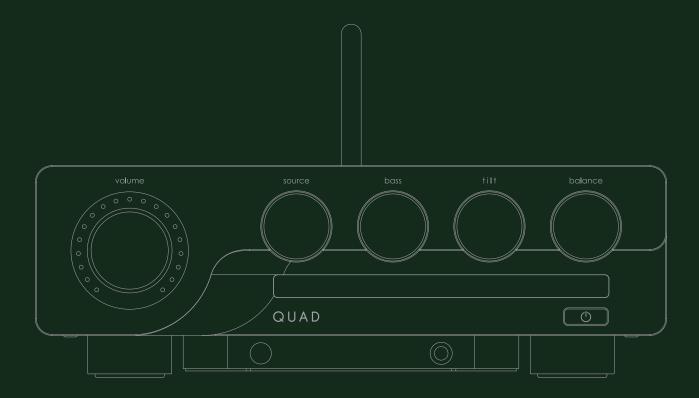




Scan the QR code using a smart-phone device for product warranty registration online.

# QUAD 3



Integrated Amplifier

User Manual

QUAD

## **IMPORTANT SAFETY INFORMATION**



AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR WARNING: SHOCK HAZARD-DO NOT OPEN

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

Warning: To reduce the risk of electric shock, do not remove the cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.

This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

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 polarised or grounding plug. A grounding plug has two blades and a third grounding prong. The wide 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 this 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.

**WARNING:** Only use attachments/accessories specified or provided by the manufacturer (such as the recommended battery - not supplied).

**WARNING:** The mains plug/appliance coupler/is used as disconnection device; the disconnection device shall remain readily operable.

**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 a confined or built-in space such as a bookcase or similar unit, and keep well ventilated in open space. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains 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 ensure that objects filled with liquids, such as vases, shall not be placed on the apparatus. No naked flame sources, such as lighted candles, should be placed on the apparatus.

WARNING: Do not ingest the battery, Chemical Burn Hazard. This product requires a coin/button cell battery (not included). If the coin/button cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death. Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.



Ground protection terminal. This product should be connected to a power outlet with ground protection.

Denmark: Apparatets stikprop skal tilsluttes en stikkon-

takt med jord, som giver forbindelse til

stikproppens jord.

Finland: Laite on liitettävä suojakoskettimilla varustet-

tuun pistorasiaan.

Norway: Apparatet må tilkoples jordet stikkontakt. Sweden: Apparaten skall anslutas till jordat uttag.



This product will generate certain heat during use. Please pay attention to the hot surface.

**WARNING:** No naked flame sources, such as lighted candles, should be placed on the apparatus.

**WARNING:** Attention should be drawn to environmental aspects of battery disposal.

**WARNING:** Use of the apparatus in tropical climates.

# QUAD 3

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## **INTRODUCTION**

Thank you for your investment in the QUAD 3. We are sure that the QUAD 3 will continue to delight you for years to come.

The QUAD 3 is designed to be the perfect match for all of your music sources and provides the necessary amplification to realise the highest quality of your music, regardless of the source.

You can link the QUAD 3 to both analogue and digital sources, thanks to its diverse range of input options.

Please read this manual carefully to discover all the ways you can connect your equipment to the QUAD 3 and learn how to get the best performance from all of your music sources.

## UNPACKING THE EQUIPMENT

The carton contains:

- The QUAD 3
- One IEC mains cable with a plug suitable for your area
- One remote controller
- One QUAD 3 user manual
- 2 x AAA batteries

Consult the dealer from whom you purchased the equipment if any item is not present. Carefully unpack the unit and accessories. Take care not to damage the surface finish when undoing the protective polythene sleeve. Retain the packing materials for future use. Retain the user manual and information concerning the date and place of purchase of your equipment for future reference. If you transfer the unit to a third party please pass on this instruction manual along with the equipment.

