KingRex UC192 USB TO S/PDIF DIGITAL TO DIGITAL CONVERTER

USER MANUAL

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B. SAFETY INSTRUCTION

i. Warning!

Changes or modifications not authorized by the manufacturer can invalidate the compliance CE regulations and cause the unit to be no more suitable use. The manufacturer refuses every responsibility regarding damages to people or things due to the sue 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.

ii. Important safety instructions!

Thank you for choose KINGREX UC192 USB TO S/PDIF CONVERTER. We sincerely hope you could keep the user manual for whole KingRex UC192 digital to digital converter lifetime, it provides you with better protection for connected equipment.

Please read this user manual very carefully. It provides safety, installation, and operating instructions that will help you derive the overall performance and fully extend the life that the UC192 D2D converter has to offer.

Please save this manual! It includes important instructions for the safely use UC192 and for obtaining factory service should the proper operation of the UC192 come into question.

Please save or recycle the packaging materials! The UC192 shipping materials were designing with great care to provide protection from transportation related damage. These materials are invaluable if you ever have to return the UC192 for service. Damage sustained during transit is not covered under the warranty.

iii. Safety caution!

● The following precaution should be observed when working on the power supply unit:

-Remove watches, rings or other metal objects.

!!! Caution: Risk of electric shock, do not remove cover. No user serviceable parts inside, Refer servicing to qualified service personnel.

!!! Warning: To reduce the risk of fire or electric shock, install in temperature and humidity controlled indoor area of conductive contaminants.

-Read the user manual and familiarize yourself with the functions before you attempt to use this equipment.

-To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

-Do not dispose of in fire to prevent injury or burns. Also do not place the units near the heat sources such as radiator, heat registers, stoves, or other devices (including amplifiers) that produce heat.

-Do not disassemble the machine with power on. If you do, you may receive an electric shock.

-Do not set these units near the water near following area: bathtub, washbowl, kitchen sink, laundry tub, wet basement, or swimming pool.

-Do not place heavy objects on the power cord. If the cord is damaged, fire, or electrical shock may result. In particular, it is possible that one might accidentally place a heavy object on a carpet that covers the cord; definitely avoid these situations!

-Do not install the UC192 D2D converter in a place where it might be exposed to oil, smoke or steam (for example, near a cooking table or humidifier). Otherwise, fire or electrical shock may result.

-Do not place the power cord near a heating device. Otherwise, the cord sheath may melt, resulting in fire or electrical shock.

-Obstruct the necessary all- around ventilation: especially DO NOT place the set close to curtains or on soft furnishing such as carpets. Overheating can cause unnecessary damage and shorten the lifespan of the equipment.

-No user serviceable parts inside. Refer servicing to qualified technician. Never remove the cover unless qualified to do so. This unit contains dangerous voltage.

-When you remove the power plug, be sure to hold the plug. Never pull on the cord. Otherwise, the power cord may become damaged, resulting in fire or electrical shock.

-Do not attempt to modify this equipment. Otherwise, fire or electrical shock may

result. Warranty is void on modified devices.

-Do not damage, process, bend, twist, stretch or heat the power cable. If the cord is damaged, fire or electrical shock may result.

-When you are connecting other audio devices to the UC192 D2D converter make sure that you first turn off the power to all devices to be connected. Refer to the user's guide for each device and use the specific cable for the connection.

-If you plan not to use the UC192 D2D converter for a long period of time (such as when you are on vacation), remove the power plug from the AC outlet. Otherwise, a fire could possibly result.

-If any abnormality occurs while suing the UC192 D2D converter, remove the plug from the AC outlet. In this case first shut off the power amplifier or turn down the volume controls and so on to avoid possibly damaging transients.

- If you notice any abnormality- such as smoke, smell, noise, etc. –remove the plug from the AC outlet. Confirm that the abnormality is no longer present, then consult your dealer for repair. If you continue using the UC192 D2D converter under abnormal condition, fire or electrical shock might result.

- If a foreign object or water enters inside the equipment, remove the plug from the AC outlet and consult your dealer for repair. If you continue using the UC192 D2D converter under this condition, fire or electrical shock may result.

- If the power cord is damaged(for example if it is cut or if the core wire is exposed), ask your dealer for a replacement. If you continue suing the UC192 D2D converter under this condition, fire or electrical shock might result.

C. Product feature:

KingRex UC192 USB to S/PDIF D2D Converter is a high-quality computer transport interface for those wishing to stream high-resolution playbacks to an existing DAC. The UC192 can transfer from PC or Mac at 16bit/44.1KHz to 32bit/192KHz through S/PDIF & IIS outputs. The UC192 runs isochronous with an adaptive clock generator to auto sync with the host. The master clock generator is a classy 1ppm TXCO unit with proprietary low-jitter drivers for Windows & Mac. Direct Sound, ASIO4ALL, and WASAPI are all supported and run smoothly. The UC192 is housed in an oval cross-section aluminum case with black hairbrush polish. It measures 88*82*24mm. "The UC192 ships with Windows & Mac drivers that need to be installed on your computer. An external 7.5V power supply is provided.

D. Specification:

- **USB interface :**

-USB 2.0 High/Full Speed compliant

-USB Audio Device Class Specification v1.0/2.0 Compliant

-- Adaptive Clock Generator for Audio Streaming Synchronization

- Supports CRC Error Correction for Playback Data.

