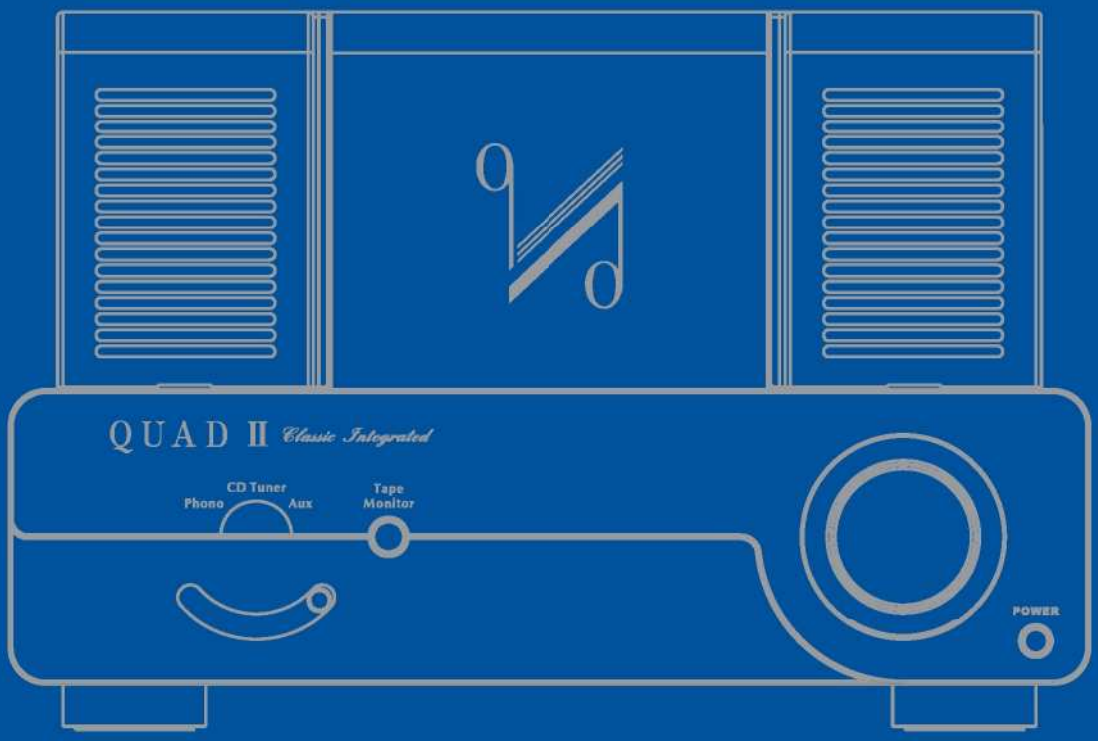
QUAD II *Classic Integrated*

Stereo Valve Integrated Amplifier



QUAD

Owner's Manual

Important Safety Precautions - Please Read Carefully!

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.

IMPORTANT SAFETY INFORMATION

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 install this equipment in a confined or building-in space such as a book case or similar unit, and remain a well ventilation conditions at open site.
The ventilation should not be impeded by covering the ventilation openings with items such as newspaper,table-cloths, curtains etc.
Attention should be drawn to environmental aspects of battery disposal.
Use of the apparatus in moderate climate.
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 type plug. A polarized plug has two blades with one wider than the other. A grounding type 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 plugs, convenience receptacles, and the point where they exit from the apparatus.
Use only attachments/accessories specified by the manufacturer.

