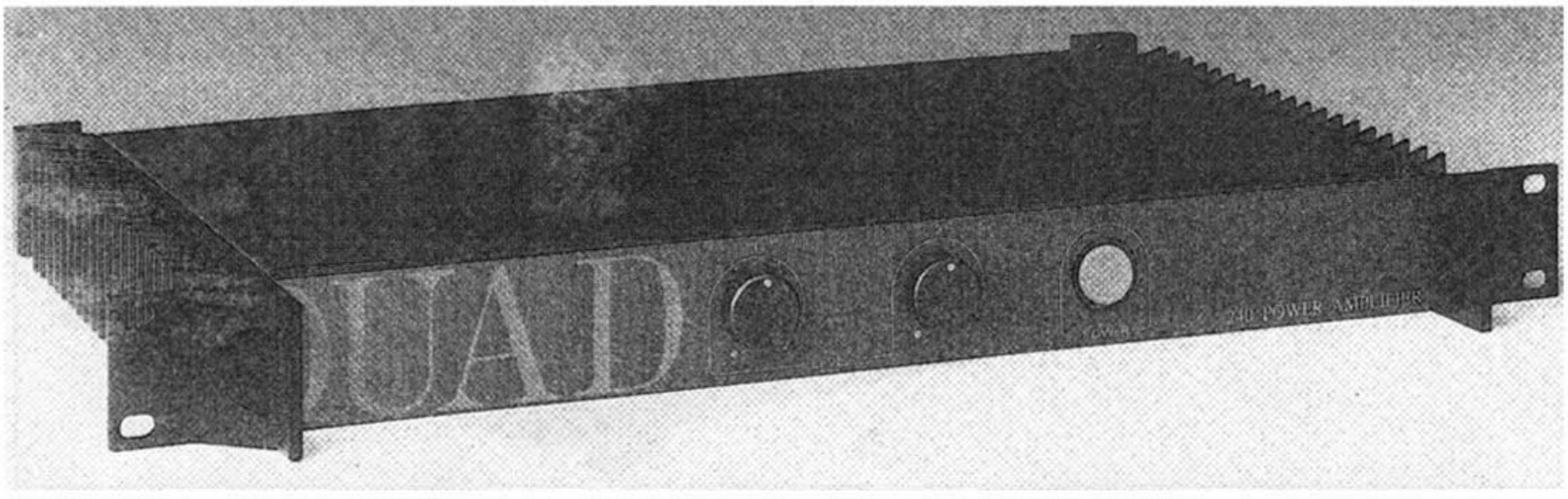

KEY FEATURES

• 1U rack mount size • XLR-3 inputs and NL4 outputs • Remote control option • 80W (4Ω) and 50W (8Ω) per channel • Active transformer inputs • Reliable design with current dumping •

QUAD POWER AMPLIFIERS

Quad power amplifiers offer high performance, reliability and value. More than 50 years accumulated experience is incorporated in each amplifier and Quad amplifiers continue to satisfy the requirements of broadcasters, recording studios, theatres, sound reinforcement and other professional users in addition to hi-fidelity enthusiast and music listeners in almost every country of the world.

PERFORMANCE AND RELIABILITY

The performance of Quad amplifiers is ensured by a Quad patented invention called "current dumping". The principle uses forward error correction in a design where the overall performance is determined solely by the performance of a very high quality amplifier and a bridge of four passive components. There are no adjustments, nothing to go out of alignment and no matching of output devices.

The relative simplicity and elegance of the design makes circuitry inherently more reliable. Quad reliability is legendary. It is achieved by careful design and rigorous control of every stage of manufacture from the selection of components through to final test. The amplifier sub-assemblies are subjected to a comprehensive automatic test procedure. Finally each professional amplifier is run for at least 24 hours before being subjected for a second time to a full test procedure.

QUAD 240 AMPLIFIER SERIES

The Quad 240 is a two channel power amplifier intended for rack mounting and can deliver more than 80W into a 4Ω load continuously. Very low distortion at any power level is safeguarded in operation by the use of the current dumping circuit topology. The balanced input sensitivity is set at the factory to −4dBu (500mV) and can be changed to +8dBu (2V) simply by setting a bridging link on the amplifier card.

The Quad 240 has been designed to allow the simple fitting of an optional remote level control module. Control is effected by either a simple potentiometer or by an external voltage. In addition space has been provided to allow the ready provision of custom circuitry which could be used for a crossover network, time delay equalisation or a direct digital input.