   IIS audio interface:

- Sample Rates Supported:44.1Khz, 48Khz, 88.2Khz, 96Khz, 176.4Khz, &192Khz

- 16,20,24 bit & 32bit 2 Channel

- **SPDIF Interface:**

With two type output connector:

Coaxial & AES/EBU

-1 Stereo SPDIF output through Integrated IEC958 Line Driver

-16,20, 24bit Mono/2 Channel

-Sample rates support : 44.1Khz, 48Khz, 88.2Khz, 96Khz. & 192K.
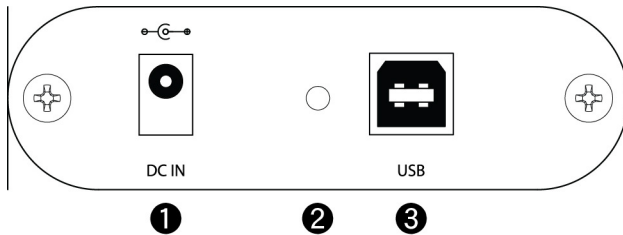
 S/PDIF output voltage: 2.5Vpp

 AES/EBU output voltage: 2.5 Vpp

 Power demand : 7.5V DC
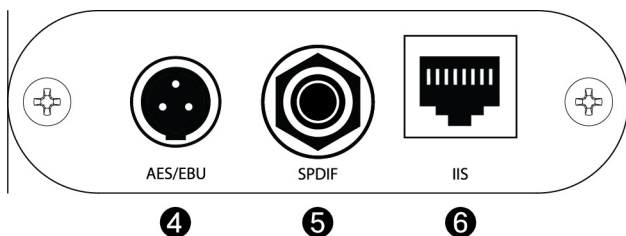
 Power consumption : 200mA @7.5V

E. Operation environment presentation

- Front panel details & rear panel details

(Figure 1)

1. **DC JACK: FOR 7.5V power input** – Apply a voltage in DC7.5V. Tip is positive, ring is negative. This input is protected against polarity inversion. 2.1mm tip jack supply connector.

2. **Power instruction LED light** - Power indicated LED. After connected power, the power indicated LED light will be glow. If the LED light is dim, please exchange your 7.5V switching power supply or contact with your local distributor & dealer for after service.

3. **USB port for PC signal input** –Connect to host w/ a suitable 2.0 USB cable. Female B USB connector.

(Figure 2)

4. **AES/EBU: TINY XLR** – Connect to DAC or receiver with a 110 Ohms balanced digital cable terminated with XLR connectors. The output is galvanically isolated by a pulse transformer. XLR male connector.

AES/EBU OPUTPUT PIN DEFINE:

1) GND

2) +

3) -

5. **S/PDIF : RCA** – Connect to DAC or receiver with a coaxial digital cable terminated with RCA male plugs. This output is galvanically isolated by a pulse transformer. Gold plated RCA female connector.

6. **IIS : RJ45** – Direct IIS output for connection to a board or DAC provided with IIS input. This input is not galvanically decoupled, so an external solution or a galvanically isolated input must be used if galvanic isolation is required.

IIS output

By Figure 2, Left to Right is 8~1.

2,4,6,8 Ground

1)SCLK 3)DATA 5)LRCK 7)MCLK

Warning! This output can use by KingRex IIS cable directly connected to a North Star Design DAC such as Model 192 or Extremo!

CAUTION : AES/EBU & SPDIF CAN NOT BE USED AT THE SAME TIME. PLEASE CONNECT ONLY AES/EBU OR SPDIF FOR STREAM OUT THE SIGNAL TO YOUR DAC.

F. Connection to the host

Connect the USB-B plug of a 2.0 USB A-B cable to the USB connector (Figure 1, 3) of UC192.

Connect the USB-A plug of the cable to a 2.0 USB port of your computer.
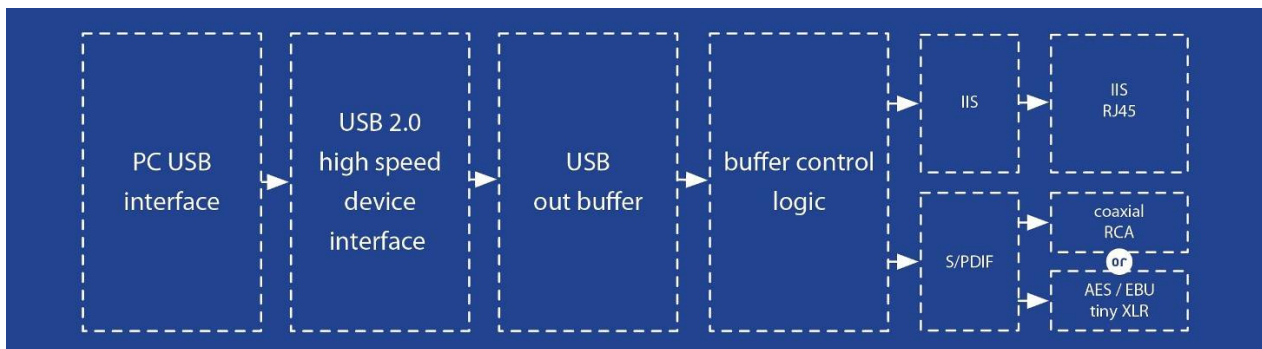
Connect a power supply connector (7.5V switching adaptor) of UC192. The power indicator will lit.

