Human Audio™

tabla

USB > S/PDIF Interface for HD Audio

USER MANUAL

v1.1c

Warning!

Changes or modifications not authorized by the manufacturer can invalidate the compliance to CE regulations and cause the unit to be no more suitable to use. The manufacturer decilines any responsibility regarding damages to people or property due to the use of a unit which has been subject to unauthorized modifications or to misuse or to malfunction of a unit which has been subject to unauthorized modifications.

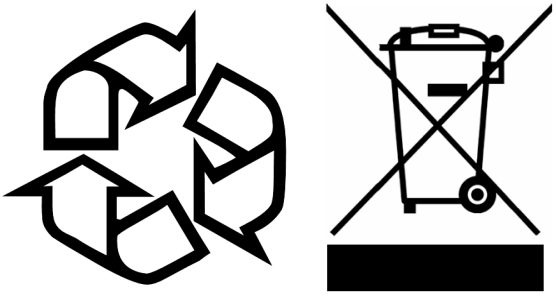
The manufacturer certifies that the product meets the requirements of the **CE regulations**, so the device can be safely used in-house. **Use in full compliance with the instructions!** Never attempt to disassemble or mechanically damage the device, because it is **dangerous** and can cause **accidents**, personal injury or **fire**! If the device damaged, **DO NOT TRY TO USE THE DEVICE** and **immediately** contact the dealer or manufacturer!

DO NOT try to power on the device without properly connected peripherals! **NEVER** attempt to connect any cable during power on state! Using of third party or damaged wires or accessories is **FORBIDDEN** and life threatening and immediately voids the warranty!

The built-in **battery contains acid**. Dismantling and/or damaging it, or not following the instructions can cause **personal injury or even a fire**! If the device is not working properly, please **immediately** contact the dealer or manufacturer!

This unit is compliant with the following CE regulations when an USB cable less than 3m is used: CEI EN 55022:2009 Class B (Radiated Emissions), CEI EN 55024:1999, CEI EN 55024:A2/2003, CEI EN 55024:IS1/2008 (Radio Frequency Electromagnetic Fields, 50Hz Magnetic Field Immunity Test and Electrostatic Discharges – ESD).

Recycling



These labels are printed on the product case, indicates that the product, when no more usable, can't be treated as generic garbage, but must be disposed of at a collection point for recycling of electrical and electronic equipment, in compliance with the WEEE regulation (Waste of Electrical and Electronic Equipment). By making sure that this unit is correctly recycled, you will help preventing potential damages to environment and human health, which could caused by a wrong treatment of this product as generic garbage. Materials' recycling helps saving natural resources. For more in-depth information about recycling this product, please contact your dealer or manufacturer.

WARNING: the information contained in this manual is considered to be reliable and accurate.
Human Audio Ltd. reserves the right to change or modify the information any time, without prior advice.
It is up to the customer to ensure that the manual being consulted is the latest version.

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Introduction

Dear Customer,

Human Audio would like to thank you for choosing the **Tabla computer audio device.** The Tabla is an internal battery powered USB interface for High Definition Audio.

The development of the Tabla at Human Audio was based on the belief that the missing link between computer audio and audiophile audio was an extraordinary USB converter. Chances are you never heard your DACs potential if you haven't used it with a Tabla.

With this new device, you are able to connect an existing audiophile or even high-end DAC (such as our new MUTO HD DAC) with the computer or music server in order to hear "**BIT PERFECT**" listening audio streams up to **24bit/192kHz**. The Tabla needs only one free **USB 2.0** port on the **PC orMAC**. The output is a coaxial digital (BNC) to the DAC although we include a BNC/RCA adapter with your unit.

Based on the Human Audio philosophy this device is pure battery powered with the built-in two-piece highgrade Lithium-Iron-Phosphate (**LiFePO4**) cells. The charging is fully automated without any external device since the Tabla uses the USB power for charging purpose during idle.

Tabla provides ultimate audio performance using these TWO built in batteries of the highest grade for the lowest ripple and the least noise in the output performance, a very advanced ripple smoothing technology is incorporated when using the USB power while the battery is being silently reloaded, ultra-low jitter discrete onboard clocks for 44.1kHz and 48kHz multiples, a specialized pulse transformer on its real 75 Ohm BNC output and of course one of the best USB-Audio algorithm available on the market (developed by M2Tech).

A power supply without any power network interferences:

Our products are **power supply independent**, battery operated and free of any disturbing "**mains**" circuits during operation. This technology is utilized in order to ensure that the listener enjoys the same high quality of sound any time of day, anywhere in the world. With Human Audio devices, many expensive and unstable power supply regenerator, and power cable become useless. In addition, for those who would like to relax and enjoy their music without worrying about short battery life - we have the solution! Thanks to it's **optimized energy consumption**, our products offer up to **12-18 hours continuous listening on a single charge.**
The devices are designed to be simple and easily controlled by the listener while it displaying monitoring information..

Packaging and accessories

The packages also include:

- Certified USB 2.0 cable
- BNC to RCA adapter
- Self-adhesive silicon feet x4
- Quick Start Guide

Usage with other Human Audio products

Recommended components:

- Libretto HD CD-Player/DAC or **MUTO** HD DAC

Non-Human Audio products are compatible with your unit, so there is no compatibility problems if you want to use other **standard DACs or** components with USB output.
If you are not sure of the anything mentioned above, please ask your dealer before using.

Technical data

Sampling frequencies:	**44.1, 48, 88.2, 96, 176.4, 192 kHz**
Resolution:	**16 to 24 bits**
Input:	**USB 2.0 High Speed port**
Output:	**BNC 75 Ohm Galvanically isolated S/PDIF signal**
Internal clock precision:	**+/- 10 ppm 0 to 60°C, 2 ppm typical @ 25°C**
S/PDIF output voltage:	**0.65 Vpp +/- 0.1V @ 75 Ohms**
Minimal computer requirements:	**1.3 GHz CPU clock, 1 GB RAM, 2.0 USB port**
Powering:	**Built-in rechargeable LiFePO4 batteries**
Charging:	**Fully automated from USB power when idle times (stop & power off state) with overcharge-proof**
Operation time**:**	**/"GREEN" mode/ without charging: 14-18 hours continuously playback**
Charging time:	**12 hours (to 95% charged)**

This data is indicative! We reserve the right of unannounced change without notice!

