Reference Information
Playing back DSD audio using foobar2000

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NOTICE

- “foobar2000” is not Yamaha product. Yamaha cannot be held responsible for any damages arising out of the use of the software.
- “foobar2000” is installable only on Windows computers. The procedures described in this documentation are based on Windows 7.
- The documentation is based on information as at May 2013 (We have no plans to offer updates).

Required components

foobar2000

“foobar2000” is an advanced freeware audio player for Windows. By installing foobar2000 and other components on your Windows computer, you can enjoy DSD (Direct Stream Digital) audio playback on the unit (via USB DAC).

Yamaha Steinberg USB Driver

Driver software required for connecting a device compatible with Yamaha Steinberg USB Driver to a computer.

ASIO support

A component required for DSD audio playback on foobar2000.

Super Audio CD Decoder

A decoder required for direct DSD playback of Super Audio CD ISO images, DSDIFF and DSF files on compatible devices.

Installing foobar2000

1 **Download the latest stable version of foobar2000 at the following website.**
http://www.foobar2000.org/download

2 **Double-click the downloaded file “foobar2000_v*.*.*.exe” to start installation.**

3 **Follow the on-screen instructions to install the software.**

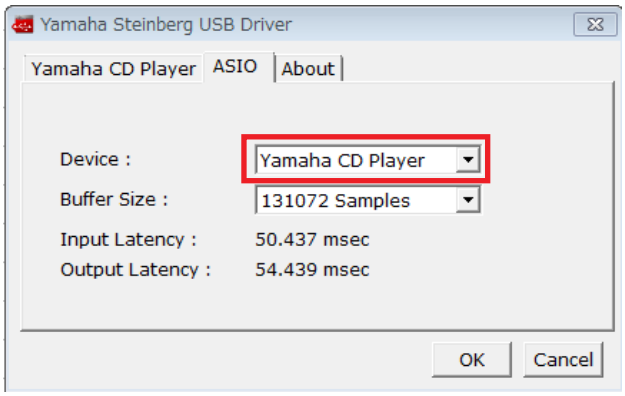
Installing Yamaha Steinberg USB Driver and configuring its settings

1 **Download “Yamaha Steinberg USB Driver” at the following Yamaha website.**
http://download.yamaha.com/

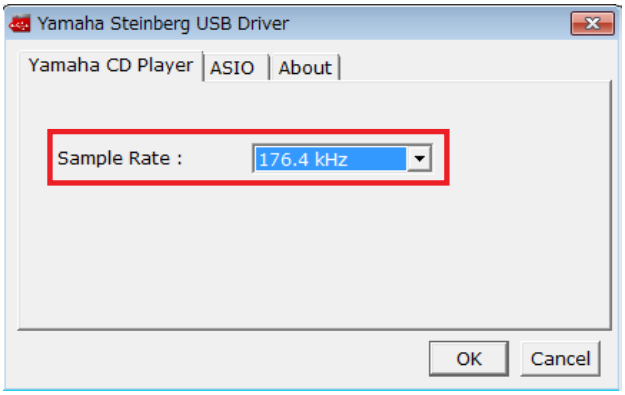
2 **Install “Yamaha Steinberg USB Driver” on your computer, connect the unit to your computer, then open its control panel.**
For details on the installation and how to open the control panel of the driver, refer to the Installation Guide supplied with the driver software.
For details on the connection, refer to the Owner’s Manual of the unit.

3 **Configure the following control panel settings.**

- “ASIO” setting
  Device: Yamaha CD player



- “Yamaha CD Player” setting
  Sample Rate: 176.4 kHz



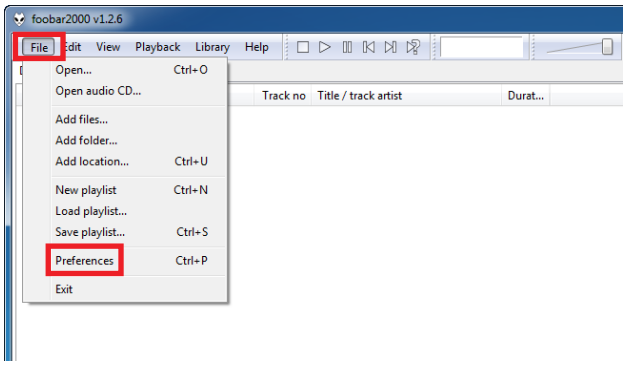
4 **Click [OK].**
Installation and settings of “Yamaha Steinberg USB Driver” is now completed.

