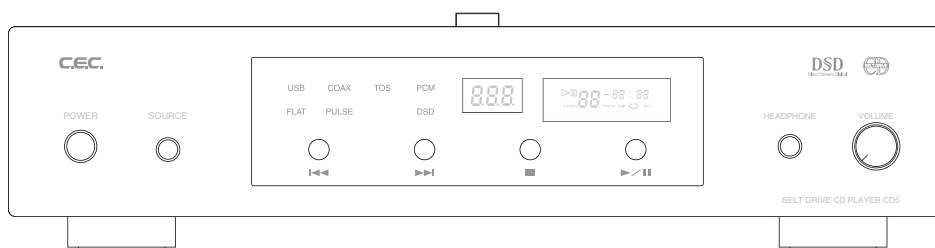**Belt Drive CD Player
USB Sound System**

CD5

Installation and Setup Guide
for USB Driver on Windows PC

Thank you for purchasing a CD5.
This guide book will show you how to install and setup the CD5 USB driver at your Windows PC to playback music files through USB connection.

C.E.C.

Contents

Introduction

The USB Interface equipped with CD5 is compatible to USB 2.0 audio device.

It is necessary for **Windows PC** users to install special driver for PCM music sources, which is possible to download from the CEC home page.

When ASIO and DSD drivers are installed to the freeware pc-music player, foobar2000, DSD files may be reproduced. This is to explain on how to install and set up those drivers using foobar2000.

    Compatible OS: Windows XP, Windows Vista, Windows 7, Windows 8

Mac PC (X10.6.8 or newer) are already equipped with a standard driver for USB 2.0 audio device, and it is not necessary to install CEC specific driver.

Download site
Windows users may access to download this specific driver at CEC home page.
    ▷ http://www.cec-web.co.jp/service/download/driver/index_ex.html
        ※ It is not abnormal to see SECURITY WARNING upon downloading and/or installation. You may
            continue to download and/or install according to the instructions by OS or Browser.

USB Driver (Your PC recognizes CD5 as a regular audio device.)
    ▷ BRAVO-HD (is the USB driver specialized in CD5, supplied by SAVITEC, USB Audio
       IC manufacturer.)

Necessary components to reproduce DSD files at foobar2000
    ▷ foo_out_asio_v2p1p2.fb2k-component (ASIO driver by foobar 2000)
    ▷ ASIOProxyInstall-0.6.0.exe (driver for the reasonable connection between ASIO and
       DSD)
    ▷ foo_input_sacd.fb2k-component (DSD driver by foobar 2000)
    Note: The above are the possible components publicized on our internet. Up-dated version at CD5 might
        not be assured.

Note: Free ware Music reproduction player foobar2000 can be downloaded at http://www.
   foobar2000.org/

USB Driver Installation

Install a USB driver, BRAVO-HD* on your Windows PC to recognize CD5 as USB audio device and playback PCM music files.

*BRAVO-HD is an exclusive USB driver that a USB Audio IC maker, SAVITEC company provides for CD5.
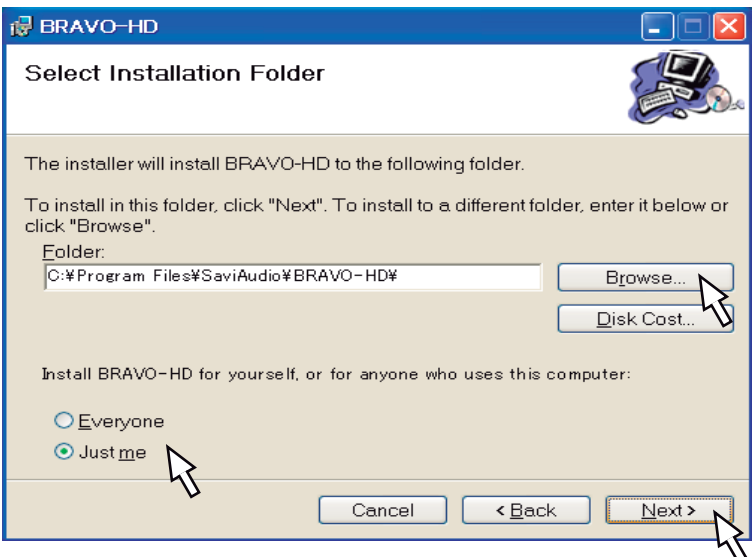
1. Installation for BRAVO-HD

