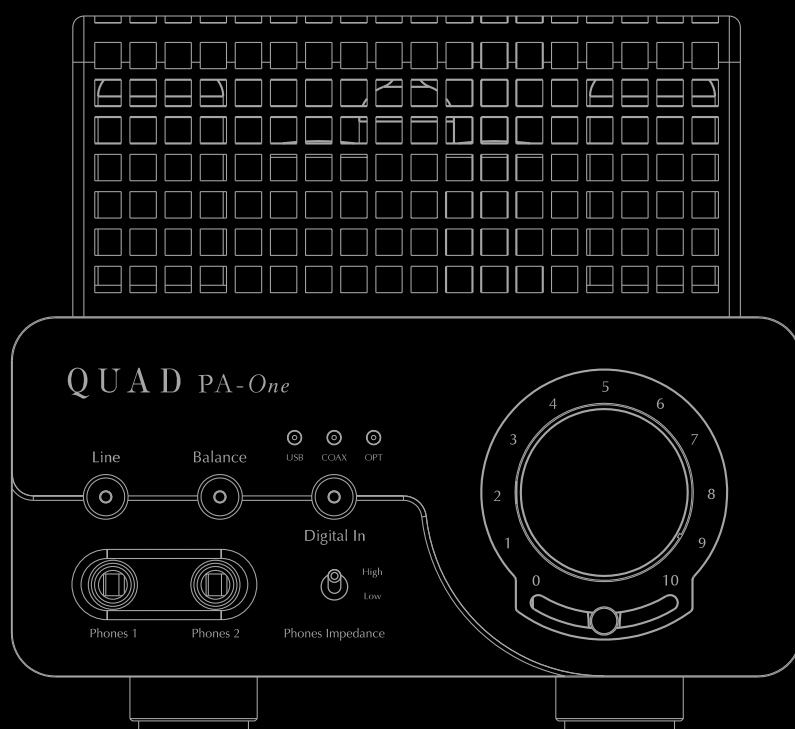


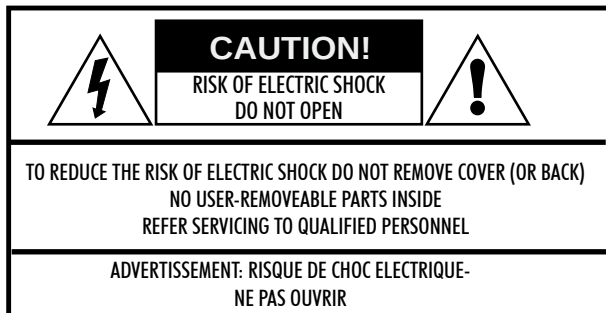
PA-One



Owner's Manual

QUAD *the closest approach to the original sound*

IMPORTANT SAFETY INFORMATION



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.

Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarized or grounding plug.

A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wider blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.



Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Unplug the apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Do not install this equipment in confined or built-in space such as a bookcase or similar unit, and keep well ventilated

this equipment is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth.

In opening space. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains etc.

WARNING: Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery etc.).

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and objects filled with liquids, such as vases, shall not be placed on apparatus. No naked flame sources, such as lighted candles, should be placed on the apparatus.

WARNING: Terminals marked with symbol of "⚡" may hold voltage of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by qualified personnel or the use of ready-made leads or cords.

WARNING: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

WARNING: The battery (battery or batteries or battery pack) shall not be exposed to excessive heat such as sunshine, fire or the like.

WARNING: Excessive sound pressure from earphones and headphones can cause hearing loss.

WARNING: Listening to music at high volume level and for extended duration can damage one's hearing. In order to reduce the risk of damage to hearing, one should lower the volume to a safe, comfortable level, and reduce the amount of time listening at high level. Headsets should comply with EN 50332-2 requirements (for GS certification).

WARNING: The mains plug is used as disconnect device; the disconnect device shall remain readily operable. The mains switch and circuit breakers are not provided with the apparatus; The installation shall be carried out in accordance with all applicable installation rules.



This equipment is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth.

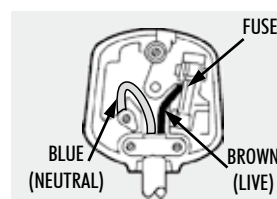
IMPORTANT NOTICE TO UK USERS

The appliance cord is terminated with a UK approved mains plug fitted with a 5A fuse. If the fuse needs to be replaced, an ASTA or BSI approved BS1362 fuse rated at 5A must be used. If you need to change the mains plug, remove the fuse and dispose of this plug safely immediately after cutting it from the cord.

