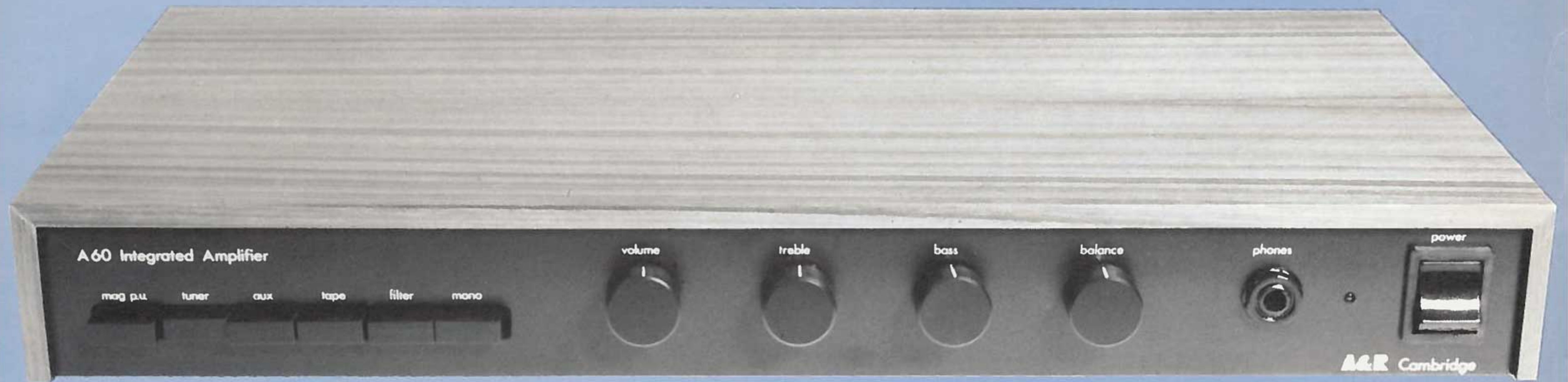


Sound Reliability.



The A60 Stereo Amplifier

Amplification & Recording (Cambridge) Limited

A&R

THE A60 STEREO AMPLIFIER. IN A CLASS OF ITS OWN.

It is a fact of life that you get what you pay for. And as far as audio goes, that means an economically priced amplifier usually has corners cut somewhere along the line.

But not the A60.

Because the A60 stereo amplifier gives you everything you expect to find in units costing much more: high sound quality, ease of operation, modern styling and extreme reliability.

That's not just our opinion. It is the opinion of reviewers, who for two years have acclaimed the A60 and its features. And it is the opinion of the public, who have loved this amplifier since its introduction. Along the way we have continually added certain refinements, giving even greater individuality to the A60.

Read on. And see if you are not also convinced that the A60 stereo amplifier truly is everything you have heard it to be.

Totally in a class of its own.

The A60 is designed throughout for the highest possible sound quality. A toroidal mains transformer ensures low internally generated hum levels, and the pre-amplifier is also designed with low noise levels in mind.

All the inputs to the A60 amplifier have high overload margins so that almost any input source can be accepted without distortion. There is no excessive 'thump' in the loudspeakers at switch-on or switch-off independent of the volume control setting. The A60 is fitted with a high frequency filter (switchable) which reduces the unpleasant scratches on old records and stereo FM noise on tuners. The bass control is designed so that deficiencies of small loudspeakers may be corrected without coloration of the middle band of frequencies.

Input sockets on the A60 amplifier all have silver plated contacts for minimum noise. The loudspeakers are connected via heavy duty screw terminals which can accept either bare wires or 4mm ('banana') plugs.

The A60 will accept any magnetic or moving coil cartridge and cartridge loading modules can be supplied to provide optimum loading for most cartridges. In certain cases where the cartridge output is very low, the HA10* moving coil cartridge pre-amplifier can be used which will boost the cartridge output to the required level, and this can be powered directly from the A60, eliminating the need for any additional mains or battery supplies.