Some PC OS will install the Basic driver of UC192 automatically.

NOTE: If you want to avoid the automatic driver installation, please connect to the computer after manually installing the driver.

G. Technical infos:

● UC192 USB TO S/PDIF & IIS D2D CONVERTER DIAGRAM

KingRex UC192 designed by isochronous. Inside the main chipset, it has buffer area for temporary storage stream data which helps to decrease the jitter and signal lose as well. The adaptive clock generator here is for synchronous mode of audio bit stream. The clock frequency will be adjusted automatically to be synchronized with host. The adjustment will be done in a manner that the clock variation will have minimum impact to the audio performance. Master clock generator is a classy 1ppm TCXO w/ proprietary driver lower jitter.

● Working environment suggestion:

OS:

Windows: XP, Vista & Win7

Mac : 10.4 10.5 & 10.6 (SOME OLD MAC COMPUTER 只有 USB1.0 界面,所以它只能使用到 UC192 的 44.1K IIS OUTPUT)

P.S. In most of condition, the Windows XP and Mac 10.3 will still workable with KingRex UC192. But in some setting, the computer will has internal conflict to be work with UC192. Our suggestion will be updated OS system at first! Most of problem will be solved after renew OS system to Window Win7 & Mac 10.6.

● Suggested software while using UC192 :

Foobar 2000 V1.1 (http://www.foobar2000.org/download)
ASIO component : WASAPI output
support (http://www.foobar2000.org/components/view/foo_out_wasapi)

H. Instruction for how to operate the UC192
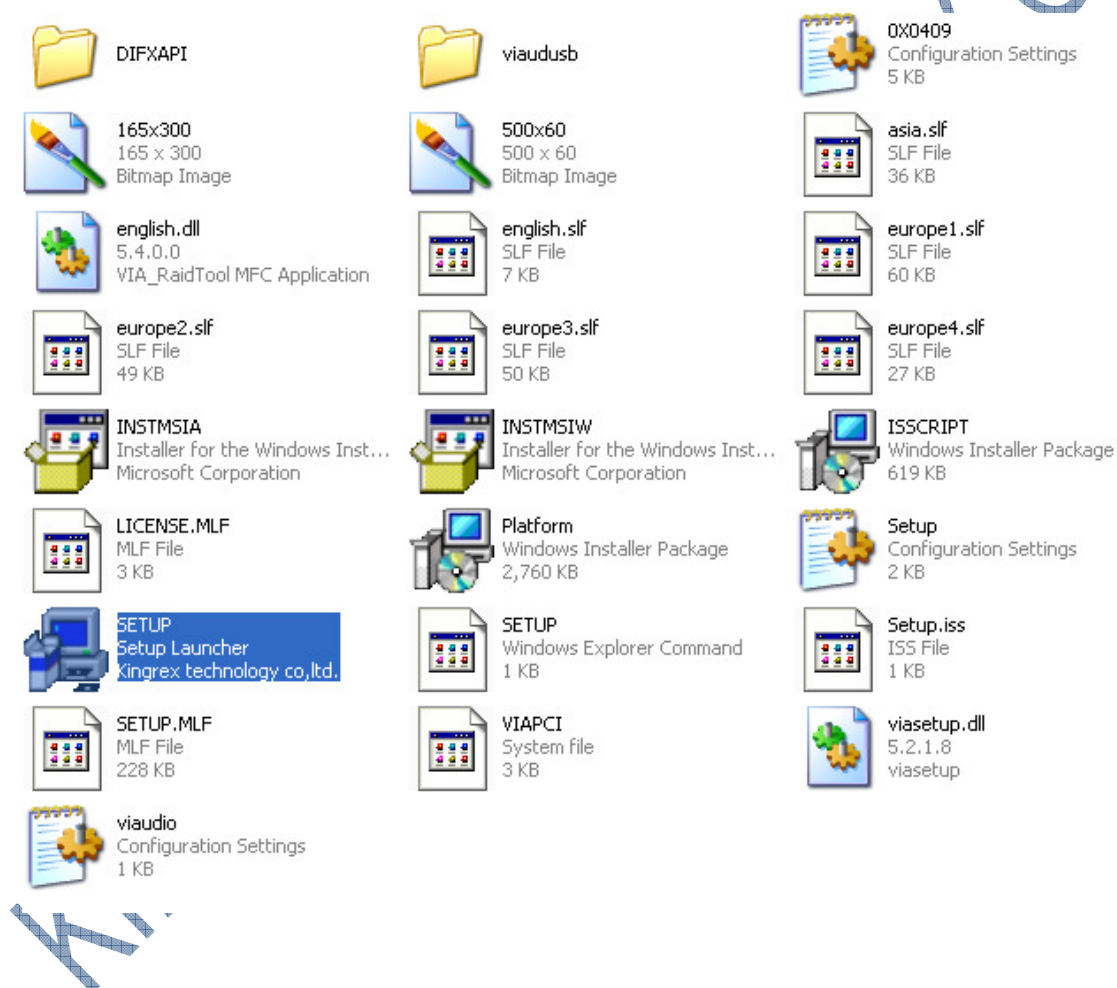
✧ Driver installation

● Obtaining the driver

The drivers for UC192 are available on the CD-Rom.