Connecting a Mains Plug

The wires in the mains lead are coloured in accordance with the code: Blue: NEUTRAL; Brown: LIVE; Green and Yellow: EARTH. As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminals marked with the letter N or coloured BLUE or BLACK. The BROWN wire must be connected to the terminals marked with the letter L or coloured BROWN or RED.



CONTENTS

IMPORTANT SAFETY INFORMATIONInside Front Cover

SETUP1

CAUTION1

TECHNICAL FEATURES1

CONTROLS AND CONNECTIONS 2

USER GUIDE 3

FURTHER INFORMATION 4

USING THE USB SOURCE 5

SOFTWARE INSTALLATION INSTRUCTIONS..... 6

SPECIFICATIONS 12

SETUP

Connect the source to the input of the unit and select the balanced or unbalanced input in appropriate. Plug your headphones into one of the front panel jack according to the impedance rating of the headphones. Set the volume to minimum, connect the unit to the main supply and switch on. It takes 30 seconds or longer to warm up before you can use it.

This PA-One is able to drive both high and low impedance headphones. 'High impedance' means 100ohms and above; 'low impedance' is below 100ohms. (Typically, high impedance headphones are 200ohms or 600ohms, while low impedance types are 32ohms.) A specification for impedance will normally be included in the instructions that come with the headphones, or you can judge the impedance type of your headphones by following the steps below. Connect your headphones to a low impedance ('Low Z') socket. Turn up the volume slowly while listening to a familiar music track. If the volume seems low, even at maximum volume, your headphones are probably high impedance. Turn the volume down to minimum level and reconnect the headphones to a high impedance ('Hi Z') socket. Turn the volume up slowly again and check that the volume is satisfactory. High impedance headphones will clearly play louder when plugged into a high impedance socket. Low impedance headphones will play slightly louder when plugged into a low impedance socket.

Interconnect cables should at low capacitance and well screened. Avoid excessively long cables.

CAUTION

The volume should be set to minimum when you switch on the unit. When the unit is playing a music track, adjust the volume knob slowly and keep the volume at a comfortable level. Listening to the loud sound for a long period can damage your hearing permanently. If you feel uncomfortable while listening, or if there is a whistling in your ears after a listening session, you may be listening too loud. Turn the volume down.

There are no user adjustable settings inside the unit. Please do not remove the top cover as this will expose high voltage parts which present a danger to life.

The unit generates heat while working, so it should be placed in a well ventilated position, and enough space is required behind it to ensure that leads are not unduly strained or damaged.

Very frequent switching on and off in any electronic equipment put some stress on components, particularly in the power supply. The unit should be switched off when at night to save electricity and to maximize operating life of the valve.

Do not plug in the charged case headphones, earphones or may cause damage.