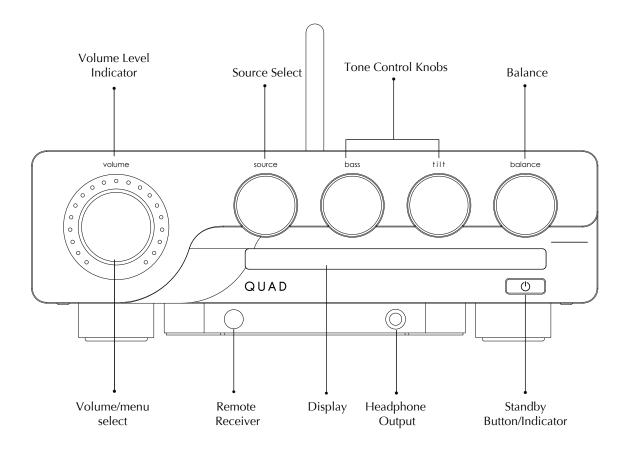
## **USB DRIVERS (AND FIRMWARE UPDATES)**

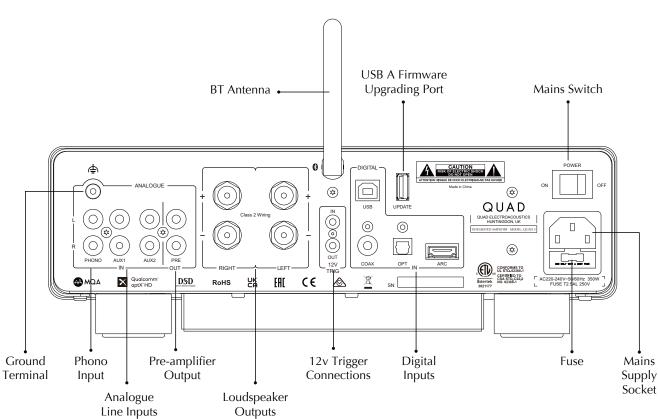
To download Windows Drivers, please see the separate manual. Any firmware updates will also be available from www.quad-hifi.co.uk

## **PLACEMENT**

The unit must be mounted on a solid, level and stable surface. Before you connect the QUAD 3 to AC mains power, ensure your AC mains voltage corresponds to the rating on the rear panel of the product. If in doubt, consult your dealer. If you move to an area which has a different mains voltage, seek advice from a QUAD appointed dealer or a competent service technician.

# **CONTROLS AND FUNCTIONS**





## Volume Indicator

The volume indicator changes as the volume level changes. When all LEDs are lit, the volume level is at maximum. When the amp is muted, the LED's will pulse slowly in a breathing pattern.

## Volume/Menu Select

You can rotate the volume controller clockwise to increase the volume and rotate it anti-clockwise to decrease the volume. Press it once to mute or unmute the volume, and long press to enter the menu.

## **Source Select**

Turn this controller to switch between different signal sources.

## **Tone Adjustment**

You can adjust the bass and tilt controllers to adjust the tone according to your preference.

## Remote Receiver

Receive messages from the remote control.

## **Headphone Output**

A stereo 6.3mm (1/4") jack is provided on the front panel for connecting headphones. When headphones are connected the audio to the loudspeaker terminals will be deactivated.

# **Standby Button**

Press the Standby button briefly to enter/exit the 'standby' mode.

## **Analogue Inputs (Line)**

Connect your analogue sources to one of the two line-level inputs, AUX1 or AUX2.

# **Pre-Amplifier Output**

Pre-amplifier output for driving external power amplifiers, subwoofers or signal processors.

# **Loudspeaker Terminals**

Connect your loudspeaker signal cable.

## **12V Trigger Connections**

The QUAD 3 features two 12V Trigger connections, one output and one input. Use the output to control other products (ie. QUAD 3CDT or third party compatible equipment). Use the input when the QUAD 3 is to be controlled by other equipment. The 12V Trigger connections are made using 3.5mm to 3.5mm stereo or mono jack interconnects (not included).

## **USB A Firmware Update Port**

This port must only be used to upgrade the internal firmware of QUAD 3. It cannot be used to connect a computer or USB disc to play music.

Please read and follow any instructions provided with any such download.

POWER OFF the QUAD 3 unit. Insert the USB storage device, onto which the USB update files have been loaded. Press the 'STANDBY' button on the front panel then simultaneously POWER ON. Your QUAD 3 will upgrade automatically. Wait for the device display to confirm that the update is completed. Then, unplug the USB drive and restart the QUAD 3. The unit is now ready to use.

## **INSTALLATION**

Before making any connections to your high fidelity equipment make sure that all units in the system are switched off and unplugged at the mains.

## **Mains Connections**

The Mains On/Off switch is on the rear panel. Before connecting your QUAD equipment to the AC mains supply, check and make sure the voltage marked on the back matches your supply voltage.

# **Analogue Signal Output Connections**

#### **Preamplifier Output**

The QUAD 3 has one pair of unbalanced RCA outputs which enable the QUAD 3 to operate as a dedicated preamplifier.

