

# Installation Manual

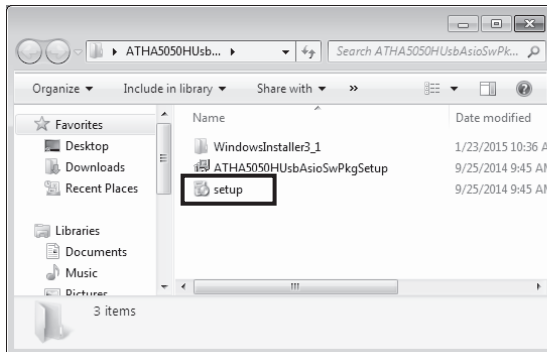
## (How to Install the Dedicated Driver Software)

### Windows 7, Windows 8, Windows 8.1 and Windows 10

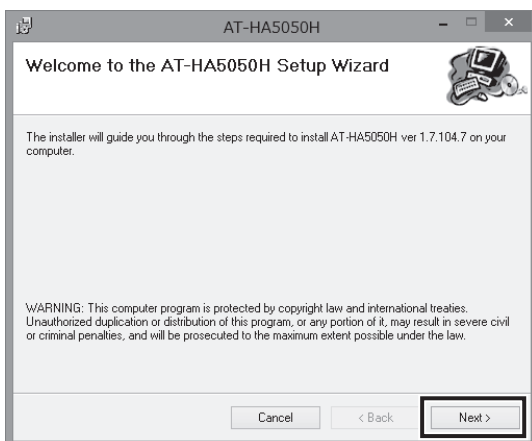
AT-HA5050H

- \* Once installation of the dedicated driver software is complete, the computer will restart automatically.  
Be sure to save and close all files and applications beforehand.
- \* Disconnect the headphone amplifier before installing software. Otherwise, the software may not install properly.

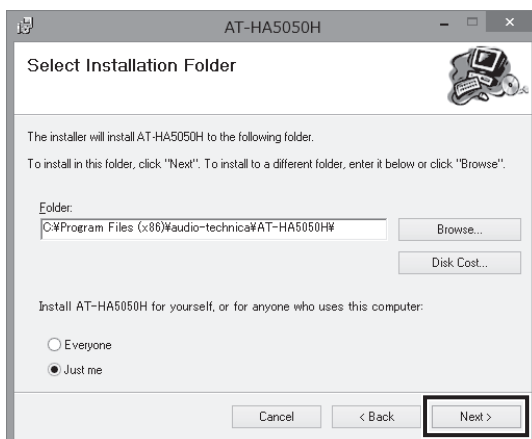
1. Uncompress the downloaded ZIP file and double-click on the "Setup" file to start the installation.



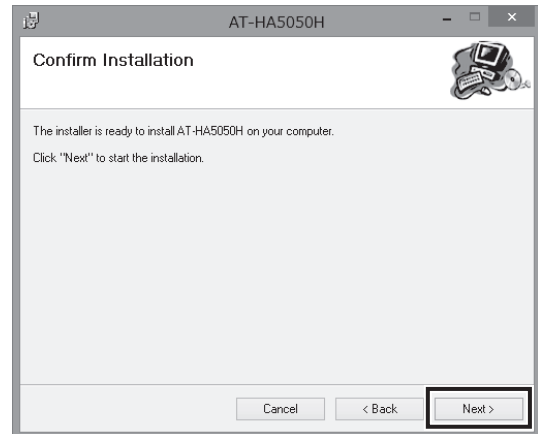
2. Click "Next".



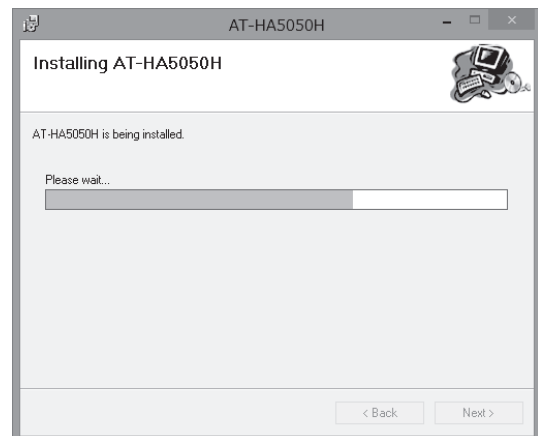
3. Click "Next".
  - \* Feel free to install the software in the folder of your choice.