● Installing the driver on a Windows-based PC

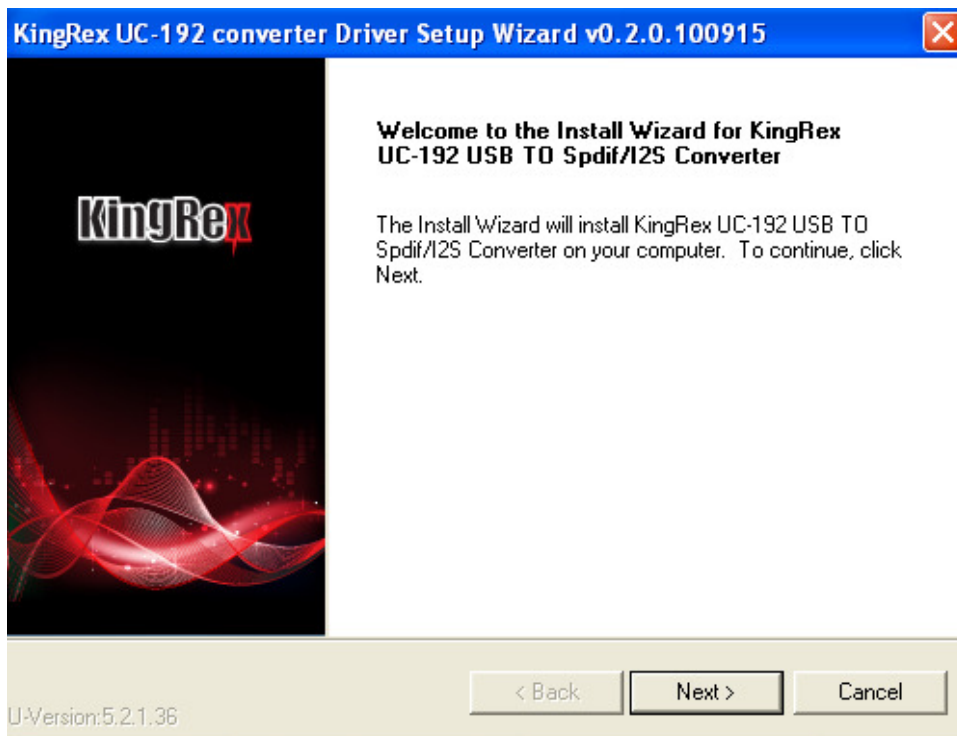1. Automatic (guided) installation.

Apply power to UC192 and connect it to the PC. Following the negotiation process,open the driver folder select "SETUP(SETUP LUNCHER) the driver installation wizard is automatically proceed as in Figure 4.
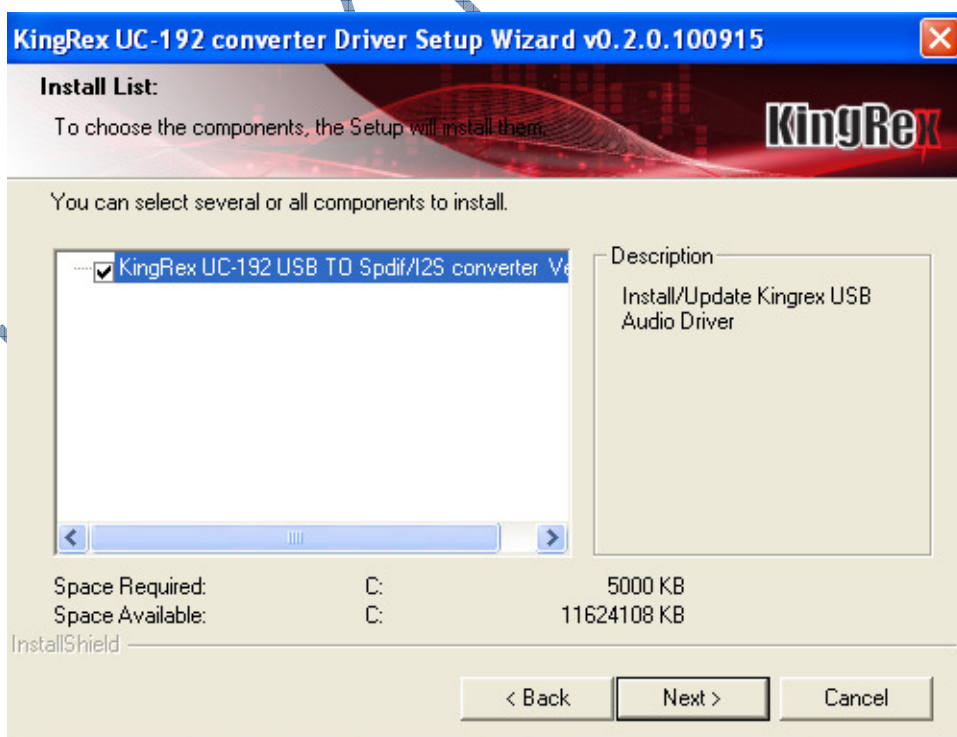

(Figure 4)

2. Click on the button to proceed. A window apprears as show in Figure 5:

(Figure 5)

