

Classic series



Quad Valve Systems

Perfect Ergonomics and Genuine Heritage
A Standard Since 1936

QUAD

the closest approach to the original sound

The Quad II Amplifier



A History of Achievement

The history of Quad is one of technical achievement in the field of sound reproduction. It is a story that began with the Quad 1 amplifier, which brought the benefits of 15 years knowledge and experience in professional audio and industrial products to the task of making the most accurate domestic audio amplifier of its age. A few years later, in 1953, the product which set the standard for amplifiers was the Quad II Power Amplifier, the time of Queen Elizabeth's Coronation and the year in which Mount Everest was finally conquered. This amplifier pioneered the principle of cathode coupling through the output transformer to reduce harmonic distortion to almost negligible levels. Such was its clear superiority that this model remained in production for 18 years. Three years later, in 1956, Quad demonstrated the first true full-range electrostatic loudspeaker. This remarkable product (known later as the ESL 57) used a virtually mass-less plastic film as a moving diaphragm between two charged plates. Compared with moving coil loudspeakers, the ESL 57 was free of unwanted colourations and distortions. This landmark product remained in production, virtually unchanged for years.

In 1967 Quad introduced its first transistorised amplifiers, the 33 Control Unit and the 303 power amplifier. These amplifiers introduced a new 'Triples' output stage that solved all the thermal instability problems that plagued early transistor designs. Radical in both circuit design and appearance, they went on to win a Design Council Award in 1969.

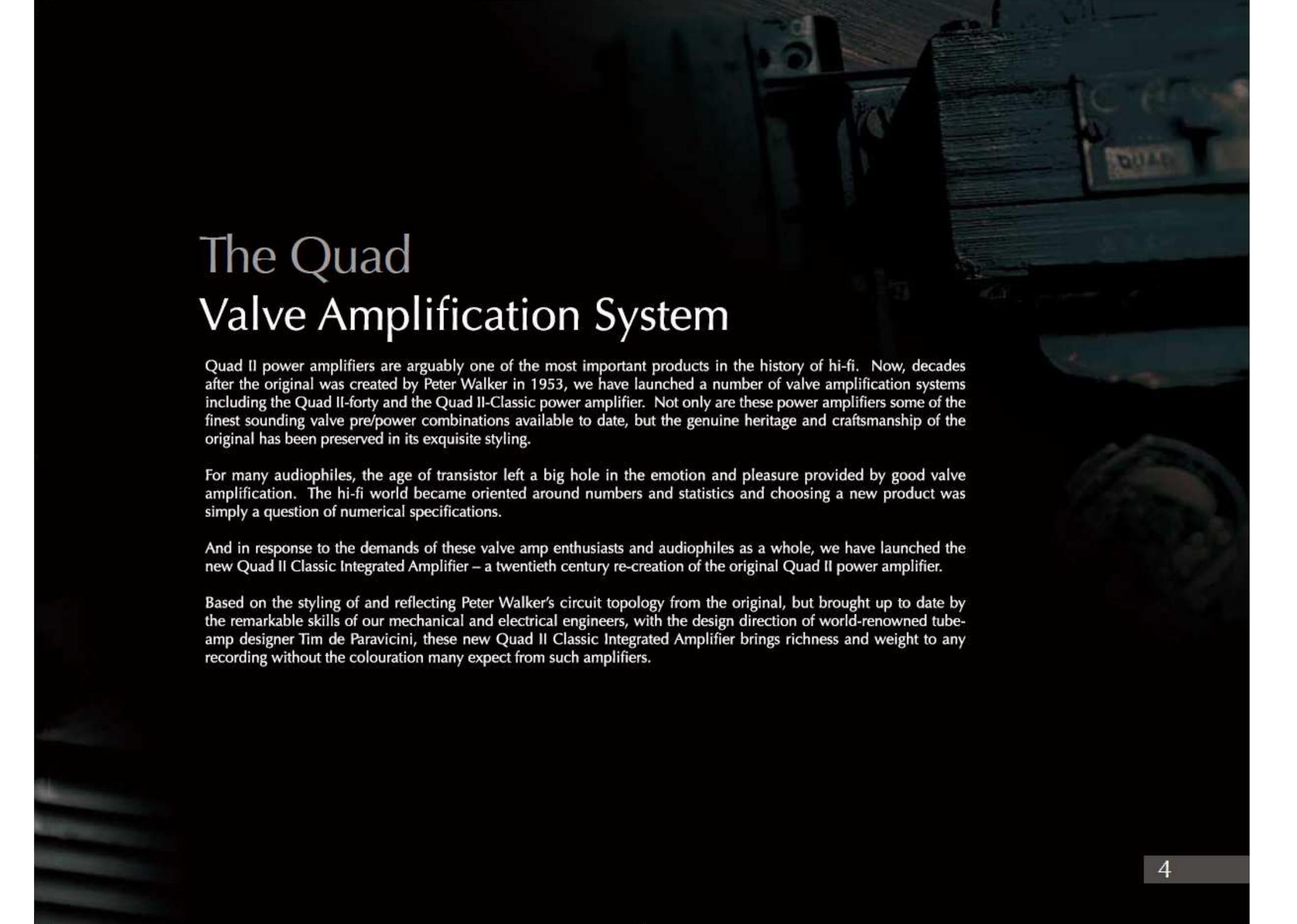
Amplifier performance took a further step forward in 1975 with the arrival of the Quad 405 'Current Dumping' amplifier. This remarkable new circuit topology remains one of the few truly original amplifier designs and has featured in Quad products ever since. For this technology Quad was awarded the Queen's Award for Technological Achievement in 1978. Numerous other prestigious awards were presented to Quad from all over the world. In 1981 Quad announced the ESL 63; a full-range electrostatic loudspeaker based upon two sets of concentric annular electrodes fed through sequential delay lines. This patented system produces a sound pressure pattern identical to the theoretical ideal of a point source origin. Once again a Quad electrostatic loudspeaker became the reference standard