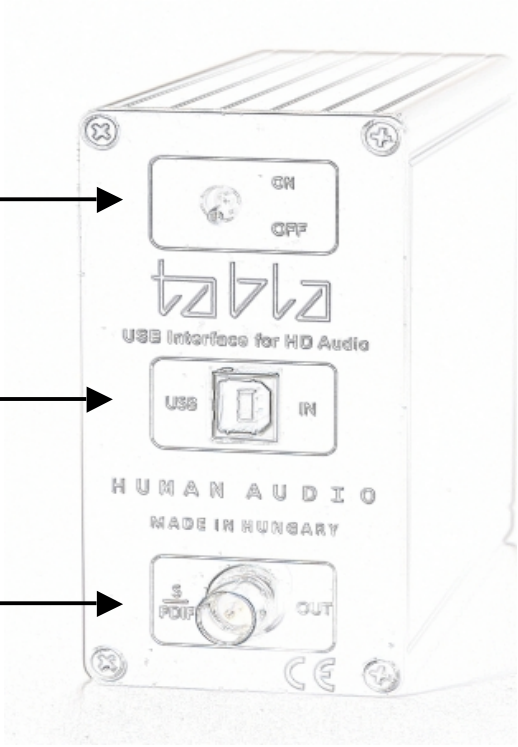
Connectors on the back

Power ON/OFF switch

USB 2.0 input port

S/PDIF output

(RCA output available with optional adapter)



DO NOT under any circumstances disconnect the USB cable while the unit is switched-on!

DO NOT under any circumstances use a third party charger! Any unapproved chargers by the manufacturer can cause device failure and could be dangerous, causing serious injuries and even fire!

Warranty

Cases are not covered under warranty:

- The unit is set up with tamper proof screws. If you attempt to open the unit your warranty is IMMEDIATELY voided and our warranty repair center will know its been tampered with.
- If the device is clearly damaged the warranty is void immediately.
- If the unit failure is due to improper use the warranty is void immediately.

Connecting & Switching On / Off

- You cannot use the unit on a computer without installed device driver. You can find the latest drivers on the manufacturer's website or the importer's website. http://www.trueaudiophile.com/tabla-drivers/
- Do not use a USB cable longer than 3 meters (10 feet). The recommended length is between 1 and 1.8 meters (3-6 feet).
- The recommended length of S/PDIF cable is between 1 and 3 meters. (3-10 feet)
- The BNC connection is strongly recommended. While an RCA connection isn't as accurate you can use it.
- Do not use a USB cable without "USB 2.0 Hi-Speed" certificate. **We cannot guarantee the right operation with non-standard (or DIY) USB cables**.
- The unit cannot be switched-on without being connected to a powered USB port. This is preventive protection in order to save the internal batteries from deep discharge.
- The right connecting sequence and switch-on:
    1. Connect both ends of the S/PDIF cable (from the TABLA to the DAC unit)
    2. Connect both ends of the USB cable (from the computer to the TABLA)
    3. If the device driver is already installed then you can switch-on the unit.
    4. If the driver is not automatically selected as output then manually select it.
- Before disconnecting the unit from the computer, stop playback first and release the device in the OS.

Before switching-on the unit, please **make sure** that the computer is working and the USB and the DAC are connected properly!

Never disconnect the unit from the computer **during playback**! Otherwise, the unit and the OS can be damaged!

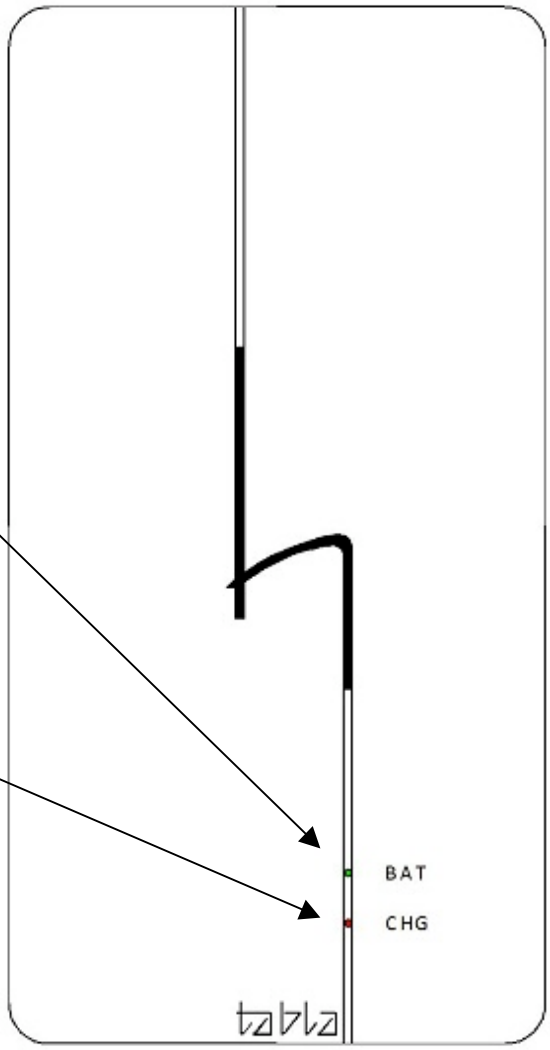
Before you switch on/off the unit, we recommend decreasing the volume level.

If the device is not used regularly it is recommended you **completely charge** the batteries at least **once a month** to maximize the battery life. (just leave it connected to a powered USB port for at least for 8 hours)

LED indicator lights & charging

There are two indicator light source on the front panel:

- "BAT" > Battery
- "CHG" > Charge



The possible light signals from BAT:

- NO light: it means:
    1. The device is switched-OFF
- GREEN light: : it means:
    1. The unit is switched-ON
    2. The battery level is OK
- RED light: it means:
    1. The unit is switched-ON
    2. The battery level is LOW

The possible light signals form CHG:

- NO light: it means:
    1. The USB charging is NOT active
- YELLOW light: it means:
    1. The USB charging IS active
    2. The unit is NOT in clean battery powered mode

(these two states are available in switched-on and -off mode too)

- Flashing RED light*: it means:
    1. The battery level is CRITICAL LOW
    2. Need to connect to powered USB port **ASAP**

(this state is available in switched-off mode only)

*Above mentioned **Flashing RED** state usually appears ONLY when the unit has not been used for several weeks or months. Under normal usage a user will never see that light.

In longer periods of unuse (weeks or months) in switched-off mode, the CHG light goes **Flashing RED** to prevent the internal batteries form deep discharge and serious damage, you NEED TO connect the unit to powered USB port **as soon as possible**. If you do not want to use your audio computer you can plug it into any USB hub or active computer USB port for charging.

Automated charging features

- IDLE CHARGING:

  When the unit is in IDLE state (switched-on, but actually is not in playback mode – playing music) the internal controller detects this and immediately begins charging from the USB port. In this case the BAT light is **GREEN** and the CHG become **YELLOW**. When playback resumed, the CHG YELLOW light goes out. If playback is NOT going on, then **the YELLOW** light stays on even when the battery reaches full capacity, **because** at the end of charging the circuit goes into **trickle charge mode for optimal battery life.**

- LOW battery CHARGING:

  When the internal batteries reached LOW level capacity, and the BAT light goes **RED** from GREEN, the automatic charging starts, even if the playback was going on. In this case the BAT light is RED and the CHG light become **YELLOW**. After a while (~90-120mins) the CHG light goes out **(if the playback is going**) and the BAT light become GREEN again and the unit will be clean battery powered mode again. This is not means that the batteries have full charge, but it has enough capacity for about 3-4 hours of clean battery powered playback again. In order to get fully charged batteries, please see the next step.

