McIntosh D150

Preferred Computer Settings for a PC using Windows 7 or 8 with JRiver Media Engine 20.xx

To play PC computer, PCM, DSD files over the D150 the following hardware will be needed:

1-A modern Win 7 or 8 computer using high performance Quad Core processors

2-A USB 2.0 High Speed A-to-B cable (Belkin Gold or better)

3-A Music Program that is capable of providing DSD-DXD support. We will be using JRiver Media Engine 20.XX in this example.

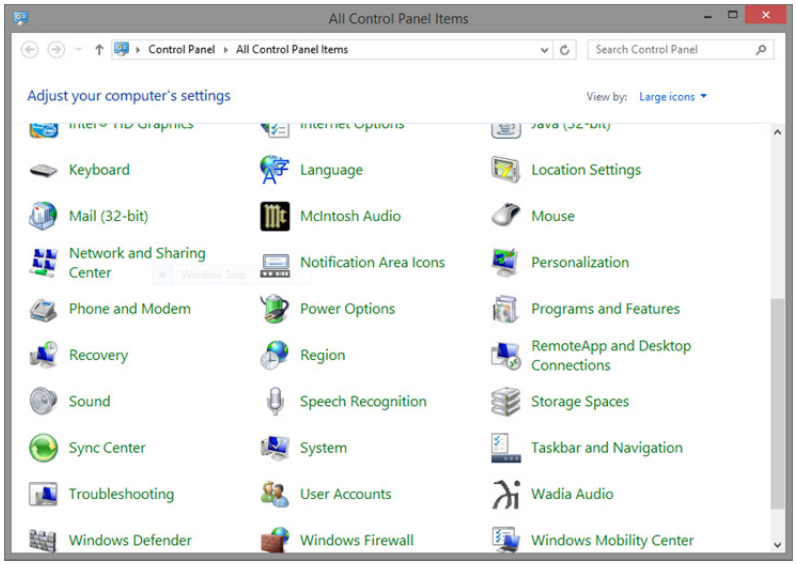
Steps on set up of PC:

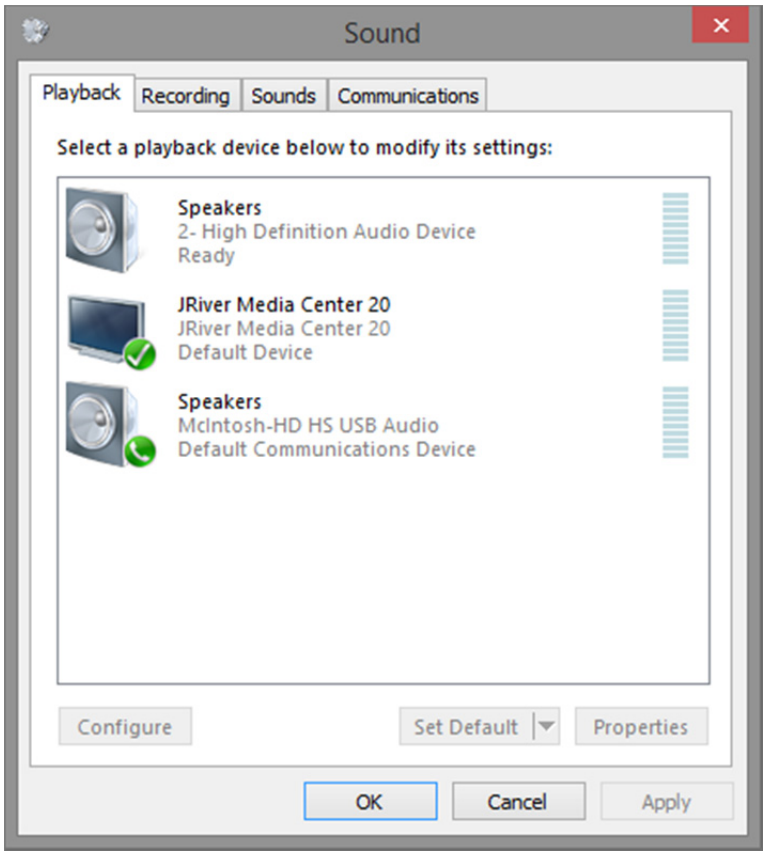
1-Download the McIntosh D150 PC driver from the www.McIntoshlabs.com website, Products-> D150 -> downloads-> PC Driver set up. Run setup and install on your computer. (You can access the McIntosh HD Audio Control panel from the shortcut in your Windows tray.)

2-Install JRiver Media 20 on your computer. If you have an older version of JRiver it is a good time to update to version 20. JRiver 20 is availiable as a 30 day free trial from www.jriver.com

3-Connect the D150 to your computer with a USB 2.0 High Speed A-to-B type cable and turn on.

4-In your PC go to Settings-> Control Panel and open SOUND.





The Sound screen should show the McIntosh-HD HS USB Audio driver checked green as Default Communications Device and JRiver Media Center 20 set as Default Device. Speakers should also be set to Ready (enabled). All three will show as a blue dashed

line on their right side, with green icons on left side of the JRiver Media Center 20 and McIntosh-HD HS USB Audio tabs.