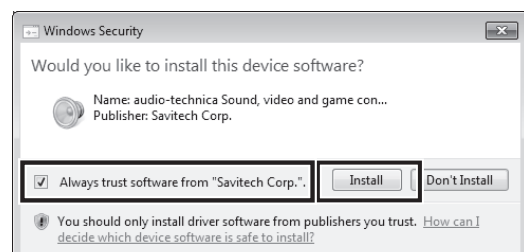
4. Click "Next".



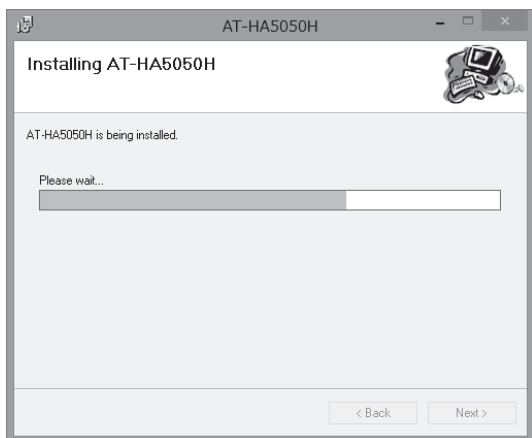
5. Installation will start (it will take some time to install).



6. When the following window displays, check the box next to "Always trust software from 'Savitech Corp.'" and click "Install".

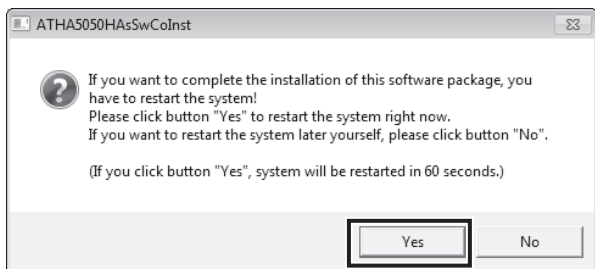


7. Installation will resume (it will take some time to complete).

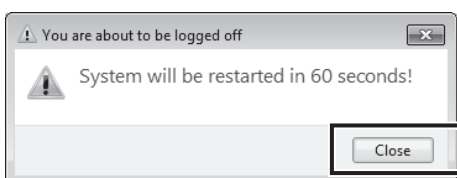


8. Click on "Yes". After 60 seconds, your computer will restart automatically.

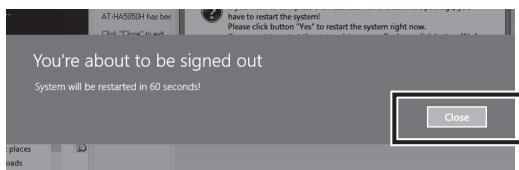
\* Be sure any open files have been saved before restarting.



9. When the following window displays, click on "Close".

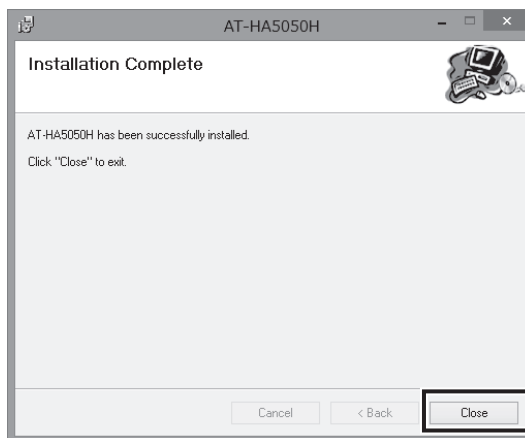


**Windows 7**



**Windows 8, Windows 8.1, and Windows 10**

10. When the installation is completed and the following window is displayed, click on "Close".



11. Once your computer restarts successfully, the installation of the dedicated driver software is complete. After restarting your computer, continue to "Computer Setup".

# Setup Manual (Computer Setup)

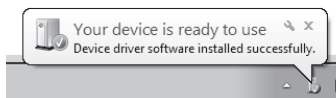
AT-HA5050H

## Windows 7, Windows 8, Windows 8.1 and Windows 10

\* Before setting up your computer, connect the headphone amplifier to your computer with USB cable and select "USB input (USB)" using the input selector switch on the front panel of the headphone amplifier.

