

## Album Player (APlayer)

Version 2.109

Freeware

Windows XP / Vista / 7/8/10

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### I General information

The Album Player program has been designed for music lovers who compile their collections of albums on the computer's hard disks or CD/DVD.

The Album Player plays audio files and audio disks of the following formats: WAV, FLAC, APE, ALAC, WavPack, AIFF, TAK, WMA, MP3, MP4, OGG, OPUS, Audio-CD, SACD, DVD-A.

The Album Player displays a list of albums stored at a selected drive or a directory, as well as content of a selected album, album art, artist name and the year of the album's release. The playback is possible either for all songs starting from the first one in the album on, or for songs starting from a selected song onwards, or for a selected group of songs. There is an option to establish a playback of all albums available. Furthermore, it may be convenient to use the program to find and listen to audio files on the selected disk or a HDD partition or a CD/DVD.

The player should be started by launching the APlayer.exe file which activates the user interface of the player. Upon launching, there follows an automatic loading of the ap2decoder.exe process which controls decoding of files performed by the approxy.exe process and provides sound reproduction.

The file ap2config.exe file is used to select additional settings which are not available in the context menu of the player.

If the mode Address Windowing Extensions (AWE) mode is supported, the player uses this mode for placing the buffers in the memory, what prevents eventual loading of data to the pagefile by a system process. The AWE mode should be activated in the system explicitly. To do that, a single launch of the awe\_on.bat command file is required.

The closing the player window down while holding the Ctrl key activates the playback of disk images in the stealth mode and turns the GUI down. In this case restarting of the APlayer.exe stops the file playback. The exception is for images of SACD and DVDA wherein the playback is only possible for a current track.

Do not rename files from the installation files' set because some of the player's operations are strictly related to pre-defined files' names.

Should you make any changes to the decoders' settings available through the context menu "Files' formats", a player's restart is required.

In order to run the player's version 2.109, one should login as an administrator. If it is not an option, one can use the version 2.105 available for downloading at:

<http://albumplayer.ru/AP2105.zip> (32-bit)

[http://albumplayer.ru/AP2105\\_x64.zip](http://albumplayer.ru/AP2105_x64.zip) (64-bit).

Using a separate link below, one can also download decoders for the FFmpeg library providing support of extra audio formats, as well as video playback:

[http://albumplayer.ru/in\\_ffmpeg.zip](http://albumplayer.ru/in_ffmpeg.zip) (32-bit)

[http://albumplayer.ru/in\\_ffmpeg\\_x64.zip](http://albumplayer.ru/in_ffmpeg_x64.zip) (64-bit).

Not more than a single instance of the version 2.109 can be run a time, but previous versions of the player can be run in several instances simultaneously, provided, they are started from different folders.

## II Compilation of albums

Files being integer parts of an album are placed in a separate directory. A playlist is being created automatically upon opening a folder in the player. A playlist can also be created based on a .cue file located in the same directory. If a .cue file contains references to wav files, it also automatically becomes a playlist for compressed files using the same name. Supported are .cue files which include links to multiple files. If there is a need to open a .cue file containing a full path to a file, it has to be opened by applying the "Open .cue" command in the menu, or dragged to the player's window, or copied in there through a buffer.

Images which belong to a particular album should be stored in the same directory or subdirectories, names of which can be added or edited in the ap2config.exe program. Each name of a directory containing images should be ended with semicolon (;). Paths to folders containing images should be set in relation to folder containing album's sound files. For example, if images are located not in an inner subdirectory but in an external one called, Covers, the path to the images should be supplemented by ../Covers ; . There is no any restriction to images' file names. Supported image formats are jpg, png and tiff. Any pixel sizes of images, as well as any high-width shapes are acceptable. Images are displayed inside the

square window of 320 x 320 pixels or in full screen mode, which can be turned on and off by a double click on the image.

### III Controlling the program

The control panel buttons are intuitive. In the upper left corner of the program window is a drop-down list of albums. Under the list of albums there is a list of tracks of a selected album. The playback can be started either by a double click on a desired line of the track list, or by activating a respective button in the player's control panel.

