

Music player for DSD(Dop) stream

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Index

1. How to play DSD(DoP) stream	3
2.foobar2000.....	3
2-1. Installation of foobar2000 application.....	3
2-1-1. Installation of foobar2000	3
2-1-2. Installation of foo_out_asio component.....	4
2-1-3. Installation of foo_input_sacd component	6
2-2. Setting up foobar2000 application	10
3.HQ Player.....	15
3-1. Installation of HQ Player application	15
3-1-1. Purchase and set up of HQ Player.....	15
4.J.River Media Center.....	18
4-1. Installation of J.River Media Center application.....	18
4-1-1. Purchase and set up of J.River Media Center	18
5.Audirvana Plus.....	23
5-1. Installation of Audirvana Plus application	23
5-1-1. Purchase of Audirvana Plus	23
5-1-2. Set up of Audirvana Plus	24

1. How to play DSD(DoP) stream

You can play DSD(DoP) stream directly without any conversion with foobar2000(Windows)/HQ Player(Windows)/J.River Media Center(Windows)/Audirvana Plus(Mac). The following explanation is how to set up the foobar2000 , HQ Player, J.River Media Center and Audirvana Plus.

2.foobar2000

2-1. Installation of foobar2000 application

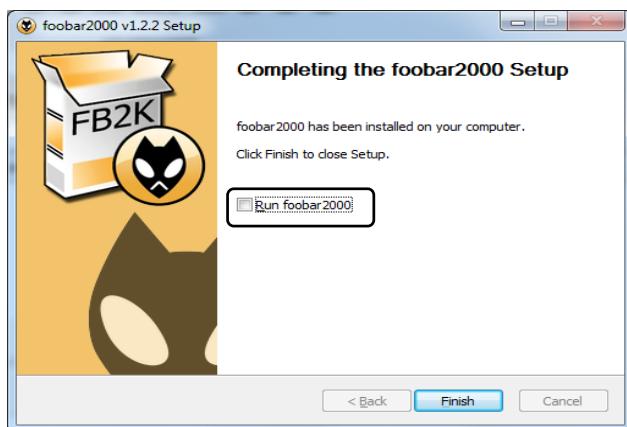
The foobar2000 is a famous and very popular application running on Windows PC. This chapter describes how to set up the application running on your system. First, confirm the driver for RAL-DSDHA1 or RAL-DSDHA2 was installed already into Windows system before setting up of the foobar2000.

To play DSD(DoP) stream directly with the foobar2000, the following steps are required:

- (1) Installation of foobar2000
- (2) Installation of foo_out_asio component
- (3) Installation of foo_input_sacd component

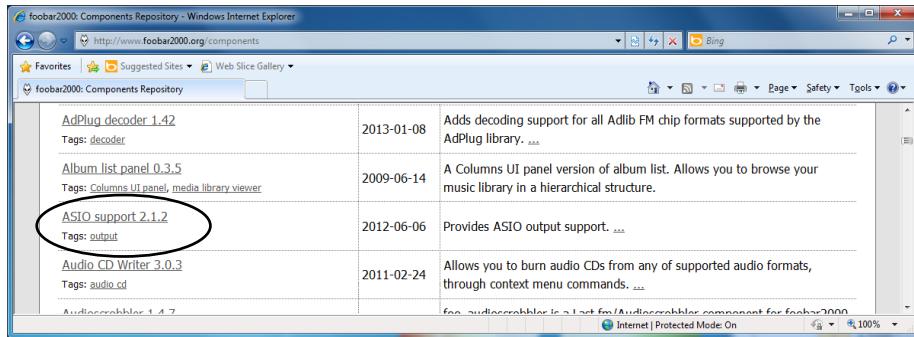
2-1-1. Installation of foobar2000

- (1) Download from the latest stable version of foobar2000 from www.foobar2000.org and install it into your Windows system.
- (2) When you finish installation, the following window will show up.
Uncheck the check mark at “Run foobar2000” and click “Finish”.

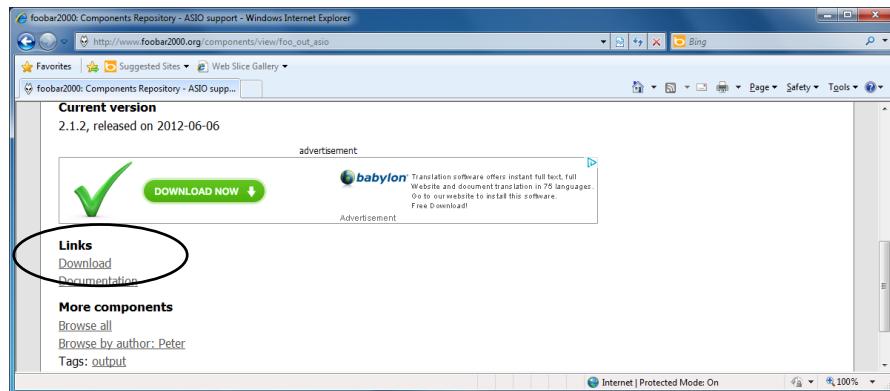


2-1-2. Installation of foo_out_asio component

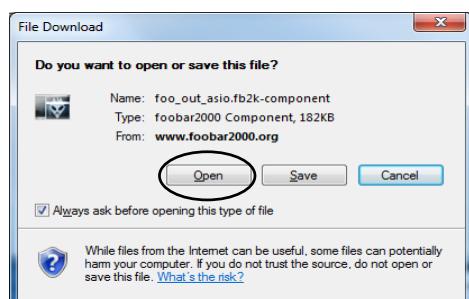
- (1) You need to download optional “foo_out_asio” component from <http://www foobar2000 org/components> and install it.



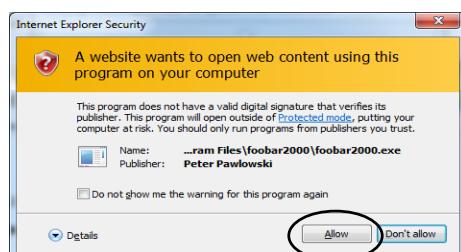
- (2) Click “Download” at Links.



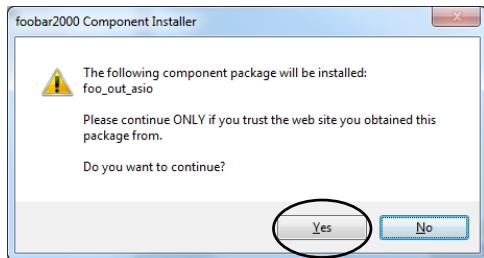
- (3) When the following window shows up, click “Open” to install it.



- (4) When the following window shows up, click “Allow” to install it.

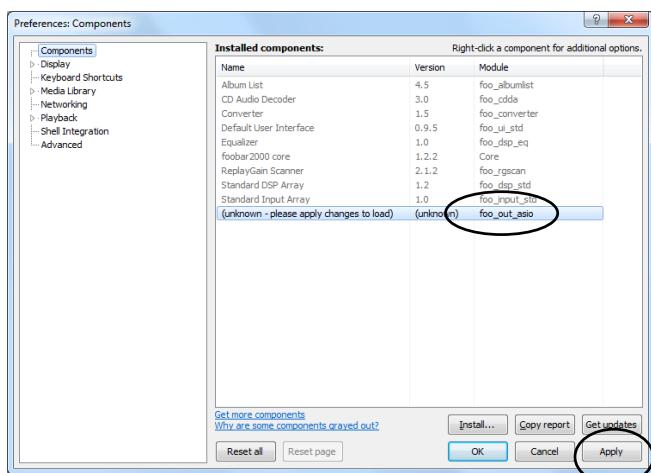


(5) When the following window shows up, click “Yes” to install it.