'the closest approach to the real sound...' has been a Quad philosophy since 1936. More than just a slogan, it underlies the company's commitment to producing the finest audio equipment, capable of reproducing all the elements and emotion of a live performance.





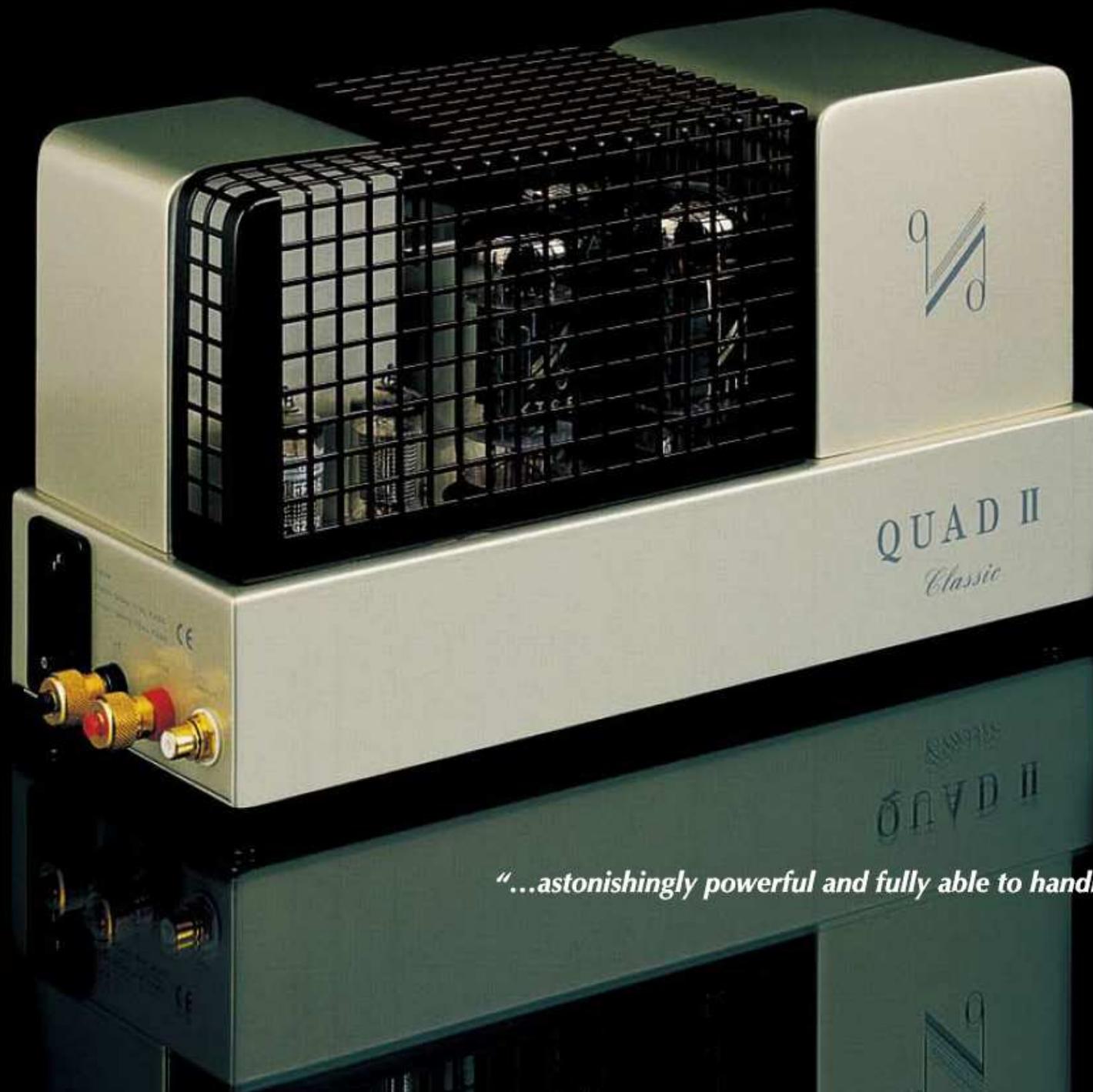
The Quad Valve Amplification System

Quad II power amplifiers are arguably one of the most important products in the history of hi-fi. Now, decades after the original was created by Peter Walker in 1953, we have launched a number of valve amplification systems including the Quad II-forty and the Quad II-Classic power amplifier. Not only are these power amplifiers some of the finest sounding valve pre/power combinations available to date, but the genuine heritage and craftsmanship of the original has been preserved in its exquisite styling.

For many audiophiles, the age of transistor left a big hole in the emotion and pleasure provided by good valve amplification. The hi-fi world became oriented around numbers and statistics and choosing a new product was simply a question of numerical specifications.

And in response to the demands of these valve amp enthusiasts and audiophiles as a whole, we have launched the new Quad II Classic Integrated Amplifier – a twentieth century re-creation of the original Quad II power amplifier.

Based on the styling of and reflecting Peter Walker's circuit topology from the original, but brought up to date by the remarkable skills of our mechanical and electrical engineers, with the design direction of world-renowned tube-amp designer Tim de Paravicini, these new Quad II Classic Integrated Amplifier brings richness and weight to any recording without the colouration many expect from such amplifiers.



“...astonishingly powerful and fully able to handle oddball loads”



The Quad II-Classic

This is a faithful reproduction of the original, the new Quad II Classic offers audiophiles the chance to recreate the spirit and atmosphere produced from one of the most famous amplifiers in audio history.

The original Quad II was first launched in 1953, designed by Peter Walker. At the time, many of his contemporaries were also producing good quality valve amplifiers. The Quad II looked, in comparison, very simple and unassuming, but its performance was far beyond that which its diminutive dimensions might suggest.