A group of tracks can be selected for playback either by dragging the mouse cursor along the list of tracks while holding the left mouse button depressed, for a continuous block of tracks, or by mouse clicking while holding the Ctrl key, to select individual tracks. Regardless a status of the option Switch to a New Album, if a limited range of tracks is selected, the transfer to a new album will not be performed. If new folders are selected to be added to an already existing list of folders and without removal of the ones selected before, the button Select Folder should be clicked while holding the Ctrl key. To delete individual albums from the list, the Delete button should be used. It deletes a selected line from an album list. Files and folders can be added to a playlist either by dragging them from the Windows Explorer to the player's windows, or by copying links to them via the clipboard.

If the player is minimized into the system tray, a single mouse click on the program icon toggles Play/Pause. A right mouse click activates the Control Menu.

The F5 key replaces a current album picture to a next one, provided, there are more than one of them. The F6 key extends time of display of a current picture for a time pre-set in the settings for the default display time.

If the mouse cursor is placed over the image, images can be changed by rotating the mouse wheel.

During playback, a transfer to a previous or a next album can be done by clicking on Previous or Next track buttons while holding down the Ctrl key on the keyboard.

### IV Program settings

The Settings menu is activated by the right mouse button.

The menu option Paste is available if the Windows clipboard contains a link to folders or files. The menu option Open List opens a previously saved playlist (\*.ap2 files). Playlist Files can be activated by clicking on their shortcuts in the Windows Explorer or on a desktop, as well as dragged into the player window and copied through the Windows clipboard.

The "Save List" saves the current playlist.

The "New list" clears the playlist.

By choosing the menu option Open CUE/M3U, a new album can be added to the album list based on information read from chosen .cue or .m3u files. This option can be useful when

tracks are submitted not in subsequent order, but as separate files, instead. In such a case the standard scanning procedure can generate a list of tracks on the album placed in a wrong order. The menu option "The interval between the tracks" inserts pauses among tracks during playback, if necessary.

The menu option "Images' display time" sets the time of display of every picture available in the album directory, provided, there is more than one picture. The zero value of the refreshment time turns the slide show mode off.

The menu option "File Formats" calls up a panel listing file formats to be selected for search.

The number of supported formats depends on installed plugin modules. To install a new plugin module, its file should be copied to the program directory. A modification of the list of formats is only taken into account during the next scanning of directories, and does not affect the playback of the current list. To speed up directory scan, the checkbox "Filter format" in the panel "File Format" should be checked, and respective lines in the list of formats should be highlighted.

Note:

If a scan of a directory ends up with finding a file of a specified format, no further search for other types of files follows. That is, there is a rule "one format, one directory." Still, playing different types of files in the same directory during the same player's session remains possible, although it will require either several scans of the directory for specified types of files as chosen in the right mouse click menu, or dragging files of different formats to the player window.

During the scan process, the right click button of the Control Panel remains depressed. Clicking at this button terminates the scan process at any moment.

The menu option "Output Mode" selects the audio output mode.

Note that the use of output modes other than waveOut, may require either a presence of specialized drivers, or a hardware support. If the player hangs up in output mode, this mode should not be not be used. Besides, it is worth considering the fact that the ASIO mode may not support certain sampling frequencies, for example, 32 and 192kHz.

The waveOut mode does not support the multi-channel playback.

The multi-channel playback is possible either by using other output modes, or by activating the option of conversion or multi-channel recordings into stereo at the "DSP" tab in ap2config program.

The "Settings" button in the "Output Modes" panel activates the panel of settings of an output plugin selected from the list.

The menu option "Switch to the new album" activates the playback mode, wherein upon completing the playback of a current album, the player starts playback of the next one.

The menu option "Show pictures", if unchecked, sets the compact display mode wherein the program window does not display albums' pictures.

The menu option "Autoplay" sets an automatic start of playback upon opening a playlist.

The menu option "Minimize to tray" sets folding of the player window into the system Tray instead of the taskbar by clicking on the minimize button of the window.

While in the system tray, a playback control is available via the context menu called up by the right mouse button. A single left mouse click on the tray icon turns playback on and toggles the Pause mode On/Off.

A double click on the icon in the system tray opens the Player Window.