Installing the “ASIO support” component

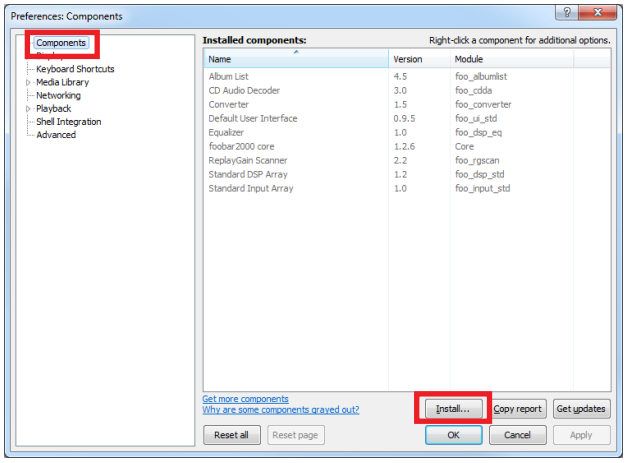
1 **Download the “ASIO support” component (foo_out_asio) at the following website.**

http://www.foobar2000.org/components/view/foo_out_asio

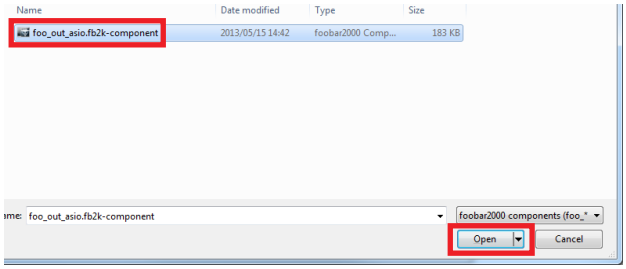
2 **Run foobar2000, then select [File] → [Preferences].**



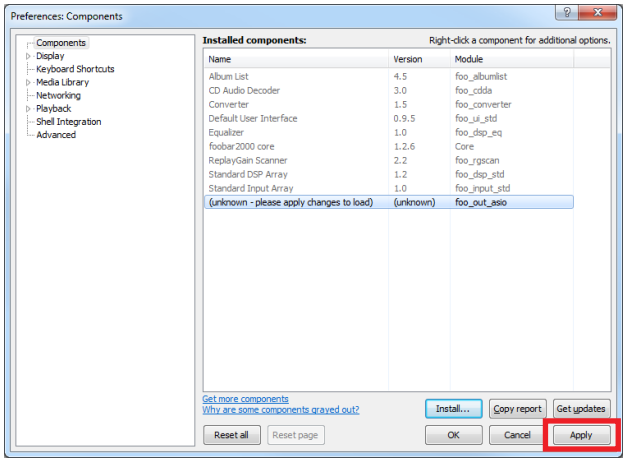
3 **Click [Components] → [Install].**



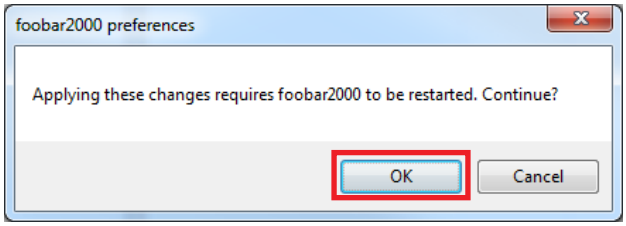
4 **Select the downloaded component “foo_out_asio.fb2k-component”, then click [Open].**