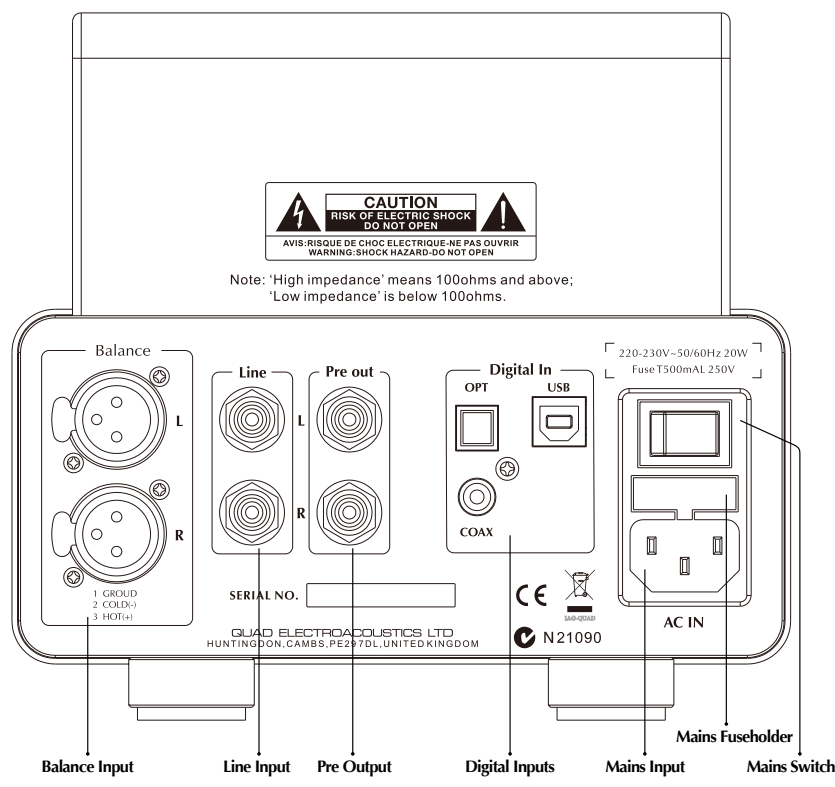
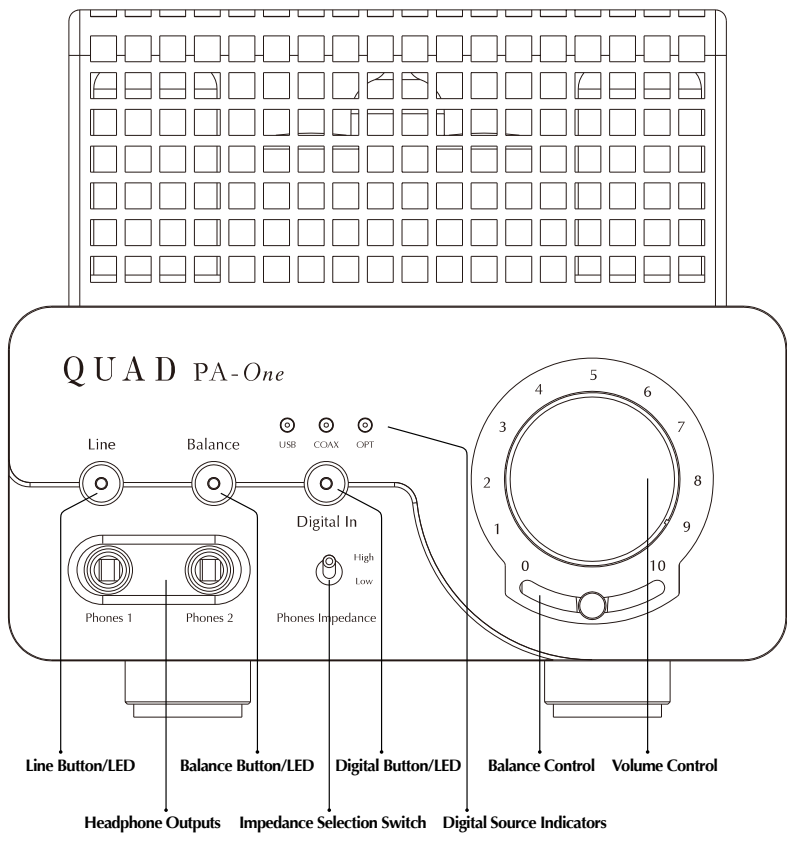
TECHNICAL FEATURES

It uses 6SL7 valves, and uses 6SN7 valves as the enhanced drive of 'triode mode', properly matched to the load through different impedance taps of high-performance audio transformer, which can be adjusted by the switch, to deliver nearly 1W of high quality, low distortion power into high or low impedance headphones.