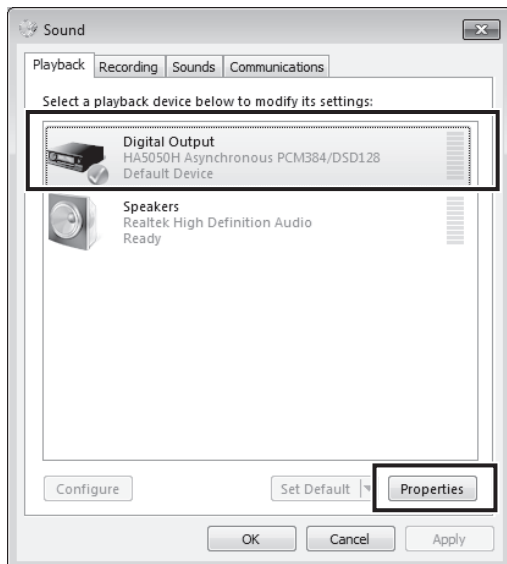
1. When connecting the headphone amplifier for the first time, the headphone amplifier will be automatically registered as an audio device (it may take some time to register).

\* When the USB connection mode selector switch on the rear panel of the headphone amplifier is in "the asynchronous mode", it will be registered as "HA5050H Asynchronous PCM384/DSD128". When it is in the "Adaptive Mode", it will be registered as "HA5050H Adaptive PCM192".



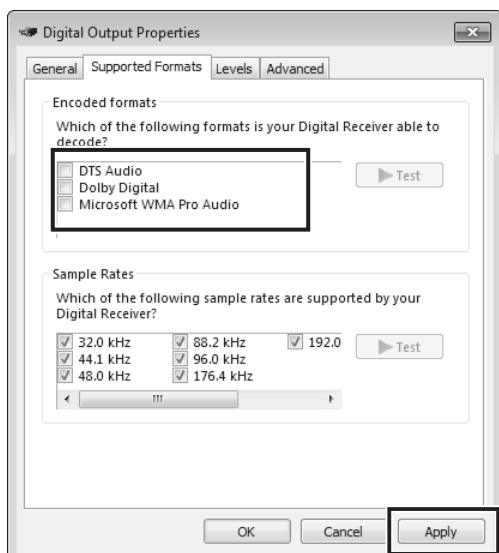
2. Click on "Start" -> "Control Panel" -> "Hardware and Sound" -> "Sound" -> "Playback" tab. Select "HA5050H Asynchronous PCM384/DSD128" and click "Set Default" and then click "Properties".

\* When the USB connection mode selector switch on the rear panel of the headphone amplifier is in the "Adaptive Mode", "HA5050H Adaptive PCM192" will be displayed.



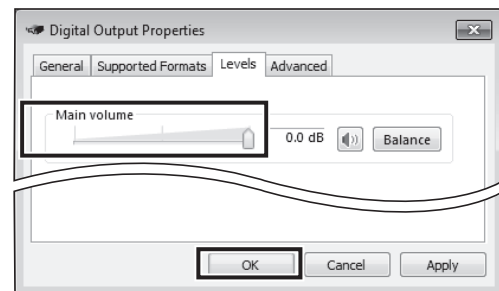
3. Select the "Supported Formats" tab and uncheck all the "Encoded Formats". Check all the "Sample Rates" and click "Apply".

\* When "Encoded Formats" is checked, loud, unwanted noise may be heard.



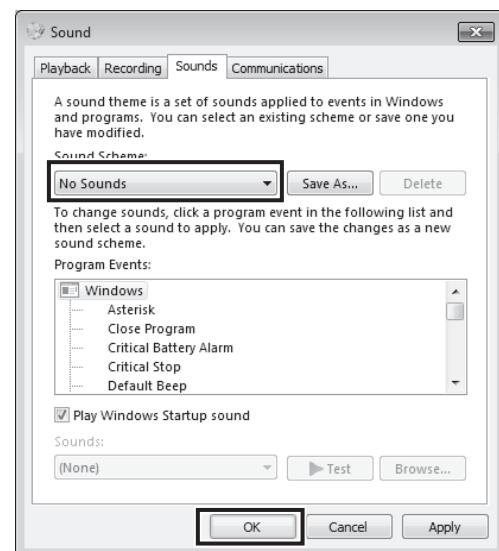
4. Select the "Levels" tab, set the main volume to maximum, and click "OK".

\* When playing back DSD data with the volume set to a level other than maximum, unwanted noise may be heard.