1.1. Melt (open) the "CD5_usb_win.zip" file downloaded from CEC download site and save the melted folder at ex. desktop.
1.2. Double-click and open the saved "cd5_usb_win" folder.
1.3. Double-click "setup.exe" in the folder to start the installation.
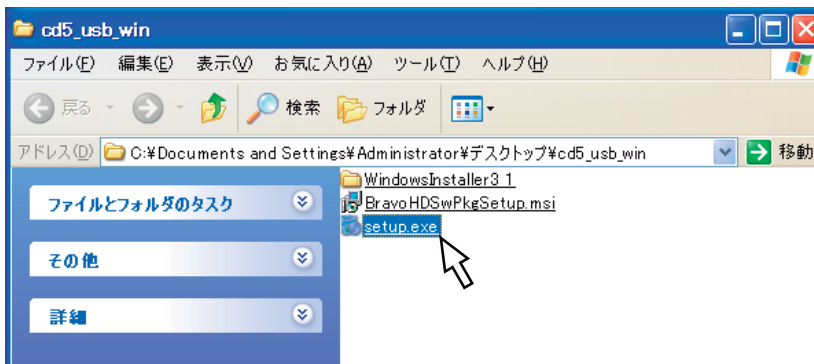
1.4. BRAVO-HD install wizard will start. Click "Next" to continue.
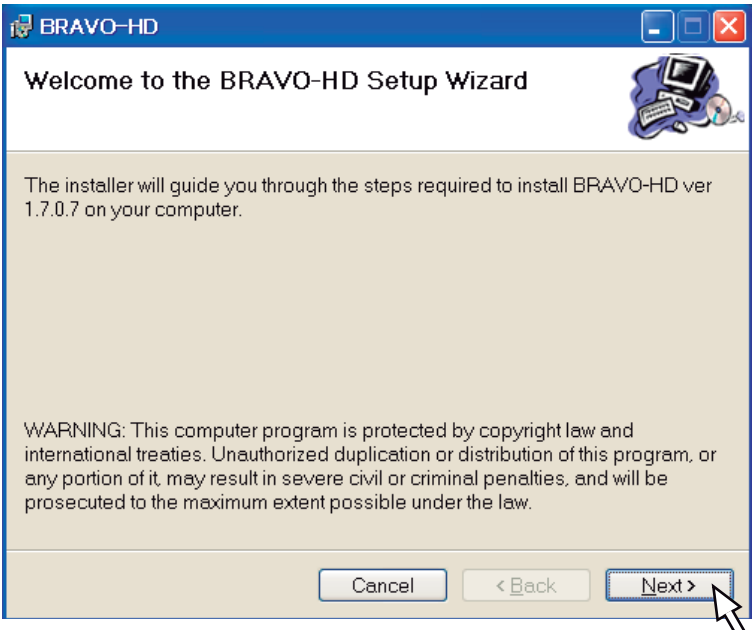
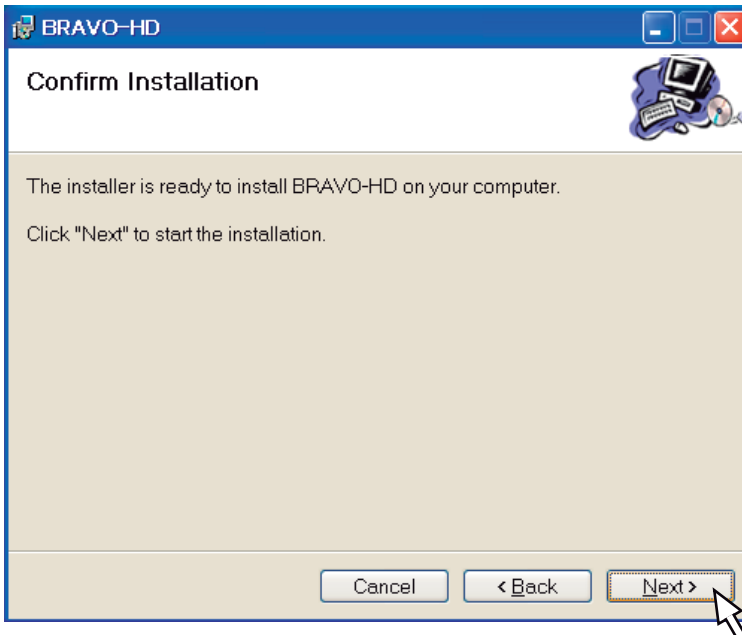1.5. Select an install folder and Windows user.

Click "Browse" to select an installation folder other than the default folder being showed.
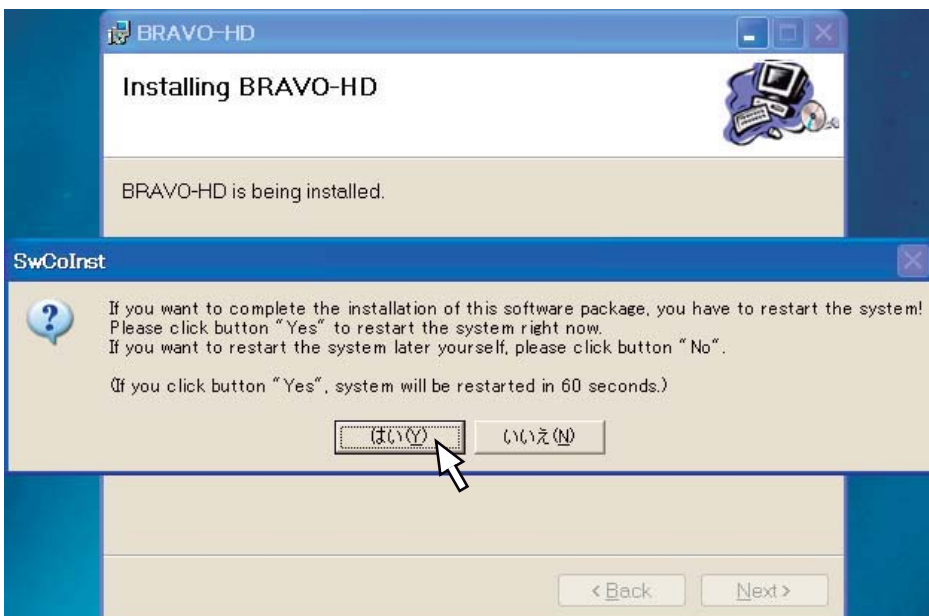
Select "Everyone" for all Windows users to use BRAVO-HD or "Just me" only for the user
that is installing the driver now.

Click "Next" to continue.

1.6. Click "Next" to start the installation.

1.7. When the installation finishes a short-cut icon "BRAVO-HD Audio CPL" will be created on desktop and the restart wizard will appear. Click "Yes(Y)" to restart the computer.

1.8. After the computer restarted connect with CD5 via USB cable.

1.9. Turning on CD5 the computer will recognize CD5 as CEC CD5 HS USB Audio and automatically apply it to the output device. You can check the setting through control panel - sound and audio device property. If not select CD5 as output device.