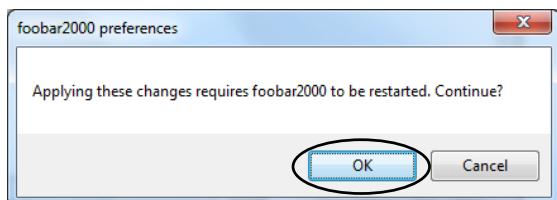


(6) foobar2000 will start up. There is a “foo_out_asio” string appearing.

Select “foo_out_asio” and click “Apply”.



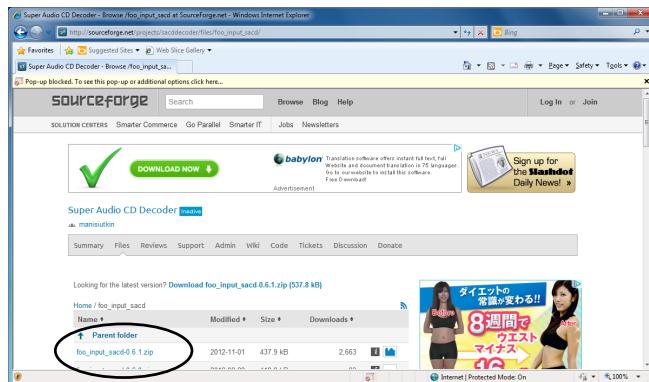
(7) When the following window shows up, click “OK”.



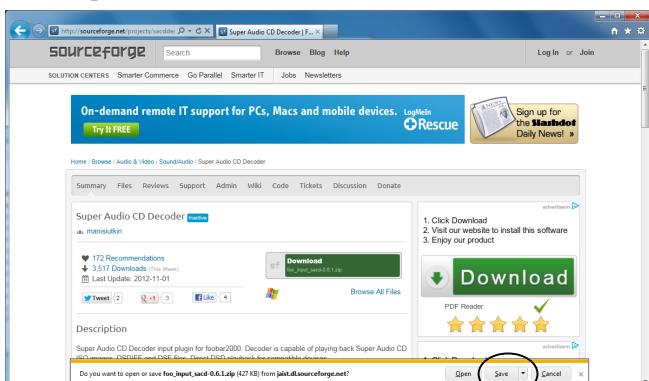
Now you have finished installation of “ASIO Support” component.

2-1-3. Installation of foo_input_sacd component

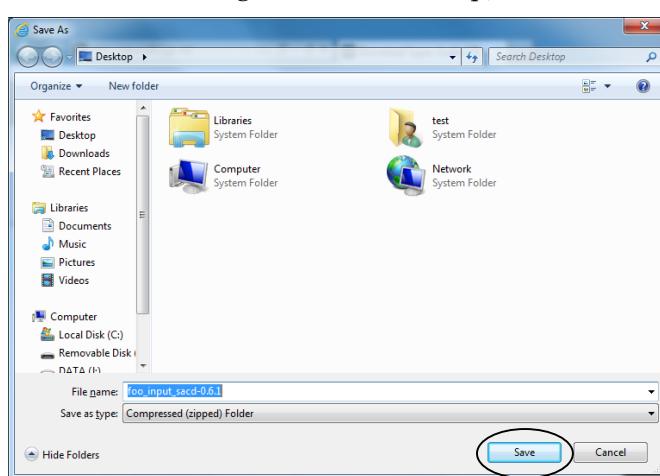
- (1) You need to download optional “foo_input_sacd” component from http://sourceforget.net/projects/sacddecoder/files/foo_input_sacd/.
- (2) Click “foo_input_sacd-0.6.1.zip”.



- (3) When the following window shows up, click “Save as”, and save it at the Desktop.



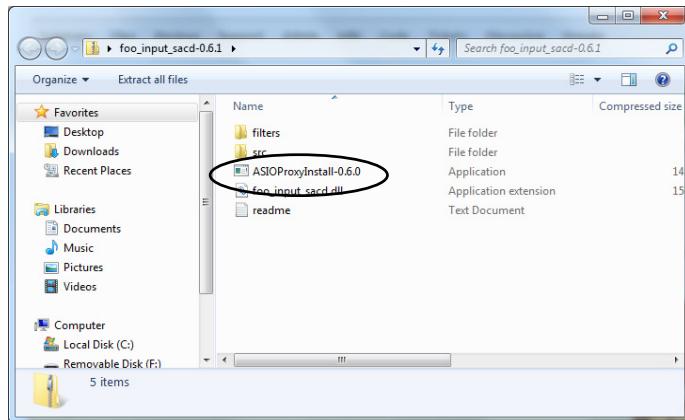
- (4) When the following window shows up, click “Save”.



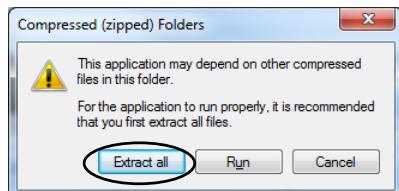
- (5) “Foo_input_sacd-0.6.1.zip” icon will show up. Double-click this icon.



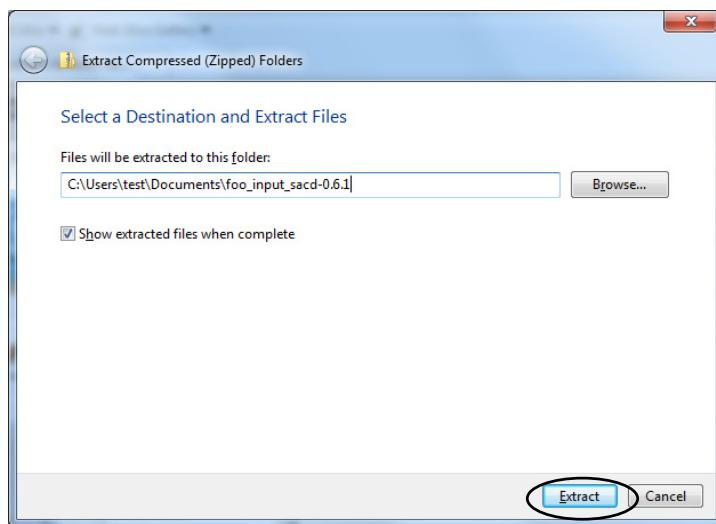
- (6) When the following window shows up, double-click “ASIOProxyInstall-0.6.0”.



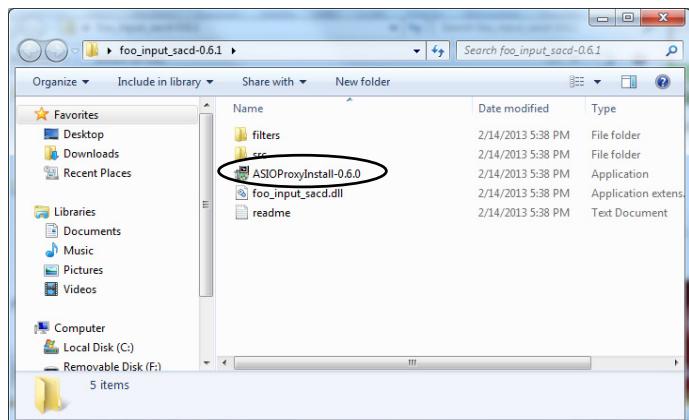
- (7) When the following window shows up, click “Exact all”.



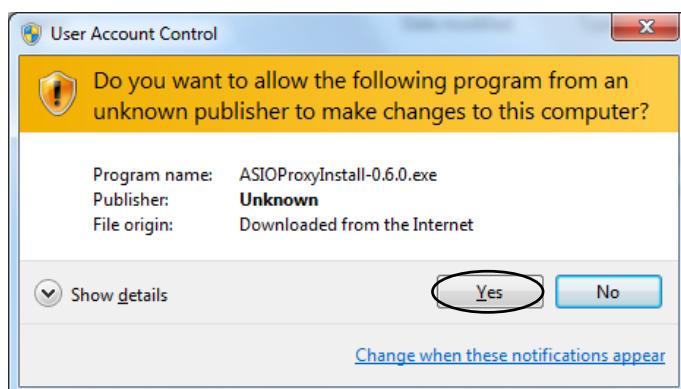
- (8) Put the check mark at “Show extracted files when complete” and click “Extract”.