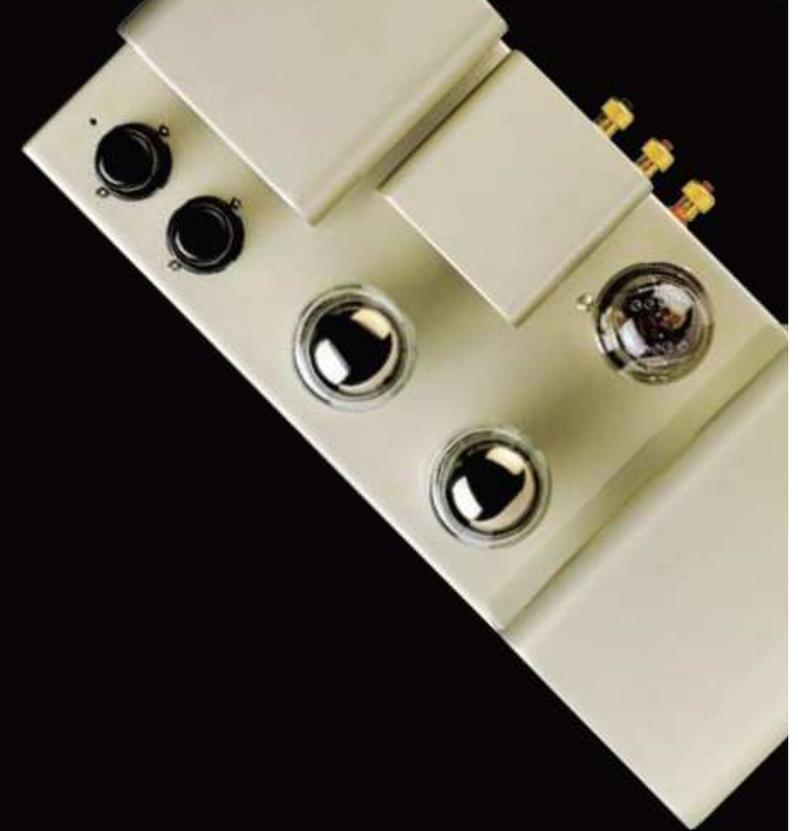
The property which set the Quad II amplifier apart from other amplifiers of the time was its output stage. It was arranged such that the cathode coupled circuit emulated the performance of triode operation, but with the size and efficiency characteristics of pentode operation. It was this breakthrough that ensured the Quad II was to remain in continuous production until 1970.

Peter's circuit, notably the design of the output transformer, has become the stuff of legend amongst electronics engineers. Studied and analysed by the finest minds in the industry, the elegance and coherence of the design is still regarded as a reference today.

Given the quite modest components of the day, he was able to engineer something which was literally greater than the sum of its parts.

The Quad II classic has been recreated accurately with input and output valves the equivalent of those used in the original design. The same balancing act has been employed to ensure the same wealth of detail and gentle tone of the original.

The output valves produce around 15-Watts per channel, operating in Class A, which allows for a gloriously sweet and refined sound with appropriately matched contemporary loudspeakers.





“Musicians and recording artists all over the world have long recognised the outstanding quality of Quad products – exquisite engineering, build-quality, finesse and refinement.”



The Quad II-eighty

80 WATT MONO BLOCK POWER AMPLIFIER

The Quad II-eighty valve amplifier is the perfect partner to our ESL speakers. Designed by one of the most famous tube-amplifier designers in the world, Tim de Paravicini, the Quad II-eighty takes inspiration from the original Quad II amplifier.

It is an 80-Watt mono power amplifier following in the tradition and philosophies of Peter Walker. The output section consists of 4 KT88 valves running as two pairs in push pull with the hallmark Quad topology of partial cathode loading in the output transformer.

This method reduces distortion when compared to the usual Ultra Linear or triode methods, however, it does require a greater grid driving voltage, achieved using a balanced pair input stage.

The output transformer was designed to improve high frequency performance and accurately balance the push pull halves. Also, the transformer was designed to make sure that full output is realised at the bass frequencies down to 20Hz.

Each output valve has its own cathode resistors to provide reliability and self-matching. The screen grids of the KT88 valves are run from a lower voltage, again for good reliability. The whole amplifier has a total of only 16dB of feedback providing good stability into virtually any known loudspeaker and especially the famed Quad electrostatic loudspeakers.



Renowned tube-amp designer Tim DeParavicini with the Quad II-Eighty Valve Amplifier



*"Truly a Quad for the 21st Century, and
in a more convenient package than you
can imagine, it's a triumph"*
– Ken Kessler, *Hi Fi News* (January 2010)





The Quad II-Classic Integrated

The rekindled interest in 2 channel analogue hi-fi has been remarkable to witness. The popularity of vinyl has grown steadily over the last 5 years and now represents a significant proportion amongst real music enthusiasts. Quad has been at the forefront of this trend with its development of some of the world's most stunning amplifiers, loudspeakers and phono stages. Creating a compact audiophile integrated solution for LP and Vintage Hi-End Audio lovers while working in collaboration with one of the industry's esteemed legendary figures, Tim DeParavicini.