- FULL CHARGING (forced charging):

  If you would like to get fully charged batteries, please leave the Tabla connected to a powered USB port without playback for 8 hours. You can do this when the unit is switched-on or switched-off as well.
  In case of switched-off: the CHG **YELLOW** light means that the unit is connected to the charge, **BUT again, the YELLOW** light stays on when the battery reaches full capacity, **because** at the end the circuit provides a **trickle charge**.

Since the charging process is about 5 times faster than discharge, assuming average listening habits, you usually are not required to charge the unit in forced mode.

The unit has a built-in circuit to prevent against overcharging, so you can leave it connected to a powered USB port at all times without any problem.

The internal LiFePo4 batteries have NO memory effect at all, so no need to do any maintenance on it.

The recommended state for storage is "Fully Charged". To maximize the lifetime of the batteries, do not leave the unit connected to an "Unpowered" USB port for long periods at a time.

Installing the driver on a Windows-based PC

Create a temporary folder in the hard disk of your computer (you can even create it on the desktop). Then, double-click on the zip file to open it. Select and drag all files in the temporary folder: this automatically unzips all files.

Automatic (guided) installation

Connect the unit to the computer. Following the negotiation process, the driver installation wizard is automatically launched. Select the option “Not now”, as in figure 2.

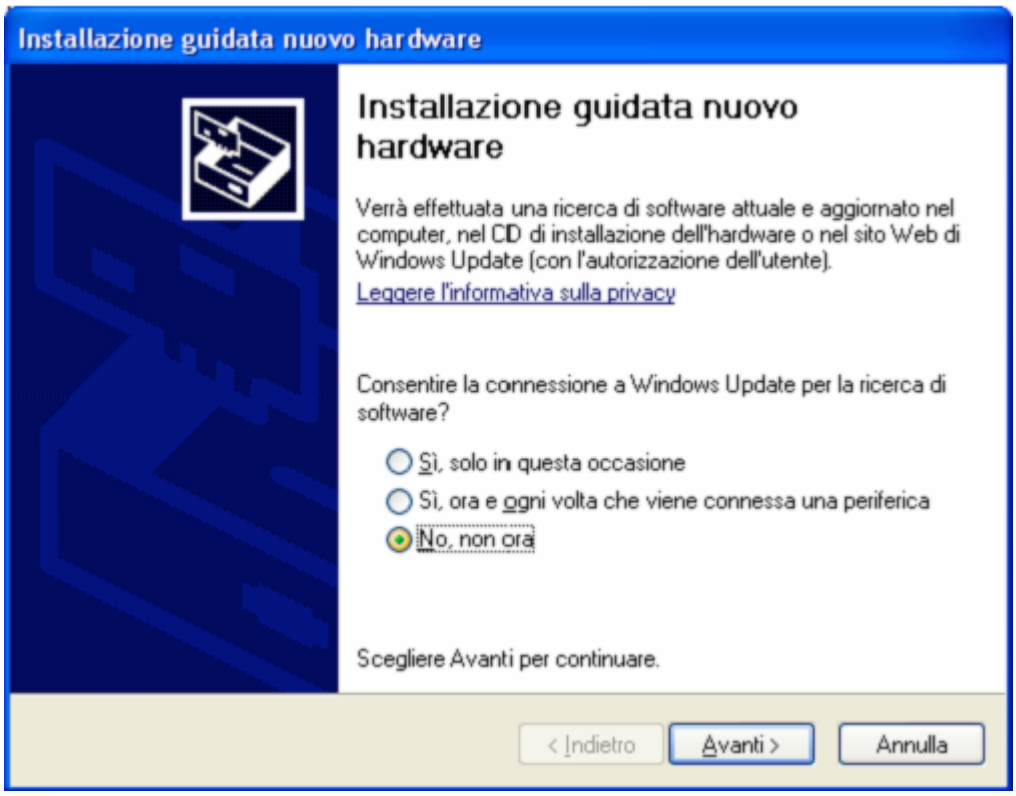


Figure 2

Click on the button to proceed. A window appears as shown in figure 3:

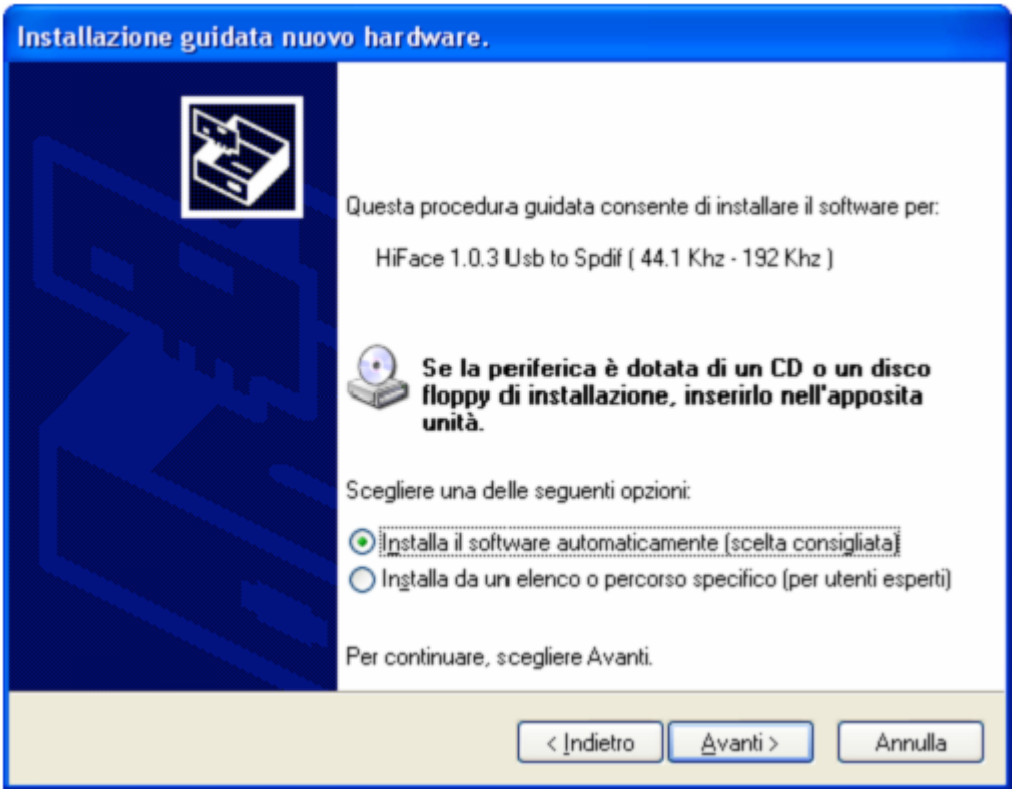


Figure 3

Choose automatic installation (as recommended) and proceed to next step. Indicate the folder where you have previously unzipped the driver and proceed to installation. The window shown in figure 4 will appear:

Figure 4

Click on Continue. The installation will proceed to the end. The window shown in figure 5 will appear. Click on Finish to complete the driver installation.