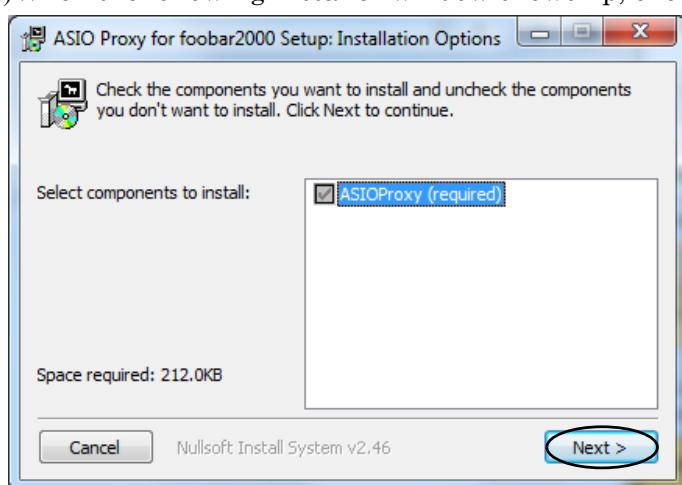
- (9) When extracting the files, the following window will show up.
Double-click “ASIOProxyInstall-0.6.0”.



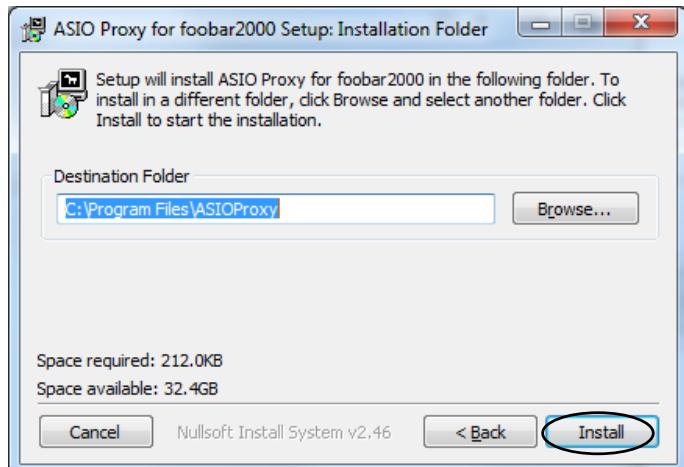
- (10) When the following “User Account Control” window shows up,
click “Yes” to continue.



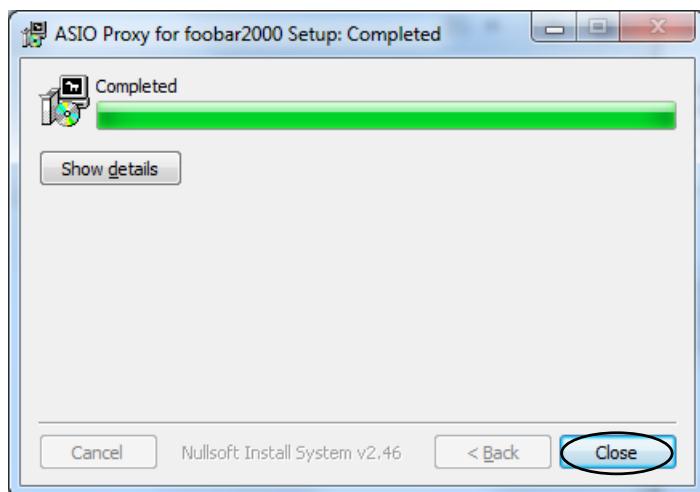
- (11) When the following installer window shows up, click “Next”.



(12) After confirming the destination folder, click "Install".



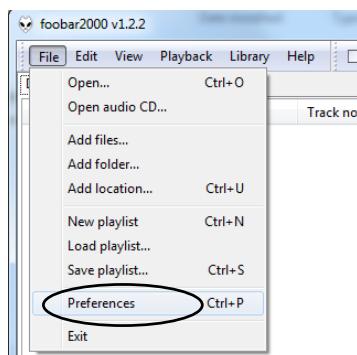
(13) When the installation has completed, click "Close".



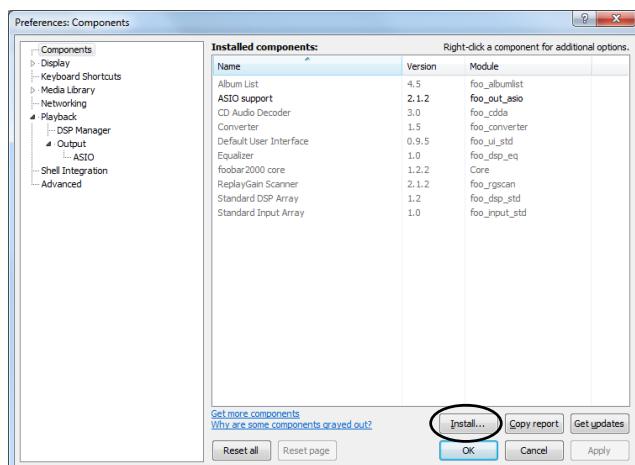
2-2. Setting up foobar2000 application

To include the downloaded components, you need to set up the following.

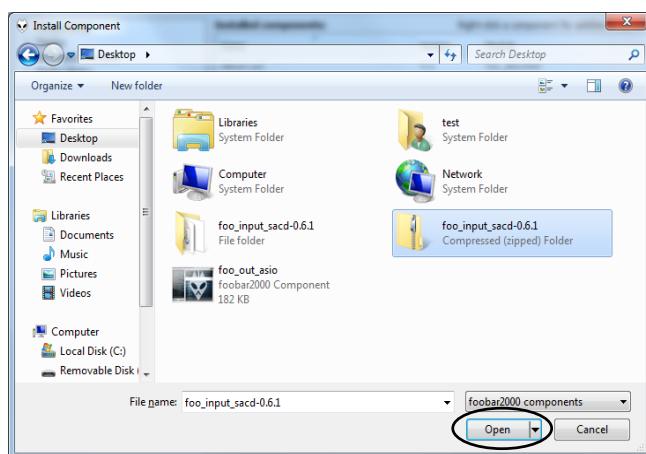
- (1) Select “Preferences” from the “File” at the menu bar.



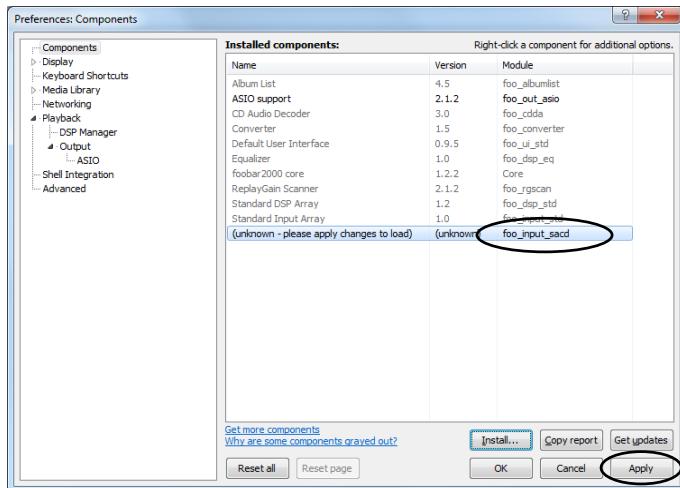
- (2) Select “Components” and click “Install”.