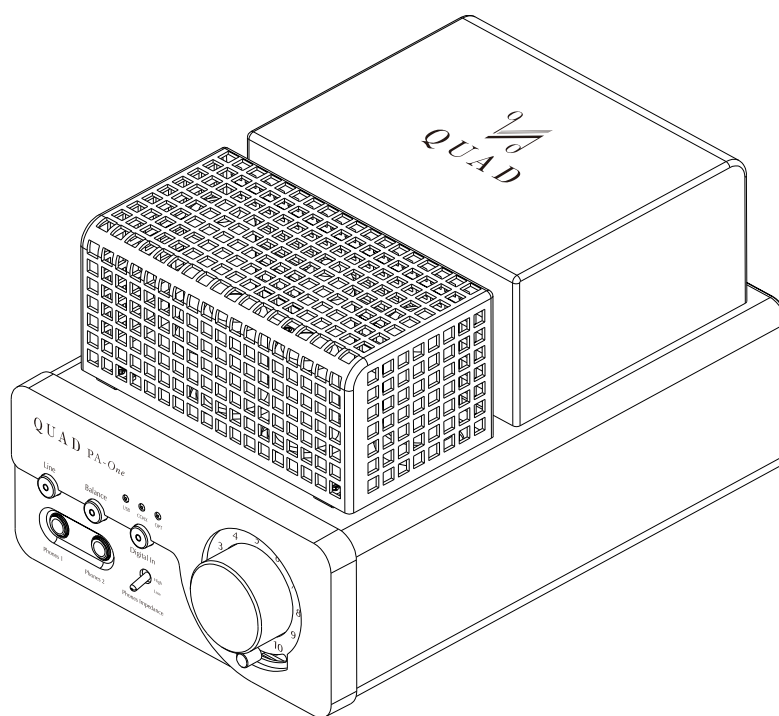
The use of EZ81 valves as rectifier makes the sound very soft and gentle, which is more suitable for headphone listening. It can also be used as pre voltage amplifier due to its function of pre output. The circuits use cathode feedback instead of negative feedback loop, contributing to a very small distortion and well dynamic performance. With the function of USB, coaxial and optical input, they can be connected to sources from computer or other devices. It is manually welded with unique manual craft.

All components in the amplifier have been carefully selected to give consistent high performance over a long period.

CONTROLS AND CONNECTIONS



USER GUIDE



INTRODUCTION

The QUAD PA-One is designed for the music lover. We make no exaggerated performance claims and are content to let the results speak for themselves. Thank you for purchasing this QUAD equipment. We hope that it will bring you many years of listening pleasure, and that, like its illustrious predecessor, it will be a treasured possession for you and for future generations of music lovers.

PRELIMINARIES

The QUAD PA-One carton contains:

- One QUAD PA-One
- One IEC mains lead fitted with an appropriate mains connector
- Instruction Manual and Warranty Registration form
- One set of packing materials

Consult the dealer from whom you purchased the equipment if any item is missing.

Please retain the packing materials for future transportation of the product.

Please read this manual in full before installing your new amplifier and retain the manual and your purchase receipt for future reference.

MAINS SUPPLY

The mains operating voltage of the unit is indicated on the rating plate attached to the unit. If this voltage does not match the mains voltage in your area, consult your QUAD dealer about converting the unit. The fuse rating should be:

220-240V T500mA 20mm

100-120V T1A 20mm

FURTHER INTRODUCTION

Burn In New Equipment

Burn in is very important. Valve components work at high voltage and temperature and when new they should spend an extended period at those temperatures to bed in. We recommend you burn in the amplifier for at least four or preferably twelve hours before you first using it. If you run in your equipment for this extended period, make doubly sure that all the safety conditions covered in this manual are fully met. Supervise the equipment for the first hour or so and if you have to leave the unit unattended thereafter, look in occasionally to make sure all is well.

Warming Up Before Use

Allow at least fifteen minutes for the amplifier to 'warm up' before use. If you play loud music while the system is cold. The output valves will not be fully operated and the amplifier will be starved of voltage and current. The resulting distortion is unpleasant and potential damage to the amplifier's valves and your loudspeakers. Intensive use of the equipment before it has warmed up will shorten valve's life.

Valve Lifetimes

Valves contain a heating element. This heats up the valve's cathode, which is coated to give off a steady stream of electrons. After a few years this coating will begin to wear out and performance will gradually deteriorate. The KT66 output valves are likely to deteriorate first but the driver valves will also eventually wear out.

As the valves start to wear out the sound will become less well defined and a lack of dynamics and power will become evident. Replacing the valves with a new set will fully restore the audio performance of the amplifier. When replacing valves it is essential to use the highest quality available. Poor quality valves will adversely affect the sound quality and may in extreme cases damage the amplifier. When replacing the output valves, use matched sets for best results.

Do not leave the amplifier permanently switched on or you will seriously shorten the lifespan of your valves!

Output Transformer

After installing or changing the wiring to your speakers, keep the volume control at zero, let the amplifier warm up and turn up the main volume gradually. If you don't hear sound, switched off immediately and investigate.

The output transformer is designed to match the high voltage, low current conditions in which the output valves operate to the low voltage high current requirements of a loudspeaker. Although robust, an output transformer can be damaged and in extreme cases wrecked, by careless use. If you play a valve amplifier into a short circuit, the output transformer will soak up a lot of energy before failing, but if the short persists the transformer could be damaged. Operating a valve amplifier at high output level with loudspeaker connected can also damage an output transformer.