Tape recording outputs are provided from both the AUX and TAPE sockets, matching inputs of both

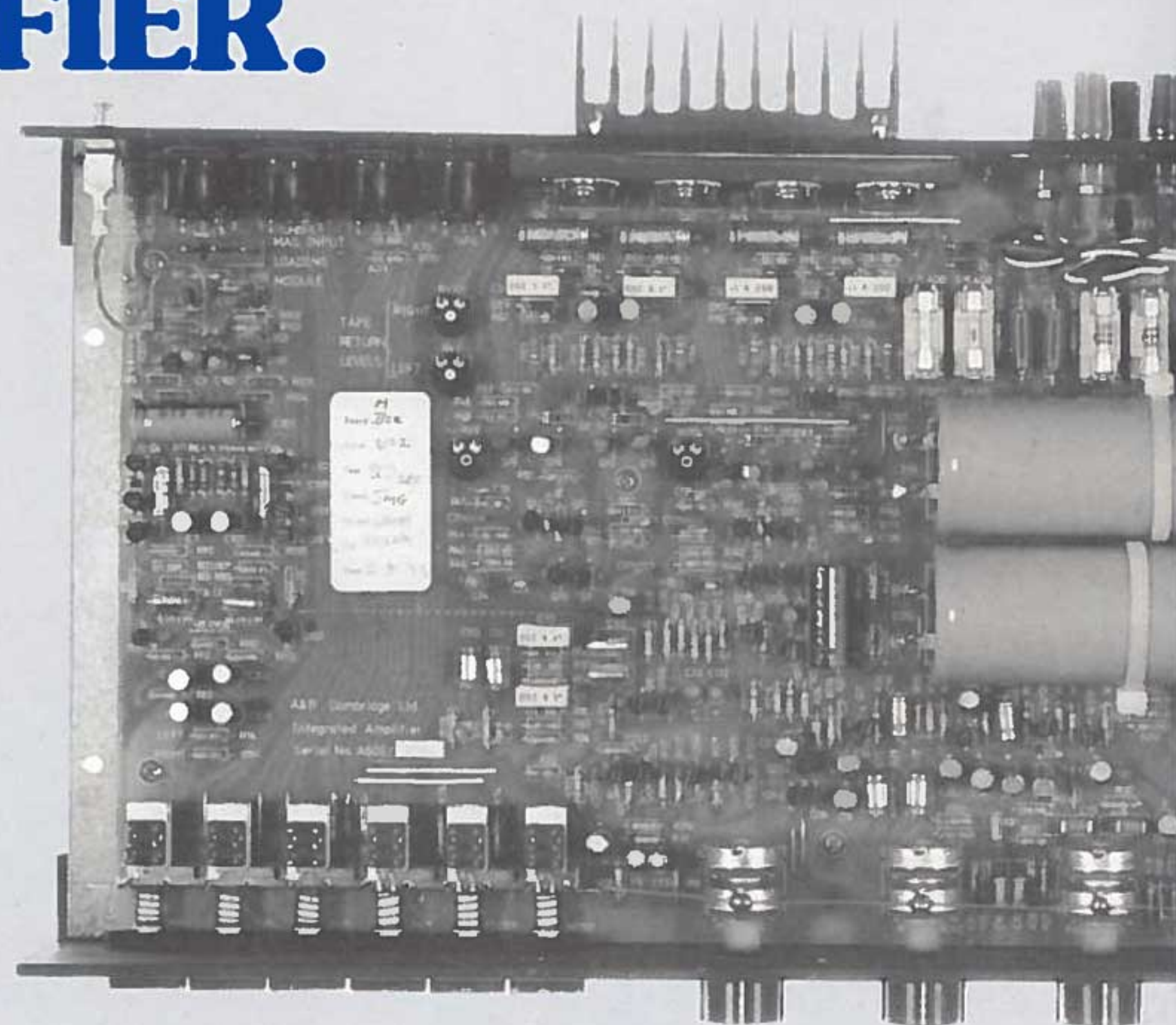
domestic cassette recorders and professional reel-to-reel equipment. The tape button allows A/B monitoring of signals when using a tape recorder with separate record and playback heads, while preset replay level controls are provided so that the A and B levels can be equalized.

Although the loudspeaker sockets are wired directly to the amplifier outputs to obtain the best possible sound quality, 'switched' outputs are provided enabling the loudspeakers to be cut out when headphones are plugged in.

Reliability is one feature which has contributed greatly to the A60's success. Electronic protection in the power output stages safeguards against any incorrect loads or short circuits. This short-term protection is backed up by output fuses should the fault persist. A

single fibreglass printed circuit board is used for internal stability and ease of servicing. All components in the A60 are operated well within their ratings, and each amplifier is exhaustively tested at all stages in its production, the test engineer finally recording each individual amplifier's major specified parameters.

The A60 stereo amplifier is finished in a matt black fascia, with matching control knobs. The sleeve is available in a choice of teak, rosewood, walnut or matt black finishes, and blends unobtrusively into any room setting.