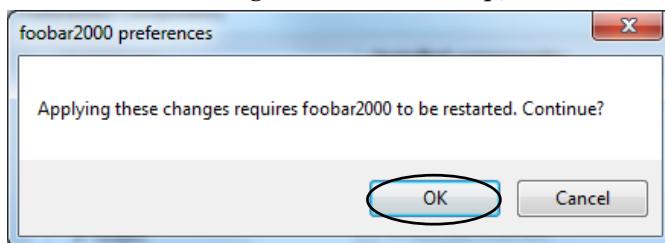
- (3) Select the “foo_input_sacd-0.6.1.zip” icon at the Desktop and click “Open”.



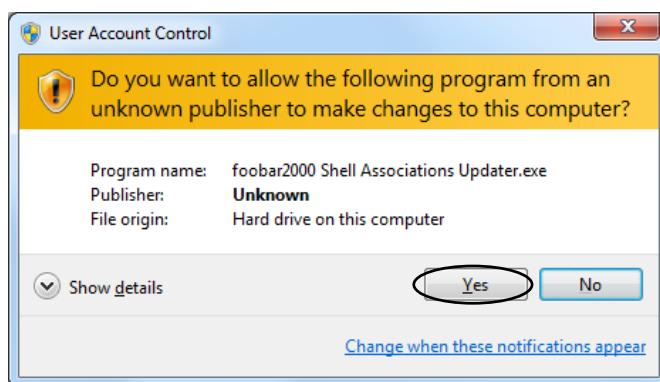
- (4) Select the “foo_input_sacd” and click “Apply”.



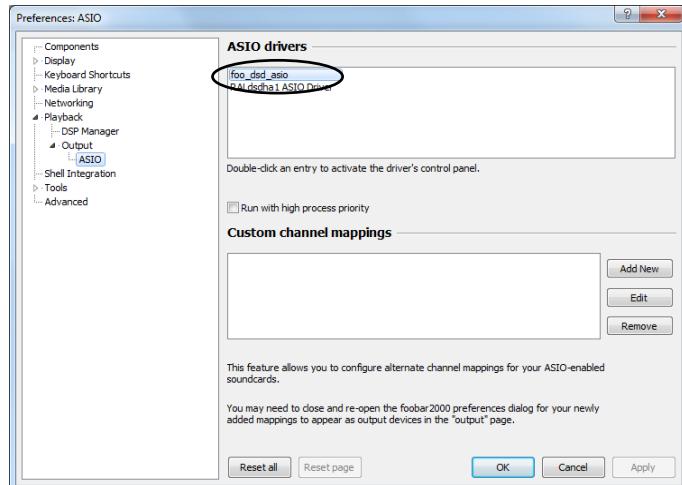
- (5) When the following window shows up, click “OK”.



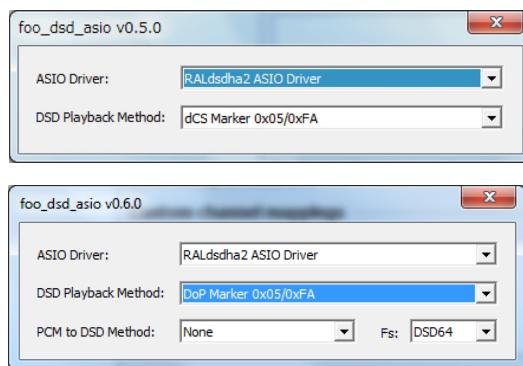
- (6) When the following “User Account Control” window shows up, click “Yes” to continue.



- (7) Select “Preferences” from the “File” at the menu bar.
 Select “Components”, “Outputs”, and then select “ASIO”.
 Double-click “foo_dsd_asio”.



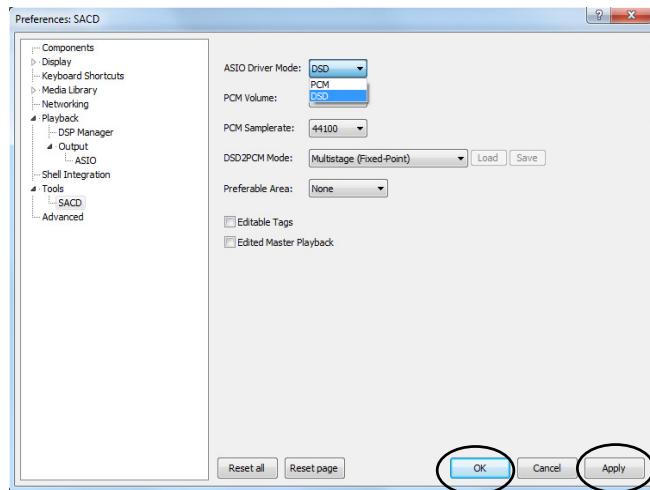
- (8) Set “RAL dsdha1 ASIO Driver” at ASIO Driver for RAL-DSDHA1.
 Set “RAL dsdha2 ASIO Driver” at ASIO Driver for RAL-DSDHA2.
 If your foo_dsd_asio version is 0.5.0, set “dCS Marker 0x05/0xFA” at DSD Playback method.
 If your foo_dsd_asio version is 0.6.0, set “DoP Marker 0x05/0xFA” at DSD Playback method.



(9) Select “Preferences” from the “File” at the menu bar.

Select “Tools”, “SACD”, and then set “DSD” at ASIO Driver mode.

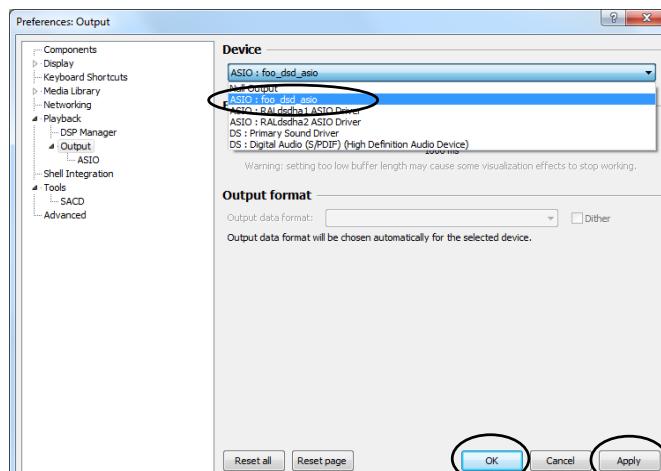
And then, click “Apply”, “OK”.



(10)Select “Preferences” from the “File” at the menu bar.

Select “Playback”, “Output”, and then set “ASIO:foo_dsd_asio” at Device.

And then, click “Apply”, “OK”.



Now you have completed the set up of foobar2000.

When DSD(DoP) stream is being played, information on DSD will show up as follows.

The screenshot shows the foobar2000 interface with a track list. The currently playing track is "Garett Brennan - Little Cottonwood" from "Alta Powder Day". The track list includes various tracks with their titles and bit depths (e.g., 16bit_44K_3min, 16bit_44K_8sec, etc.). At the bottom of the window, a status bar displays "DSD64 | 5645 kbps | 2822400 Hz | stereo | 0:35 / 4:57". A large downward arrow points from this status bar to a highlighted text box below it.

Play...	Artist/album	Track ...	Title / track artist	Dur...
Keith Greeninger & Dayan Kai ...			Looking For A Home	5:51
Garett Brennan - Little Cotton...			Alta Powder Day	4:57
Jenna Mammina & John R. Bur...			When I'm Called Home	4:43
? - ?			16bit_44K_3min	3:16
? - ?			16bit_44K_8sec	0:09
? - ?			16bit_48K_5sec	0:05
? - ?			16bit_88K_5sec	0:05
? - ?			16bit_96K_5sec	0:05
? - ?			24bit_44K_8sec	0:09
? - ?			24bit_48K_5sec	0:05
? - ?			24bit_88K_5sec	0:05
? - ?			24bit_96K_5sec	0:05

DSD64 | 5645 kbps | 2822400 Hz | stereo | 0:35 / 4:57

DSD64 | 5645 kbps | 2822400 Hz | stereo

3.HQ Player

3-1. Installation of HQ Player application

The HQ Player is a famous and very popular application running on Windows PC. This chapter describes how to set up the application running on your system.