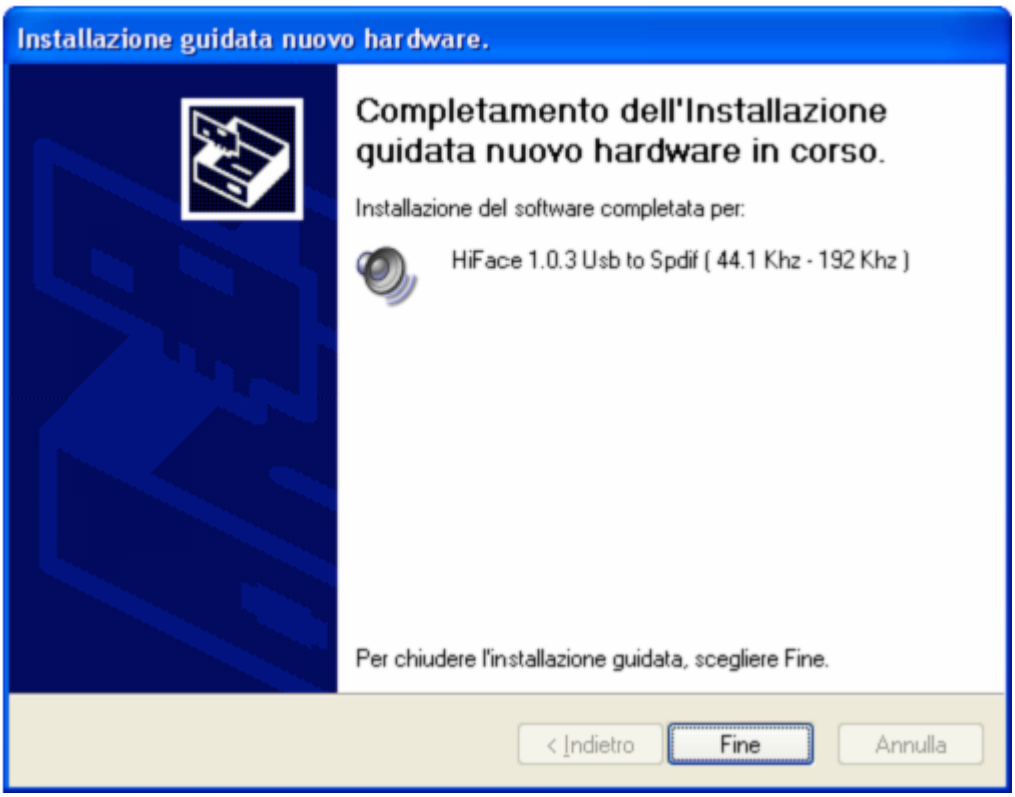


Figure 5

The wizard appearance and the guided installation procedure may slightly vary from XP to Vista to Windows 7.

Manual installation

Sometimes it is necessary or advisable to install the driver manually. The installation package offers two installation utilities, “setup32.exe” and “setup64.exe”. The former is for 32 bits operating systems, while the latter is for 64 bits operating systems. Without connecting the unit to the computer, double-click on either “setup64.exe” or “setup32.exe”, depending on your operating system: the driver will be installed in your PC

Installing the driver on a Mac

Double-click on the zip file to open it. It contains a single dmg file. Extract it from the zip and double-click on it to open it. It only contains a pkg file. Double click on it to start driver installation. The window shown in figure 6 will appear.

Figure 6

Click on the Continue button. The installation process will go on and the window in figure 7 will appear.

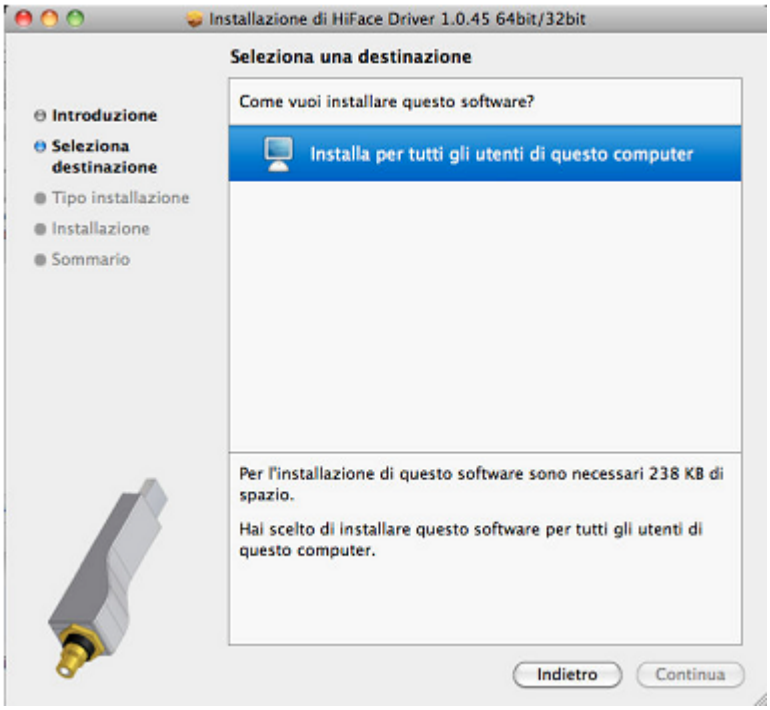


Figure 7

Select “Install for all users”, then click on Continue button. Another window will appear as in figure 8 and you will be asked to type in the administrator password. After doing that, the installation process will continue and you will be asked for a confirmation to continue the process up to the computer restart. Click on Continue Installation button. The installation will continue until the final window will appear, announcing the successful installation of the driver.