Sound property on WindowsXP
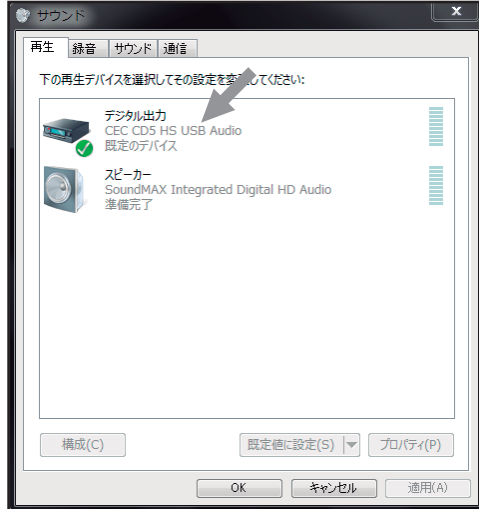
Sound property on Windows7

1.10. Starting a PC-music after selecting the USB input on CD5 you can listen to the playback music through the analog or headphones output on CD5.

CD5 USB input is compatible with up to 32bit/384kHz PCM signal but the sampling frequency may be limited by the system setting or PC-Music player.

Refer to "BRAVO-HD Control Panel" after completing "Installation and Setup to play DSD files"

Note: You can delete the downloaded "cd5_usb_win.zip" file and the saved "cd5_usb_win" folder with files after the installation finished.

Installation and Setup to play DSD files

Installing ASIO and DSD drivers to a freeware pc-music player foobar2000 for Windows
DSD64(2.8224MHz) and DSD128(5.6448MHz) files can be played through CD5.
Before starting these steps install foobar2000 to your Windows PC, which can be downloaded
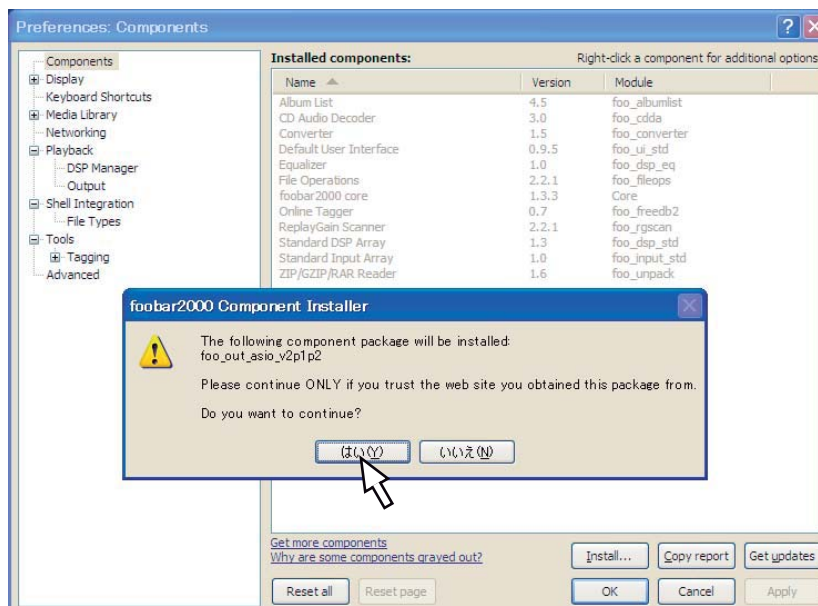from http://www.foobar2000.org/.

2. Installation for foobar2000 ASIO driver

2.1. Melt (open) the downloaded "cd5_dsd-plugin_fb2k.zip" file and save the melted folder at
  ex. Desktop.
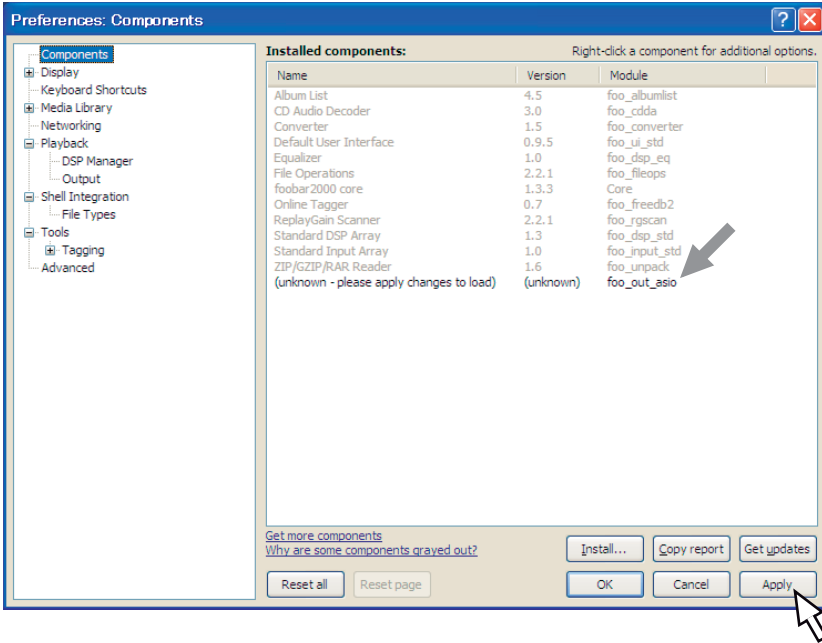2.2. Double-click open the saved "cd5_dsd-plugin_fb2k" folder.
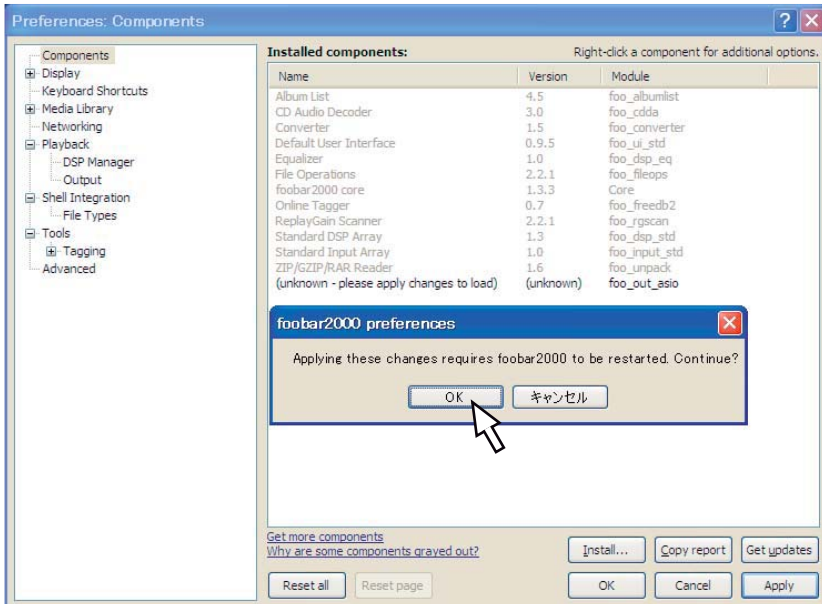2.3. Double-click "foo_out_asio.fb2k-component" in the folder.
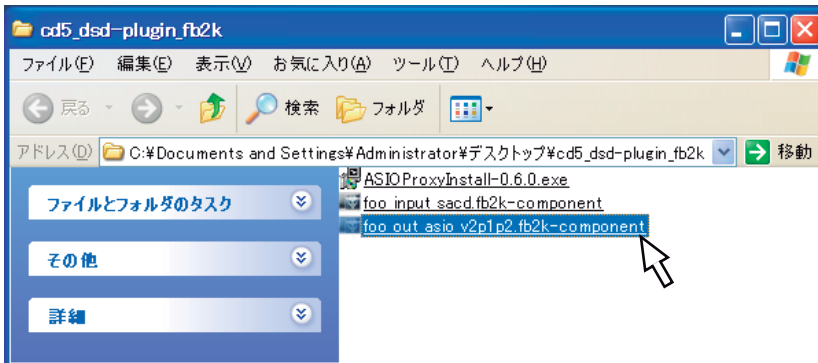
2.4. foobar2000 Components Installer will start. Click "Yes(Y)" to continue.