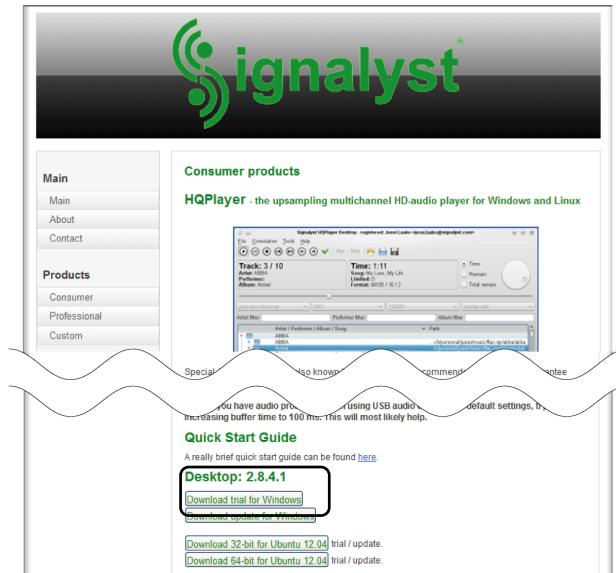
First, confirm the driver for RAL-DSDHA1 or RAL-DSDHA2 was installed already into Windows system before setting up of the HQ Player.

To play DSD(DoP) stream directly with the HQ Player, the following steps are required:

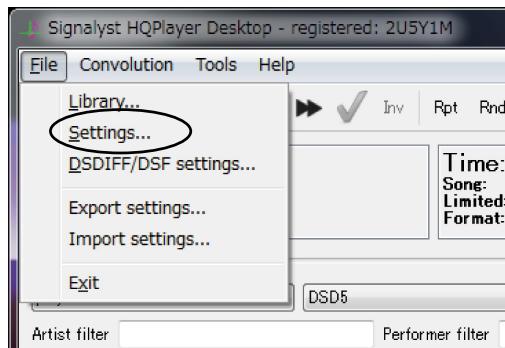
3-1-1. Purchase and set up of HQ Player

- (1) Purchase the latest stable version of HQ Player from the below URL
and install it into your Windows system.

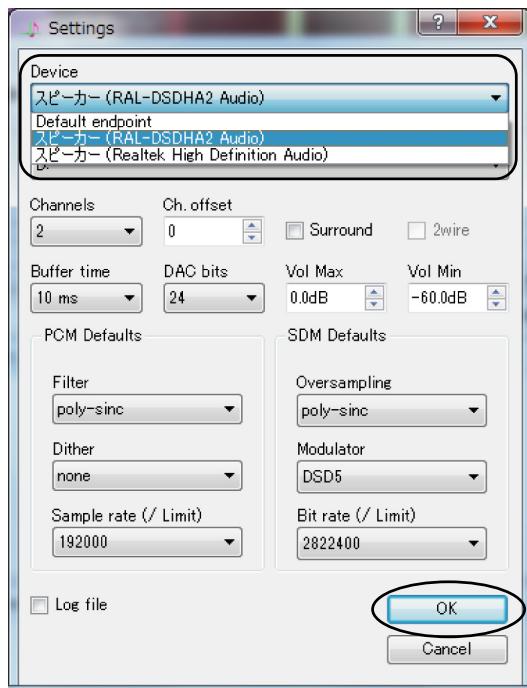
<http://www.signalyst.com/consumer.html>



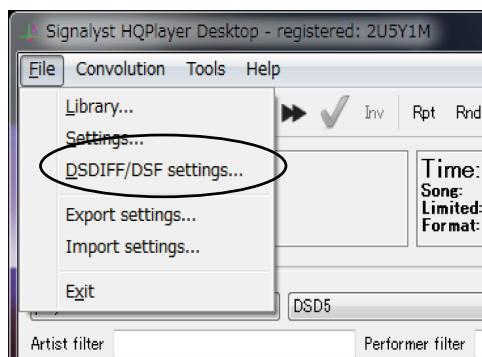
(2) Start up with HQ Player and select “Settings” from the “File” at the menu bar.



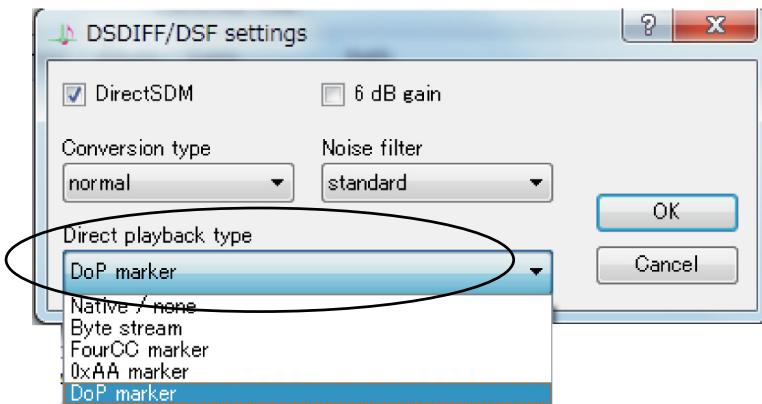
(3) When the following window shows up, select “RAL-DSDHA1 Audio” or “RAL-DSDHA2 Audio” at Device.



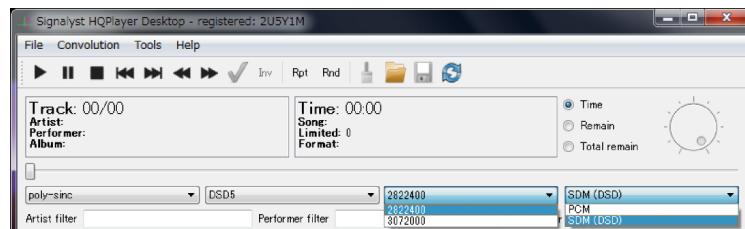
(4) Select “DSDIFF/DSF Settings” from the “File” at the menu bar.



- (5) Select “DoP marker” at the “Direct playback type” and click “OK”.



- (6) Set “SDM(DSD)” and “2822400Hz” as sampling rate.



Now you have completed the set up of HQ Player.

- (7) Double-click the music file and add it to the play list.

When you click the music file at the play list, the HQ Player will play the music.

Artist / Performer / Album / Song		Path
<input checked="" type="checkbox"/> My Favorite Things		D:\MusicFiles\DSF_files\hmcj10015-5_1_09.dsdf
Length	Performer / Artist	Song
1 5:12	The Super Premium Band	My Favorite Things