The menu option "About file" activates an information dashboard for a selected file, provided, such an option is supported by the file format's decoder.

The player's settings, as well as the last selected album and a particular track, are stored and used the next time the program is started.

Settings for input plugins (format decoders) are accessible through the command "File Formats" pop-up menu. A panel of settings of the input plugin comes up on checking the "Configuration" button.

An output mode for the DSD files can be chosen among settings for the SACD plugin and then in the list of Output Mode options.

The output modes "DoP" and "Native (ASIO)" will only work if supported by the DAC used.

In the list of "DSD Mode limit" settings one can establish a sample rate above which the PCM output mode will be forcibly used even if "DoP" or "Native (ASIO)" modes are selected in the "Output Mode" list. The option "PCM mode for multi-channel" allows playback of multi-channel DSD recordings if played on DACs supporting Stereo DSD modes without turning off the DoP and DSD Native, provided, the option "Convert 5.1 to Stereo" is enabled in the "DSP" tab is turned on in the ap2config.exe configurator.

Additional settings are available in the ap2config.exe configuration program.

The "General" tab of the program contains general settings of the player.

The option "Enlarge images" enlarges small pictures to the size matching the area of the image output.

The option "Show messages in the system tray" initiates pop-up messages on change of tracks displayed if the player is minimized to tray.

The option "Show files in the folder selection dialog" enables displaying files in the folder selection panel. By default this option is turned off, because it is slow and even unstable on some computers.

The option "Artist name after the track name in the .cue list" sets an allocation of the artist name if the album name differs from the artist's name, as read from the information of the .cue file.

The set of buttons "Using CPU cores" mode enables running of all player's software processes on a single processor's core. This setting provides additional optimization of operations with data, however, it may cause some instability of the playback. This option is only available if the player is started in the Administrator status.

The set of buttons "Playback Mode" allows choosing one of available playback modes. The "Standard" mode employs an adjustable pre-load buffer and supports the option "Gapless mode", providing, seamless (without a pause) playback of individual album's files. Disabling the "Gapless mode" option may improve stability of operation of the player when playing files from an optical disc or a network.

In the "Direct Input" mode, the playback does not use the player's buffer, and the decoded data is loaded directly into the driver's buffer. It minimizes the number of data operations, but it can also lead to playback instability, especially for smaller values of the driver's buffer size.

In the "Full Memory" mode, the file under playback is being decoded and completely loaded into the memory, and the audio format decoding process becomes then completed and unloaded from the memory. This mode eliminates any disk access during playback. It is more effective if the pagefile is disabled in the system.

In the "Output Module" drop-down list one can choose the output module.

The Standard output module employs plugins which can be selected and customized in the player's context menu (see "Output Mode" in the menu).

The output modules in the EXTRAS folder apparently are optimized versions of the sound engine for ASIO, Kernel Streaming (KS) and WASAPI output modes. Some individual settings of these modules employ their own configuration programs. The EXTRAS modules provide bit-perfect audio stream. If these modules are activated, the player's volume control is disabled. To control loudness, use the Windows System volume control for the WASAPI mode, and the volume control of an amplifier or any other playback device for Kernel Streaming and ASIO modes.

The EXTRAS ASIO module does not support multi-channel playback. The settings' option "Hold ASIO Output", if enabled, can sometimes eliminate clicks in transitions between tracks in the Direct Input and Full Memory modes. If this option is enabled, turning the player off may be required in order to let other applications regain access to the sound output.

In the EXTRAS ASIO the supported ASIO buffer is size limited, therefore the Hi-res files playback may fail if the buffer is too large. If the buffer size in the ASIO driver settings is described by latency, then the respective value should not exceed 40ms, and if the buffer size is measured in number of samples, then it should not exceed 8192.

The playback using EXTRAS KS and EXTRAS WASAPI modules may require enabling the bit conversion of the audio stream into 24 or 32 bits. Respective options are available both in both panels of configurators of these modes, and in the "DSP" tab of the ap2config program.