Connect an RCA cable between the unbalanced pre output of the QUAD 3 and the unbalanced input of a power amplifier, sub-woofer or other equipment. Cables should be of low-noise construction and fully screened to minimise hum and noise transmission.

#### **Loudspeaker Outputs**

The QUAD 3 has two sets of loudspeaker outputs. They are independent for left and right stereo amplifier outputs.

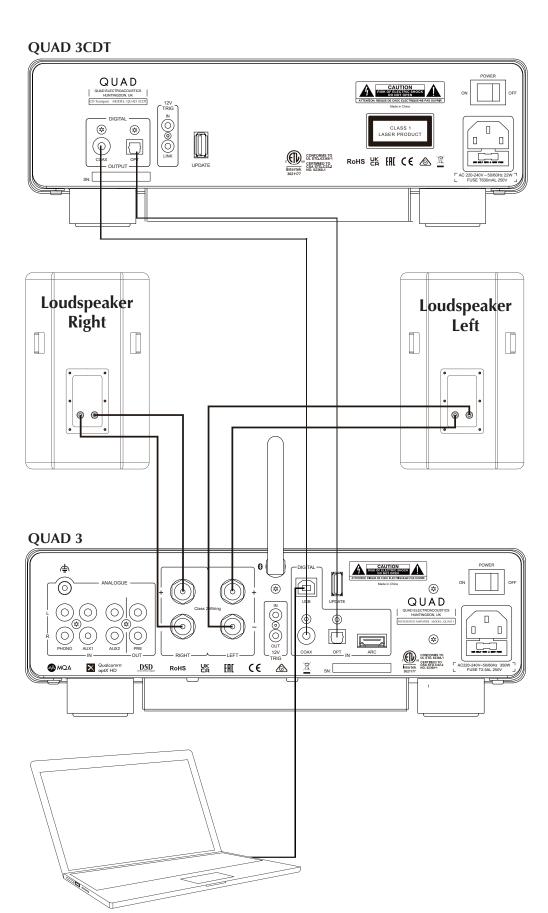
Connect the Positive (+) RED terminals of the amplifier to the Positive (+) RED terminals of the loudspeakers. Connect the Negative (-) BLACK terminals similarly. When connecting loudspeakers tighten the terminals securely by hand. Make sure there are no loose strands of wires which could cause short circuits.

### **Headphone Output**

The QUAD 3 has a stereo 6.3mm(1/4") jack on the front panel for connecting headphones. Connecting headphones will mute the audio signal to the loudspeakers.

WARNING: Listening to music at high volume levels and for extended durations 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 levels. Headsets should comply with EN 50332-2 requirements (for GS certification).

# **CONNECTION**



## **Analogue Signal Input Connections**

The QUAD 3 has two sets of unbalanced RCA inputs for connection to sources which provide line level outputs. Both sets are identical.

Connect an RCA cable between the unbalanced input of QUAD 3 and the unbalanced output of a source unit like a CD player or DAC. Cables should be of low-noise construction and fully screened to minimise hum and noise transmission.

## **Phono Signal Input Connections**

The QUAD 3 has a phono signal input, the phono input should only be connected to turntables fitted with moving magnet (MM) cartridges.

# **Digital Signal Input Connections**

The QUAD 3 has a variety of digital inputs which can be connected to most popular digital sources, like the digital output of a CD or DVD player, DAC or PC.

## **Coaxial Input**

The QUAD 3 has a coaxial SPDIF input. Connect an RCA digital cable between the digital coaxial output of the source unit to the COAX input of QUAD 3.

#### **Optical Input**

The QUAD 3 has an optical SPDIF input. Connect an optical (TOSlink) cable between the digital optical output of the source unit to the OPT input on QUAD 3.

### **Bluetooth Input**

Select the BT source option on the QUAD 3. On your Bluetooth transmitter device (ie. smartphone, tablet or PC) use the Bluetooth devices menu to locate 'QUAD 3-xxxx' and connect. Once paired, the Bluetooth icon will appear on the QUAD 3 display. If you switch to another input on the QUAD 3 your mobile device will be disconnected after 60 seconds.

To reconnect, select BT on the QUAD 3 and it will automatically connect to the last paired device (if the device is within range). Alternatively, select 'QUAD 3-xxxx' on your device in the Bluetooth menu and it will reconnect. Once paired, you can disconnect your device from the QUAD 3 by long pressing the button on the remote controller.