4.J.River Media Center

4-1. Installation of J.River Media Center application

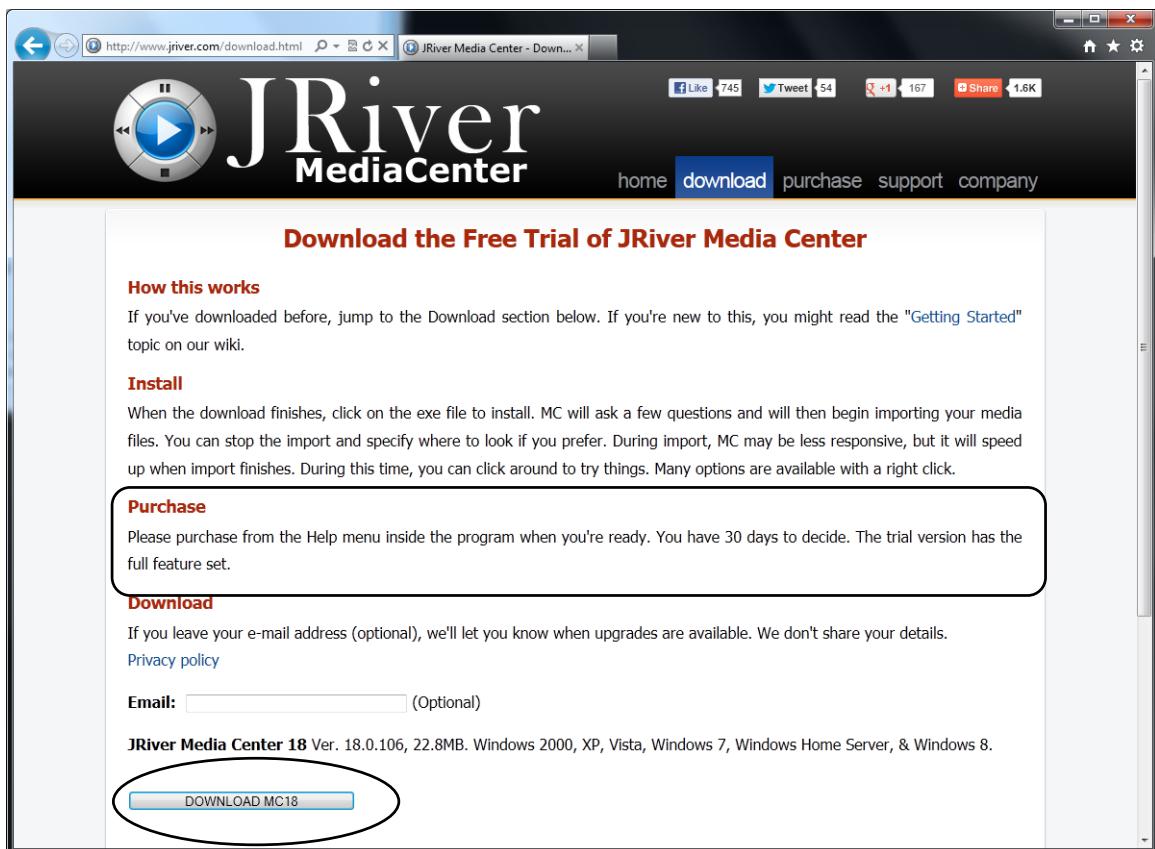
The J.River Media Center is a famous and very popular application running on Windows PC. This chapter describes how to set up the application running on your system.

First, confirm the driver for RAL-DSDHA1 or RAL-DSDHA2 was installed already into Windows system before setting up of the J.River Media Center.

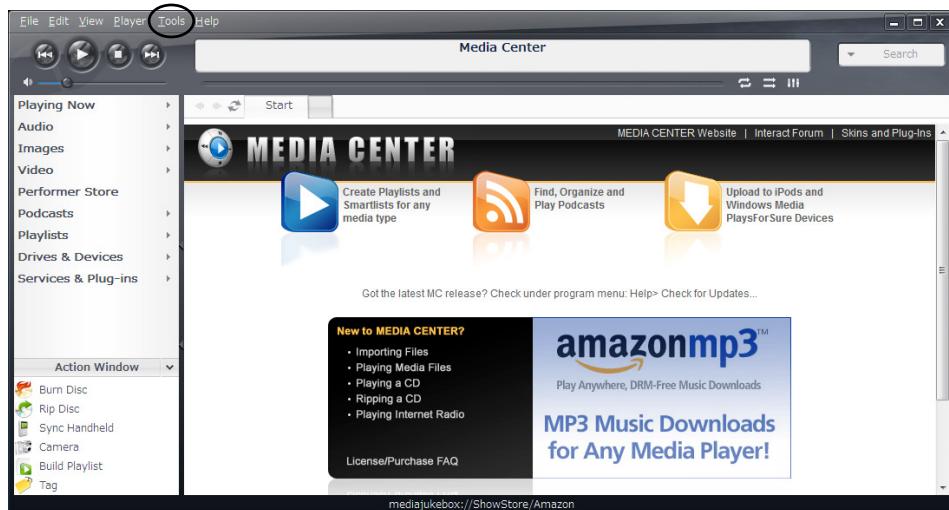
To play DSD(DoP) stream directly with the J.River Media Center, the following steps are required:

4-1-1. Purchase and set up of J.River Media Center

- (1) Purchase the latest stable version of J.River Media Center from the below URL and install it into your Windows system.
<http://www.jriver.com/download.html>

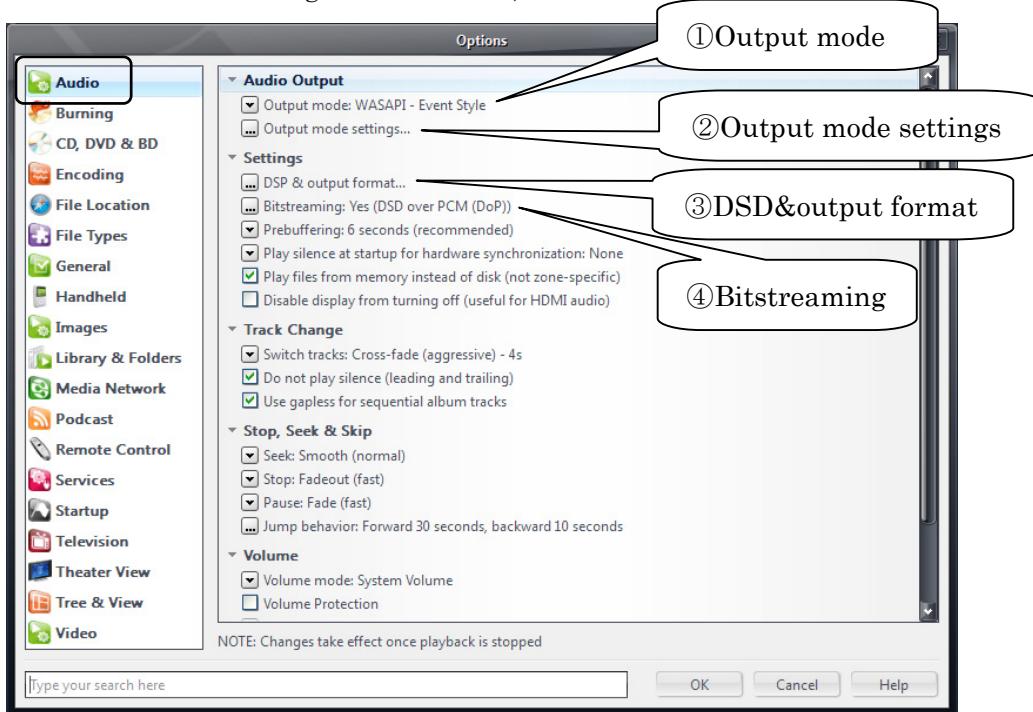


(2) Start up J.River Media Center. Click “Tools”. And select “Options”.