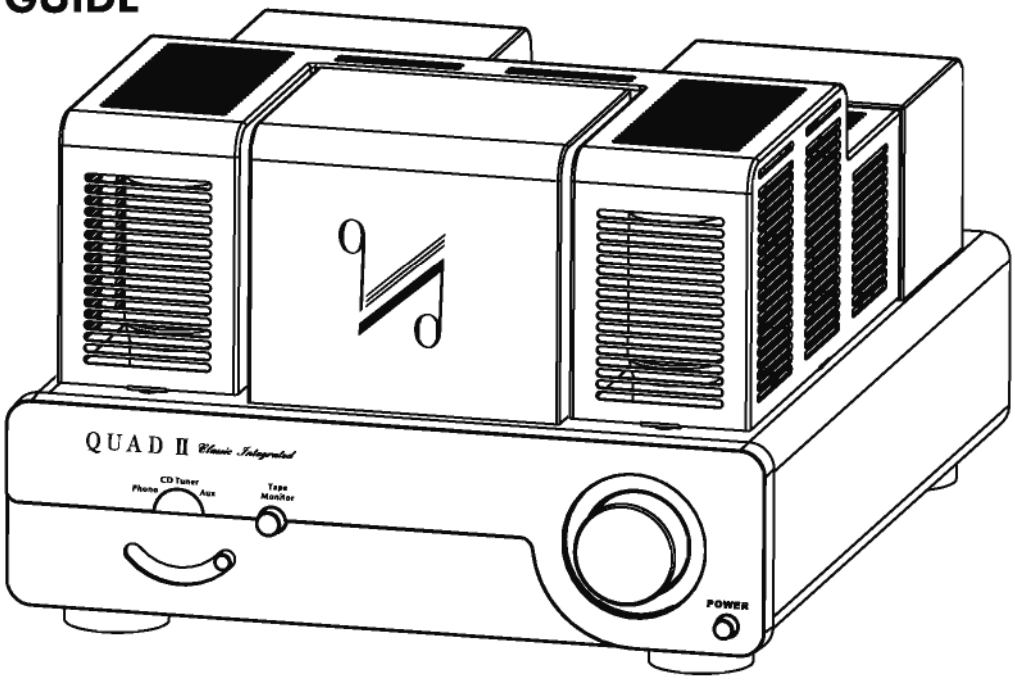
Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.

When a cart 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 the 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: 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 that 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 apparatus.
Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device.
Warning: The mains power switch for this appliance is located on the front panel. To permit free access to this switch, the apparatus must be located in an open area without any obstructions.

CAUTION: This appliance operates on very high voltages. DO NOT remove covers or dismantle. This is very dangerous and could cause severe shock.

WARNING: For the terminals marked with symbol of "ϟ" may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person.
The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
This apparatus is for professional use only.
⏚ Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.

USER GUIDE



INTRODUCTION

The QUAD II *Classic* integrated amplifier is a re-interpretation of the legendary QUAD II amplifier designed by Peter Walker, founder of QUAD and one of the guiding lights of early Hi-Fi reproduction.

The QUAD II *Classic* integrated amplifier 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 II *Classic* integrated amplifier carton contains:

- One QUAD II *Classic* integrated amplifier
- 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 (UK, Korea, etc.) T 2AL 20mm Slow Blow

100 - 120V (USA, Japan, etc) T 4AL 20mm Slow Blow

INSTALLATION

Place the unit on a stable rigid surface with at least 1m (3ft.) of free space above it. If you are using a turntable, ensure that the tonearm is least 400 mm away from the amplifier to minimise any hum conduction and ideally on a separate shelf. If you have to use the turntable and the amplifier on the same surface, place the turntable to the right of the amplifier to maximise the distance between the tonearm and the amplifier.

Avoid placing the amplifier in front of the loudspeakers to avoid vibrations from the speaker drive units causing microphonics in the amplifier and degrading the sound.

If this is your first valve amplifier: please familiarise yourself with some important issues surrounding the safe use of the QUAD II *Classic* Integrated amplifier

Valves Get Hot

Valve power amplifiers generate a lot of heat even with no input so it is vital to ensure adequate ventilation for your amplifier.

Although the protective cages over the valves get hot they are very unlikely to cause a burn. For absolute safety the unit should be placed out of the reach of children and pets and away from heat-sensitive objects.

Valve Amplifiers Work at High Voltages

Valves require a high voltage to function. Do not open the case. Also ensure that nothing is poked, dropped or poured into the amplifier's case.

The environment should be dry and free from litter. Do not place magnetically or thermally sensitive objects (i.e. credit cards or optical discs) close to the unit.