5 **Click [Apply].**

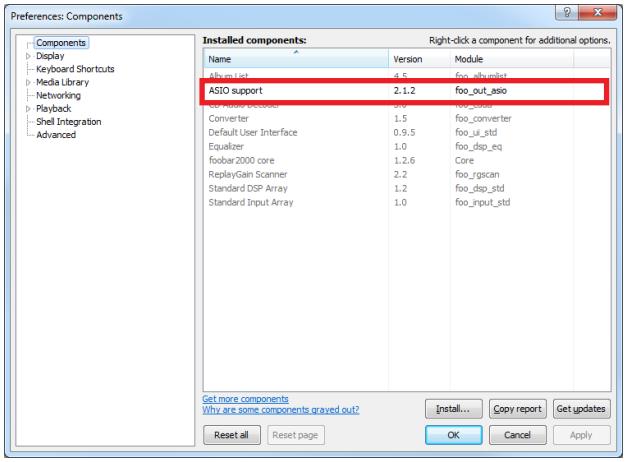


6 **In the dialog box, click [OK] to restart foolbar2000.**



7 **If foolbar2000 is restarted, click [File] → [Preferences] → [Components], then confirm "ASIO support" is listed in "Installed components".**

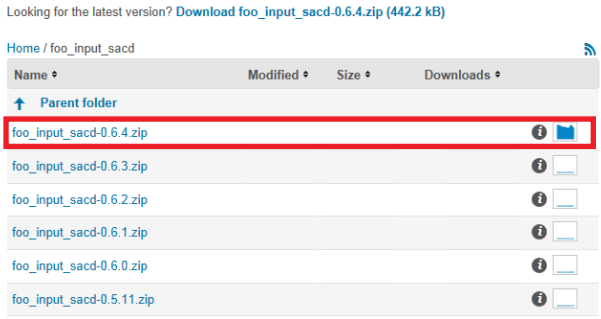
Installation of the "ASIO support" component is now completed.



Installing the “Super Audio CD Decoder” component

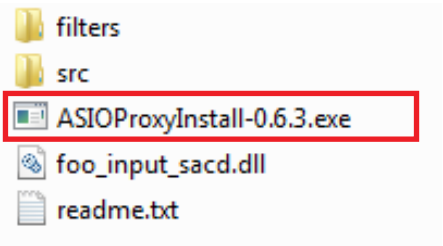
1 **Download the latest version of “foo_input_sacd-0.*.*.zip” at the following website.**

http://sourceforge.net/projects/sacddecoder/files/foo_input_sacd/



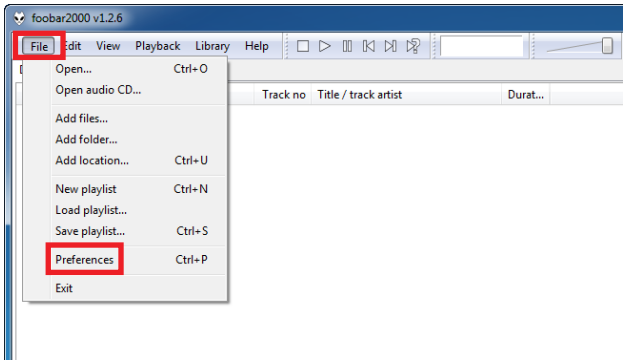
2 **Uncompress the downloaded file “foo_input_sacd-0.*.*.zip”.**

3 **In the uncompressed folder, double-click “ASIOProxyInstall-0.*.*.exe” to start installation.**