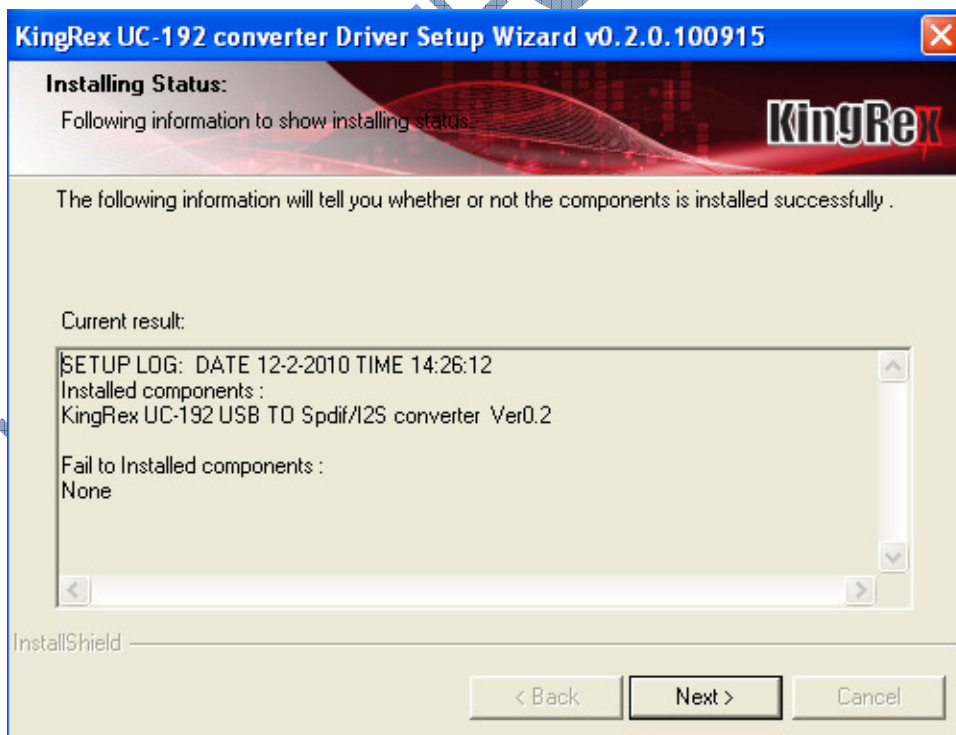3. Click on the blank space. Press "Next" for next step.

(Figure 6)

4. Choose "Continue Anyway"(as recommended) and proceed to next step. The windows shown in figure7 will show.

(Figure 7)

5. Please press "Next" and go on next window.

(Figure 8)

6. Click on Continue. The installation will proceed to the end. The window is shown in figure 9. Click on Finish to complete the driver installation.

(Figure 9)

NOTE: the wizard appearance and the guided installation procedure may slightly vary from XP to Vista to Windsows 7.

Manually uninstalling the driver on a Windows-based PC
Connect UC192 to the PC.
Go to the control panel and launch the "System" utility, then select Hardware tab. Open the peripheral management window (see figure XX).
You will find UC192 listed under Audio, Video, and Game controllers.

● Installing the driver on a Mac
As Mac OS will automatic install the driver (No more extra driver to be needed)!

I. Configuring the computer to UC192

● Configuring a PC with Windows XP

A PC with Windows XP can use UC192 in two different ways: Direct Sound (DS) and ASIO4ALL.

● Configuring a PC with Windows Vista or Win7

A PC with Windows Vista or Win7 can use UC192 in two different way: Direct Sound (DS), ASIO4ALL, and WASAPI. DS is suitable for players which cannot operate WASAPI or for Internet streaming. WASAPI(Windows Audio Standard API) is a standard interface for audio players which allows to get the same performance of KS with application which cannot operate in KS mode, at the cost of higher CPU load.