2.5. The installing component "foo_out_asio" will be listed up marked with (unknown). Click "Apply" to continue the installation.
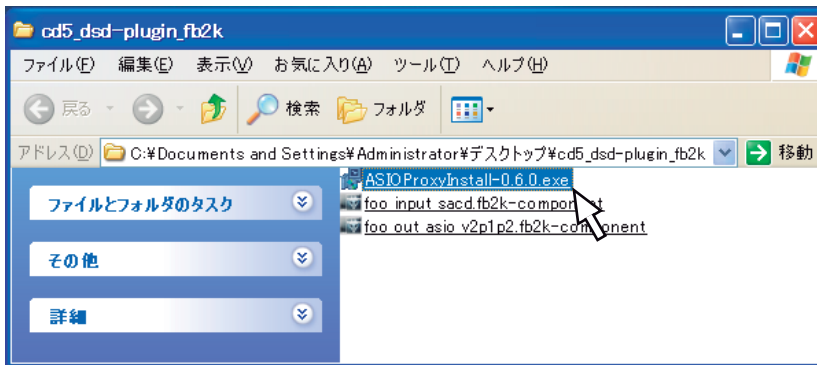

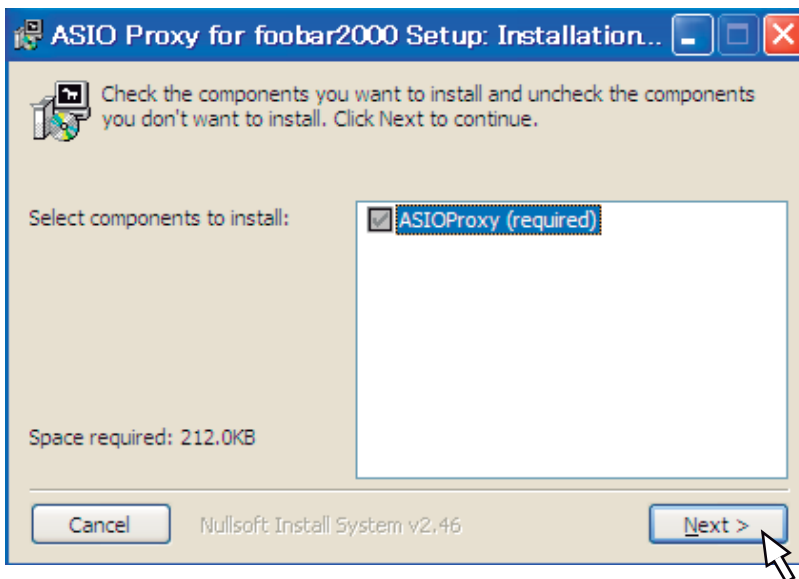2.6. Click "OK" to complete the installation and change. foobar2000 will restart.

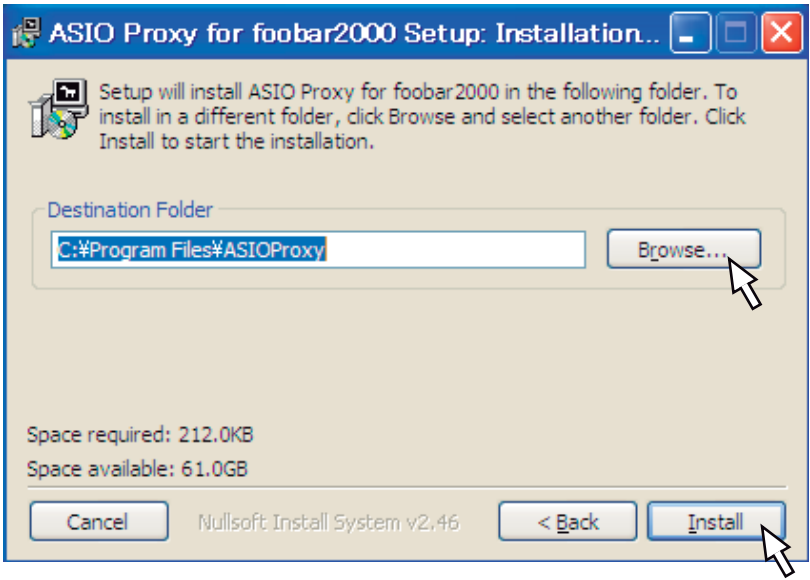### 3. **Installation for foobar2000 ASIO Proxy**