The machine must be used on the connected load conditions, otherwise it may cause damage to the output transformer.

USING THE USB SOURCE

With the increased popularity of computers as source, this PA-One USB D/A converter allows consumers to enjoy listening to digital music sources from a computer (Windows or Mac) via USB connection. This product is USB 1.1 and 2.0 compliant. This device supports sampling frequencies ranging from 35kHz to 192kHz and incorporates a high quality digital-to-analogue converter (DAC). The factory default 48kHz input sampling frequency. With the computer in operation the PA-One USB DAC converts will detect input data. The display screen will then indicate the presence of a digital signal and show the output sampling frequency of the music filed in your computer.

Note: Windows does not support 192kHz sampling frequency. Owners of computers (Windows) are required to install corresponding software provided in the accompanying CD-ROM. Simply follow the software installation instructions contained.

SOFTWARE INSTALLATION INSTRUCTIONS

Setup of operating system

1. Mac OS X
2. Windows 8 / 7/ Vista / XP
3. Recommendations

All operating systems

Please note that your screen display may vary depending on the operating system.

System requirements:

Intel Core 2 @ 1.6GHz or similar AMD processor

1GB RAM

USB 2.0 Interface

Microsoft Windows Vista 32/64 Bit incl. SP2 | Windows 7 32/64 Bit | Windows XP SP3 (not recommended)

Apple MAC OS from 10.6.4

Mac OS X Installation from 10.6.4

The driver will be installed automatically when USB-device is connected for the first time. No third party driver is required.

