

WASAPI Mode

By default, current versions of Microsoft Windows (Windows 7, Windows 8, and Windows 8.1) are configured to use a single user-specified sample rate. Digital audio recorded at this sample rate will be played back without resampling, but digital audio at any other sample rate will be re-sampled to the configured sample rate before being sent to the DAC or other playback device. (So, for example, if you purchase a 24/96 download and play it in Windows, and your default sample rate is set to 44k, the file will be re-sampled to 44k (and your DAC or XMC-1 will correctly display 44k as the sample rate *IT* is receiving).

If, like most audiophiles, you prefer to have your high-def downloads play at the sample rate in which they were recorded (referred to as “their native sample rate”), you must use a special mode called WASAPI - which is available in Windows 7 and Windows 8. WASAPI mode is part of Windows, and there’s no need to install it or turn it on, but WASAPI mode can *ONLY* be used by player programs specifically designed to use it, and each such program must be individually configured to do so. (Windows Media Player, the audio player that comes with Windows, does *NOT* support WASAPI mode.)

NOTE: Apple computers have a similar situation, where by default digital audio files are re-sampled to a single pre-set sample rate, and playing digital audio files at their native sample rates requires you to choose a player program that supports that option and configure it accordingly. (Audirvana, Amarra, and many other Apple programs support this option, and a plugin named BitPerfect adds this capability to iTunes for the Apple.)

In this document, we’re going to explain how to configure some popular Windows PC audio player programs to use WASAPI mode. Remember that this option must be configured separately in *EACH* different player program you use.

WASAPI mode is independent of the DAC or other audio playback device you’re using. It will work with any USB audio device (although, if WASAPI mode attempts to send audio to a device at a sample rate which the hardware or drivers don’t support, you will receive an error message).

We absolutely recommend using WASAPI mode to get the best audio performance from your XDA-2, DC-1, or other Emotiva DAC, or the “USB DAC” input on your XMC-1 or other pre/pro.

NOTE: WASAPI is a Windows interface mode. Before configuring WASAPI mode in your application, you should install the appropriate USB audio drivers for your DAC or pre/pro into Windows and verify that the drivers and your USB cable are working. There are NO special settings or options in the drivers necessary to allow them to support WASAPI mode. Some players differentiate between WASAPI EVENT and WASAPI PUSH modes. Emotiva’s Unified 6631 USB Drivers support WASAPI PUSH mode (and DO NOT support WASAPI EVENT mode), so you should configure your player program to use WASAPI PUSH mode.

THE CONFIGURATION INSTRUCTIONS ON THE FOLLOWING PAGES WILL WORK WITH THE XDA-2, THE DC-1, AND THE USB AUDIO “STREAM” INPUT ON THE XMC-1.

Configuring jRiver Media Center v20 To Use WASAPI Mode

To configure WASAPI Mode in jRiver Media Center, do the following:

1. (If you haven't already) install and run the *jRiver Media Center* program.
2. Under the *Tools* menu, go to *Options*.
3. Select the *Audio* category.
4. On the right, under *Audio Device*, select *USB2.0 High-Speed True HD Audio (WASAPI)*.
5. Now, under *Audio Device*, click *Device Settings*.
(This option won't be available until you select the Audio Device in the previous step).
6. In *Device Settings...*
 - Check the box next to *Open device for exclusive output*.
 - Check the box next to *Disable event style*.
 - Leave *Bit Depth* set to *Automatic*.
 - Leave *Buffering* set to *100 milliseconds*.
7. Click *OK* twice to save your settings and exit.

NOTE: For each source sample rate, jRiver Media Center can be independently configured to convert files of that sample rate to a specified sample rate, or to play them at their native sample rate. For "bit perfect playback", you want each file to play at its native (unconverted) sample rate. However, there are certain situations where converting the sample rate can be useful. For example, the XDA-2 doesn't support 176k via USB (it does support 176k on its other inputs). Therefore, if you wish to play 176k files on your XDA-2 using jRiver, you should configure jRiver to play 176k files at 192k.