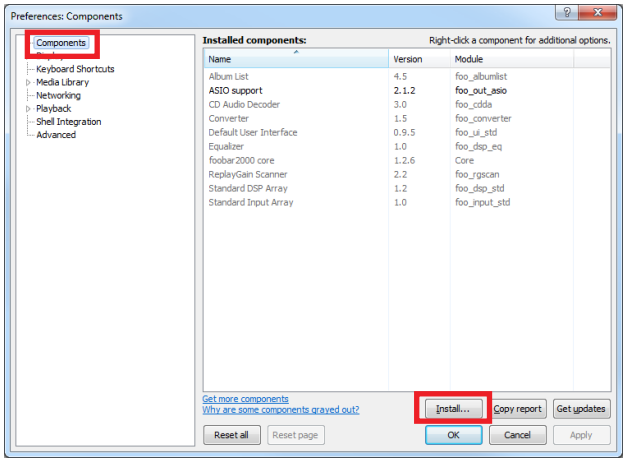


4 **Follow the on-screen instructions to install the component.**

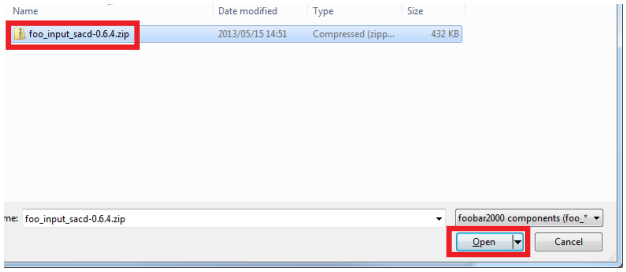
5 **Run foobar2000, then select [File] → [Preferences].**



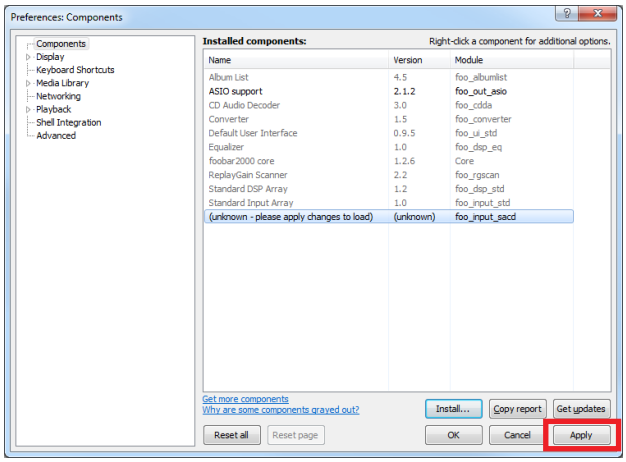
6 **Click [Components] → [Install].**



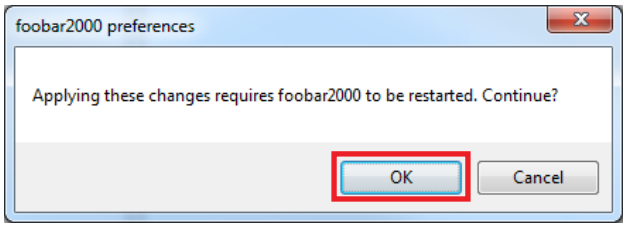
7 **Select the downloaded component “foo_input_sacd-0.*.*.zip”, then click [Open].**