The WASAPI output mode is supported by Windows starting with Vista and then in later Windows versions. If the Kernel Streaming mode configurator produces an error message at start up, it means that the soundcard driver does not support functions necessary for this mode. The ASIO output can only be enabled if a supporting this regime driver is available. The "Service Mode" option starts the audio player engine (ap2decoder.exe) in a Windows Service mode. If any failure occurs in this mode and then the player stops playing files, the uninstall.bat procedure should be performed.

The option "Run from a current user" provides launch of a service on behalf of a current user, what may be advantageous when using the ASIO output mode. However, this option can only be run when logging on with a password.

If the service starts the standard way, then the user's settings of the ASIO driver, as set in the ASIO Control Panel, should be copied into the registry. That's what the RegCopy utility located in the folder EXTRAS \ASIO\ RegCopy is for.

The section "Automate System Sampling Rate" sets the default output device to automatic selection of the system sampling frequency matching the sampling frequency of the played file. When using the WaveOut and DirectSound output modes, as well as WASAPI and KS in certain cases, this option allows to avoid resampling of the initial file's sampling frequency during

playback. The sampling rate will be automatically selected from the following list: 44100, 48000, 88200, 96000, 176400, 192000, 352800, and 384000. If the source sampling rate does not match any one from the list, the last selected sampling rate will be used. If an output device does not support some of the listed rates, then in order to run the "Auto System Frequency", the "DSP" tab should be configured so that the non-supported rates appear resampled into supported ones, otherwise an attempt of playback will cause establishing of unworkable settings of the device. If the auto operation eventually establishes unworkable settings, then a workable configuration can be reestablished manually by calling up the "Playback devices" menu by a right click at the speaker icon in the tray. Then enter the default output device's properties and check the very right menu tab to select any standard output mode.

The option "Period of the system timer" allows changing the said period for the time of playback. If buffers are set to the minimum, a smaller period of the system clock may assist more stable playback.

The "DSP" tab provides settings for optional digital processing of the original signal.

The option "Enable resampling" activates a conversion of a sampling rate of the original file, as specified in each row of the matrix, into the sampling rate specified in a matrix' column selected for this row. The sampling rates are specified in kiloHertz.

The option "Convert 5.1 to stereo" activates the conversion of multichannel sound of 5.1 or 7.1 formats into stereo, what allows a playback of multi-channel files on devices that only support playback of two channels.

The option "Convert Stereo to 5.1" activates a distribution of a stereo sound to 5 channels for a playback on multi-channel devices.

The option "Reverse Channels" swaps the left and right channels of stereo recordings.

The option "Invert phase" changes the polarity of the output signal.

The group of radio buttons "Output Format" allows selecting specific output formats of audio data.

The "VST" tab provides settings for the VST plugins available. The VST plugins can be installed by copying the .dll files into folders VST32 or VST64 in accordance with platforms the plugins are designed for.

The 32-bit version of the player works only with 32-bit VST plugins, and the 64 bit version only works with 64 bit plugins. However, it is also possible to combine the 32-bit decoding along with DSP/VST processing, and the 64-bit sound output mode. For this option, the actually used 64-bit ap2decoder.exe along with its configurator should be copied to the main folder of the 32-bit version of the player. Besides, a copy of the 32-bit approxy.exe file should be renamed to approxy64.exe and then copied to the same folder. When done, there is a 64-bit output module and 32-bit processing available.

In the "VST" tab, the right column displays the list of available plugins, while the left column lists plugins selected for use. The buttons between the lists allow managing the list of selected plugins. The "Load" and "Save" buttons allow loading and saving pre-sets. In order to be automatically loaded at start of playback, the pre-set should be saved under the name "default". In the list of available pre-sets, preceding stars mark embedded plugin pre-sets. If the

playback is started with VST plugins activated, a blue icon with a white V is displayed in the tray. A click on the icon calls up a list of active plugins, and a panel of plugin settings may be activated. The checkbox "Bypass" in the settings panel temporarily disables a plugin. In order to make adjustments by ear, both the preload and output plugin buffers should be set as small as possible.

Since the Full Memory VST plugin only works during pre-load, it is not suitable for making adjustments on the fly. In order to reduce the number of data conversions while using VST plugins, it is recommended to choose the "32 bit float" format in the "DSP" tab.