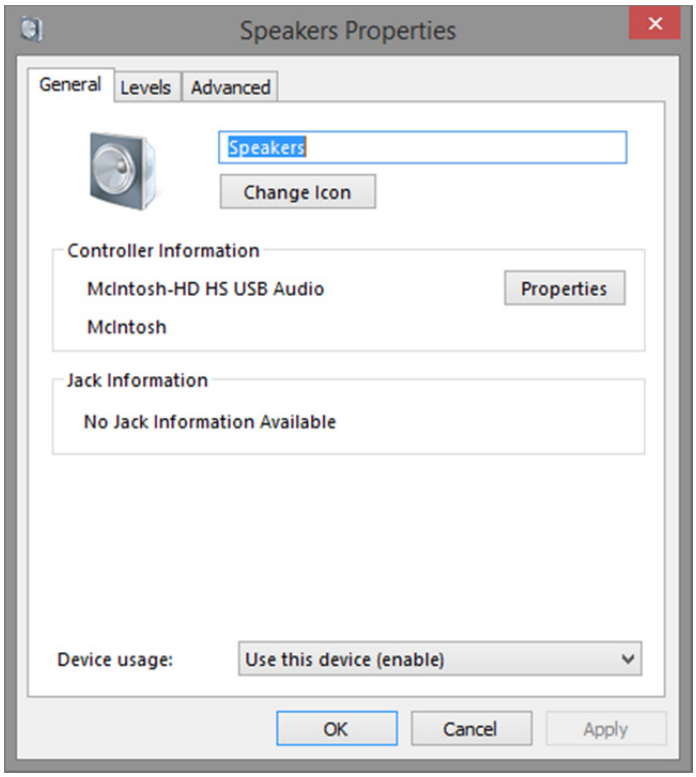
If the McIntosh HD driver is not set as default, mouse over then click, Set Default -> Default Device.

JRiver Media Center 20 should be set to Default Communications device.

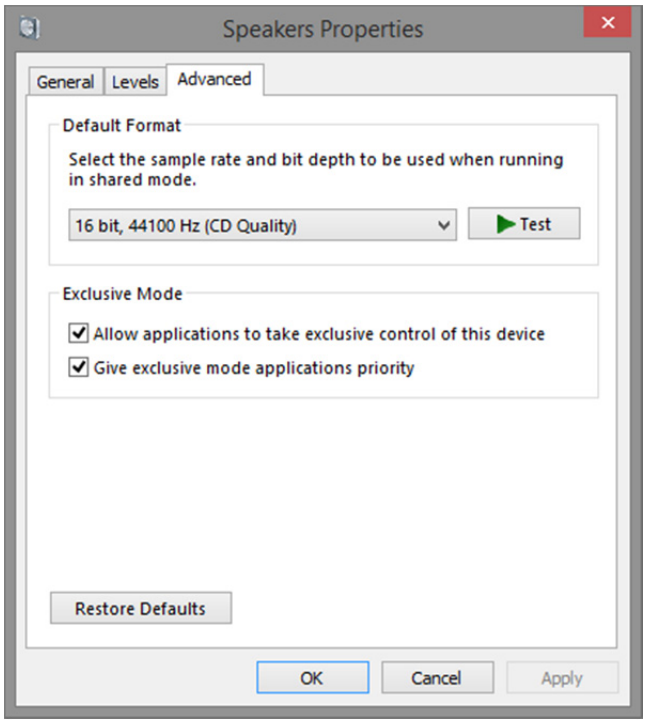
(Speakers, internal computer sound should be enabled which will show Ready state.)

When other sound devices are connected to the computer such as another USB audio device or HDMI cable these will appear in the Sound menu and will need to be enabled if used. If only one device is connected the PC will usually switch over automatically.

Clicking on Properties will bring up the Digital Output Properties screen below and its' tabs. Device usage: Use this device (enable), should be the choice set. This should be set the same on each of the JRiver' and Speakers', Speakers Properties screen. All three should be enabled.



Next, clicking on the Advanced tab of the D150 driver will bring up the screen below. Check, 'Allow applications to take exclusive control of this device' and 'Give exclusive mode applications priority'.



Before we leave the McIntosh HD HS USB Audio screen mouse over the small green Test arrow and left click. You should hear the left and right test tone through the D150 with the USB input selected. BEFORE you play music this test must work. If you do not hear the L-R Chime please recheck your settings.

Since JRiver will play the actual data rate of the song to the McIntosh D150, simply set to Restore Defaults and let the program do its job of syncing with the DAC. Leave at 16/44 as the Exclusive Mode will allow JR to control the output data rate of the driver.

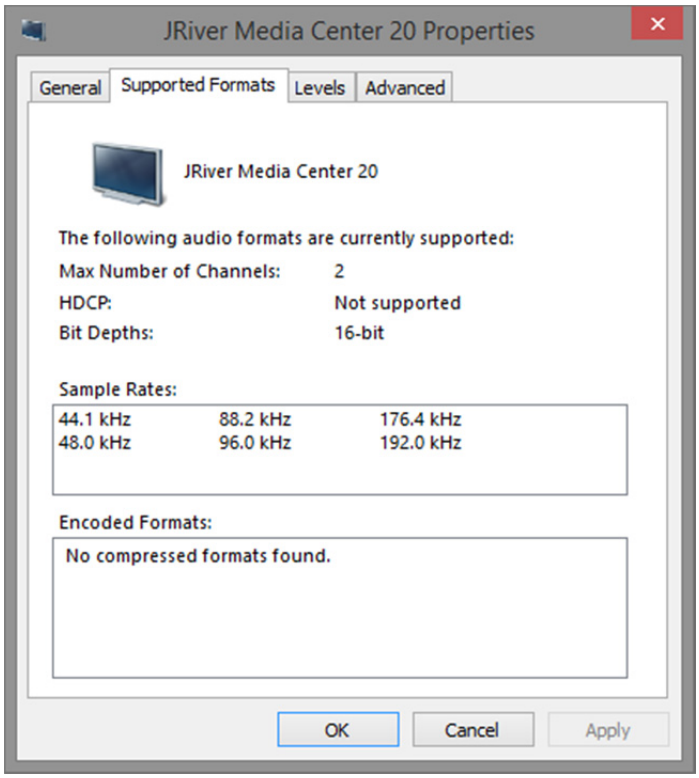
The McIntosh driver which was downloaded has a control panel which appears as below. This has an installed shortcut on the Windows desktop. Clicking on the McIntosh blue box will open the control panel. Regardless of what data rate the driver control panel is set at, JRiver will play the song at its native data rate. You do not need to open the McIntosh HD-Audio control panel to play music.