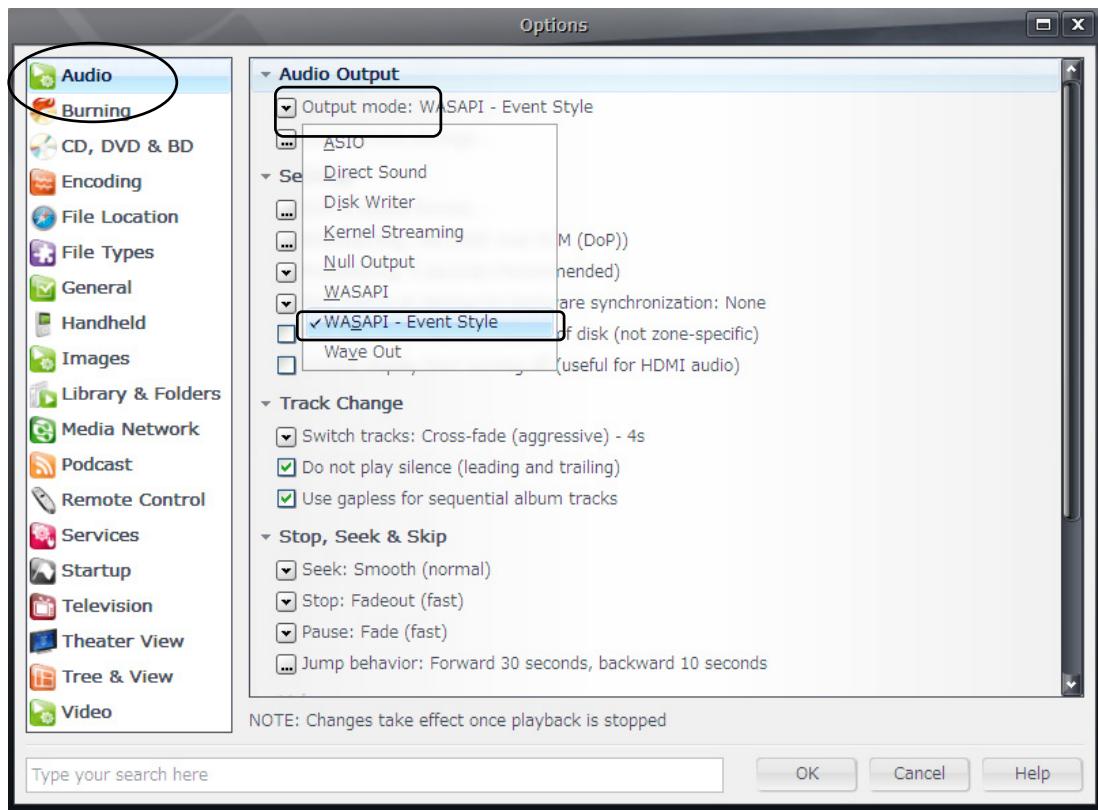


The following window will show up. You need to set the following setting here.

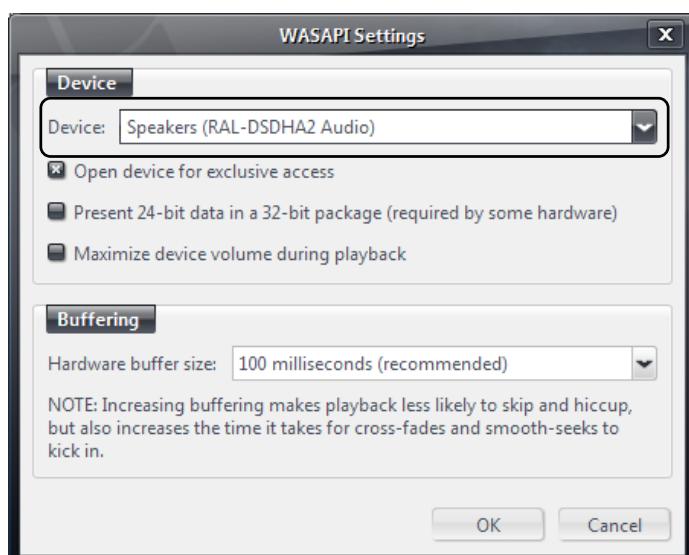
- ① Output mode. Proceed to (3) to set this section.
- ② Output mode settings. Proceed to (4) to set this section.
- ③ DSD&output format. Proceed to (5) to set this section.
- ④ Bitstreaming. Proceed to (6),(7) to set this section.



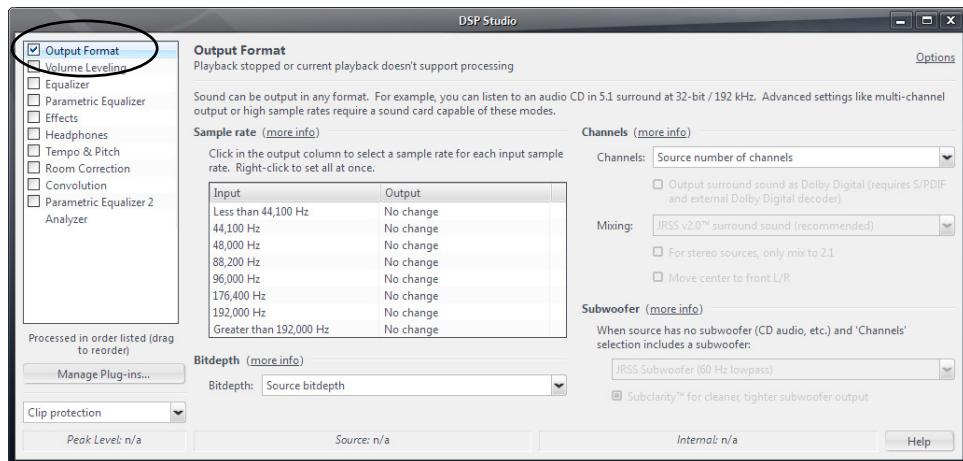
- (3) The following window will show up. Select “WASAPI – Event Style” at “OutPut mode” at “Audio” section.



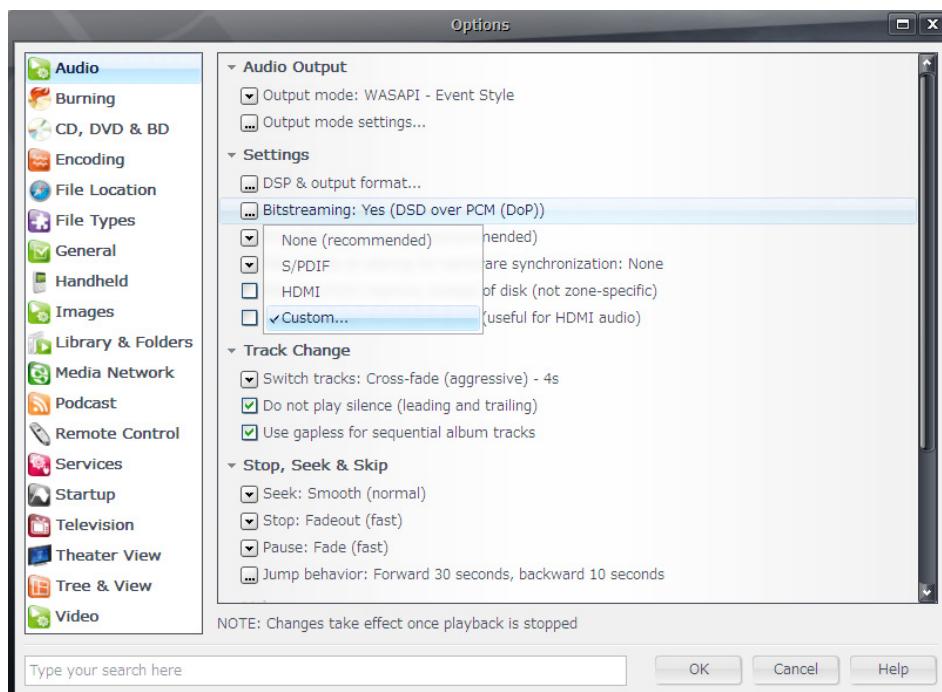
- (4) Confirm RAL-DSDHA2 connected to your PC is powered on and select “Speakers(RAL-DSDHA2 Audio)” at “OutPut mode settings”.