NOTE: Windows "itself", and Windows Media Player, do NOT use WASAPI Mode. WASAPI Mode must be configured in EACH player program that you wish to use it with. Configuring WASAPI Mode in jRiver Media Center will NOT configure Windows itself, or other Windows audio player programs (including Windows Media Player) to use WASAPI.

Configuring Foobar2000 To Use WASAPI Mode

Foobar2000 is a popular free audio player program.

To configure WASAPI Mode in Foobar2000, do the following:

1. (If you haven't already) install and run Foobar2000.
(You can download Foobar2000 from www.foobar2000.org) .
2. Download the *WASAPI Output Support plugin* for Foobar (from the *Components* page)
3. Double click on the *WASAPI Output Support plugin* to install it
(Reply to any prompts as necessary.)
4. Under the *Files* menu, go to *Preferences*.
5. Click on the *Components* category.
6. Locate *WASAPI output support* in the components list and click once on it to highlight it.
7. Click *Apply* to activate the *WASAPI plugin*.
8. Click on the *Playback* category.
9. Under *Playback*, click on the *Output* category.
10. Use the *Device* pulldown list to select your *Emotiva device and WASAPI PUSH mode*
WASAPI (push): Speakers (x-USB2.0 High-Speed True HD Audio).
11. Click *Apply* to accept your changes.
12. Click *OK* to exit Foobar2000 configuration.

NOTE: When you choose an output device in Foobar2000, that output device will be used by Foobar, but will not become the Windows default output device. (If you configure things this way, Foobar2000 will play music through your Emotiva DAC, but Windows noises and other sounds may be configured to play through other devices - like your computer's speakers.)

NOTE: Windows "itself", and Windows Media Player, do NOT use WASAPI Mode. WASAPI Mode must be configured in EACH player program that you wish to use it with. Configuring WASAPI Mode in Foobar2000 will NOT configure Windows itself, or other Windows audio player programs (including Windows Media Player) to use WASAPI.

Configuring Media Monkey 4 To Use WASAPI

To configure WASAPI Mode in Media Monkey 4, do the following:

1. (If you haven't already) install and run Media Monkey 4.
2. Under the *Tools* menu, go to *Options*.
3. Under the *Player* category pick *Output Plug-ins*.
4. Click the radio button next to *MediaMonkey WASAPI output*.
5. Click *Configure*.
6. On the *MediaMonkey WASAPI output plugin* configure page...
Select *USB2.0 High-Speed True HD Audio* as your output device
(you may also select *Default Device* IF your Emotiva DAC is configured to be your Windows default output device).
Check the box next to *Exclusive Mode*.
Under *Exclusive Mode* select *Automatic choice of format (per track)*.
7. Click *Advanced*.
8. On the *Advanced* screen...
UNCHECK the box next to *Event driven Exclusive mode (recommended)*.
UNCHECK the box next to *Event driven Shared mode (recommended)*.
9. Click *OK* three times to save your settings and exit.

NOTE: Windows "itself", and Windows Media Player, do NOT use WASAPI Mode. WASAPI Mode must be configured in EACH player program that you wish to use it with. Configuring WASAPI Mode in Media Monkey will NOT configure Windows itself, or other Windows audio player programs (including Windows Media Player) to use WASAPI.

NOTE: Media Monkey lets you explicitly choose an audio output device, or simply tell it to use the Windows default setting. If you set your Emotiva DAC to be your default audio output device (in Control Panel), then Windows programs without specific output settings will use it, and Media Monkey will use it if you set Media Monkey to use the Default Device. However, if you specifically set Media Monkey to use your Emotiva DAC, but you DON'T set your Emotiva DAC as your Windows default output device, then Media Monkey will use it but other Windows devices will not. (If you configure things this way, Media Monkey will play music through your Emotiva DAC, but Windows noises and other sounds may be configured to play through other devices - like your computer's speakers.)