The decoders of DSD (SACD), DVD-A and TAK formats are 32 bit ones even in the 64-bit player's version. In order to establish VST processing for these formats in the 64-bit player's version, the folder VST32 and the ap2config.exe file should be copied from the 32-bit version to the 64 bit one. Then the 32-bit VST plugins should be selected in ap2config.exe.

In the initial settings, the default delay of action of configuration changes, as well as refresh time interval of VST plugin panels during playback, are set in several seconds. In order to achieve both the delay time and the update interval not exceeding 100 milliseconds, the preloading buffer in ap2config should be reduced to 64KB, as well as the buffer of Standard configuration output plugins or EXTRAS output modes (see their settings' panels) should be set to minimum, and in the DSP tab the output resolution should be set to Float 32 or 32.

On the "Hotkeys" tab, there are settings for hot keys to control the playback. To make a setting, an input field should be selected, followed by depressing a key or a combination of a key with Ctrl and Alt.

By default, respective multimedia keyboard keys are used as global hot keys. By default, the browser navigation keys (BrowserBack and BrowserForward) are used as global keys to switch albums.

To restore default values of a hotkey, it should be turned off and then on again.

## V Web interface

The folder "web", located in the main player's folder contains files of the Web interface which provides an ability to control playback from a browser, including tablets and smartphones. Any modern browser supporting HTML5 is suitable for use as a Web interface except Internet Explorer. The file ap2web.exe runs straight from the "web" folder (no copying to the main folder necessary). It starts in the tray (an icon with a black disk is displayed). A click on the icon opens a window with information about the address of the local Web server, for example: <http://192.168.1.3:100>. This address should be entered in the address bar of the browser. The port number (100) can be amended in the server's panel. The web server can be run without launching the player.

Playback settings for the web interface are taken from the main player. By default, the playlist is loaded automatically, as saved on the last exit from the main player (Last Playlist).

The far right button on the web interface opens a list of .ap2 format playlists stored in the main folder of the player. Playlists are saved by the "Save list" command in the context menu of the player. Clicking on the picture in the web interface hides the image and displays a wide-shape playlist.



Switching back is performed by clicking on the vertical bar to the right from the playlist. In the Web interface mode, navigation across albums takes place independently from playback. To return back to the album being actually played, one needs to click on the text of the block with information about the track being currently played.

If the web interface does open up on a tablet or smartphone connected to Wi-Fi, one may try to disable the Windows Firewall or add the ap2web.exe process to the Firewall's list of exclusions. Instructions on how to do that can be found in the Internet.

The client part of the web interface is open source. These are three files in the "web" folder: aplayer.html, aplayer.js, aplayer.css. By making modifications of these files, one can implement an alternative playback control interface which would appear better adapted to a specific platform and a particular device. The file web\_commands.txt contains information for developers regarding the set of commands supported by the http-server part.

## VI Listening to the Internet radio

Listening to Internet radio via the player is similar to files' playback. Supported is broadcasting in the following formats: FLAC, OGG, OPUS, MP3, AAC, and WMA. Records into the list of radio stations look like files having the .RSD extension and containing a string with a HTTP link to the radio station. The link may refer to .m3u or .pls files or directly to the stream.

The folder, Radio contains an initial list of pre-selected radio stations. The playback starts with a few seconds' delay which is required for initial buffering. Once the playback started, a pop-up informer window appears on the screen; it can be moved to any convenient place or closed.

The radio playback is not compatible with the Full Memory output mode. To prevent artifacts during radio playback, it is recommended not to exceed the 256KB pre-load buffer size.

The radio plugin settings allow toggling the pop-up informer window and display of tracks' images on/off, as well as a proxy-server's address can be indicated. At a right click on the informer window its content is copied into the clipboard.

## VII Video playback

The video playback, as well as the playback of some extra audio formats (DTS-HD MA, PCM\_Bluray, etc) use the FFmpeg input plugin which is accessible at a link mentioned in the Ch.I above, as well as at the start page of Player's web site. A related command in the "File" context menu displays a list of sound tracks of a file. Among settings of the FFmpeg plugin one can select a particular sound track number, if several of the present ("Audio track number"). The Settings panel also allows adding or removing files' extensions the FFmpeg decoders are used for. Besides, the video output ("Show Video") and hardware video decoding ("Use HW acceleration") can be toggled on/off. Respective changes come into effect upon restarting of the Player.