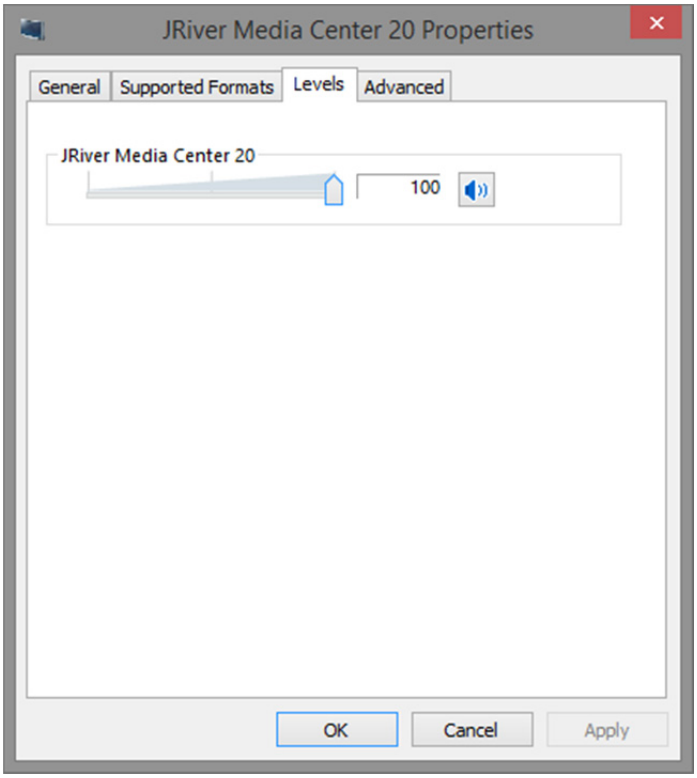
In this example the driver is set to 16/44.1 but as shown is playing a 32/176.4 audio track. This is how the ASIO mode works.

Next is to set JRiver up in Windows Control Panel Sound. It will be similar to the McIntosh HD HS USB settings.

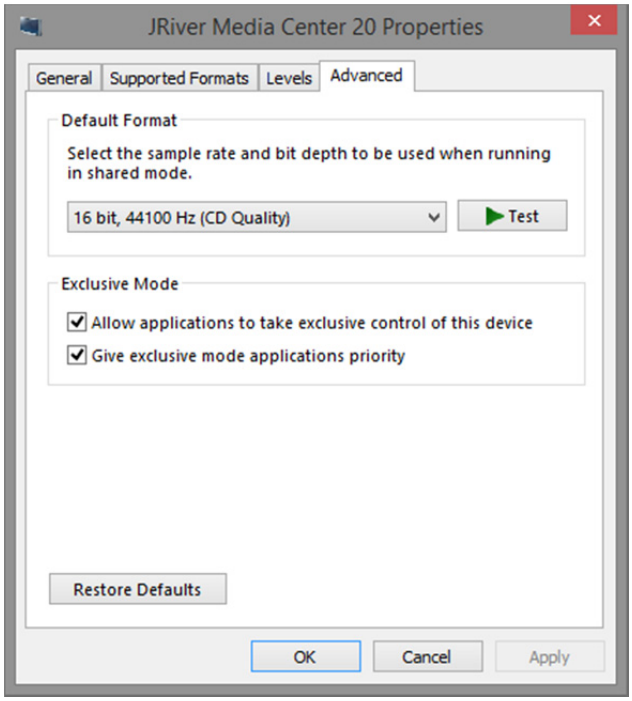
Mouse over the JRiver tab as below so it is highlighted in blue.

Clicking on the Properties box on the lower right will open up the JRiver Digital Output Settings. Supported Formats of 44.1kHz through 192 kHz should be shown.





Level tab should always be set to 100% as shown since listening Volume is set in the McIntosh D150 and all bits are always sent from the JRiver player to the D150 for Bit Perfect, Asynchronous playback. Finally open the Advanced Tab section of JRiver.



You can check restore defaults as the data rate will be set in the music program. Check both boxes in the Exclusive Mode section.

If you are using multiple USB audio playback devices, each with their own drivers, you will need to switch default devices in the Sound settings whenever you connect your computer to a different McIntosh USB audio device. You may have multiple drivers installed on a computer since you are only using the connected device and its' driver at any one time.