#### **PC USB Input**

Connect your computer to the QUAD 3 via a USB cable (Type-A to Type-B). Select the USB source using the handset or the source controller on the front panel.

To download windows audio drivers please visit www.quad-hifi.co.uk



B-type USB

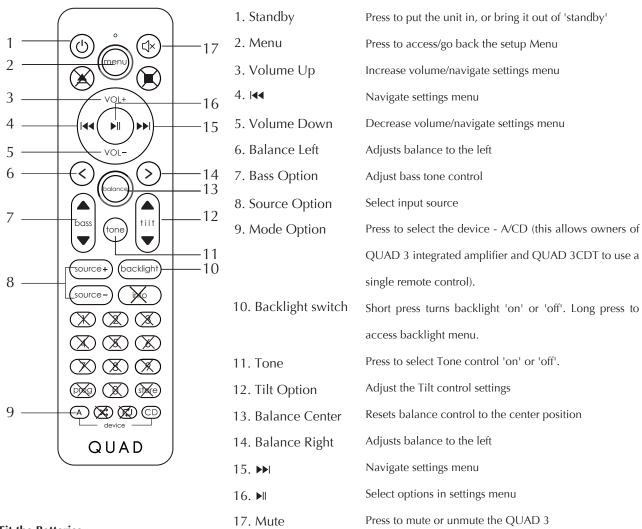
## **ARC Digital Input**

ARC function allows you to send audio from your ARC-compliant TV to the QUAD 3 through a single HDMI connection. To enjoy the ARC function, please ensure your TV is both HDMI-CEC and ARC compliant and set up accordingly.

Please note: Your TV must support the HDMI-CEC and ARC functions. HDMI-CEC and ARC must be set to 'on'. Please make sure that your TV's HDMI ARC Audio output is set to PCM Stereo or PCM 2-channel\*. The configuration method of HDMI-CEC and ARC differ depending on the brand or model of your TV. For details about the ARC function, please refer to your TV owner's manual. Please make sure that you are using a HDMI 1.4 cable or higher to support the HDMI ARC functionality.

\*exact naming may vary depending on your TV.

## REMOTE HANDSET



Fit the Batteries

Open the cover and insert 2 x AAA batteries, replace the cover. Always use AAA batteries and replace them in sets – never mix up old and new batteries. Very weak batteries can leak and damage the handset. Replace them in good time!

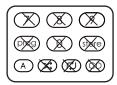
Note: there is a risk of fire and injury if a battery is handled improperly. Do not disassemble, crush, puncture, short the contacts or dispose of the batteries in fire or water. Do not attempt to open or service a battery. Discard used batteries in full

## **Handset Operation**

accordance with recycling regulations in force in your area.

Point the handset at the remote receiver and press the buttons as illustrated to activate the relevant functions. The handset should be within 15 metres of the player and there should be a clear line of sight between the handset and the unit for optimum remote control operation.

Note: The buttons shown crossed out are for use with the QUAD 3CDT model and offer no function on the QUAD 3.



## **OPERATION**

## **Standby Mode**

The QUAD 3 will be in standby mode when powered on. The U indicator on front panel is lit. Press the U button to take the QUAD 3 out of standby mode. The indicator light goes out.

## **Protection Mode**

The QUAD 3 is protected by a thermal switch which interrupts the AC Power supply if the amplifier is grossly overloaded for a period of time. To restore operation, simply press the  $\textcircled{\textbf{U}}$  button on the front panel. It is thus fully protected against gross overload, short-circuited output etc, but not neccessarily against seriously inadequate ventilation.

## **Mute Mode**

Users can press the remote handset button  $\not\subset x$  or press the volume knob to bring The QUAD 3 in or out of Mute mode when playing music. When muted, the volume indicator on the front panel will flash.

## MENU OPTIONS

#### -< FILTER >-

Configure the digital filter for the audio DAC. LINEAR (SLOW) is the default setting.

