conventional DVD players. The primary advantage of DVD-RW over DVD-R is the ability to erase and rewrite to a DVD-RW disc. According to Pioneer, DVD-RW discs may be written to about 1,000 times before needing replacement, making them comparable with the CD-RW standard. DVD-RW discs are commonly used for volatile data, such as backups or collections of files. They are also increasingly used for home DVD video recorders.

DVD-R DL (double layer)

DVD-R DL (Dual Layer) (Also Known as DVD-R9) is a derivative of the DVD-R format standard. DVD-R DL discs employ two recordable dye layers, each capable of storing nearly the 4.7 GB of a single-layer disc, almost doubling the total disc capacity to 8.54 GB. Discs can be read in many DVD devices (older units are less compatible) and can only be written using DVD±RW DL burners.

DVD+R (R = Recordable once)

A DVD+R is a writable optical disc with 4.7 GB of storage capacity. The format was developed by a coalition of corporations, known as the DVD+RW Alliance, in mid 2002. Since the DVD+R format is a competing format to the DVD-R format, which is developed by the DVD Forum, it has not been approved by the DVD Forum, which claims that the DVD+R format is not an official DVD format. The DVD+R format is divergent from the DVD-R format. Hybrid drives that can handle both, often labeled "DVD±RW", are very popular since there is not yet a single standard for recordable DVDs. There are a number of significant technical differences between the dash and plus formats, and although most consumers would not notice the difference, the plus format is considered by some to be better engineered.

DVD+RW (RW = ReWritable)

A DVD+RW is a rewritable optical disc with equal storage capacity to a DVD+R, typically 4.7 GB (interpreted as $4.7 \cdot 10^9$, actually 2295104 sectors of 2048 bytes each). The format was developed by a coalition of corporations, known as the DVD+RW Alliance, in late 1997, although the standard was abandoned until 2001, when it was heavily revised and the capacity increased from 2.8 GB to 4.7 GB. Credit for developing the standard is often attributed unilaterally to Philips, one of the members of the DVD+RW Alliance. Although DVD+RW has not yet been approved by the DVD Forum, the format is too popular for manufacturers to ignore, and as such, DVD+RW discs are playable in 3/4 of today's DVD players. Unlike the DVD-RW format, DVD+RW was made a standard earlier than DVD+R.

DVD+R DL (double layer)

DVD+R DL (Double Layer), also known as DVD+R9, is a derivative of the DVD+R format created by the DVD+RW Alliance. Its use was first demonstrated in October 2003. DVD+R DL discs employ two recordable dye layers, each capable of storing nearly the 4.7 GB of a single-layer disc, almost doubling the total disc capacity to 8.55 GB. Discs can be read in many DVD devices (older units are less compatible) and can only be created using DVD+RW DL and Super Multi drives. The latest DL drives write double layer discs slower

(2.4x to 8x) than single-layer media (8x-16x). A double layer rewritable version called DVD+RW DL is also in development but is expected to be incompatible with existing DVD devices.

DVD-RAM (random access rewritable)

DVD-RAM (DVD–Random Access Memory) is a disc specification presented in 1996 by the DVD Forum, which specifies rewritable DVD-RAM media and the appropriate DVD writers. DVD-RAM media are used in computers as well as camcorders and personal video recorders since 1998. You can identify a DVD-RAM disc due to lots of little rectangles distributed on the surface of the data carrier. Compared with other writeable DVDs, DVD-RAM is more closely related to hard disk technology, as it has concentric tracks instead of one long spiral track. Unlike the competing formats DVD+R, DVD-R, DVD+RW and DVD-RW, you do not need special DVD burning software to write or read DVD-RAMs on a computer. DVD-RAMs can be accessed like a usual floppy disk or hard drive. DVD-RAM is more suited to data backups and use in camcorders than DVD±RW. The advantages of DVD-RAM discs are the following: long durability of minimum 30 years and they can be rewritten more than 100,000 times, and also the fact that no DVD burning software required in computers as the discs can be used and accessed like a removable hard disk.

Blu-Ray Discs

Blu-ray Disc (BD) is a next-generation optical disc format meant for storage of high-definition video and high-density data. The Blu-ray standard was jointly developed by a group of leading consumer electronics and PC companies called the Blu-ray Disc Association (BDA), led by Sony and Philips. Blu-ray has information capacity per layer of 25 gigabytes.

Blu-ray gets its name from the shorter wavelength (405 nm) of a "blue" (technically blue-violet) laser that allows it to store substantially more data than a DVD, which has the same physical dimensions but uses a longer wavelength (650 nm) red laser.

BD-R (R = Recordable once)

A single-layer Blu-ray disc (BD) can fit 23.3, 25, or 27 GB; this is enough for approximately four hours of high-definition video with audio. A dual-layer BD can fit 46.6, 50, or 54 GB, enough for approximately eight hours of HD video. Capacities of 100 GB and 200 GB, using four and eight layers respectively, are currently being researched; TDK has already announced a four-layer 100 GB disc.

BD-RE (RE = REwritable)

The BD-RE (rewritable) standard is available, along with the BD-R (recordable) and BD-ROM formats, which became available in mid-2004, as part of version 2.0 of the Blu-ray specifications. BD-ROM pre-recorded media are to be available by early 2006.

In addition to 12 cm discs, an 8 cm variation for use with camcorders is planned that will have a capacity of 15 GB.

To ensure that the Blu-ray Disc format is easily extendable (future-proof) it also includes support for multi-layer discs, which should allow the storage capacity to be increased to 100GB/200GB (25GB per layer) in the future simply by adding more layers to the discs.

Blu-ray drives currently in production can transfer approximately 36 Mbit/s (54 Mbit/s for BD-ROM), but 2x speed prototypes with a 72 Mbit/s transfer rate are in development. Rates of 8x or more are planned for the future.

Because the Blu-ray standard places data so close to the surface of the disc, early discs were susceptible to dust and scratches and had to be enclosed in plastic caddies for protection. The solution to this problem arrived in January 2004 with the introduction of a clear polymer that gives Blu-ray discs unprecedented scratch resistance. The coating, developed by TDK Corporation under the name "Durabis," allows BDs to be cleaned safely with only a tissue - a procedure that can damage CDs, DVDs. Bare BDs with the coating are reportedly able to withstand attack by a screwdriver.