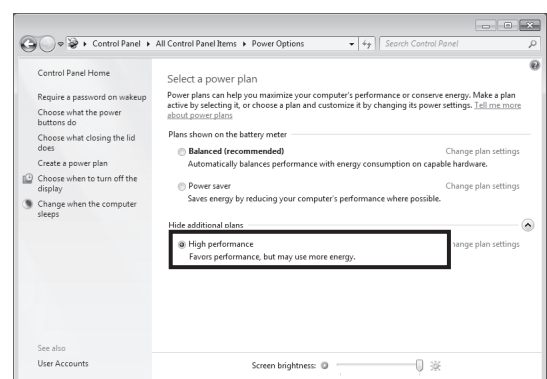


5. Click on "Sound" -> "Sounds" tab. Set the sound settings to "No Sounds" and click "OK".

\* If you select a setting other than "No Sounds", unwanted noise may be heard during playback of DSD data when Windows sound effect is output.



6. Click on "Start" -> "Control Panel" and open "Power Options". When the computer is set to power saver mode, a "clicking" noise may be heard during playback of music. If that is the case, select "High Performance" or "Balanced" instead of the power saver setting.



## Mac OS

\* Before setting up your computer, connect the headphone amplifier to your computer with USB cable and select "USB input (USB)" using the input selector switch on the front panel of the headphone amplifier.  
When using the headphone amplifier with Mac OS, it is not necessary to install the dedicated driver software.

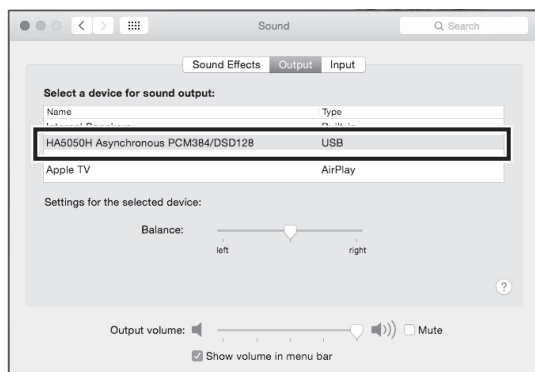
### ■ How to select a sound device

1. Under "Application", click on "System Preferences" -> "Sound".



2. Select the "Output" tab on the setting screen and select "HA5050H Asynchronous PCM384/DSD128" from "Select a device for sound output".

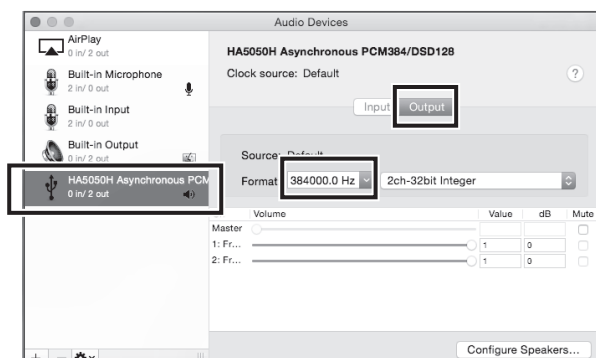
\* When the USB connection mode selector switch on the rear panel of the headphone amplifier is in the "Adaptive Mode", "HA5050H Adaptive PCM192" will be displayed.



### ■ How to select a sound format

1. Click on "Application" -> "Utilities" and open "Audio MIDI Setup".
2. Click on "Audio Devices" -> "HA5050H Asynchronous PCM384/DSD128", and select the sampling rate from the "Output" tab.

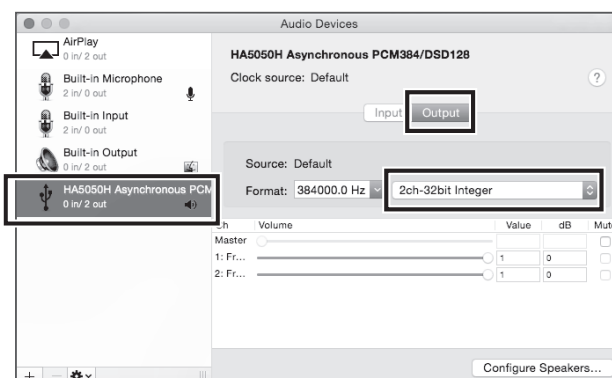
\* When the USB connection mode selector switch on the rear panel of the headphone amplifier is in the "Adaptive Mode", "HA5050H Adaptive PCM192" will be displayed.