- LINEAR (FAST): This commonly selected filter offers clean overall suppression and excellent rejection, best for music with large transients. Provides crisp clean highs.
- LINEAR (SLOW): A low group delay and symmetrical input response with less ringing than 'Linear-phase fast roll-off'. It offers punchier bass than LINEAR (FAST), with clean highs. (Default)
- MINIMUM (FAST): This offers minimal pre-ringing. It is usually preferred for imaging and sound stages. It offers no aliasing in the frequency domain and stronger bass than 'LINEAR (FAST)', with clean highs.
- MINIMUM (SLOW): A Non-Symmetrical filter designed to minimise pre-ringing. It offers a strong punchy bass with a good transient attack.
- HYBRID: This is the combination of LINEAR (FAST) and MINIMUM (FAST). It offers a fast transient attack, strong punchy bass and crisp highs.

### -< DPLL >-

This setting is used for changing the bandwidth of the digital phase lock loop of the D/A converter to accommodate different levels of jitter on the incoming SPDIF signal. 'Normal' mode should be selected for signals with low jitter, while Wide mode should be selected for signals with abnormal jitter. For best audio quality leave this setting at the default value 'Normal' only use 'Wide' for a given input if the system is having problems locking onto the source.

## -< MQA MODE >-

• Full Decode A (PCM Upsampling Off) - This enables the full internal MQA decoding process of the QUAD 3, and simultaneously enables PCM streaming via SPDIF (COAX or OPTICAL) up to 192kHz. The SPDIF outputs will be switched off when MQA decoding is taking place, or if the PCM stream sample rate is above 192kHz.

This mode is best for those streaming MQA and using the analogue outputs, or for streaming PCM (FLAC, WAV etc.) and using either analogue or digital outputs.

• Full Decode B (PCM Upsampling On) - this enables the full internal MQA decoding process of the QUAD 3, and upsamples both MQA and PCM to 352.8kHz or 384kHz.

This mode is for use with the analogue outputs only. The SPDIF outputs (COAX and OPTICAL) are disabled.

 Passthrough Mode - this will bypass the MQA decoding stage in the QUAD 3 internally

### -< SENSITVITY >-

The gain of AUX1, AUX2 and PHONO analogue signals can be adjusted +/- +6dB in 1dB increments.

#### -< VOL LIMIT >-

VOL LIMIT sets the maximum volume level for the unit when exiting 'standby' mode. The volume setting will be set to the level that was used at the end of the previous operating session This will avoid a sudden loud signal at the beginning of a new session.

#### -< TONE >-

TONE can be turned 'on' or 'off' in the menu.

It can also be enabled or disabled via the 'TONE' button on the remote or via the source controller on the front panel interface of the QUAD 3.

#### -< CONTRAST >-

The contrast can be adjusted from Level 1 to 5

### -< AUTO STANDBY >-

The 'auto standby' feature will, by default, put the unit into standby after 20 minutes of inactivity.

This feature can be configured and set to 20 minutes, 60 minutes or 'never'.

#### -< VERSION >-

Check the currently installed firmware version.

### -< CEC >-

Activate or deactivate the CEC function of the QUAD 3. If you want QUAD 3 to sync power on and off with your TV, CEC should be set to 'On'. CEC is set to 'Off' by default, which means it will not auto-power on with your TV set, but still allows QUAD 3 volume control via your TV remote.

**Note:** CEC performance will vary according to your TV or 3rd party HDMI CEC specification. The CEC code release time varies from device to device, therefore CEC 'On' could cause delays in audio response from the QUAD 3 when powered on by use of the TV remote controller. Other functions are not affected.

#### -< TRIGGER >-

Activate or deactivate the 12V trigger function of the QUAD 3.

#### -< BACKLIGHT >-

The backlight can be adjusted from 'Off' or to various brightness settings from Level 1 - 3.

You can set the display text 'on' or 'off'.

#### -< RESET >-

Reset the QUAD 3 to the factory default settings.

## The Menu

The menu enables you to customise the unit and optimise the interface with other equipment in your system.

Press the 'menu' key on the remote controller to enter menu mode, and then press ' | | or ' | to cycle through the menu options. Press | | or ' | or

You can also Long press the Volume knob on the front panel to enter the menu, then rotate it to cycle through the menu options. Press the volume controller again to enter the sub-menu. Press again to confirm any changes. Long press the volume controller to go back up a level, or exit the menu.

## WARRANTY COVERAGE

QUAD warrants its products, subject to the following terms and conditions below, to be free from defects in materials and workmanship.

## **Online Registration**





Scan the QR code using a smart-phone device, for product warranty registration online.

The three (3) year extended warranty is applicable to items purchased from Jan 1st 2021, onwards. Items purchased prior to this date are not eligible for this extended warranty service but are subject to statutory warranty claims and all applicable consumer rights.