8 **Click [Apply].**

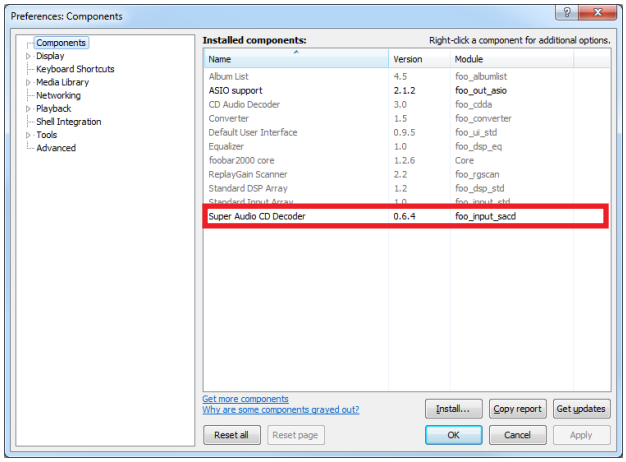


9 **In the dialog box, click [OK] to restart foolbar2000.**



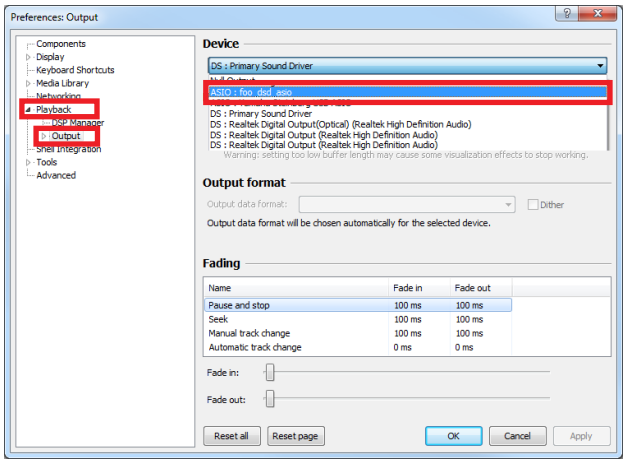
10 **If foolbar2000 is restarted, click [File] → [Preferences] → [Components], then confirm “Super Audio CD Decoder” is listed in “Installed components”.**

Installation of the “Super Audio CD Decoder” component is now completed.

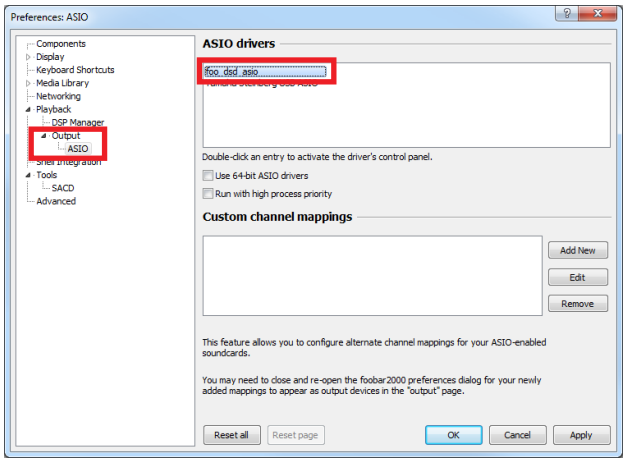


Configuring DSD playback settings of foobar2000

1 **Click [File] → [Preferences] → [Playback] → [Output], then select “ASIO:foo_dsd_asio” from the “Device” pull-down list.**



2 **Click [Output] → [ASIO], then double-click “foo_dsd_asio” in “ASIO drivers”.**

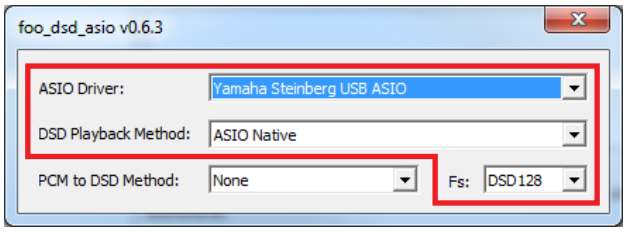


3 **Configure the following settings.**

ASIO Driver: Yamaha Steinberg USB ASIO

DSD Playback Method: ASIO Native

Fs: DSD64 (normal speed playback) or DSD128 (double speed playback)



4 **Click [X] (close button) to close the window.**

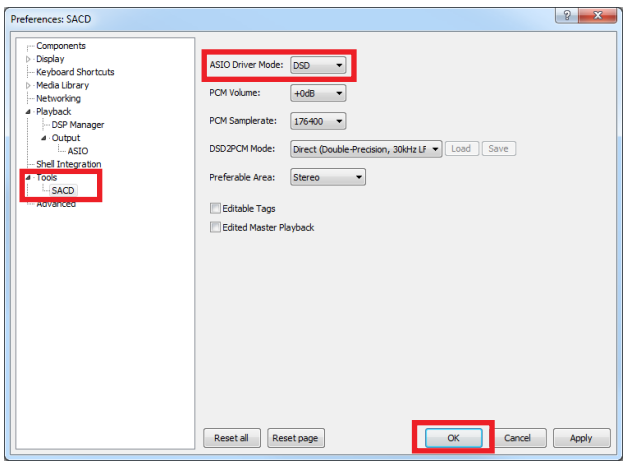
5 **Click [Tools] → [SACD], configure the following setting.**

ASIO Driver Mode: DSD

6 **Click [OK].**

DSD playback settings of foobar2000 is now completed.

You are ready to enjoy DSD audio playback on the unit.



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