Through his contemporary designs based on Quad's novel amplifier technology developed over half a century ago for his invention of the first Quad II Mono Amplifier introduced in 1953, our classic range of amplifier and speaker components represent far more than a nostalgic trip down memory lane. Each product represents as significant a design statement as their original counterparts.

The new Quad II Classic Integrated Amplifier is a perfectly balanced and completely integrated amplifier system to resolve system matching and offer exceptional performance and value within a relatively compact and classically styled chassis.

Performance, as you would expect from one of the most famous names in hi-fi, is nothing short of breathtaking. The 25watt-per-channel specified, belies their power and ability to drive even the most difficult loads. The remarkable output transformer design is characterized through its speed, agility and ability to convey the genuine passion of live performance.



"...a dedicated audiophile design that uses simplicity to achieve signal purity"



The Quad Design and Engineering

The KT-66 output valves, in push pull configuration are visually stunning, even when safely secured within the cage that protects them. Each valve produces around 25-Watts per channel output in 'Pure Class A' which allows a superbly refined sound that appropriately matches modern as well as contemporary loudspeakers.

The package had to retain the retro look of its famous preamplifier predecessor with the power amplifier and transformers blended into a modern compact look. It has an understated elegance which lies beneath its smooth curves and lustrous finish because it uses a circuit dating back over fifty years to the time when vacuum tubes ruled the electronics industry and Peter Walker was considered by many to be the master of audiophile design.

All Quad products are expected to last a lifetime – even longer. Many Quad customers still derive immense pleasure listening to products built over fifty years ago. The new Quad II Classic Integrated Amplifier is no exception, and with periodic servicing and a caring hand, you can expect its performance to continue for decades to come.





“Quad has succeeded where few of hi fi’s gamblers dare.”



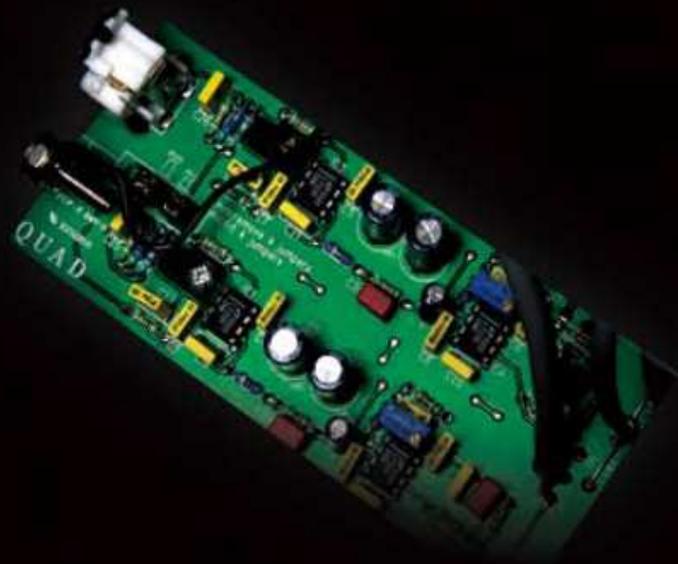
The Quad II-Classic Integrated



The Quad II Classic Integrated Amplifier operates in Pure Pentode (Beam Tetrode) output with partial cathode loading, this being more linear than so called ultralinear. It is a pure Class A operation, whereas its push pull operation's efficiency can only reach 50% max and its power supply is the usual capacitor filter with diode bridge rectifier, AC 6.3 volts heaters to the valves that is shared between both channels.

Equipped with a bi polar transistor phono amplifier that uses 4 transistors per channel with low feedback to provide correct RIAA equalisation. Also has a gain switch for moving coil cartridges, 0.25mV at 1kHz, a circuit which operates from a regulated 36V derived directly from the main HT valve. It ensures a very high overload performance from records.