To qualify for the extended 3 year warranty, you must register your product within ninety (90) calendar days from the date of purchase. Visit <a href="https://www.quad-hifi.co.uk/warranty-registration">https://www.quad-hifi.co.uk/warranty-registration</a> to complete your online registration. Items not registered online will have a Limited Warranty for one (1) year, or for the period of your country's statutory warranty, whichever is longer.

Warranty can only be offered to products registered with proof of purchase with date, model and details of the authorised dealer clearly stated on the receipt/invoice. Please keep the original receipt/invoice in case it is required for a warranty claim.

This Limited Warranty is non-transferable and is offered exclusively to the original owner.

This Limited Warranty is valid only in the original country of purchase.

Repairs or replacements are provided under this warranty are the exclusive remedy of the consumer. QUAD shall not be liable for any incidental or consequential damages for breach of any expenses or implied warranty with any product. Except to the extent prohibited by law, this warranty is exclusive and in lieu of all other warranties whatsoever, both expressed and implied, including but not limited to the warrant of merchantability and fitness for practical purpose.

This warranty provides benefits that are additional to and do not affect your statutory consumer rights.

This Limited Warranty offer is subject to correct information being submitted in your application. Incorrect dates or mismatched purchase receipt dates that are outside of the warranty terms will immediately invalidate any warranty claim.

\*Please check with your dealer local distributor for further information.

## **Exclusions**

The following items are excluded from the QUAD warranty:

Normal wear and tear and cosmetic damage (including but not limited to any wear from reasonable use, environmental deterioration or neglect)

Products on which the serial number has been removed, altered or otherwise made illegible.

Products not purchased from an authorised QUAD dealer.

Products that were not new at the time of original purchase.

Products sold 'as is', 'as seen' or 'with faults'.

Product not purchased from an Authorised Dealer/Distributor within the region of the claim (ie parallel imports or grey market products)

Accidental damage or faults caused by commercial use, acts of God, incorrect installation, incorrect connection, incorrect packaging, misuse or careless operation or handling which is not in accordance with the user instructions.

Equipment that has been operated in conjunction with unsuitable, inappropriate or faulty apparatus.

Repairs, alterations or modifications carried out by parties other than QUAD or its authorised service partners.

Damage in transit that cannot be attributable to the fault of QUAD, the authorised distributor or dealer (ie. claims otherwise covered by transit insurance.)

Faults relating to abnormal or inappropriate power supply voltage or power surges.

Faults relating to extremities in temperature, exposure to heat, water or other liquids, insects, excessive moisture, sand, chemicals, battery leakage or any other contaminants.

Any force majeure events, including but not limited to any acts of God, fire, lightning, typhoon, storm, earthquake, hurricane, natural disaster, tsunami, flood, war, riot, public disturbance.

Any other causes beyond the reasonable control of either QUAD and its Authorised Distributor.

Please note items purchased before 1st Jan 2021 are not eligible for the extended warranty claim.

#### **How to Claim**

To obtain warranty service please contact the authorised dealer from which you purchased this product and present the limited warranty certificate offered upon registration of your product's extended warranty offer.

Do not dispatch goods without the prior agreement of the dealer distributor or authorised service centre.

If asked to return products for inspection and or repair, please pack carefully preferably in the original carton or packaging affording an equal degree of protection and returned via insured, trackable courier service.

The authorised dealer or distributor will offer full return details and instructions. However, please note if unsuitable packaging is used the warranty may be deemed void due to improper action in return.

QUAD or the authorised distributor, dealer or service centre may make a charge for the supply of new packaging for the return of the repaired item. Please note, insurance is recommended as goods are returned at the owner's risk. Authorised distributors or service centres can not be held liable for loss or damage in transit. insurance and freight charges on the return journey will be paid for by QUAD, authorised dealer, distributor or service centre if corrective work proves to be necessary.

In the event of 'no-fault found' or 'no repair necessary', the return shipping charge will be the responsibility of the owner.

## Repairs

All repairs will be carried out by the appointed distributor (or locally appointed service centre). Repairs handled or processed without authorisation or approval of the appointed representative will be excluded from this limited warranty. Please note, QUAD is not able to supply parts or replacement items to any other entity than the official distributor or authorised service centre.