Valves are Microphonic

Because valves are constructed from fine wires and tiny metal parts they can pick up external vibrations. If you place the power amplifier too close to the speakers, direct sound at high volumes may vibrate the valves. 1 metre (3ft) to the side of each speaker should be considered a sensible minimum.

Interconnects and Cables

The signal inputs to the amplifier are via RCA phono connectors. As valve equipment works at high impedances, the phono interconnects from source units, and especially from the pickup cartridge should be well screened and of a low-noise, low-capacitance construction. To minimise capacitance and other effects, signal interconnects should be kept as short as possible.

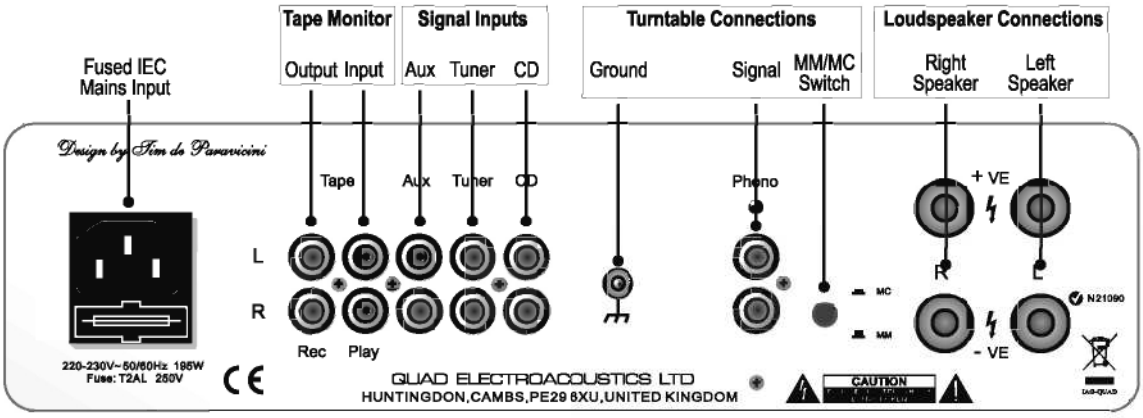
Choose good quality loudspeaker cable designed for the purpose rather than general purpose 'zip' or 'bell' wire. The cable should be of adequate gauge to maximise bass performance. We do not recommend high inductance or capacitance cables as these can have a significant and deleterious effect on valve amplifier output stages.

Mains Earthing (Grounding)

This amplifier requires connection to an earthed (grounded) mains supply. In your sound system, the amplifier should be the only device connected to mains ground to negate hum induced by ground loops. For this reason we suggest that you avoid using interconnects with separate ground wires. If any of your other equipment is grounded a "hum loop" may arise. If this happens please consult your dealer for advice.

Turntable/tonearm grounding is dealt with on the next page.

CONNECTIONS



Before connecting your amplifier all components in the system must be unplugged at the mains and the volume control of the amplifier set at zero.

When making stereo connections, RCA plugs and sockets coded *white* or *black* usually indicate the LEFT channel and those coded *red* the RIGHT channel. In a stereo pair of sockets the upper socket is usually the Left Channel and the lower socket the Right. If you are in any doubt, consult a qualified dealer.

Connecting a Turntable

Before connecting the unit please read the instructions that came with your pickup cartridge, turntable and tonearm. Ensure all active units in your system are switched off.

Signal connections: Most tonearms come with captive phono cables. If your turntable has phono sockets you will need a stereo RCA cable. Connect the turntable phono outputs to the Phono Inputs. Push the plugs firmly into place to make secure contact. Ensure the Left and Right channels are correctly connected.

Ground Connections: Most turntable/tonearm combinations use a ground wire; some use separate ground wires for turntable and tonearm. If your turntable has phono socket outputs you may need as a ground wire a single length of stranded wire the same length as the signal cables.

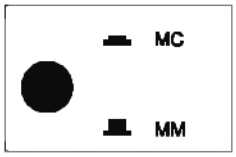
Connect the ground wire/s to the Input Ground terminal. Unscrew the ground terminal part way and insert the spade connector under the terminal. If the cable does not have a spade connector, bare a short length of wire and insert this under the left side of the terminal. Tighten firmly.