3. Next, select the bit depth.

\* Select "desired bit depth".

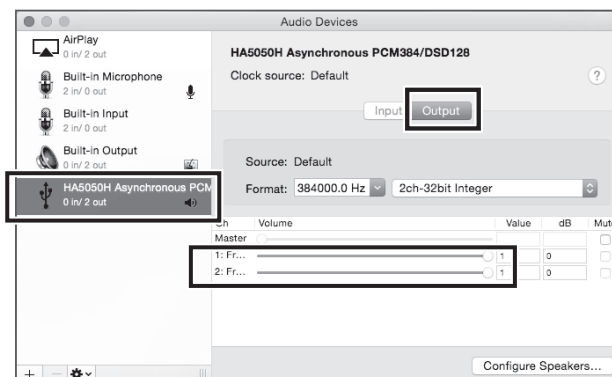
To play back DSD data, select "2 ch-24 bit integer" or "2 ch-32 bit integer". Add a space after period if you select "2 ch-16 bit integer", unwanted noise may be heard.



4. Next, set maximum volume level.

\* When playing back DSD data with the volume set to a level other than maximum, unwanted noise may be heard.

\* Master ch cannot be changed,



# How to operate the Control Panel

AT-HA5050H

## Windows OS only

The Control Panel is installed along with the dedicated driver software and the shortcut icon is created on the Desktop.

\*Compatible with Windows 7, Windows 8, and Windows 8.1. Audio-Technica have confirmed this can also operate on Windows 10.

The Control Panel is only enabled when used in ASIO mode. When using the headphone amplifier, it is recommended to use ASIO mode. When WASAPI mode or Direct Sound mode is used, change the sampling frequency and the bit depth using the music player software.

1. Connect the headphone amplifier to your computer with USB cable and select "USB input (USB)" using the input selector switch on the front panel.
2. Double-click the "HA5050H USB ASIO CONTROL PANEL" icon on the Desktop.



3. Select the "bit depth" and "buffer" when outputting in ASIO mode.

\*To play back DSD data in DoP mode, select 24 bit or 32 bit.

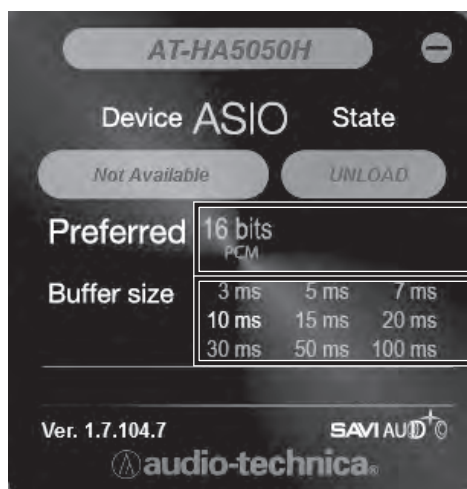
\*If sound stoppage or a "clicking" noise occurs during music playback, set a longer buffer.

\*In order to use "HA5050H USB ASIO CONTROL PANEL", the output of the music playback software must be set to ASIO.

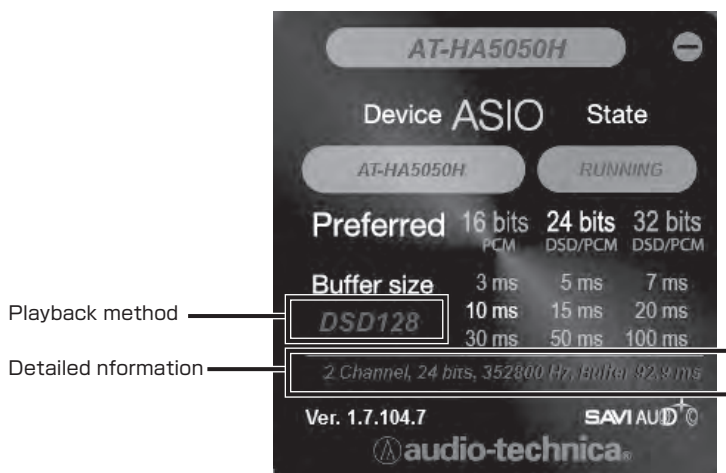
\*If the output of your music playback software is set to something other than ASIO (such as WASAPI or Direct Sound), "HA5050H USB ASIO CONTROL PANEL" will be disabled. If this is the case, bit depth of 16 will appear.