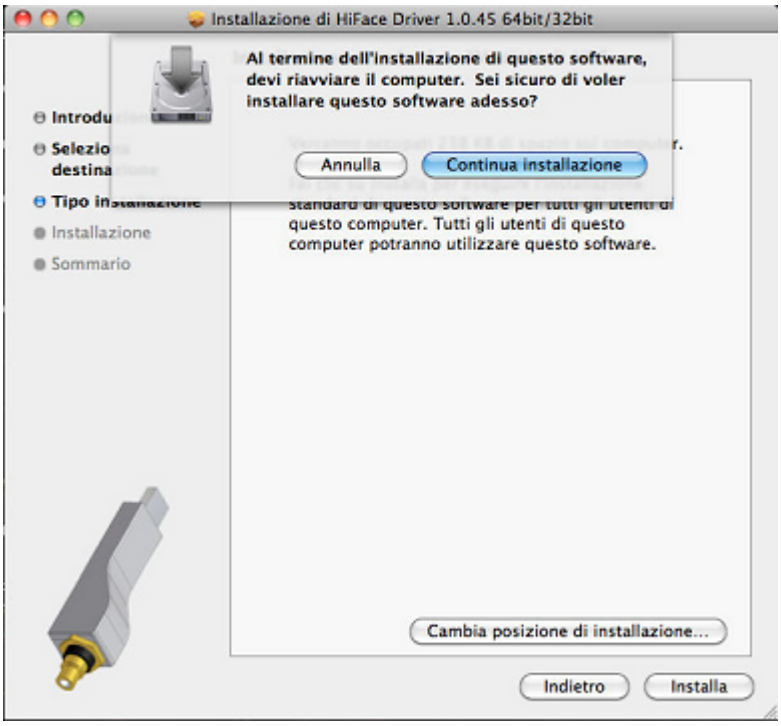


Figure 8

Click on Restart button to complete the installation process as indicated in figure 9.

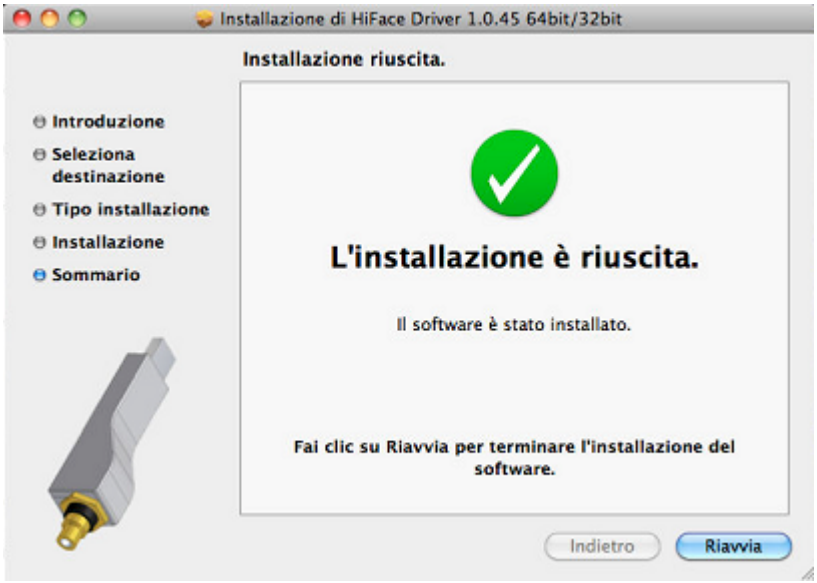


Figure 9

Uninstalling the driver

Sometimes it is necessary to uninstall the driver to roll back to a previous version. Uninstall is a quite simple procedure which depends on the operating system and the way the driver was installed.

Uninstalling the driver on a Windows-based PC after installation with setup32.exe or setup64.exe

Go to the control panel and launch the "Application Installation" utility. Look for the hiFace driver item in the list. Double-click on it to launch uninstalling.

Manually uninstalling the driver on a Windows-based PC

Connect the unit to the computer. Go to the control panel and launch the "System" utility, then select Hardware tab. Open the Peripheral Management window (see figure 10). You will find hiFace listed under Audio, Video and Game controllers.

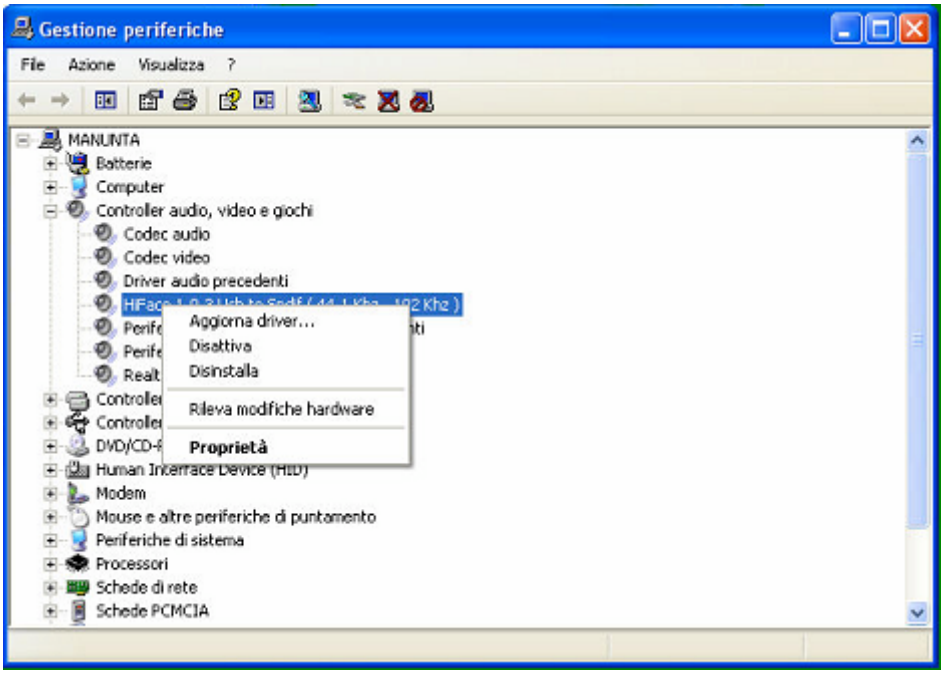


Figure 10

Right-click to access the available actions. Select "Uninstall".

Uninstalling the driver on a Mac

Open a console, then type the following commands:

sudo mv /System/Library/Extensions/Hiface.kext /tmp
sudo touch /System/Library/Extensions
sudo pkgutil --forget com.m2tech.driver

Then, restart the Mac.

Configuring the computer

Configuring a PC with Windows XP

A PC with Windows XP can use hiFace in two different ways: Direct Sound (DS) and Kernel Streaming (KS). The former is suitable for players which can't operate in Kernel Streaming mode (such as Windows Media Player and iTunes) or for Internet streaming, while the latter can be chosen (for better performance) with players which can operate in Kernel Streaming mode (such as FooBar, Winamp, Monkey Media, JRiver).

Configuring for Direct Sound with Windows XP

Connect hiFace to your PC. Then, go to the Control Panel and launch the Sound and Audio Peripherals utility. Select the Audio tab. In the Predefined Peripheral drop-down menu of the Playback area, select "KS hiFace" (see figure 11).