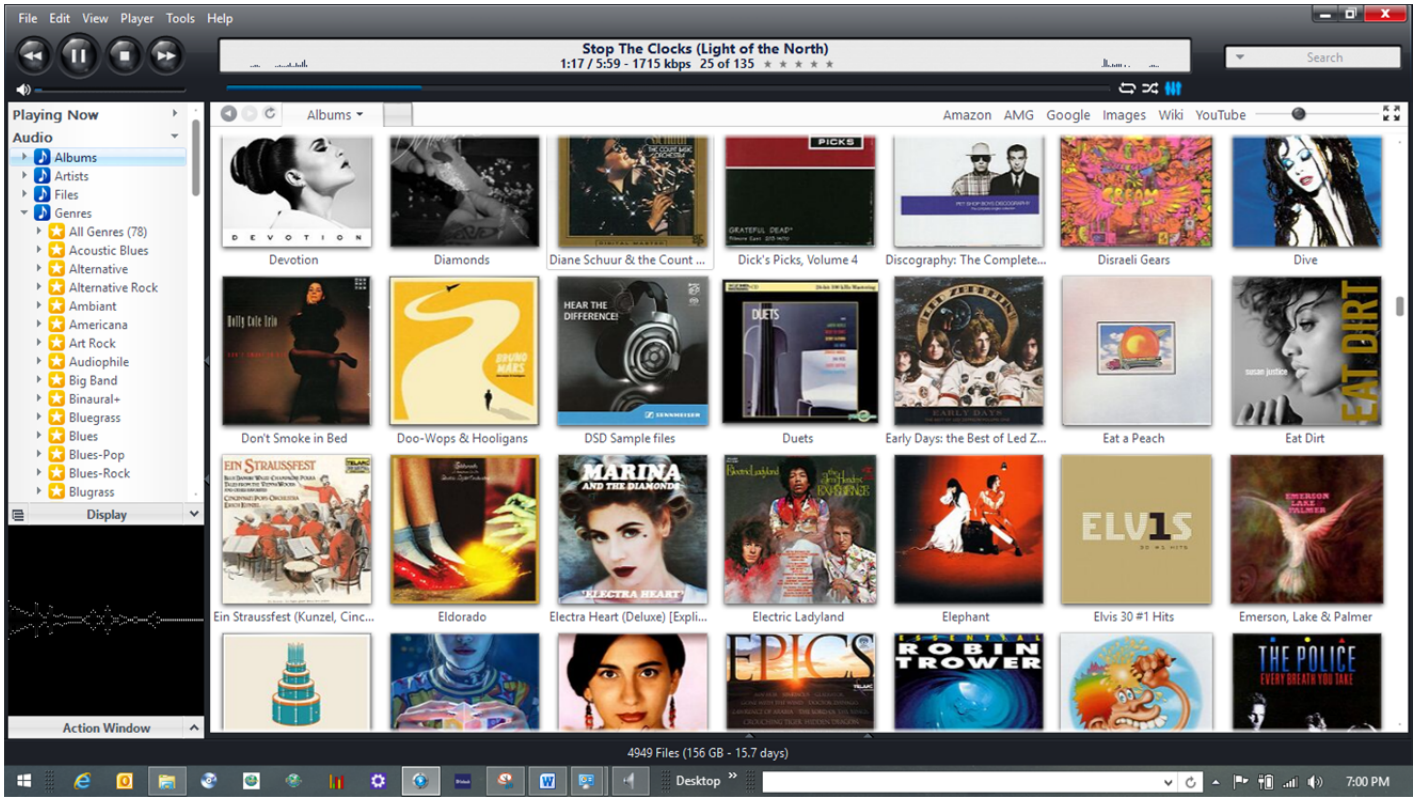
MOST computers will change the default driver to the one the computer USB port is connected to like D150 or a different McIntosh USB model. Since different models may not use the same drivers, when the computer is powered up it will recognize the device and driver as long as the driver has been previously installed on the computer.

If you are listening to a streaming feed like YouTube, JRiver should be turned on but not playing music.

The next section will cover the settings in the JRiver Media Engine 20.