\*When an output mode other than ASIO (such as WASAPI or Direct Sound) is used, configure various settings from the music player software or the following Windows Control Panel.

Click on "Start" -> "Control Panel" -> "Sound" -> "Playback" tab -> "AT-HA5050H" -> "Properties".



4. When the music is played in ASIO mode, the current playback method (PCM, DSD64, DSD128) and detailed information are displayed.



USB compatibility list

AT-HA5050H

Windows OS, Mac OS

(unit: bit)

HA5050H Asynchronous PCM384 / DSD128			Windows 7	Windows 8 / 8.1 / 10
ASIO	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz, 352.8 kHz, 384 kHz	○ 16-32	○ 16-32
	DSD	DoP64 176.4 kHz	○ 24-32	○ 24-32
		DoP128 352.8 kHz	○ 24-32	○ 24-32
		Native64 88.2 kHz	○ 32	○ 32
		Native128 176.4 kHz	Incompatible*1	Incompatible*1
WASAPI	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz, 352.8 kHz, 384 kHz	○ 16-32	○ 16-32
	DSD	DoP64 176.4 kHz	○ 24-32	○ 24-32
		DoP128 352.8 kHz	○ 24-32	○ 24-32
		Native64 88.2 kHz	Incompatible	Incompatible
		Native128 176.4 kHz	Incompatible	Incompatible
Direct Sound	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz	○ 16-32	○ 16-32
	DSD	Incompatible	Incompatible	Incompatible

HA5050H Adaptive PCM192			Windows 7	Windows 8 / 8.1 / 10
ASIO	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz	○ 16-32	○ 16-32
	DSD	DoP64 176.4 kHz	Incompatible	Incompatible
		DoP128 352.8 kHz	Incompatible	Incompatible
		Native64 88.2 kHz	Incompatible*3	Incompatible*3
		Native128 176.4 kHz	Incompatible*3	Incompatible*3
WASAPI	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz	○ 16-32	○ 16-32
	DSD	DoP64 176.4 kHz	Incompatible	Incompatible
		DoP128 352.8 kHz	Incompatible	Incompatible
		Native64 88.2 kHz	Incompatible	Incompatible
		Native128 176.4 kHz	Incompatible	Incompatible
Direct Sound	PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz	○ 16-32	○ 16-32
	DSD	Incompatible	Incompatible	Incompatible

HA5050H Asynchronous PCM384 / DSD128		Mac OS
PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz, 352.8 kHz, 384 kHz	○ 16-32
DSD	DoP64 176.4 kHz	○ 24-32 *2
	DoP128 352.8 kHz	○ 24-32 *2
	Native64 88.2 kHz	Incompatible
	Native128 176.4 kHz	Incompatible

HA5050H Adaptive PCM192		Mac OS
PCM	32 kHz, 44.1 kHz, 48 kHz 88.2 kHz, 96 kHz, 176.4 kHz 192 kHz	○ 16-32
DSD	DoP64 176.4 kHz	Incompatible
	DoP128 352.8 kHz	Incompatible
	Native64 88.2 kHz	Incompatible
	Native128 176.4 kHz	Incompatible

\* 1 If you play accidentally, a loud distorted sound will be emitted.  
\* 2 When 16 bit is selected, playback will start without any sound being heard.  
\* 3 Playback will start without any sound being heard.

\*Once installation of the dedicated driver software is complete, the computer will restart automatically. Be sure to save and close all files and applications beforehand.

\*Disconnect the headphone amplifier before installing software. Otherwise, the software may not install properly.

### Connection

**Q:** When the headphone amplifier is connected to my computer, the message "Installation of the driver failed" is displayed. (Windows only)

**A1:** If the headphone amplifier is connected to your computer before installation of the dedicated driver software is completed, the driver will not be recognized correctly. Add a space after period install the dedicated driver software first. (You need to restart your computer after installation.)

**A2:** Reinstalling the driver may improve it.

After uninstalling "AT-HA5050H" from "Start" -> "Control Panel" -> "Add or Remove Programs", reinstall it.

\*When the device is connected for the first time, it may take a while to be recognized.

Do not disconnect the cable or operate the switch while it is being recognized.

### HA5050H ASIO CONTROL PANEL

**Q:** "HA5050H USB ASIO CONTROL PANEL" cannot be found on Mac OS.

**A:** There is no "HA5050H USB ASIO CONTROL PANEL" on Mac OS.

For various settings, click on "Application" -> "Utilities" -> "Audio MIDI Setup" to set.