A60 SPECIFICATION

Input Facilities

These are selected by the first four push buttons on the front panel and are in order:

Magnetic Pick-up

Sensitivity 2mV for 35 Watts output into 8 ohms at 1kHz. Hum and noise less than -68dB unweighted, or CCIR/ARM weighted. Overload margin better than 36dB at all frequencies 20Hz-20kHz. Frequency response equalized within ± 0.5 dB of RIAA characteristics, 40Hz - 20kHz, typically -3dB at 20Hz. Input impedance 47k ohms in parallel with approximately 30pF. Loading modules available to produce any load resistance less than 47k ohms and/or load capacitance greater than 30pF.

Tuner & Auxiliary Inputs

Sensitivity 100mV into 100k ohms for 35 Watts output into 8 ohms at 1kHz. Hum and noise better than -80dB unweighted, or CCIR/ARM weighted. Overload margin - infinite.

Tape Input

Maximum sensitivity and other details: as above.

Sensitivity is variable via preset controls. Input impedance varies between 47k ohms at maximum sensitivity rising to 100k ohms at minimum sensitivity.

Tone Controls

TREBLE: Up to 12dB boost and cut at 15kHz (ref. 1kHz)
 BASS: Up to 12dB boost and cut at 50Hz (ref. 1kHz)
 HIGH FILTER: Turnover frequency 7.5kHz nominal. Ultimate slope 12dB/octave (Bessel characteristic).

OUTPUTS

Tape Output

Output level is the same as TUNER and AUX inputs and approximately 50 x the MAG P.U. input level - nominally 100mV. Output impedance 5k ohms (plus any contribution from TUNER or AUX sources). Tape monitor switch allows A/B comparison between the recorded sound and the original.

Aux Output

Output level as TAPE OUTPUT. Output impedance 100k ohms (plus any contribution from TUNER or AUX sources).

Headphones

Connection via a front panel stereo jack socket. When using the headphones socket, the loudspeaker outputs may be muted or not, as desired. This output is suitable for phones of 8 - 2k ohms impedance.

Loudspeakers

Connection via screw terminals which will accept bare wires or 4mm ('banana') plugs. Suitable for 8 - 16 ohms loudspeakers.

Frequency Response

MAG. P.U. Input - see Input Facilities. Other inputs 20Hz - 20kHz ± 0.5 - 1dB ref. 1kHz

Output falls continuously beyond these limits.

Damping Factor

Greater than 45, 10Hz - 1kHz, referred to 8 ohms. Above 1kHz the damping factor reduces a little (typically 35 at 10kHz) because of a small choke included to maintain absolute h.f. stability. This has negligible audible effect in practice.

Cross Talk (Stereo)

Less than -50dB, 10Hz - 1kHz, reducing to typically -45dB at 10kHz. The crosstalk products are pure and substantially free from distortion.

Output Power & Distortion (at 240 volts AC mains)

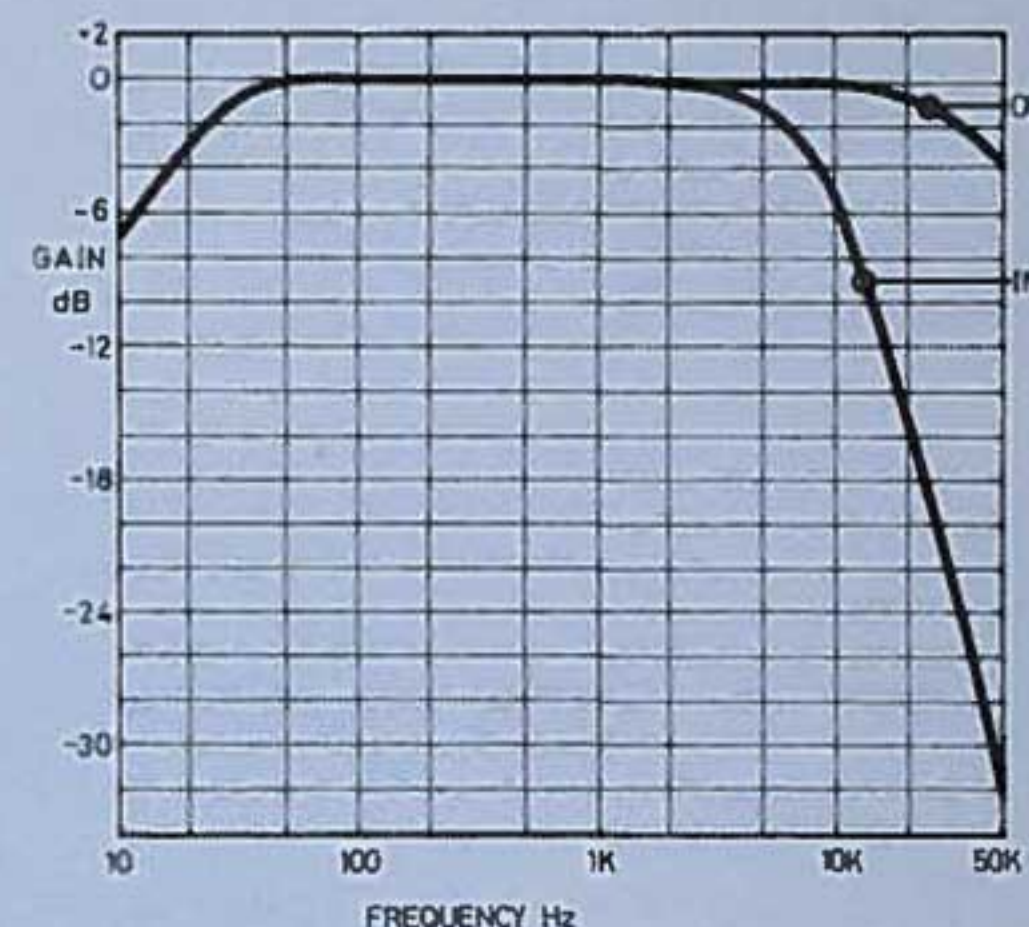
Guaranteed power bandwidth is 20Hz - 20kHz at 0.2% distortion (with both channels driven into 8 ohm loads at 35 Watts continuous sine wave power). 1kHz output at 0.2% distortion into 8 ohms is typically:
 40 Watts (both channels driven).
 47 Watts (one channel driven).
 1kHz t.h.d. at any level to 35 Watts is less than 0.08% (typically less than 0.05% at 35 Watts).