Note 1: *Some turntables do not use a ground wire but have a cartridge negative return lead connected internally to the turntable/tonearm chassis.*

Note 2: *Some cartridges have a negative signal pin linked to the metal cartridge body. If the cartridge body contacts the tone arm metalwork via the connecting hardware this may cause a hum loop. Consult your dealer before you remove this link.*

Note 3: *If you use a high capacitance RCA cable to connect a moving magnet cartridge to the turntable input you may cause an audible peak in the high frequency response. If you are in any doubt consult your dealer.*

Cartridge Selection



The QUAD II *Classic* Integrated amplifier accepts a wide variety of magnetic and moving-coil cartridges. Pressing the MM/MC selector button selects moving-coil (mc) cartridges; releasing the button selects moving magnet cartridges.

Use the MM position for:

- Standard moving magnet cartridges
- High output moving-coil cartridges (read the manufacturer's guide)
- Low output moving-coil cartridges connected via step-up devices (e.g. a m-c cartridge with its own transformer or head amplifier).

Use the MC position for:

- Standard low output moving-coil cartridges only.

Note: *Low output moving-coil cartridges are very low impedance devices. If you play a moving magnet cartridge with the selector set to* MC *you will get huge amounts of distorted sound with virtually no treble. If you do the reverse the output will be very low and shrill.*

Connecting Line Inputs

Virtually any line level audio source component may be connected to the line level inputs. These include tuners, CD players etc.

Connect a pair of high quality screened cables terminated in RCA phono plugs from the LINE OUTPUT of the source component to the chosen input of the amplifier

Connecting Recording Equipment

Connect a suitable pair of RCA phono cables from the LINE IN or REC sockets of the recorder to the TAPE REC sockets of the amplifier.

Connect another pair of RCA phono cables from the LINE OUT or PLAY sockets of the recorder to the TAPE PLAY sockets of the amplifier.

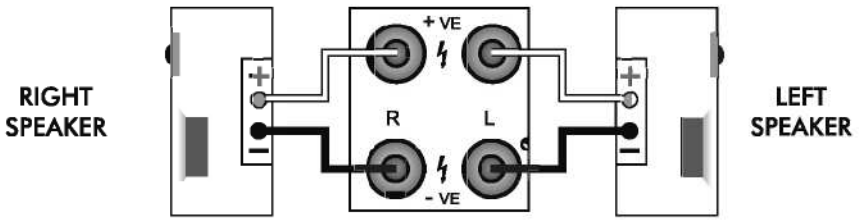
Connecting Loudspeakers

Strip any outer sleeve from the loudspeaker cable to a depth of around 40 mm (1.5").Strip the top 7mm of sleeving to expose the bare wire. If you are using stranded cable, lightly twist the strands to gather any loose ends.

Partially unscrew the terminal to expose the cross hole at the terminal base. Push the bare end of the cable into the hole. Ensure that the polarity is correct and there are no loose strands which could touch adjacent terminals. Tighten securely.

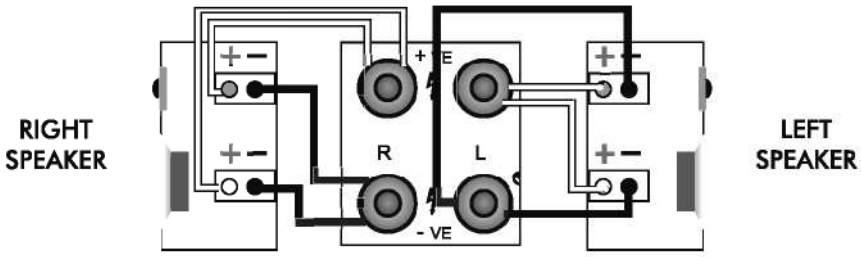
Standard Wiring

Connect the Left Loudspeaker to the Left channel of the amplifier. Connect the Red (Positive) terminal of the loudspeaker to the +VE terminal of the amplifier. Connect the Black (Negative) terminal of the loudspeaker to the –VE terminal of the QUAD II *Classic* Integrated amplifier. Now connect the Right Loudspeaker to the Right channel of the amplifier. Ensure that the Left and Right loudspeakers are connected to the Left and Right channels respectively.