The phono circuit is housed in a shielded compartment providing low noise RF proofing within the main package.





"The Quad offers a degree of entertainment that's hard to find elsewhere in high fidelity. It's a masterful product..."



Integrated Amplification Process



The Quad II Classic Integrated Amplifier output is 25 watt per channel integrated amplifier had to obey Peter Walker's philosophy of cathode loading of the output stage and simplicity of design.

Upon input, a selector switch routes the required signal to the volume control then on to the first of 3 small driver valves. This first valve is an ECC83 acting as a differential balance circuit that is a phase splitter.

The output going into a pair of ECC88 valves that both operate as a cascode circuit for high gain and wide bandwidth directly drives the output valves (KT66) via capacitors.

The circuit had to have high gain than a normal power amplifier to offer a nominal 250mV input sensitivity on the various inputs.

Push pull feed back is arranged from the cathodes of the output back to the ECC88 valves to provide low distortion and noise with consistent performance.

The Quad II-Classic Integrated Specifications

Model	QII Classic Integrated Amplifier
Valve Type	4 x KT66,4 x ECC88,2 x ECC83
Input Channel	3 x Line level,1 x MM/MC Phono(selectable) and Tape Monitor
Stereo Power Output	25W per Channel into 8 Ohms
THD	0.06%@15W(700Hz)
Noise	Better than -95dBr(ref 25W into 8R)
Frequency Response	20Hz-20kHz +0dB/-0.5dB
Crosstalk	Better than 75dB
Gain	34dB
Noise	-98dB(275mVinput)
Dimension(HxWxD)	200x310x380mm



Quad Valve Range

Specifications



Model	II-forty	II-classic	II-eighty
Mono Power Output	40W RMS	15W RMS	80W RMS
THD @ 700Hz	0.3% @ 40W 0.03% @ 1W	0.3% @ 12W 0	.3% @ 40W 0.5% @ 80W
Residual hum & noise	Better than -80dB	Better than -90dB	Better than -94dB
Frequency Response	10Hz-30kHz(+0dB/-0.5dB)	10Hz-20kHz(+0.2dB)	10Hz-30kHz(+0dB/-0.5dB)
Damping Factor	20 @ 700Hz	11.75 @ 700Hz	16 @ 1kHz
Power Consumption	180W maximum	90Va maximum	180W maximum
Loudspeaker Taps	4 ohm and 8 ohm	8 ohm	4 ohm and 8 ohm
Valves	2 x 69H7 Input 2 x KT88 Output 1 x 5U4C Rectifier	2 x EF86 input 2 x KT66 Output 1 x GZ34 Rectifier	2 x 69L7 input 4 x KT88 Output 1 x 69N7 Rectifier
Sensitivity	1V RMS	1.4V RMS	1V RMS



Model	QC-twentyfour	QC-twentyfour P	
Valve Complement	1 x 6111 twin triode	4 x 6111	
THD @ 1V RMS	<0.2% 0.02% @ 1W	<0.08% (A-weighted)	
Frequency Response	5Hz-50kHz (+0dB/-0.5dB)	20Hz-20kHz (+0dB/-0.5dB)	
Hum and Noise	Better than -80dB	Better than 60dB	
Line Stage Gain	15dB		
Recommended Min. Load	50k ohms		
Inputs	5 x Line level 2 x Buffered tape loops		
		Input Impedance	
		Moving magnet	47 Ohms
		Moving coil	10 Ohms
		Stage Gain	
		High sensitivity	1.3mV (MM)/130uV (MC)
		Medium sensitivity	2.6mV (MM)/260uV (MC)
		Low sensitivity	5.2mV (MM)/520uV (MC)
		Nominal output level	
		(ref 5.2mV, MM, Low)	1.0
		Inputs	Selectable MC/MM cartridge
		Outputs	1 x fixed line level 1 x variable line level
		Power consumption	15 VA maximum



QUAD

Quad Electroacoustics Ltd,

IAG House, Sovereign Court, Ermine Business Park, Huntingdon, Cambs, PE29 6XU

Tel : 01480 447700, Fax : 01480 431767 www.quad-hifi.co.uk

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