Other than the warranty and services set out in this warranty, to the fullest extent permitted by law, QUAD shall not be liable to you and/or any third party or entity whatsoever for:

- Any loss, damages and/or malfunction caused to any product(s) which is/are connected to any of the products covered by this warranty.
- Any damages, loss and liability, whether direct, indirect, incidental, consequential special, punitive or otherwise, howsoever caused by, arising out of or otherwise, in relation to the installation, delivery, use, service, repair, replacement and/or maintenance of the product;
- Any damages, loss and liability under this warranty in respect of any act, omission, or negligence of any of their technicians, employees, agents, representatives or independent contractors relating to the actual or purported performance of any of the obligations under this warranty.

## **Service Centre Address**

For technical support, servicing or product queries and information please contact either your local retailer or the office below.

IAG Service Dept. 13/14 Glebe Road Huntingdon Cambridgeshire PE29 7DL UK

Tel: +44(0)1480 452561

Email: service@quad-hifi.co.uk

For information on other authorised service centres worldwide contact QUAD International, UK. A world wide distributors list is available on the QUAD website: www.quad-hifi.co.uk

# **SPECIFICATIONS**

Model	QUAD 3
General description:	2 x 65W (8 ohm), 2 x 100W (4 ohm)
	Class AB power amp section
	ES9038Q2M 32-bit DAC
Design philosophy and core technology	MQA Full Decoder (PC USB, Coax/Optical)
	Bluetooth 5.1 (aptX/aptX HD) Streaming
	Dedicated High Performance Low Noise MM Phono stage
	Dedicated Current-Feedback Headphone Amplifier
	Built-in Bass and Tilt adjustment
	USB Firmware Upgrade
	2 x Analogue (Aux), 1 x Phono (MM) inputs
Inputs	1 x SPDIF (Coax), 1 x SPDIF (Optical), 1 x PC USB
	1 x HDMI ARC, 1 x Bluetooth (aptX/aptX HD), 1 x 12V Trigger
Outputs	1 x Pre Amplifier,1 x Stereo Speaker,1 x Headphone, 1 x 12V Trigger
Sampling Frequency	Optical/Coaxial: 44.1kHz -> 192kHz
	PC USB: 44.1kHz -> 768kHz (PCM) / DSD64, DSD128, DSD256, DSD512
Preamplifier Section:	
Gain (max.)	+0dB (Line)
	+47dB (Phono MM)
Input Sensitivity	800mVrms (Line, Volume = 0dB)
	3.6mV (Phono MM, Volume = 0dB)
Input Impedance	10K (Line)
	47K / 100pF (Phono MM)
Total Harmonic Distortion (THD)	<0.001% (1kHz @ 2V, Volume = 0dB)
Frequency response	20Hz-20kHz (+/-0.1dB)
Output voltage	2.3V max. (Volume = 0dB)
Output impedance	120 ohm
Signal-to-Noise ratio	> 110dB ( A-weighted)
	> 78dB (Phono MM, A-weighted)
DAC	
D to A Converter	ES9038Q2M
Total Harmonic Distortion (THD)	< 0.001% (1kHz @ 0dBFS)
Output level (0dBFS, 1kHz)	2.05Vrms
Max. Sampling Frequency	Optical/Coaxial: 192kHz
	PC USB: PCM768kHz, DSD512
Signal-to-noise ratio (S/N)	> 116dB (A-weighted)
Power Amplifier Section	
Gain	+29dB
Rated Power Output	2 x 65W (8 ohm, THD<1%)
	2 x100W (4 ohm, THD<1%)
Frequency Response	20Hz-20kHz (+/-0.3dB)
Total Harmonic Distortion (THD)	<0.003% (1kHz @ 30W/8ohm)
Input Sensitivity	800mVrms
Signal-to-Noise ratio (S/N)	> 110dB (A-weighted)
Max. Output Current	10A
max. Output Current	10/1

# **SPECIFICATIONS**

### **Headphone Amplifier**

Total Harmonic Distortion (THD)	< 0.01% (1kHz, 50mw)
Output Impedance	2.35 ohm
Load impedance	20-600 ohm
General	
Standby Power Consumption	<0.5W
Net weight	8Kg
Gross weight	9.3Kg
Dimensions (mm) (W x H x D)	300x101x332 mm
Carton Size (mm) (W x H x D)	366x215x420 mm
Finish	
Power requirements (depending on region)	220-240V ~ 50/60Hz
	100-120V ~ 50/60Hz
Standard accessories	Power Cord, Remote Control, User Manual, 2 x AAA batteries.



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.