CONNECTORS

Inputs are via XLR-3 sockets and the outputs are via Neutrik Speakon NL4 loudspeaker connectors. The amplifier is supplied with the mating NL4 connectors to aid easy installation. The use of a professionally designed amplifier and loudspeaker output connector solves many of the age old problems of previous connection methods.

POWER SUPPLIES

Each amplifier channel module is separately supplied from twin windings on a common transformer and is fitted with a thermal sensor which interrupts the supply if the channel should overheat for any reason. The power supply capacity is designed to deal with the most awkward of dynamic loads usually associated with loudspeakers and this contributes to the amplifier's excellent transient handling capability.

INPUT ARRANGEMENTS

The Quad 240 is fitted with an active balance input which uses a special transformer in an active circuit designed to compensate electronically for the undesirable effects of standard transformer inputs. It yields the advantages of a conventional transformer without many of the disadvantages and provides a wide bandwidth, truly resistive input impedance and a high CMRR performance.

APPLICATIONS

The Quad 240 is ideally suited to driving loudspeakers in areas such as video edit rooms, dubbing suites and/general purpose monitoring. It is ruggedly constructed and since it is provided with access for rear support it is eminently suitable for use in mobile facilities where reliability, high performance and weight are prime considerations.

240 VARIANTS AND OPTIONS

The standard Quad 240 is supplied wired for 240/220V ac mains and can be set for 120/110V ac operation (a simple internal change). The 240S is a slave version and is similar to the 240 except that it is not fitted with level controls and this prevents unauthorised alteration of gain. Quad will be pleased to consider making variants to suit particular requirements. The main option is the remote level control module.

Performance specification

power output	80W	4Ω load, per channel, 240Vac supply
	50W	8Ω load, per channel, 240Vac supply
		<0.1% THD+N, T amb 20°C
power output response	10Hz-30kHz	−3dB ref 1kHz 50W 8Ω
frequency response	20Hz-20kHz	−0.5dB ref 1kHz
group delay*	<6μs	at 1kHz, amplifier output is non-inverting
group delay error*	<1.5μs	up to 20kHz ref 1kHz
distortion	<0.03%	THD+N, 40Hz any level up to 50W 8Ω
	<0.01%	THD+N, 1kHz any level up to 50W 8Ω
	<0.1%	THD+N, 20kHz any level up to 50W 8Ω
dynamic range (hum + noise)	>108dB	A wtd ref full signal output, (15.7kHz bandwidth)
input sensitivity		for full output
selectable internally	2V	(+8dBu) equivalent to ppm 6, 22dB gain
or	500mV	(−4dBu) 34dB gain
remote control option		plug-in module
control signal	0V to 5V	or 10kΩ potentiometer
control range	>80dB	
interface connector	9 way D type	mounted on rear panel
input impedence	>10kΩ	balanced, nominal, resistive
common mode rejection	>60dB	20Hz to 10kHz
common mode range	250V	50Hz
input connector	XLR-3	chassis socket wired to IEC
		pin 1 = chassis, pin 2 = hot, pin 3 = cold
output connector	NL4	wired to the low output impedance convention
		1+ = signal, 1− = return, 2+ and 2− not connected
output impedance	0.03Ω	at 1kHz nominal, in series with 1.5μH
output voltage offset	7mV	typical
channel separation	>80dB	1kHz, inputs terminated
load stability	any load	unconditional
power requirements	250VA	with both channels delivering 80W into 4Ω
working mains voltage	250/220Vac	note that lower supplies will reduce output power
	125/110Vac	internal transformer tapping change
indicators	LED's	indicates dc supplies for each channel
protection		
thermal	85°C	internal heatsink temperature
peak current	10.5A	peak output current limit internal protection
dc offset		power supply 0V centering circuit
dc supply fuse	6.3A	internal dc power supply fuse
mains fault	T2A	240Vac mains fuse
	T4A	120Vac mains fuse
operating temperature	0°C to 45°C	high ambient temperatures require full ventilation
weight	5.4kg	without packing
dimensions overall	483×45×350mm	width (19 inch rack), height (1U), depth

*Group delay is a measure of the transit delay of signals passing through the amplifier. Group delay error is a measure of the delay experienced by the frequency components of a complex signal passing through the amplifier.