Mac OS X System setup from 10.6.4

Open Finder>Go to >Utilities

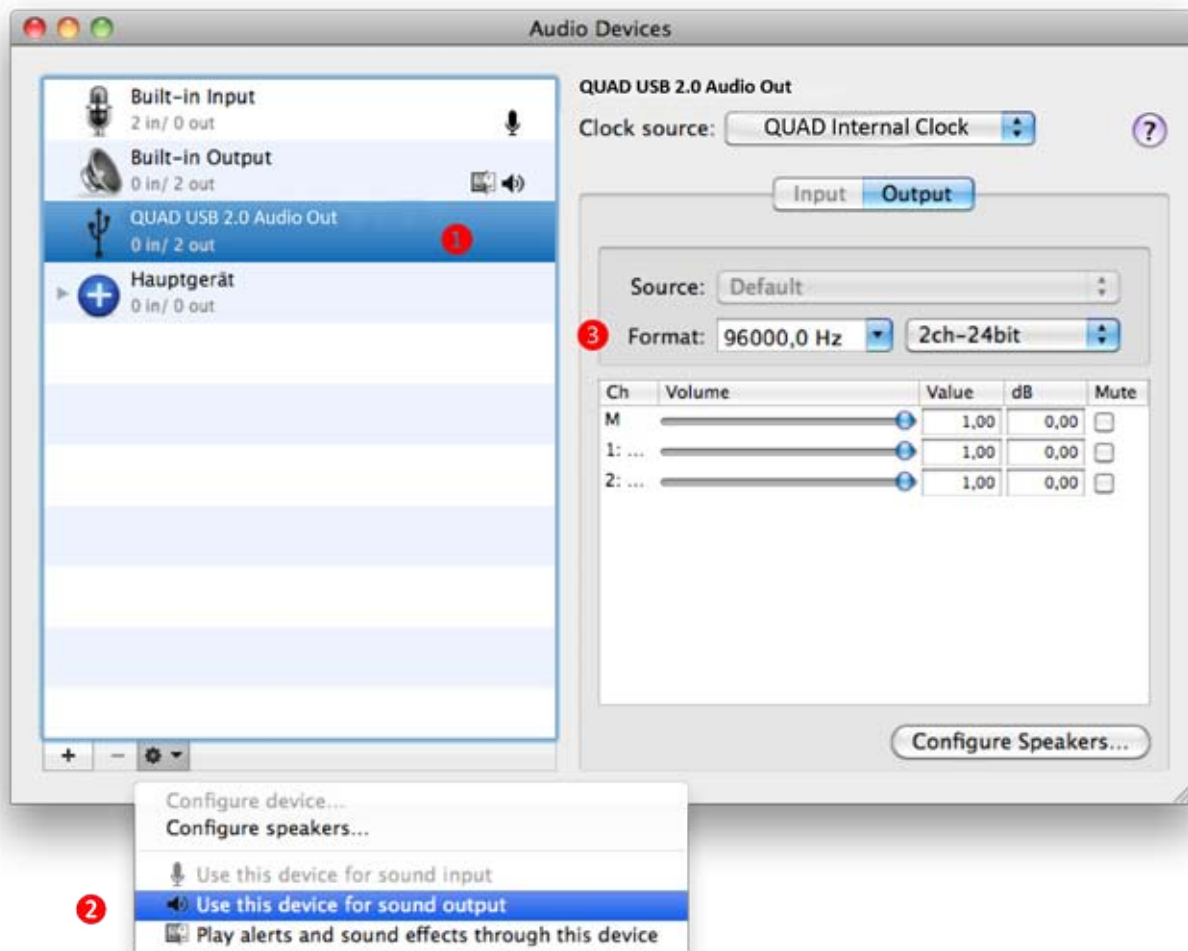
Open Audio>MIDI>Setup



SOFTWARE INSTALLATION INSTRUCTIONS

Mac OS X Installation from 10.6.4

- ❶ Select device QUAD USB 2.0 Audio Out.
- ❷ Check by using this device for sound output.
- ❸ Set your desired sample rate and bit resolution at format.



SOFTWARE INSTALLATION INSTRUCTIONS

Windows 8 / 7 / Vista / XP / Installation

You have to install the driver before using the USB device for the first time.

Put the installation CD into the CD/DVD/ drive of your computer.

Setup will start automatically. If not, please follow these steps:

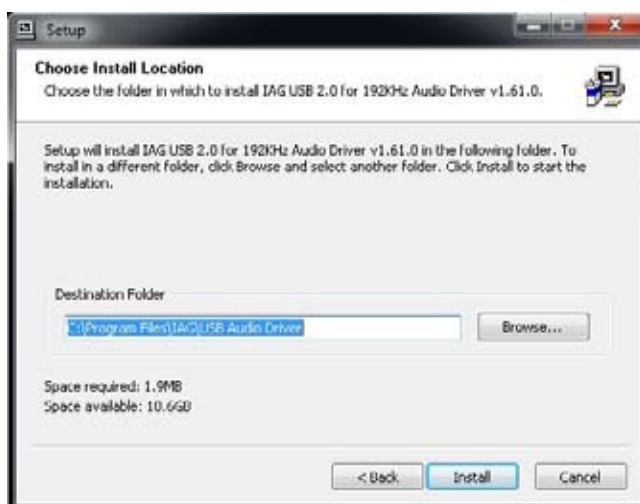
Click on Start>Computer. Right -click the icon of the CD/DVD drive and then click on install program.

Follow the instructions of the setup program to install the driver. Complete the install action by clicking finish.