Settings in JRiver 20 for McIntosh D150

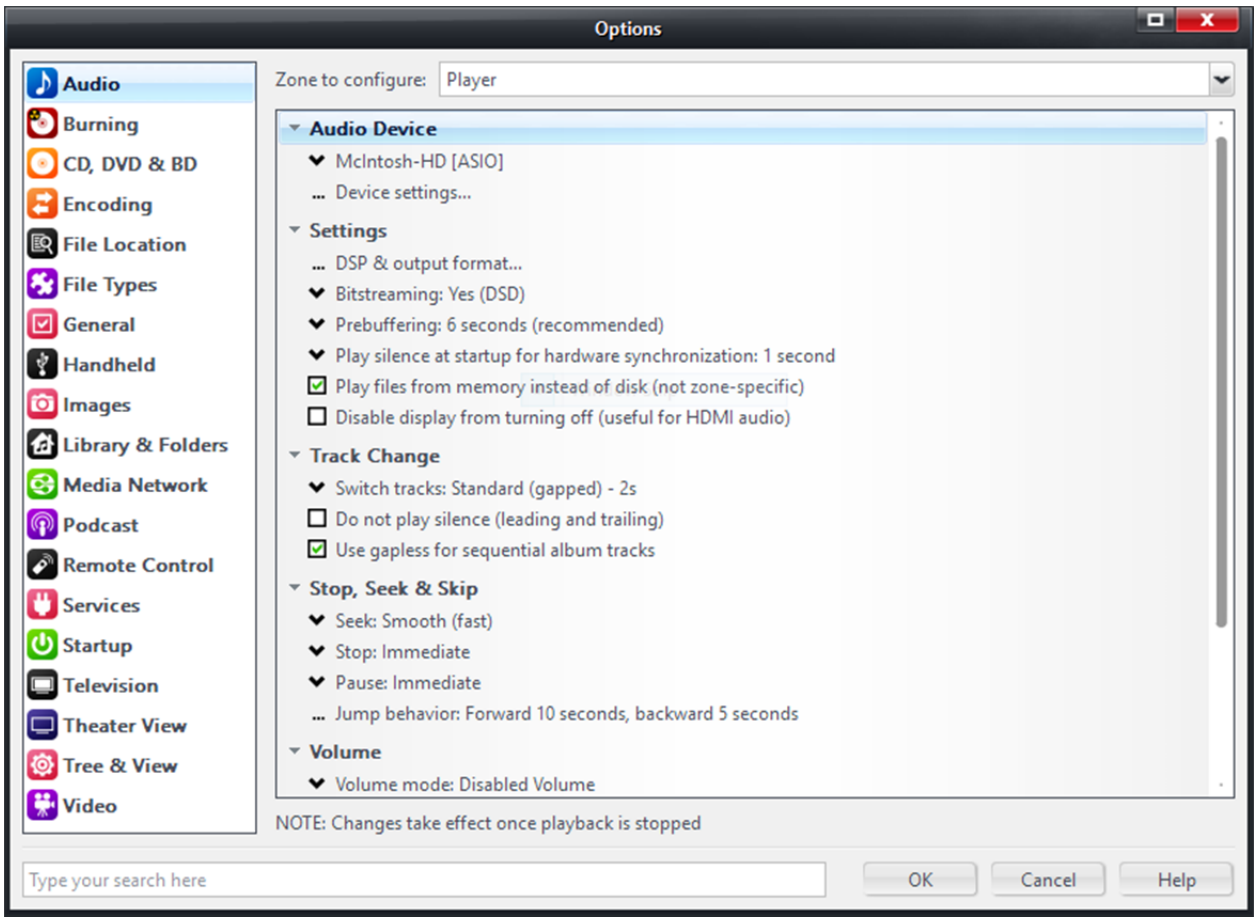
JR20 is a powerful computer program that will allow the manipulation and playback of many types of files. Under the HELP tab at the top left of the home screen you will find a drop down menu that lists HELP WIKI. This is an open interact forum where other JRiver users and experts can ask questions and share solutions. To be an expert on all computers and every JR 20 feature is beyond the scope of this outline but these basic settings will work well with the McIntosh D150 for music playback of all file types using a Windows 7 or 8 machine.



The top left corner of the JR home screen has a series of tabs and the Tools tab is where the playback settings are located.

Left click on the Tools tab and go to the bottom of the list and select Options. This will open up the main adjustment page. The left hand side AUDIO tab should be checked so the adjustments to the Audio Device section of the program are listed.

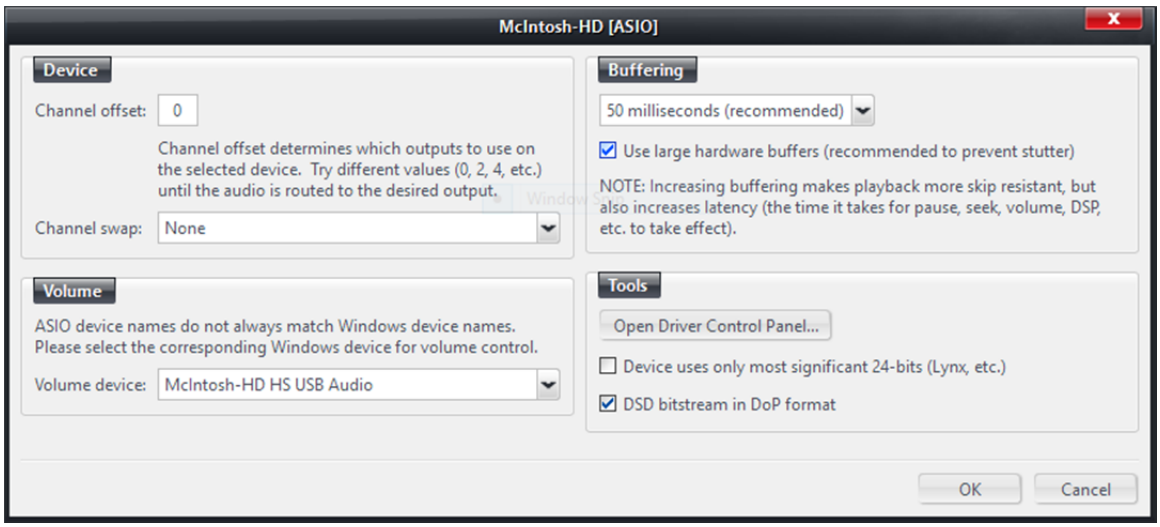
The first selection made needs to be the Digital Output under Audio Device. Selecting Digital Output will list all of the USB audio drivers on the computer. Please check, McIntosh HS (ASIO). This is the correct driver when using D150. If it does not appear in the list please download this driver from the www.McIntoshlabs.com website under Downloads at the bottom of the D150 product page.