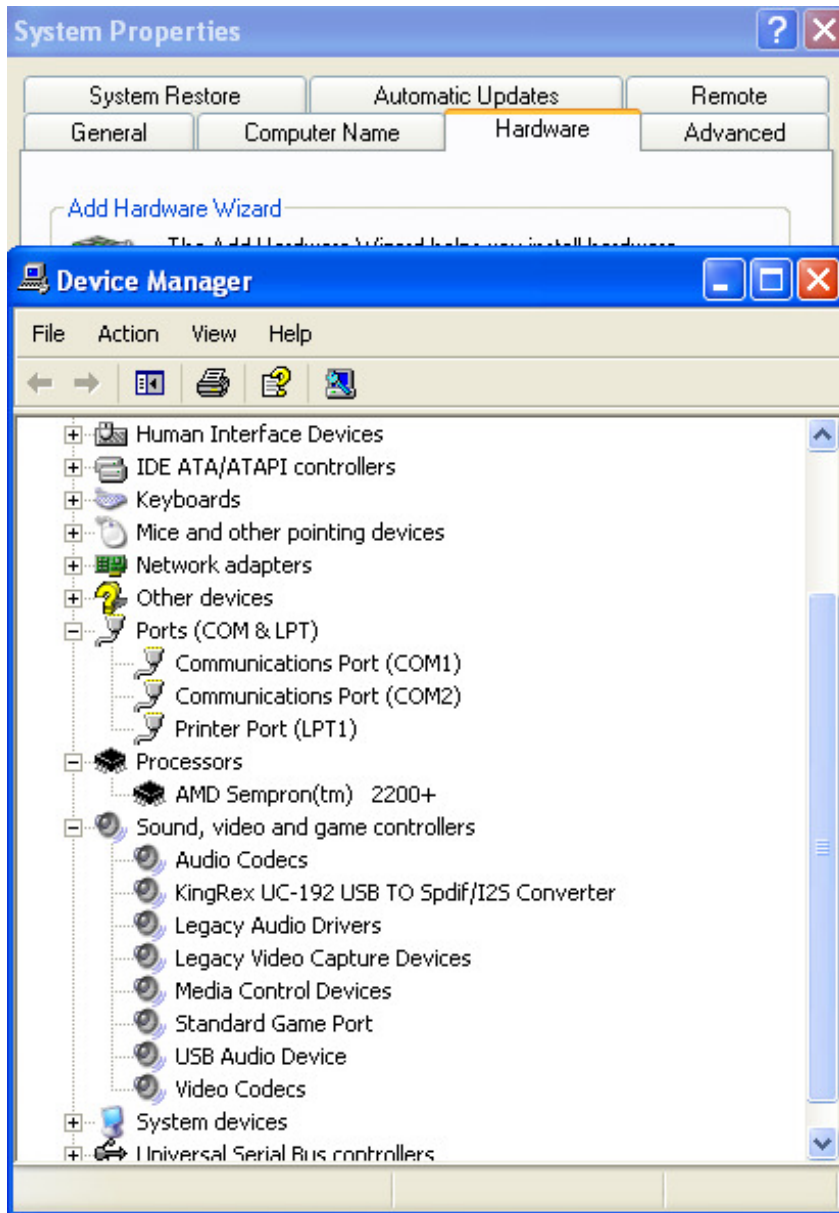● Configuring a Mac audio output devices

Go to system preference and select sounds. The following windows as shown, please select UC192and ope the "AUDIO MIDI SETUP" for output sampling rate/bits rate select for output as indicated Figure 10

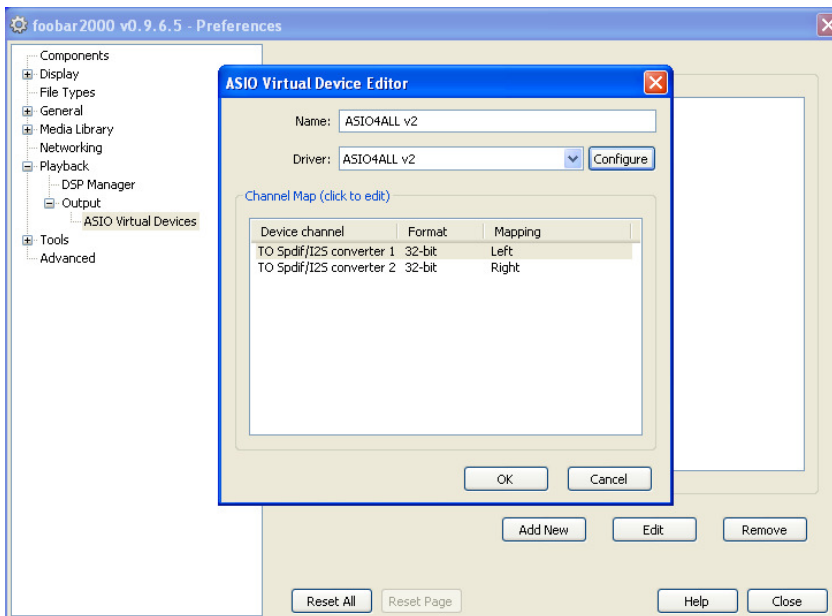(Figure 10)

● Configuring for Windows XP, Vista, or Win7

Open control Panel and select Hardware and Sounds. Under Audio, click to open the Manage Audio Devices window which will show KingRex UC192.

(Figure 11)

Open control panel and select hardware and sounds. Please go the path foobar 2000-> File->Preference->ASIO Virtual Device Editior-> ASIO4ALL control panel-> KingRex UC192-> SPDIF or IIS.
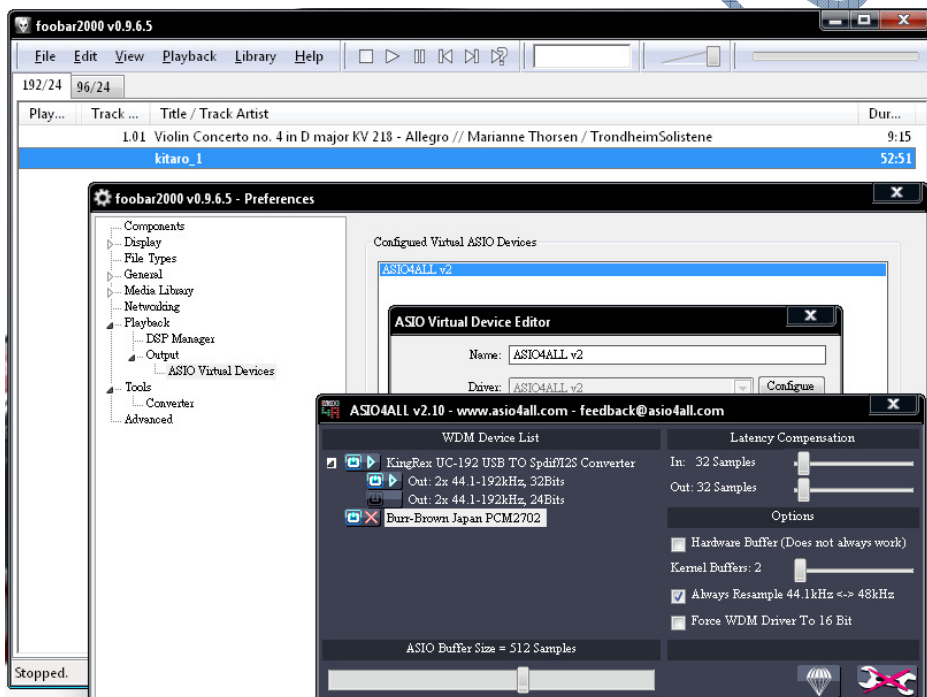
As happens with ASIO4ALL, press the "configure" button setup the ASIO virtual devices.