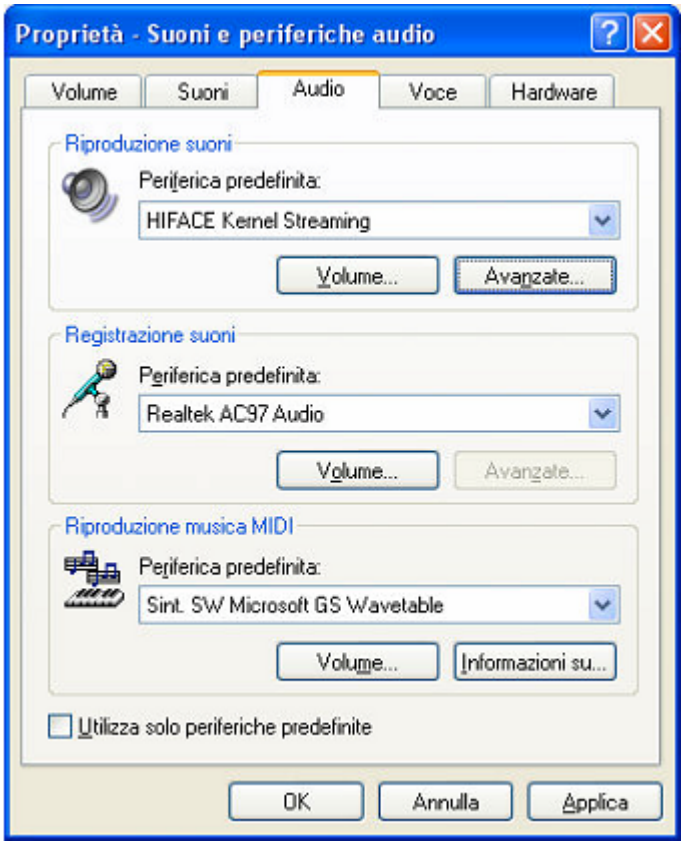


Figure 11

Then, select the "Voice" Tab. Again, select "hiFace Kernel Streaming" in the drop-down menu of the Playback area. Click on OK button. Please be advised that even if the peripheral is listed as "kernel streaming", it will operate in Direct Sound mode when listed here. From now on, unless hiFace is disconnected or settings are changed again, hiFace is the audio peripheral all audio programs will use when operating in direct sound mode.

Configuring for Kernel Streaming with Windows XP

Kernel Streaming has no standard setting in Windows XP. KS must be selected in the specific player you choose to use. For example, when using FooBar, with hiFace connected to the PC, go to the File/Preferences/Playback /Output tab and select “KS: hiFace” as output device. Other players will require different settings (see later).

Using the unit in both Kernel Streaming and Direct Sound mode.

When hiFace is selected as predefined audio peripheral, it is possible to use it in Kernel Streaming mode, too, with a caveat. When using it in KS mode, it is necessary that no other application access hiFace in DS mode. If this happens, Windows XP’s Kernel Mixer takes control of hiFace’s driver and from then on, no KS application can access hiFace unless the PC is restarted or hiFace connection to the PC is cycled.

Configuring a PC with Windows Vista or Windows 7

A PC with Windows Vista or Windows 7 can use hiFace in three different ways: Direct Sound (DS), Kernel Streaming (KS) and WASAPI. DS is suitable for players which can’t operate in Kernel Streaming mode nor with WASAPI or for Internet streaming; KS can be chosen (for better performance) with players which can operate in Kernel Streaming mode (such as FooBar, Winamp, Monkey Media, JRiver). WASAPI (Windows Audio Standard API) is a standard interface for audio players, which allows getting the same performance of KS with applications that cannot operate in KS mode, at the cost of higher CPU load.

Configuring for Direct Sound with Windows Vista or Windows 7

Open control Panel and select Hardware and Sounds. Under Audio, click on Manage Audio Devices. The following windows will appear, in which hiFace is listed. Set hiFace as predefined device. Then, click on OK.

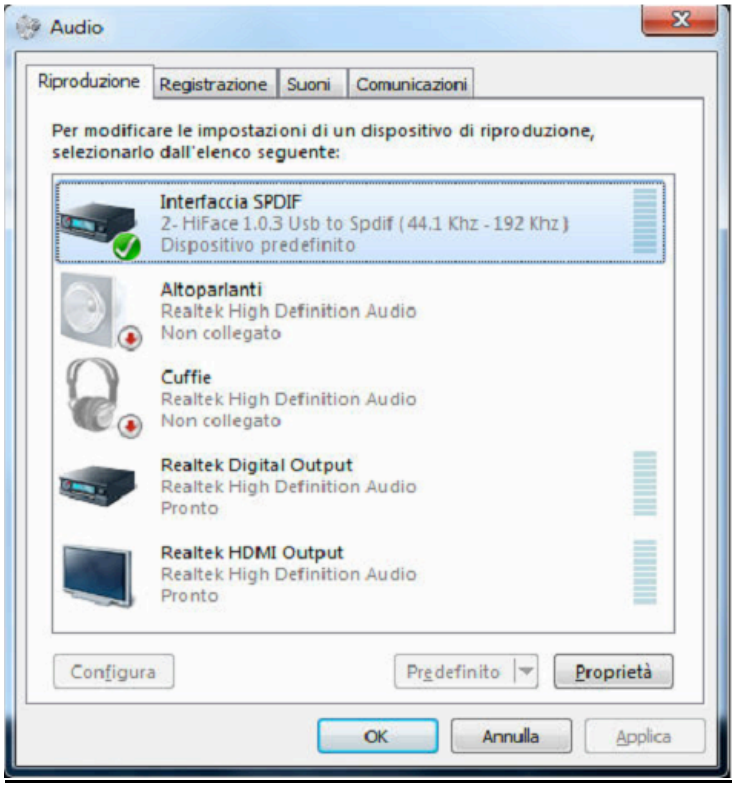


Figure 12

Configuring for Kernel Streaming with Windows Vista or Windows 7

As for Windows XP, Kernel Streaming has no standard setting in Windows Vista and Windows 7. KS must be selected in the specific player you choose to use. For example, when using FooBar, with hiFace connected to the PC, go to the File/Preferences/Playback /Output tab and select “KS: hiFace” as output device. Other players will require different settings (see later).

Configuring for WASAPI with Windows Vista or Windows 7

As happens with Kernel Streaming, WASAPI cannot be directly accessed. WASAPI must be selected in the specific player you choose to use. For example, when using FooBar, with hiFace connected to the PC, go to the File/Preferences/Playback /Output tab and select “WASAPI: hiFace” as output device. Other players will require different settings (see later).

Configuring a Mac

Go to System Preferences and select Sounds. The following windows will appear. Select hiFace for output as indicated in figure 13.