Step 1- Start install wizard



Step 2- Choose specified destination folder

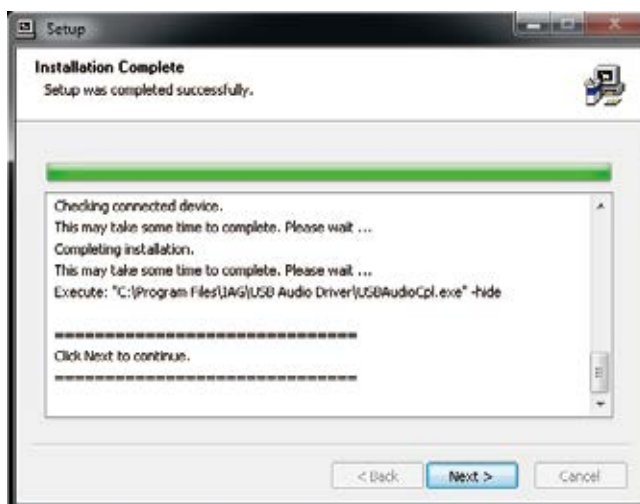


SOFTWARE INSTALLATION INSTRUCTIONS

Step 3 - Connect your QUAD PA-One



Step 4 - Click "next" to finish the installation



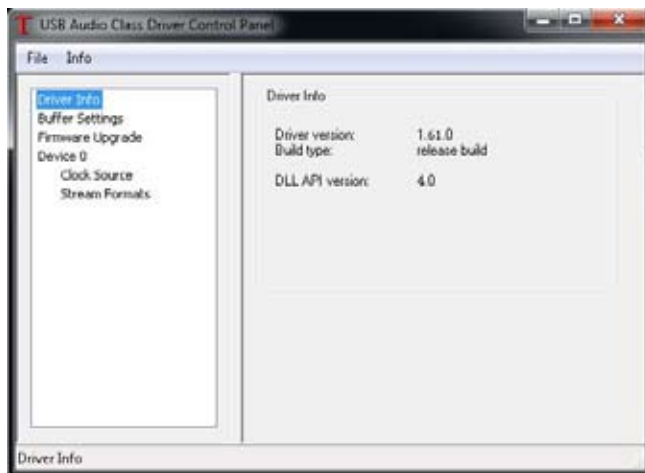
Step 5 - Close the installation



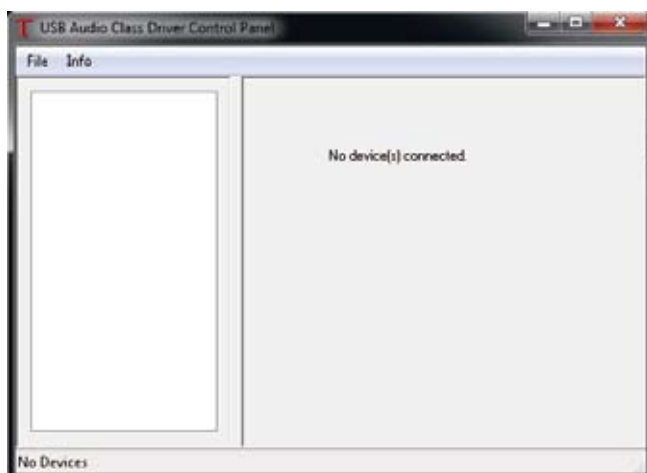
SOFTWARE INSTALLATION INSTRUCTIONS



To confirm connection of the QUAD PA-One to the PC, double click on the  tab.



If this window appears then the connection has been established between the QUAD PA-One and the PC, the Device is now ready to use.



If this window appears then the connection has not been established, please reconnect the QUAD PA-One.

SOFTWARE INSTALLATION INSTRUCTIONS

Windows 8 / 7/ Vista / XP System setup

After successful installation of the driver please connect the USB Audio device to a free USB port.