3.1. Double-click "ASIOProxyInstall-0.6.0.exe" in the "cd5_dsd-plugin_fb2k" folder.

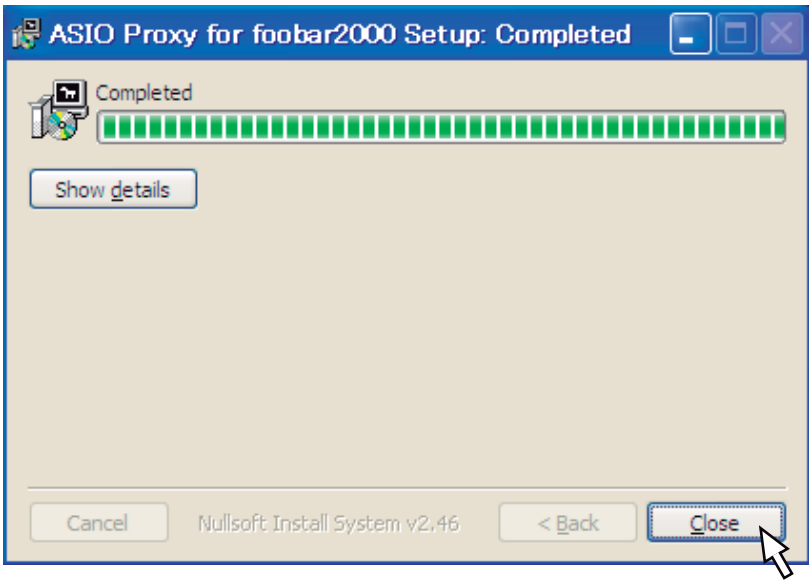3.2. Click "Next" on ASIO Proxy for foobar2000 Setup wizard to continue.
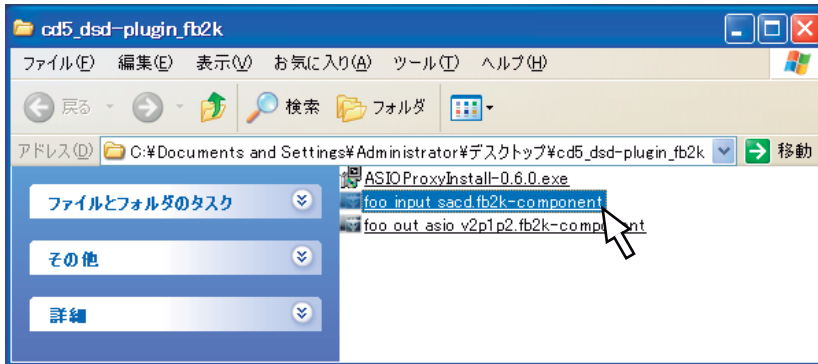
3.3. Select an install folder.

Click "Browse" to select a folder other than the default folder being showed.

Click "Install" to start the installation.

4.2. Install will finish soon and click "Close" to complete the installation.
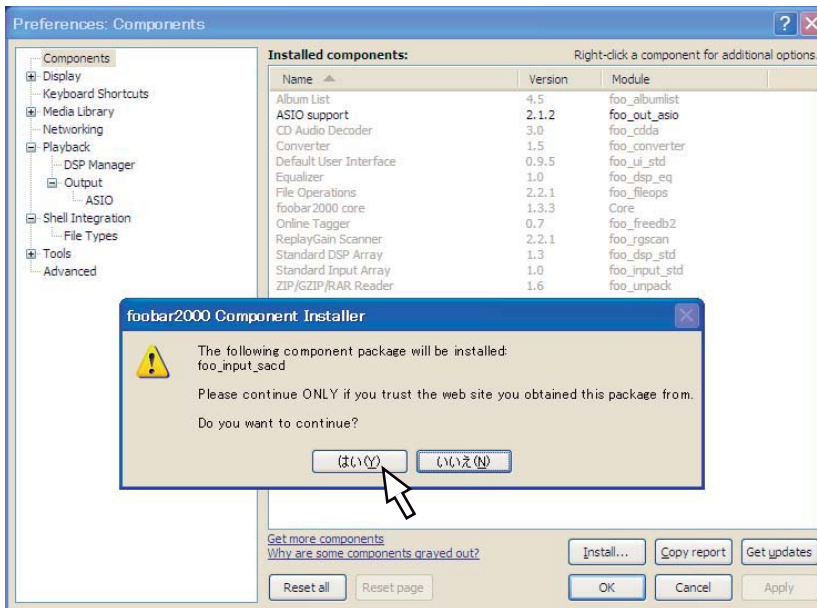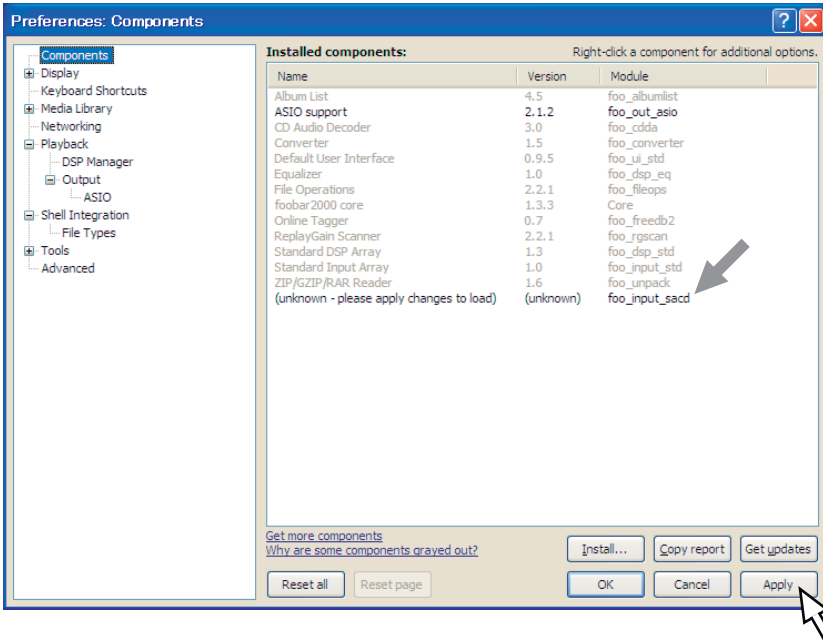
4. Installation for foobar2000 DSD Driver