Bi-Wiring

Bi-wiring is a technique whereby the treble and bass sections of a loudspeaker are independently connected to the relevant channel of the amplifier. Not all loudspeakers can be connected in this way. If your loudspeakers can be bi-wired, you may certainly bi-wire the QUAD II *Classic* integrated amplifier to the loudspeakers if you wish. Follow the recommendations in your loudspeaker user handbook.



Connecting the Mains

Ensure that the ON/OFF switch on the front panel is set to the OFF (fully extended) position.

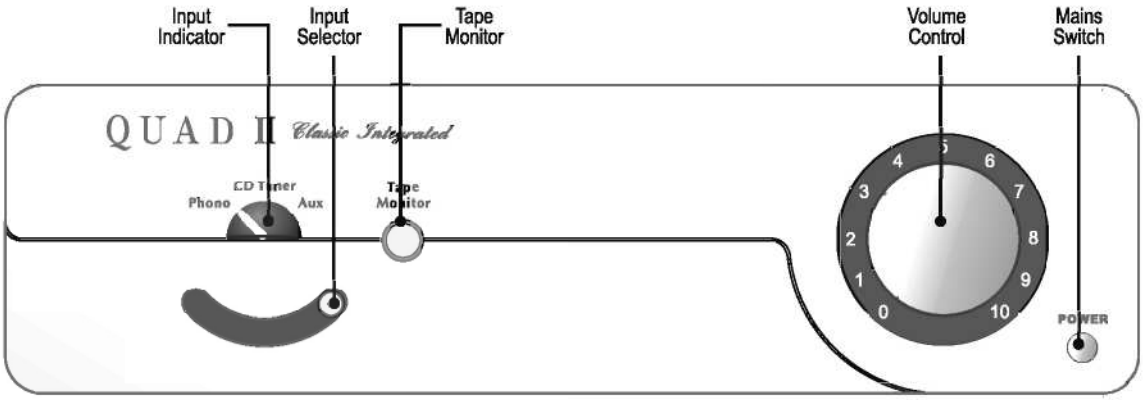
Ensue that the volume control on the front panel is at the minimum (fully anticlockwise) position.

Plug the supplied IEC lead into the mains input socket. Now plug the IEC lead into the wall socket and switch on` at the mains point.

Plug in the mains leads and switch on the power to your source units.

The system is now fully connected and ready for operation.

OPERATION



Switching On

The mains switch is a 'push ON push OFF' type. When the switch is depressed power is applied, when released, the power is switched off.

Turn the volume control fully anticlockwise to its minimum setting (0).

Depress the ON/OFF switch to switch the amplifier ON.

Warming Up

Allow at least fifteen minutes for the amplifier to 'warm up' before use. Warming up should always be done with the system volume control at zero. After the amplifier has warmed up fully, the system is ready for use.

Selecting an input

Move the Input selector to the left or the right to select the phono or a regular line input. The input indicator indicates the selected input.

Remember to turn the main system volume control to minimum when changing inputs, when changing discs, and especially when cleaning your stylus.

Altering the volume

Turn the volume control up to a moderate level. Remember the position of the volume control is NOT an indication of "how loud" your system will play.

The tape monitor

The signal from the selected input appears at the Tape Out sockets.

Pressing the tape monitor button in will select the tape input and deselect the other inputs so that you can listen to your audio recorder. If you have a three head recorder this enables you to monitor the playback as well as the input when you are making a recording.

After Use

Turn the Volume control down.

Always switch the amplifier off.

FURTHER INFORMATION

Running In New Equipment

Running in is very important. Valve components work at high voltages and temperatures and when new they should spend an extended period at those temperatures to bed in. We recommend you run the amplifier in for at least four and preferably twelve hours before you first use 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 operational and the amplifier will be starved of voltage and current. The resulting distortion is unpleasant and potentially damaging to the amplifier's valves and your loudspeakers. Intensive use of the equipment before it has warmed up will shorten valve 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, switch 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 levels with *no* loudspeaker connected can also damage an output transformer.