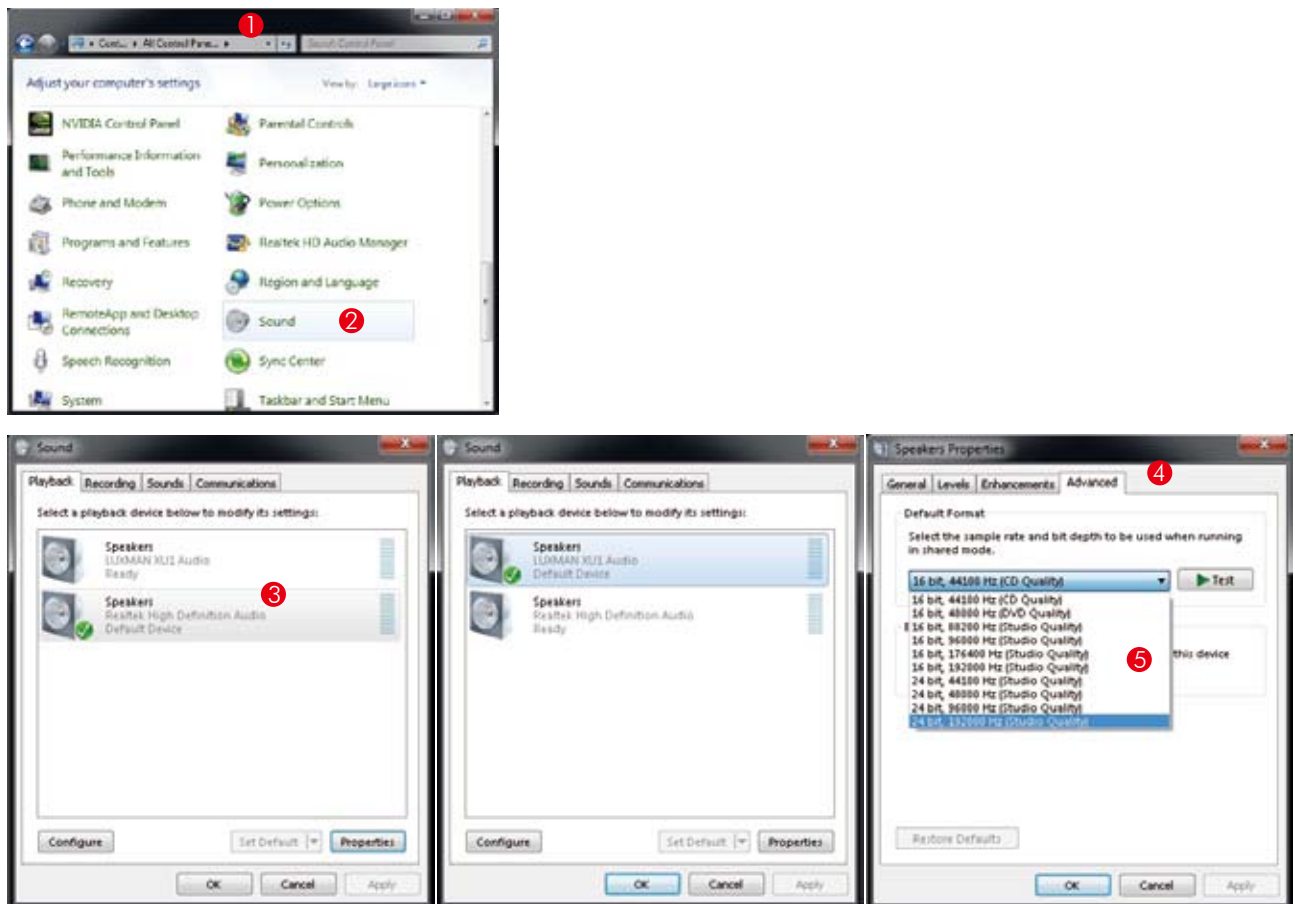
Do not use a USB-hub! Close all other USB applications if you want to listen to music with your computer. The QUAD Audio Driver replaces the internal soundcard of your computer.

Adjusting the sample rate

- ❶ Open the control panel of your computer.
- ❷ Open Sound.
- ❸ If the QUAD Audio is not set as default, please set it to default as shown.
- ❹ Under properties select Advanced and adjust the output format as required ❺.

Note: Windows Vista does not support the sample rate of 176.4kHz/24 bit. If you want to playback this sample state, a music player supporting this feature is required. You can use J.River media Center or Foobar for example.

Windows XP does not support sample rates of more than 48kHz. You need a special music player to play back other sample rates, for example J.River media Center or Foobar.



SPECIFICATIONS

Input Impedance	50k Ω
Output Power	500mW @ 32 Ω
Output Impedance	32 Ω ~300 Ω
Input Sensitivity	300mV (500mW @ 32 Ω)
Frequency Response	15Hz~30kHz (+0.5dB,-0.5dB)
Distortion	0.5% @ 1kHz
Channel Balance	$\pm$ 0.5dB
S/N Ratio (ref. 500mW)	105dB (IHF-A)
Stability	Measurements made with 230V supply
Inputs	1xBalanced input, 1xRAC input, 1xCocial input, 1xOptical input, 1xUSB input
Outputs	2xStandard headphone socket (high/low impedance), 1xRCA output
Digital Resolution	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176kHz, 192kHz
Power Supply Voltage	AC110~120V AC220~230V (50/60Hz)
Valve	2 $\times$ 6SL7, 2 $\times$ 6SN7, 1 $\times$ EZ81
Size (WxDxH)	180 x 284.5 x 163.5 (mm)
Net Weight	7.5kg

INTERNATIONAL SERVICE CENTRE ADDRESS

IAG House
13/14 Glebe Road
Huntingdon
Cambridgeshire
PE29 7DL
UK
Tel: 01480 452561
Fax: 01480 413403



IAG-QUAD

Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

QUAD

IAG House, 13/14 Glebe Road, Huntingdon, Cambridgeshire, PE29 7DL, UK

Tel: +44(0)1480 452561 Fax: +44(0)1480 413403 <http://www.quad-hifi.co.uk>

IAG reserves the right to alter the design and specifications without notice. All rights reserved © IAG Group Ltd.

Quad is a member of the International Audio Group. Code: QH14-MNL002a