(Figure 12)

- Configuring ASIO output for Windows system
  Go to system preference and select sounds. The following windows as shown, please select UC192 for output as indicated Figure 13. Under the UC192, the first device is I2S output; the second device is SPDIF ouput.
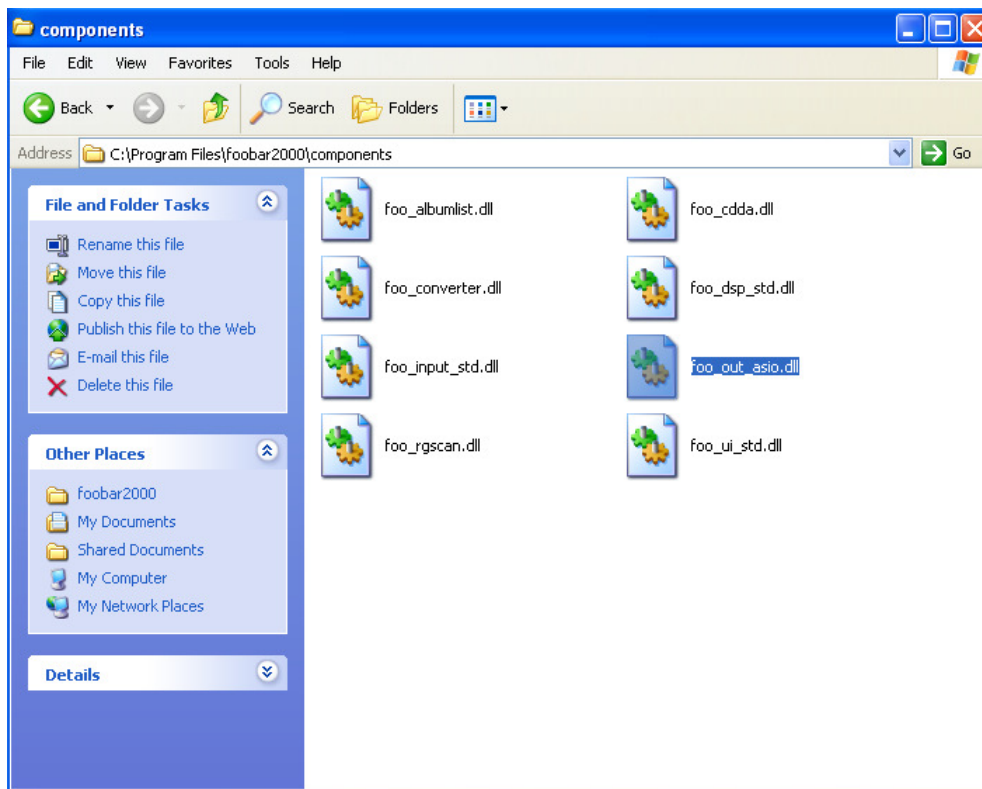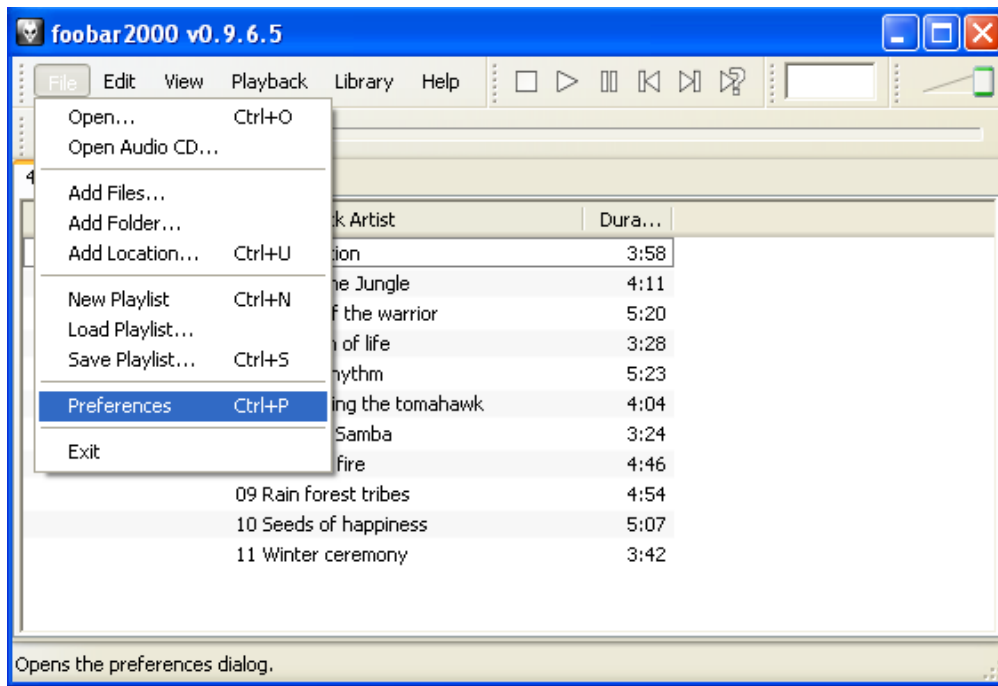