Overall Volume Levels

Output levels from different source components in a high fidelity system can vary widely. A CD player can produce levels significantly higher (>18 dB) than an FM tuner. It follows that the position of the volume control is not a guide as to 'how loud' the equipment will go. Though the overload characteristics of the amplifier are such that you can play your music at surprisingly high levels, if the sound is distorted, you are overloading your equipment whatever the position of the volume control.

CARE AND CLEANING

The surface of the equipment may be cleaned with a damp cloth provided that the power has been removed first. Solvent based cleaning materials should never be used as they may damage the paint finish.

GUARANTEE AND PRODUCT REGISTRATION

Your QUAD equipment is guaranteed against any defect in material and workmanship for a period of one year from the date of purchase with the exception of the valves, which are warranted for three months. Proof of purchase is required for warranty claims.

Please complete and return the enclosed Warranty registration form. Within the warranty period QUAD will undertake replacement of defective parts free of charge provided that the failure was not caused by misuse, accident or negligence. Your statutory rights within the territory in which you purchased the equipment are not affected by this warranty.

QUAD carries out a regular review of its products and reserves the right to adjust the specifications and performance from time to time.

SERVICE INFORMATION

If your QUAD equipment requires servicing (including valve replacement) you should return it to the dealer from whom the equipment was purchased.

If you are abroad and there is no suitable dealer in your area, please contact the distributor for the country in which it was purchased or QUAD Electroacoustics Ltd.

It is user's responsibility, whether the equipment is under warranty or otherwise, to ensure that equipment for service is returned carriage paid and in the original packaging. You should enclose a brief note with your name and address and the reason for returning the equipment.

International Service Centres

UK: International Audio Group Service Centre, Unit 4, St Margaret's Way, Stukeley Meadows Industrial Estate Huntingdon, Cambs, PE29 6EB
Tel:+44 (0)1480 447700 Fax: +44 (0)1480 431767
For information on authorised service centres worldwide contact QUAD Electroacoustics Ltd. A worldwide distributor list is available at ***www.quad-hifi.co.uk***

SPECIFICATIONS

Valves:	4 x KT66: 4 x 12AX7: 2 x 6922EH
Input Sensitivity:	275mV RMS (Line Level & Tape Monitor) 2mV RMS (MM) 200µV RMS (MC)
Output Power:	25W per Channel into 8 Ohms
THD:	0.06% @ 15W (700Hz)
Hum and Noise:	Better than -98dBA (ref 25W into 8Ω)
Frequency Response:	20Hz – 20KHz (+0dB / -1dB)
Crosstalk:	>75dB
Voltage Gain:	34dB
Power Consumption:	195 W (max)
Dimension (H x W x D:)	200 x 310 x 380 mm.

Note: Design and specifications are subject to change without notice for improvements.

IMPORTANT NOTICE TO UK USERS

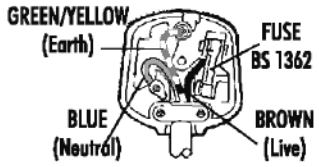
The appliance cord is terminated with a UK approved mains plug fitted with a 3A fuse. If the fuse needs to be replaced, an ASTA or BSI approved BS1362 fuse rated at 3A must be used. If you need to change the mains plug, remove the fuse and dispose of this plug safely *immediately* after cutting it from the cord.

Connecting a Mains Plug

The wires in the mains lead are coloured in accordance with the code: Blue: NEUTRAL. Brown: LIV.: GREEN/YELLOW: Earth.
As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

The wire coloured BLUE must be connected to the terminal marked N or coloured BLUE or BLACK.

The wire coloured BROWN must be connected to the terminal marked L or coloured BROWN or RED.



The wire coloured Green/Yellow must be connected to the terminal marked E or coloured GREEN or marked with the symbol ⏚

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist.

Check with your Local Authority or retailer for recycling advice.

QUAD

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