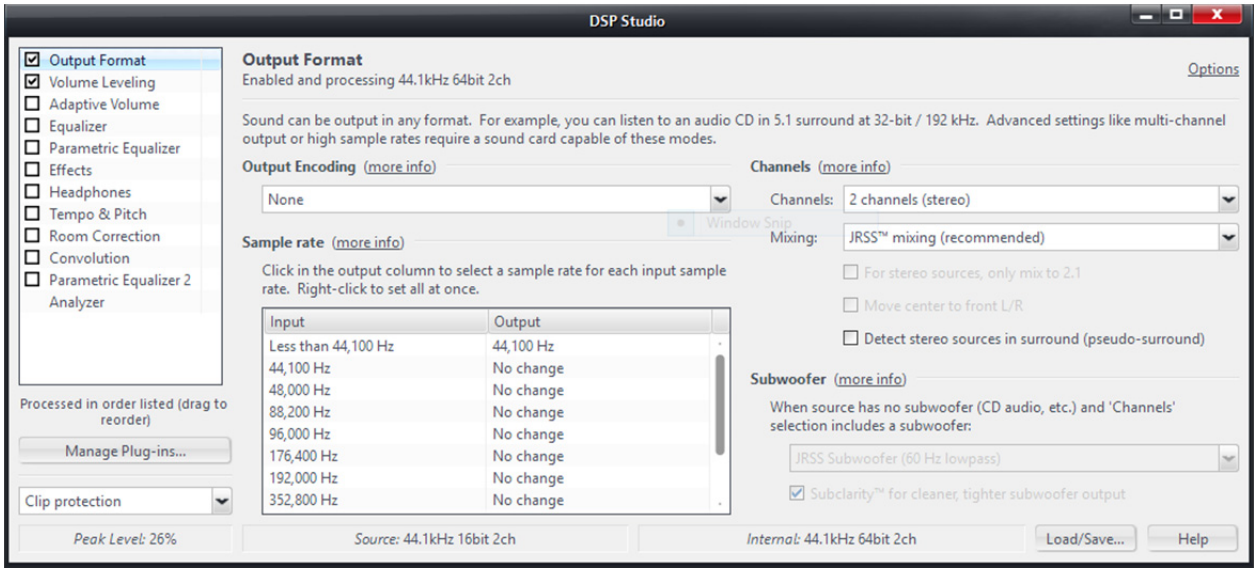
Next tab … Device settings … will need to opened. The settings listed below are the preferred settings for smooth playback. After these are made, click OK at the bottom of the screen.

All of the following adjustments are being made to match the way the data from the computer is sent to the D150. If only ONE type of file was used for all music this would be simple. If however, ANY audio file type and all resolutions are to be played then the JR settings must match the switching cadence of the D150. These recommended settings are based on extended testing using files from 16bit-44kHz CD quality through 5.6 MHz DSD files on a Windows 8.1 computer with a quad core i5 processor.

First open the Device Settings… and set as shown below.



Next, open DSP and Output format under Settings, as shown below. In the top left corner please check Output Format and Volume Leveling. This will allow access to the output format and activate Volume Leveling.



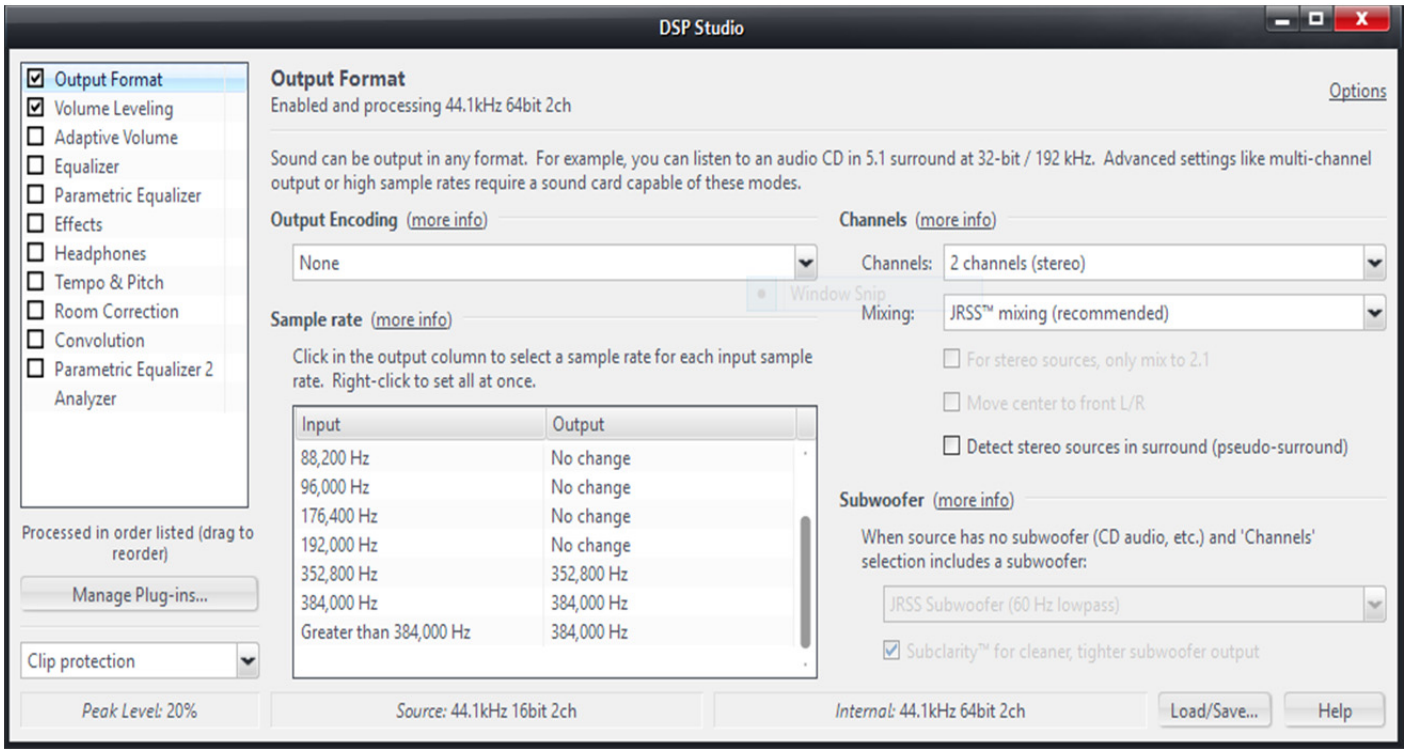
Volume Leveling will adjust the playback volume of each song in relation to all others in the music library. Since these files will be manipulated at 32 or 64 bits this will not change the actual volume of the songs but will adjust their playback relationship to each other so dramatic volume changes are lessened. Volume Leveling does not change the dynamic range or resolution of the recording in any way.