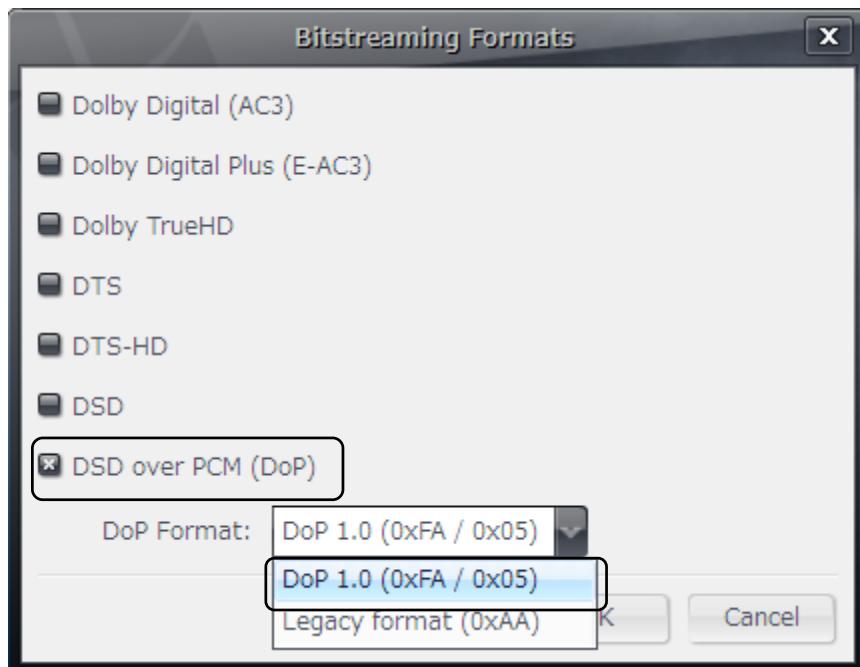
(5) Put a check mark at “Output format” at the left check box.



(6) Select “Custom” at “Bitstreaming”.



- (7) The following window will show up. Put a check mark at “DSD over PCM(DoP)” and select “DoP 1.0(0xFA/0x05) at ”DoP Format”. And click OK.



Now you have completed the set up of J.River Media Center.

When DSD(DoP) stream is being played, information on DSD will show up as follows.

Name	Artist	Album	Rating	Genre	T...	Dura...	Bit...	File T...	Date
LR_500_0	JEITA/CP-2403	その他	54	3:02	1411	wav			
LR_ハイヒノイズ	JEITA/CP-2403	その他	55	1:02	1411	wav			
LR_400Hz[5山_0	JEITA/CP-2403	その他	56	1:02	1411	wav			
LR_100_0	JEITA/CP-2403	その他	57	1:01	1411	wav			
LR_1k_0	JEITA/CP-2403	その他	58	0:59	1411	wav			
What a Wonderful World	Mathias Landaeus Trio	その他		3:38	5644	dsf	2006		
Kalimba	Mr. Scruff	Electronic	1	5:48	192	mp3	2008		
Maid with the Flaxen ...	Richard Stoltzman/Slova...	Fine Music, V...	2	2:49	192	mp3	2008		
A Theme In 3/4	The Super Premium Band	Classical		4:05	5644	dsf	2011		
All Blues	The Super Premium ...	Softly, As In...		7:12	56...	dsf	2011		
Autumn Leaves	The Super Premium Band	Softly, As In...		5:53	5644	dsf	2011		
J.J. Dream	The Super Premium Band	Softly, As In...		7:21	5644	dsf	2011		
L's Bop	The Super Premium Band	Softly, As In...		3:11	5644	dsf	2011		
My Favorite Things	The Super Premium Band	Softly, As In...		5:12	5644	dsf	2011		

All Blues (DSF - 7:12 - 291 MB)

5.Audirvana Plus

5-1. Installation of Audirvana Plus application

The Audirvana Plus is a famous and very popular application running on MacOS. This chapter describes how to set up the application running on your system.

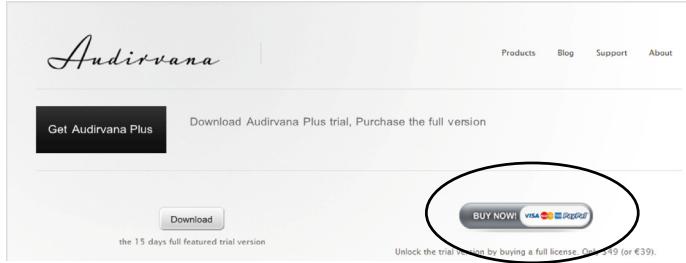
To play DSD(DoP) stream directly with Audirvana Plus, the following steps are required:

- (1) Purchase of Audirvana Plus
- (2) Set up of Audirvana Plus

5-1-1. Purchase of Audirvana Plus

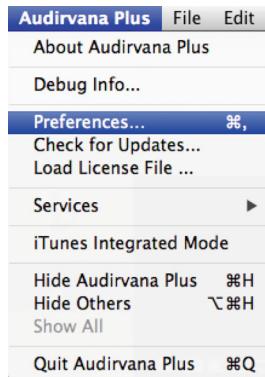
Purchase Audirvana Plus from the below URL and install it into your MacOS.

URL:http://audirvana.com/?page_id=112 and



5-1-2. Set up of Audirvana Plus

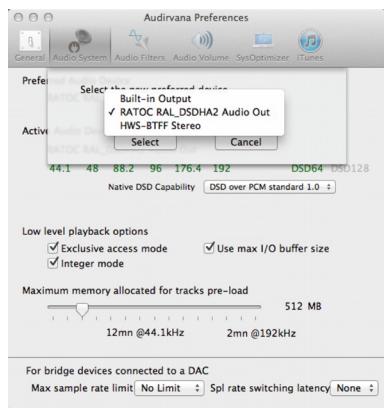
- (1) Select “Preferences” from the “Audirvana Plus” at the menu bar.



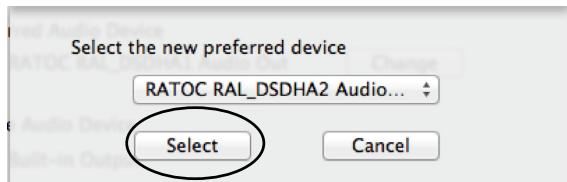
- (2) The following window will show up. Click “Audio System” and then click “Change” at Preferred Audio Device.



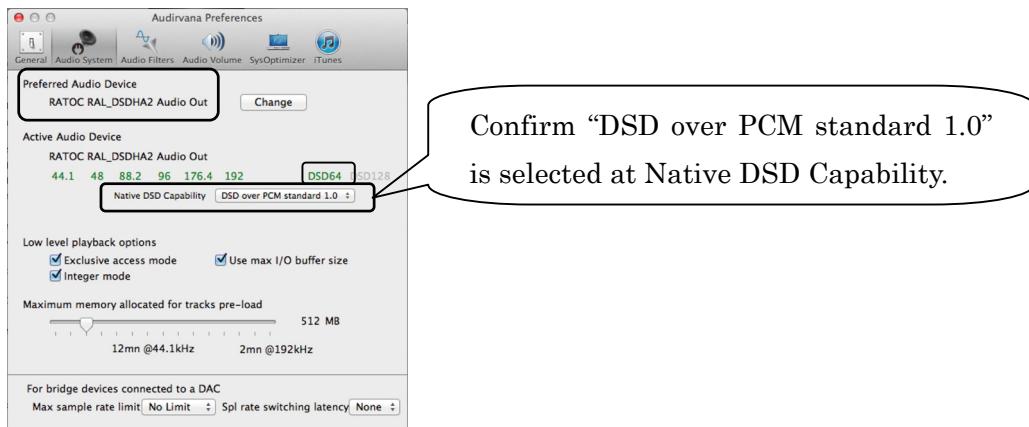
- (3) Select “RATOC RAL_DSDHA1 Audio Out” at Select the new preferred device if you use RAL-DSDHA1.
(4) Select “RATOC RAL_DSDHA2 Audio Out” at Select the new preferred device if you use RAL-DSDHA2.



(5) Click “Select”.



(6) Confirm “RATOC RAL_DSDHA2 Audio Out” is selected at Preferred Audio Device. And also, confirm the letter of “DSD64” is green.



(7) Click “Audio Volume” and confirm “DAC only” is selected at “Volume control type”.



Set the volume of Audirvana Plus at the maximum(0dB).

Now you have completed the set up of Audirvana Plus.