The video is displayed in a separate window which can be closed with no interruption of the sound playback. The video window is provided with a context menu wherein the video can be toggled between "to pixel" ("Scale video to 100%") and full screen ("Full Screen mode"). The menu also allows to set a delay for compensation of video advancing respective sound ("Set

video delay"), as well as to display the stream parameters' information panel ("Stream info"). Toggling between To Pixel and Full Screen video regimes is also possible by a double click on the video window.

The video playback requires the Standard playback mode (not the Direct Input, and not the Full Memory ones). The recommended preload buffer size is 256KB.

## VIII Troubleshooting

**PROBLEM:** The player file (APlayer.exe) does not start, it hangs up or displays an error message.

**SOLUTION:**

If the player ceases to run after an installation of new components, remove them.

If the player ceases to run during playback, delete the file aplayer.dat.

After some particular failures of the FLAC format decoder, the player may only return to a workable condition upon rebooting of the system.

If the player ceases to play files in the service mode, the uninstall.bat file should be run.

**PROBLEM:** The audio playback is accompanied by clicks, pops, the sound is interrupted.

**SOLUTION:** Increase the buffer size (see "buffer size") used during playback. The buffer size control settings are available in most of output plugins. A larger buffer size increases playback stability but increases a delay of start of playback.

**PROBLEM:** The player does not find music files upon opening a folder or a disk.

**SOLUTION:** uncheck "Filtering the selected format" in the "File Formats" panel.

**PROBLEM:** The player can only find a part of music files actually located in the folder.

**SOLUTION:** The player can only include format compatible files into the playlist. If the files in the folder vary in formats, samples of each of these files should be consequently dragged into the player's window. In this case a separate list of files will be created for each format of the files.

**PROBLEM:** The order of tracks in the playlist does not correspond to the original order of the tracks.

**SOLUTION:** Since the player does not extract information on track numbers from files' tags, the said situation may occur if file names in the track-by-track rip don't start with the track number. Provided, .cue files are available, the problem can be solved by dragging the .cue files to the player window, or by copying the .cue files through the clipboard, or by opening the .cue files via the menu command "Open CUE / M3U". Then the album tracks' order corresponds to the .cue file data. For a collection of albums the above procedure can be performed once and then stored as a playlist (.ap2 file). If a folder contains both .m3u and .cue files, and if the menu options "Process .m3u" is enabled and "Process .cue" is disabled, the tracks will be automatically put in order in accordance with the .m3u.

**PROBLEM:** During playback, a premature move to a next track occurs.

SOLUTION: Increase the size of the pre-load buffer. For a standard decoder, it is set in the ap2config.exe program panel by the "Preloading buffer for the output plugins parameter." For the "EXTRAS" output modules it is set in the "Preload buffer" field in the module settings panel.

NOTE:

When using the ASIO4ALL driver, any changes made to its settings will only affect the player if the changes of settings is made via the panel ASIO4ALL opened by clicking on a respective tray icon, which appears at the start of playback. The player should be put on Pause, then the Settings panel should be opened, then the settings' changes should be made, and then the panel should be closed and the player restarted. The button "ASIO control panel" in the player settings should not be used for ASIO4ALL at all. When the player is used in the Service mode, the utility RegCopy from the EXTRAS\ASIO\RegCopy should be applied to copy the ASIO4ALL settings.

The technical support Internet forums of the Album Player are:

<http://forum.doctorhead.ru/index.php?showtopic=8905>

<http://forum.ixbt.com/topic.cgi?id=12:52300>

[http://www.vegalab.ru/forum/showthread.php/47818-Album-Player-\(APlayer\)](http://www.vegalab.ru/forum/showthread.php/47818-Album-Player-(APlayer))

An update date on the player's page <http://albumplayer.ru> is to be referred to as the reference to the update history.

Reviews and comments can be sent to the author of the program by E-Mail:

[igor\\_a\\_2000@mail.ru](mailto:igor_a_2000@mail.ru) .