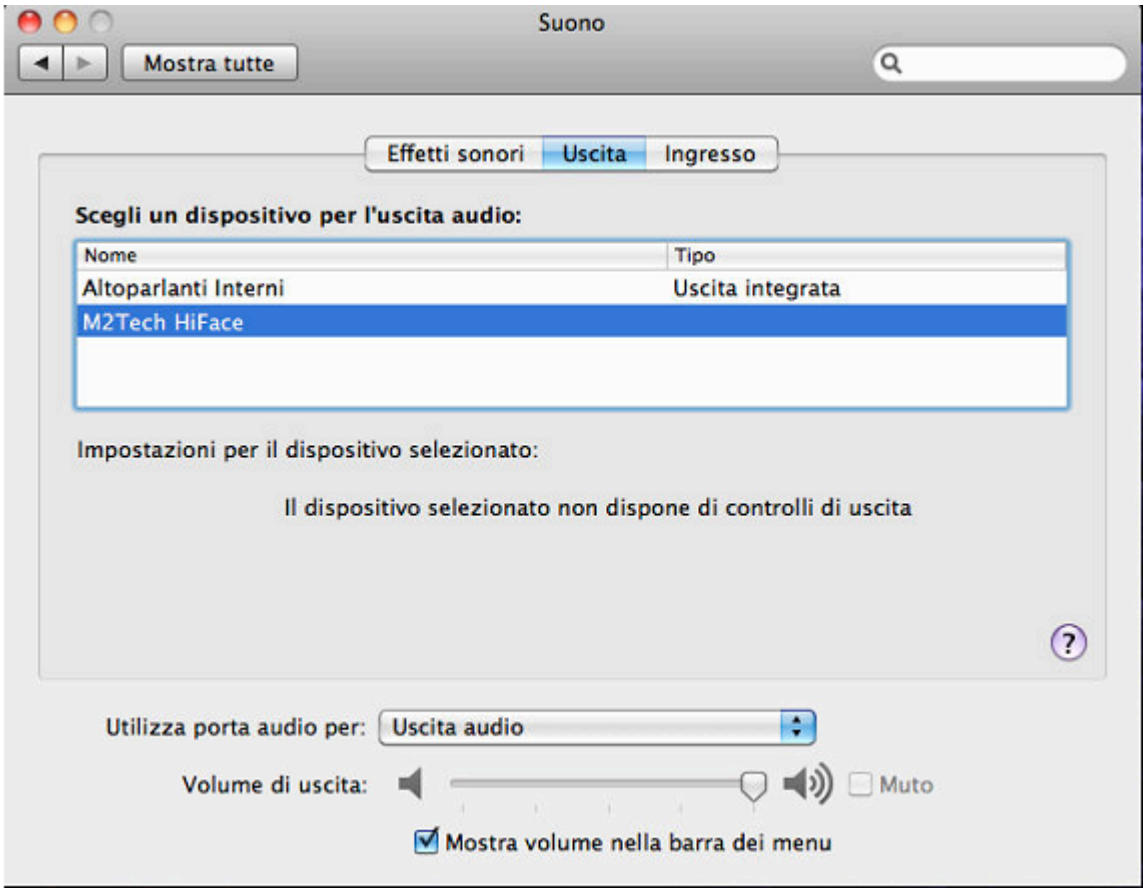


Figure 13

Configuring the player for Kernel Streaming: some examples

FooBar

To use FooBar in KS mode it is necessary to download the DLL for Kernel Streaming from the FooBar2000 website and install it in the Components sub-folder inside FooBar2000 main folder in your hard disk. The DLL can be found at http://www.foobar2000.org/components/view/foo_out_ks *(click on Download)*. It is a zip folder, which contains the DLL. Extract it from the zip and copy to the Components folder. Then, restart FooBar, go to the File/Preferences/Playback/Output window and set parameters as in figure 14.

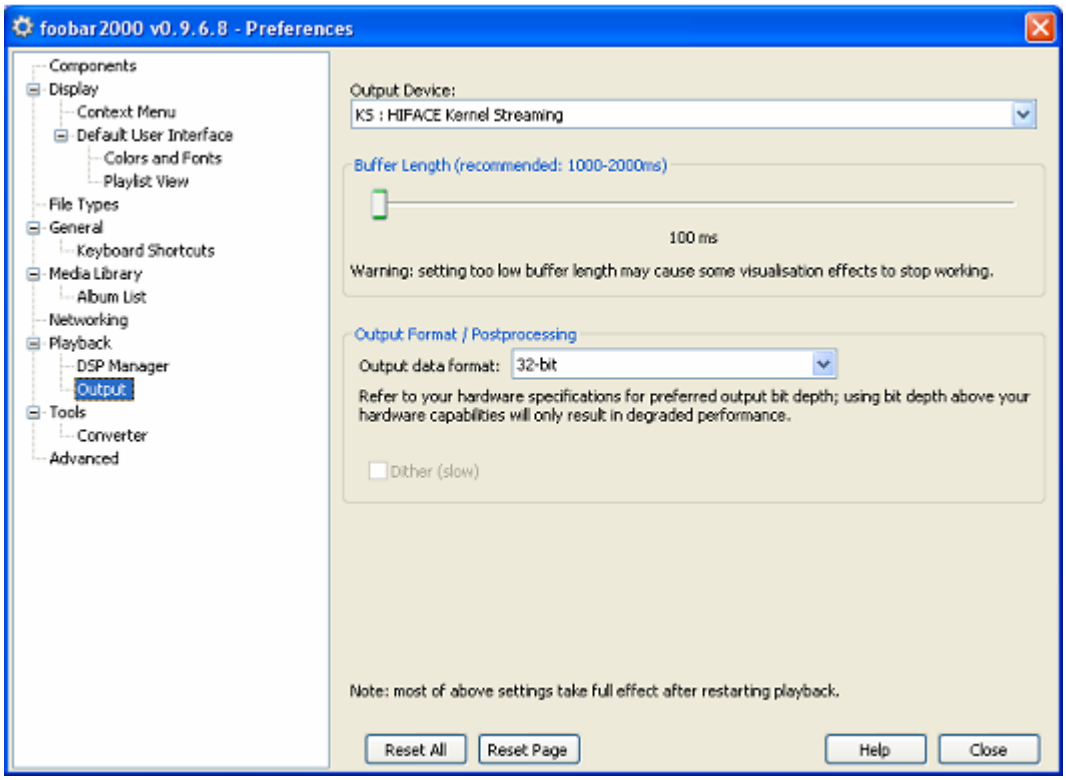


Figure 14

Winamp and MediaMonkey

These two players are actually the same player with different skins, so they can share the same plug-ins. A freeware plug-in for Kernel Streaming by Steve Monks is available on the Internet (http://www.stevemonks.com/ks_plugin/plugin.html) that can be used to enable Kernel Streaming operation with these players. Download the zip file, extract the dll file and copy it into the Plugins folder inside Winamp main folder. With hiFace connected right-click on Winamp and select Display/Select Plug-ins. The Preferences window of Winamp will open (see figure 15).