Output Format will allow the actual playback resolution bit rates to be set which also determines the file types that can be played.

All other tabs in this left hand list can be used but this will result in the loss of Bit Perfect playback, which for maximum fidelity, is the goal of these adjustments.

Clip Protection should be checked as this will prevent digital overload which can produce harsh sounds. Volume Leveling will also protect against clipping. If D150 is connected to a power amp of low sensitivity Volume Leveling can be shut off for additional gain or volume.

In the center of the screen output formats are set. This is two columns of input, the original file encoding, and output what is sent to the DAC. By checking No change the D150 will see each file in its' original format. If all the formats are set to 192,000Hz, as an example, this will only increase the file size or 'container' of the original music file with no change in sound quality.

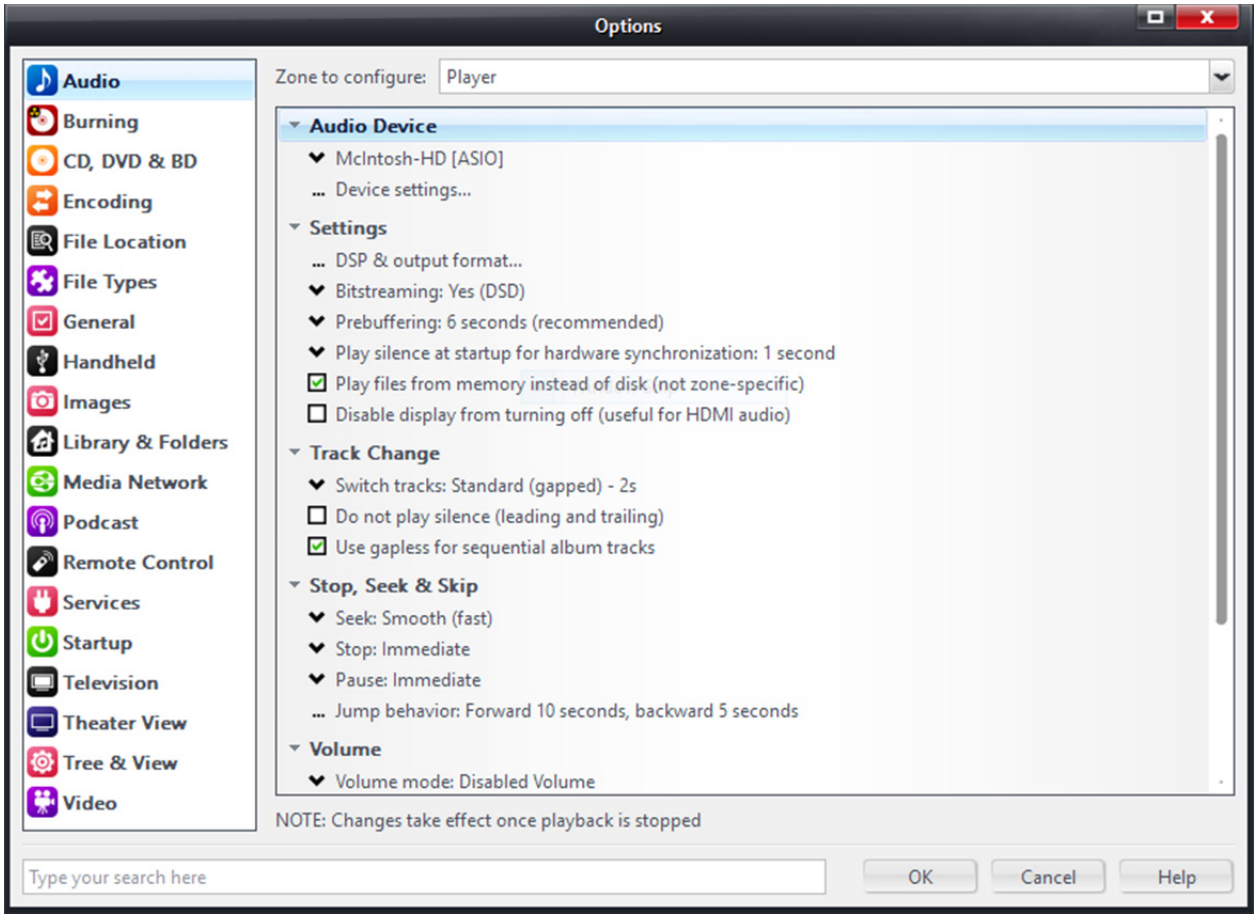


Set all sample rates to No Change, greater than 384,000 Hz to 384,000 Hz.