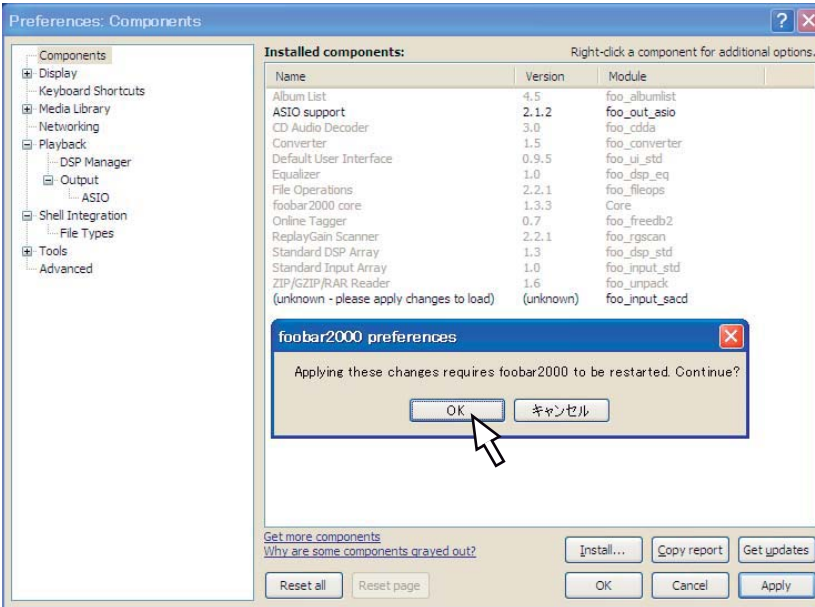4.1. Double-click "foo_input_sacd.fb2k-component" in the "cd5_dsd-plugin_fb2k" folder.

4.2. foobar2000 Component Installer will start. Click "Yes(Y)" to continue.

4.3. The installing component "foo_input_sacd" will be listed up marked with (unknown). Click "Apply" to continue the installation.
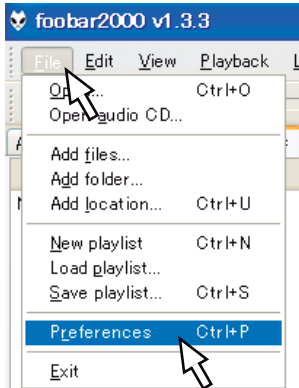

2.6. Click "OK" to complete the installation and change. foobar2000 will restart.
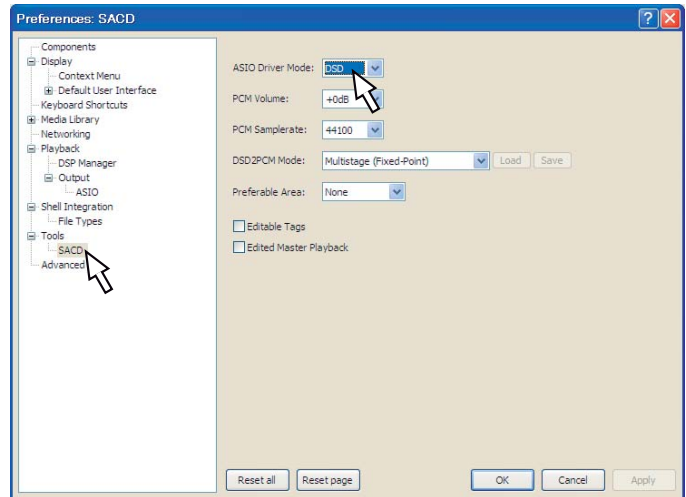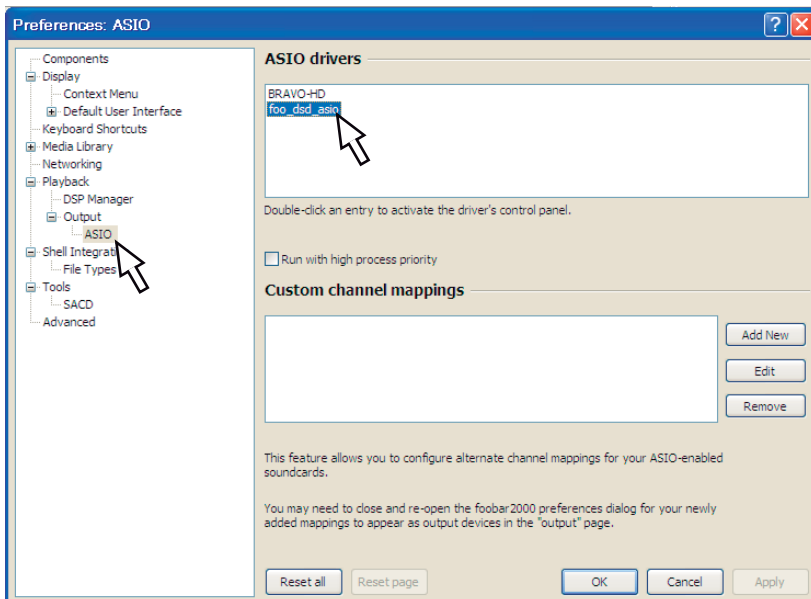
5. DSD Playback Setting on foobar2000