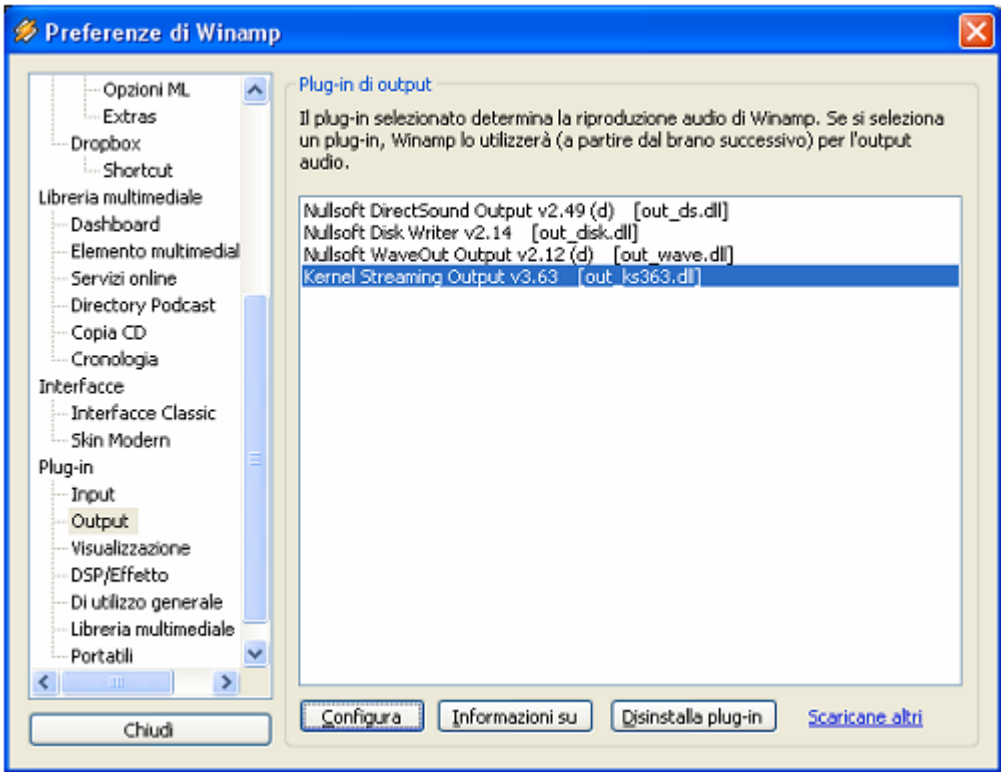


Figure 15

Go to Plug-in/Output and select “Kernel Streaming Output”. Then click on Configure button. Choose HIFACE Kernel Streaming in the output device list (Figure 16).

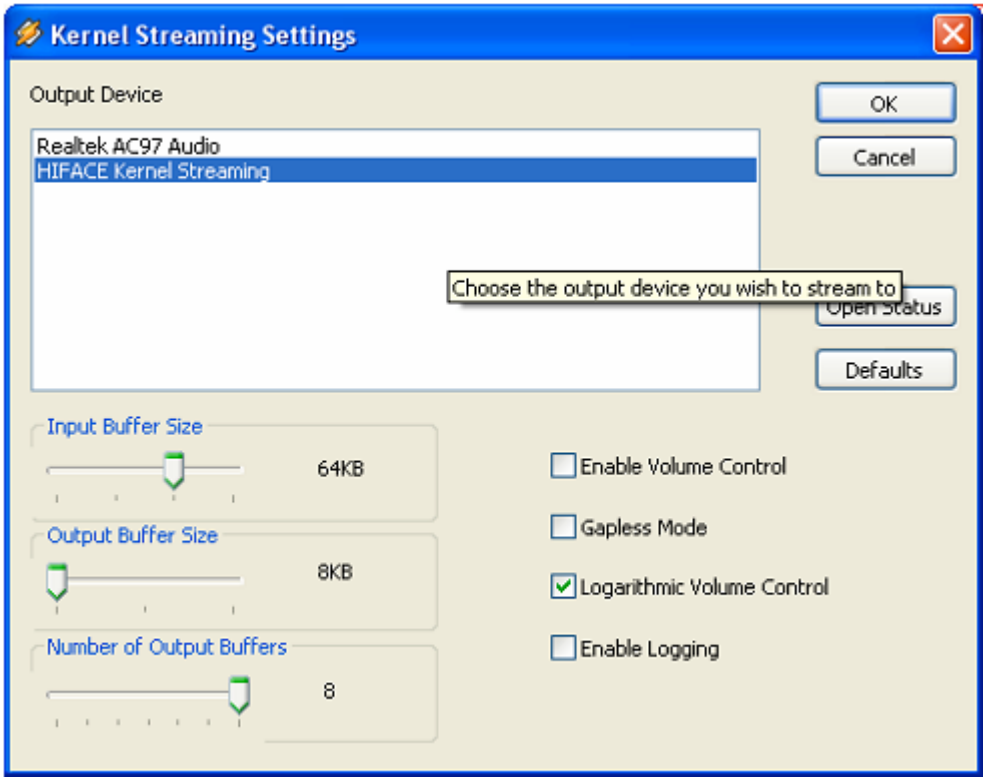


Figure 16

TROUBLESHOOTING

The unit does not switch-on

- Make sure that the input plug is securely connected to a "Powered" USB port.

If the above point is carried out, but did not succeed, please contact the dealer or the manufacturer!

The unit switched-on but no sound from the speakers

- Make sure that the input and output are connected properly and there is input signal (playback is going on the computer), select the right input source (DAC, Amplifier) and that you have set the volume level. Make sure the M2Tech driver is selected as an output source.

If the above point is carried out, but did not succeed, please contact the dealer or the manufacturer!

Explanations

In this chapter, there are explanations for some of the terms and abbreviations mentioned in the manual

OS: Operating System

PC: computer with Windows Operating System

MAC: computer with Mac OSX Operating System

LED: abbreviation for light emitting diode

BNC: professional connection for low-level digital and analog signals with right signal termination. In this case much more accurate than RCA connection

RCA: asymmetric coupling which provides connectivity (pin 2: signal and ground)

USB 2.0: universial Serial Bus (USB) 2.0 is a complete overhaul of the Universal Serial Bus input/output bus protocol, which allows much higher speeds than the older USB 1.1 standard did. The goal of the new serial bus is to broaden the range of external peripherals that can be used on a computer. A hard drive can easily hit the USB 1.1 bottleneck whereas it now becomes more 'usable' under USB 2.0 conditions.

User notes

Service and dealer registrations