(Figure 13)

- Configuring the player for WASAPI or ASIO output support under FooBar 2000 player
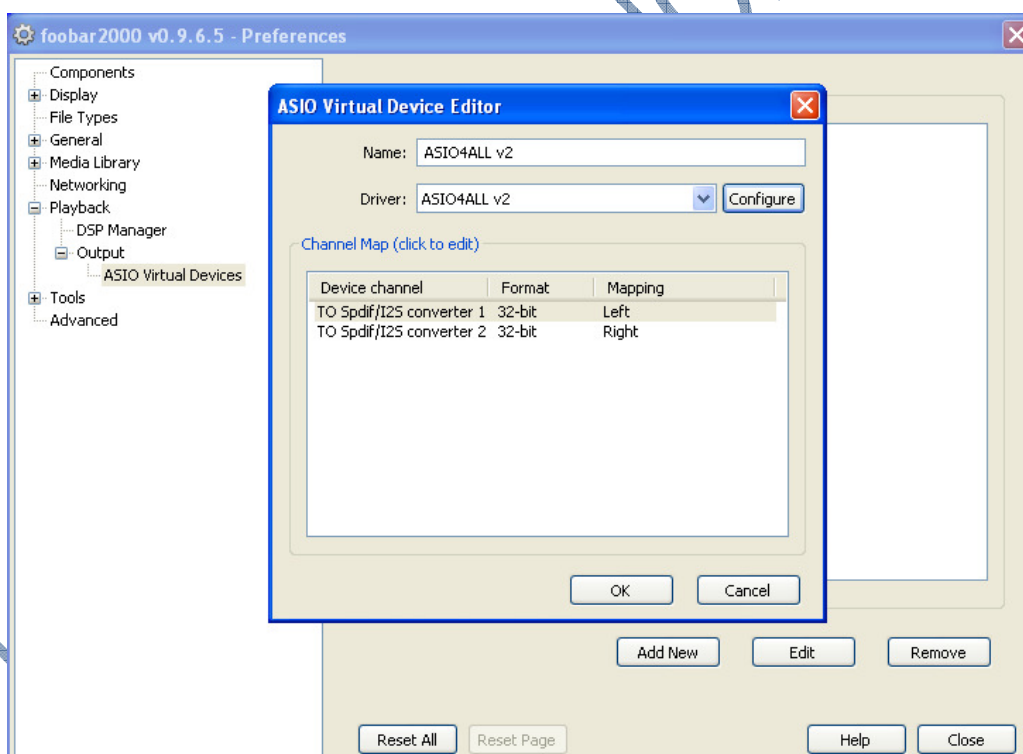
FooBar 2000

To use FooBar with WASAPI under Win7 it is necessary to download the DLL's for WASAPI or ASIO output support from the FooBar 2000 website component 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_wasapi (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->Preference-> Playback->Output window and set parameters as Figure 14.

(Figure 14)

(Figure 15)

J. Maintenance

For cleaning the cabinet, use a dry cloth and wipe dust away. If needed, moisturize the cloth with a small amount of window cleaning dissolvent. Do not use excessive amounts of solvents, and do not let any of solvent spill into amplifier. The front panel is made of aluminum, it can be cleaned by using normal mild solvents and clean paper tissue or cloth. Do not use any other the scratch the mirror display at the front.

K. Burn in

All new electronic equipment must be burned in to achieve optimum performance. Please allow the new pre-amplifier and reserved power supply unit to burn in by playing music with the loudspeakers connected for 200 hours before critical listening is performed.

L. Service

The simplicity of the KingRex UC192 D2D converter are very few parts can be breaking down.

Should you ever require service, you can either contact your dealer or national distributor, who can solve any problems locally.

You are also very welcome to contact KingRex Technology Co., LTD directly if you need any information or help.

Our contact information is listed on the last page of this user guide.

M. Our best wishes ~

We at KingRex only use the best " raw materials" trimmed and rafted to perfection by the best engineers and sound enthusiasts for all audiophiles.

The guidance lines in this manual will assure you of an exquisite sound experience hope it will provide clear instruction to operate our products.

We hope you years of proud ownership and happy listening. We feel confident that you will cherish this amplifier for both its amazingly clear reproduction as well as for its splendid craftsmanship, elegant appearance, and convenient size.

Hope you won't mind to share with us if there is any problem or questions. Please do not hesitate to contact with us. We look forward to hearing from you~

REMARK: Kingrex UC192 already pass the compatibility test for PCs and Macs. If the UC192 cannot work with your PC or Mac, the most common problem is the outmoded OS system. Please try to update your OS system first or work with other new PC.