5.1. Click "File" on foobar2000 to open "Preferences".

5.2. Click "Tools - SACD" on the left side tree and select "DSD" at ASIO Driver Mode.
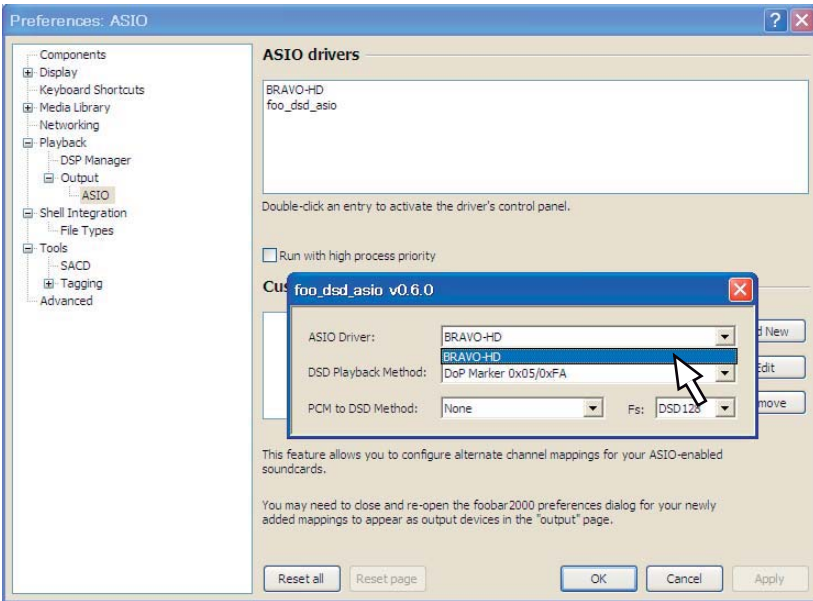

5.3. Click "Playback - Output - ASIO" on the left side tree, and double-click "foo_dsd_asio" listed at ASIO drivers.
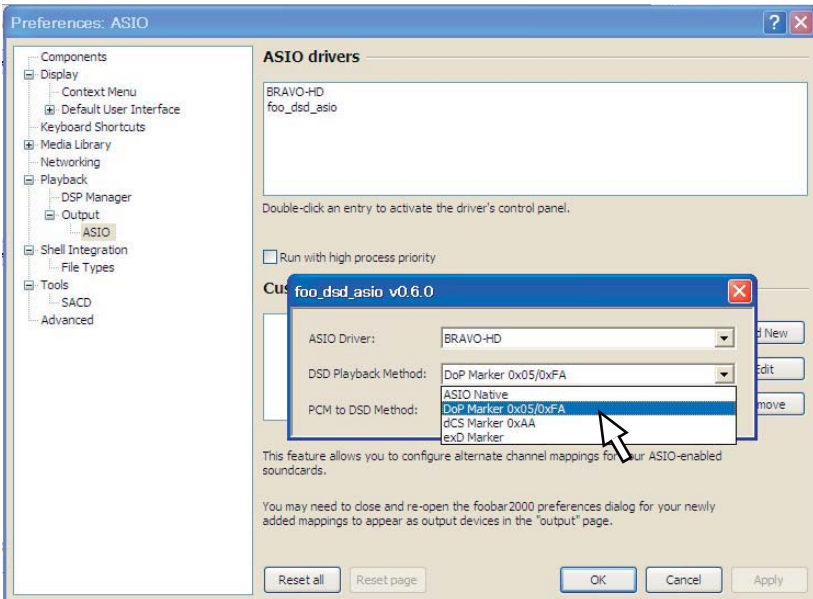
5.4. Dialog for foo_dsd_asio v0.6.0 setting will appear.

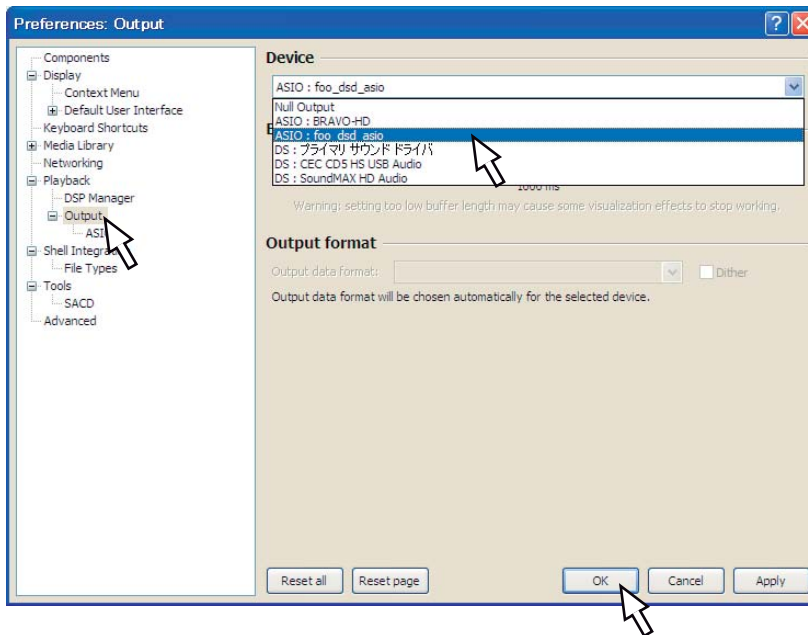Select "BRAVO-HD" at ASIO Driver.