The file size limit of the D150 is 384,000Hz. 352,800 and 384,000Hz are used for DSD, DXD file types. Music files referred to as DSD64, DSD128 or DSD -2.8MHz and 5.6MHz can be used with D150 combined with JR-20.

This screen shot above is of a normal 16 bit, 44.1 CD rip to the HD playing. At the bottom of the page the actual peak level is showing 20% which goes up and down as the volume changes in the course of the song playing. In the computer, JRiver is

processing this CD file at 44.1KHz and 64 bits. The 64bit Internal processing allows Volume Leveling mentioned above since the maximum music file size of 24 bits is far exceeded by the computer so files can be volume leveled since the computer's processing is a much larger 'bit box'. Clicking on the red X in the upper right hand corner will close the DSP studio and return to the options box.



These **Setting changes** as shown will need to be duplicated for proper playback using the McIntosh D150.

1-DSP & Output format … was set above

2-Bitsreaming: YES (DSD), if DSD files will be played, if not, can be left to NO

3- Prebuffering: 6 seconds (recommended)

4-Play silence at startup for hardware synchronization: 1 second

5-Check - Play Files from memory instead of disk. Note: This will pull the music from the solid state memory instead of the spinning disc drive which may be more precise depending on the individual computer.

Track Change

1-Switch Tracks: Standard (gapped) - 2s, allows the time needed when tracks are of a different resolution. If the tracks are the same resolution they will switch faster like a normal CD song gap.

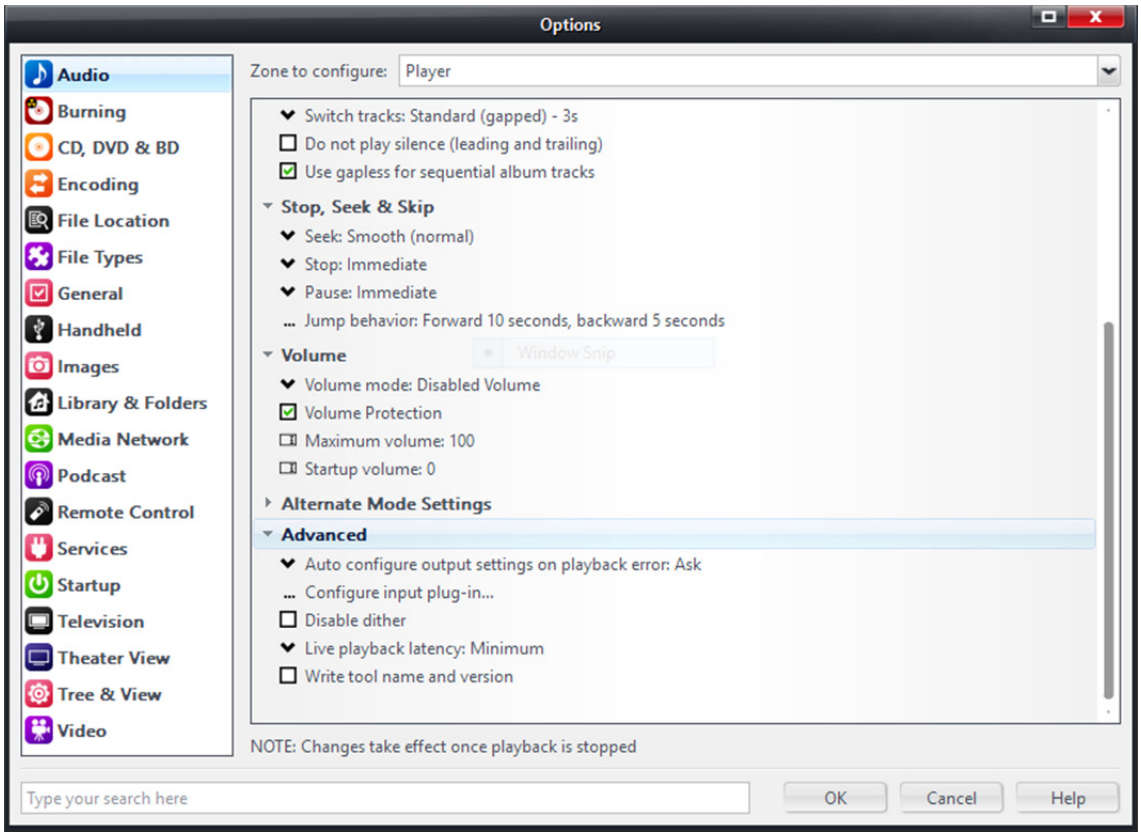
2- Use gapless for sequential album tracks- Check, Note: this is for albums that are gapless like Dark Side of The Moon, etc.

Seek: Smooth (fast)

Stop: Immediate

Pause: Immediate

At the bottom of the Options page open the Advanced tab. Set Live playback latency: Minimum. This will prevent sync audio sync issues when streaming video content.



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These are all of the settings needed for smooth playback using the McIntosh D150 with music stored on or streamed from a computer. Please refer to the JRiver Wiki Help forum for detailed advice and information on JRiver operation.

There are many different ways to configure JRiver. This is one example that will yield high performance, bit perfect playback of your favorite computer audio tracks.

Additional questions on the D150 may be sent to McIntosh Tech Support at www.mcintoshlabs.com -> Support-> Model-> Tech Support.

Thank you,

McIntosh Tech Support
RC 2-9-15