### Playback

**Q:** Sound source from computer does not play through AT-HA5050H.

**A1:** Click on "Start" -> "Control Panel" -> "Sound" -> "Playback" to check that "HA5050H Asynchronous PCM384/DSD128" or "HA5050H Adaptive PCM192" is selected.

**A2:** Check that the "AT-HA5050H" is selected as the output destination of the player.

**A3:** Kernel streaming playback is not supported. For the supported playback systems, refer to the attached sheet "List of Supported USB Playback Systems".

**Q.** DSD sound source is not played back correctly.

**A1:** To play back DSD sound source, the output bit depth must be set to 24 bit or 32 bit.

For Windows: Open "HA5050H USB ASIO CONTROL PANEL" to set.

For Mac: Open "Application" -> "Utilities" -> "Audio MIDI Setup" to set.

**A2:** To play back DSD sound source, the highest volume settings of your computer and player software must be used.

For Windows: Click on "Start" -> "Control Panel" and open "Sound" to set.

For Mac: Select "Application" -> "Utilities" -> "Audio MIDI Setup" -> "Audio Devices" to set.

Or select "System Preferences" -> "Sound" -> "Sound Output Device" to set.

**A3:** Native DSD128 sound source output is not supported.

To play back DSD128 sound source, set to DoP output on the player software.

**Q:** When a track is changed during playback on my computer, noise results (for DoP output).

**A:** In some player software, it has been confirmed that malfunctions such as noise occur when the following sound source format is switched.

- PCM 176.4 kHz ⇔ DSD64
- PCM 352.8 kHz ⇔ DSD128

In these cases, audio may be improved by upsampling PCM playback to 192 kHz or 384 kHz in the settings of player software.

**Q:** Noise or sound stoppage occurs during playback of audio on my computer.

**A1:** When peripherals such as an external HDD or SD card are connected, it can cause sound stoppage. This may be improved by removing peripherals connected to USB port or SD card slot.

**A2:** When an application such as anti-virus software is running, it can cause sound stoppage. This may be improved by closing the application.

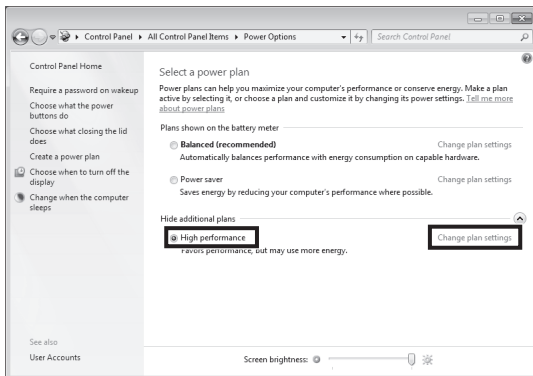
**A3:** When the buffer size setting is small, it can cause sound stoppage.  
This may be improved by increasing the buffer setting in player software.

\* For Windows, the buffer time can also be set in "HA5050H USB ASIO CONTROL PANEL".

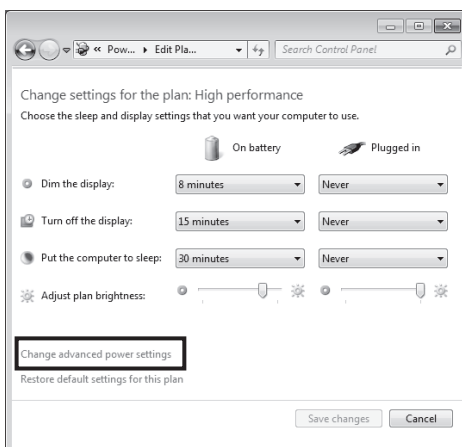
**A4:** Depending on system specifications and settings (such as power saver mode) of your computer, sound stoppage may occur.  
If your OS is Windows, try to change the settings using the following as a reference:

### ■ How to disable Windows power saver mode

1. Click on "Start" -> "Control Panel" and open "Power Options". When the computer is set to power saver mode, a "clicking" noise may be heard during playback of music. If this is the case, select "High performance" and then click "Change plan settings".



2. Click on "Change advanced power settings".



3. Select the "Advanced lowercase settings" tab and click on "High performance [Active]". Under "Processor power management", set "Minimum processor state" and "Maximum processor state" to 100% and click "OK".

\* Battery power consumption of the computer may increase (battery duration time may be reduced).