Select "ASIO Native", "DoP marker" or "dCS Marker" at DSD Playback Method.

Note: ASIO Native is not compatible with DSD128.

5.5. Click "Playback - Output" at the left side tree and select "ASIO:foo_dsd_asio" at Devices.
    And click "OK" to finish the setup.

All the installation and setup have completed. Now foobar2000 is compatible with DSD64/128 and PCM up to 32bit/384kHz through CD5.

NOTE

☐ In order to avoid any interruption or affection from PC upon listening to your desired music through ASIO at foobar2000, set the output of reproduction to the other than CEC CD5 HS USB Audio at Sound and Audio Device property at your PC (refer to page 6). The volume control and/or mute function can be operated by foobar 2000 and/or amplifier.

☐ When you listen to the music through the other sound/playback device than ASIO at foobar 2000 like Windows Media Player and/or iTunes, set the output of reproduction to CEC CD5 HS USB Audio at Sound and Audio Device property at your PC.

BRAVO-HD Control Panel
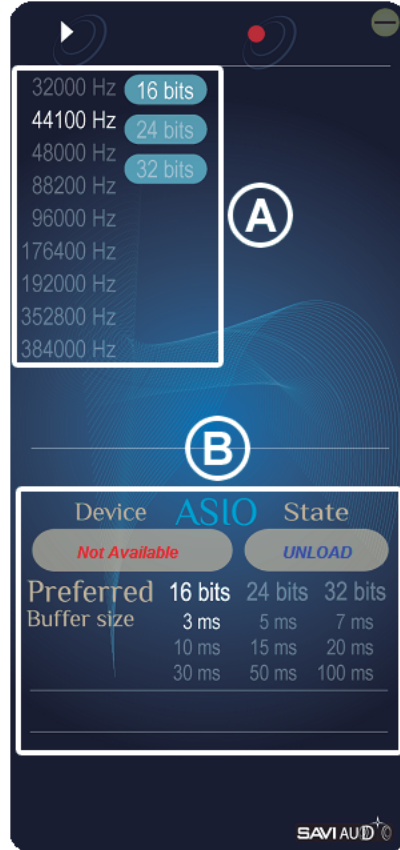
1. Start "BRAVO-HD Audio CPL" from the short-cut on desktop or programs menu. BRAVO-HD control panel will appear.
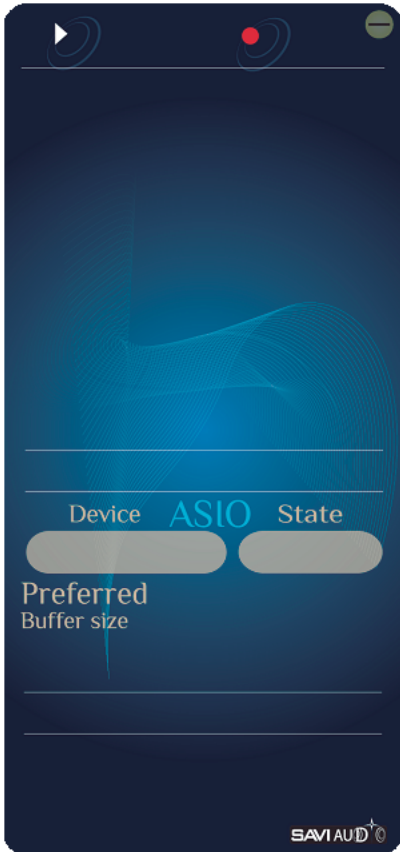
2. Turning on CD5 connected via USB cable the BRAVO-HD control panel will change to show a current setting.

In the area marked with Ⓐ click to change the sample rate and/or bit rate to be used on Windows sharing mode.

Note: WindowsXP does not have the sample rate and bit rate settings for sharing mode, thus Ⓐ is not showed.

In the area marked with Ⓑ the current setting and playback via foobar2000 ASIO output are displayed. And click to change the bit rate and buffer size.

Note: Ⓑ does not work on playback via other than ASIO.

3. Changing the sample rate and bits per sample on BRAVO-HD control panel the Windows system setting on "sound - digital output property" will change accordingly, and vice versa.

Note: Setting 352.8kHz or 384kHz the sound from ex. an internet browser may be unstable and noisy. In that case set the sample rate 192kHz or lower and restart.

4. PCM, bit rate, sampling frequency and buffer size of a current PCM playback via ASIO like a foobar2000 output setting are displayed.
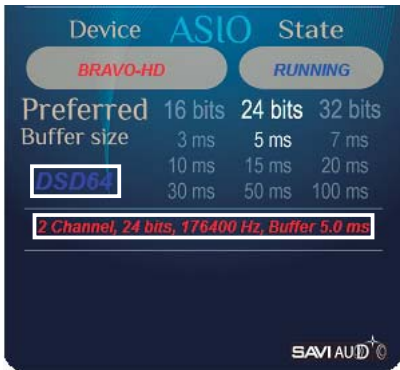

Ex. Playback after changing the bit rate and buffer size during stop will show the new settings.

Note: Bit rate setting should be the same as or more than playback file. Otherwise the bit rate for output is less than the original.

Note: By smaller buffer size setting against a higher resolution music file a continuous noise on music from the beginning, pop noise or interruption may happen. In that case set the buffer size bigger and restart.

5. Displaying a DSD64/2.8MHz playback.

Note: When playing a DSD file set the bit rate 24 or 32. 16 bits setting can not play any DSD.

Ex. Playback after changing to 32 bits and 10ms buffer during stop will show the new settings.

6. Displaying a DSD128/5.6MHz playback.

Note: Start BRAVO-HD Audio CPL to see a current playback or change the settings. You don't need to start it per playback.

19

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CEC Holdings Co., Ltd., Japan