Protection

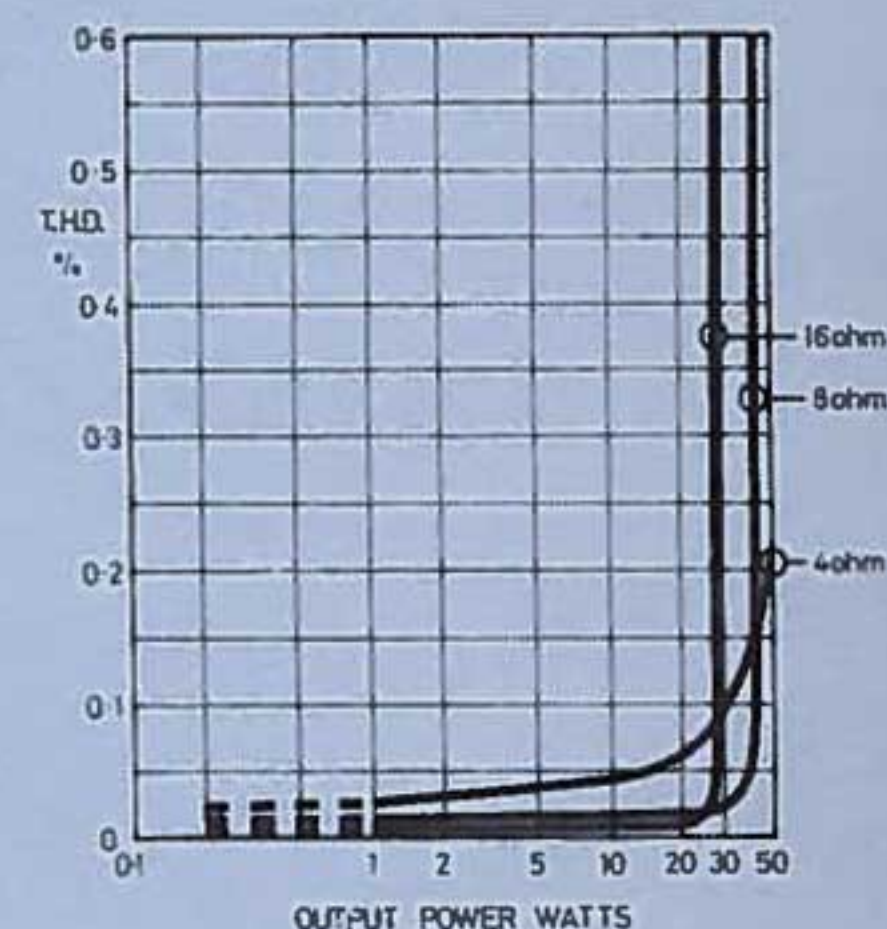
Delayed V-I limiting on output stages which resets automatically and protects against short and medium term overloads. Long term overloads will blow internally replaceable quick blow fuses.

Power Supply

Normally 240 Volts AC 48 - 60 Hz, 120VA maximum. The operating voltage may be dealer adjusted to 120 volts if required. The amplifier may be operated from supplies in



Rumble and High Filter Responses



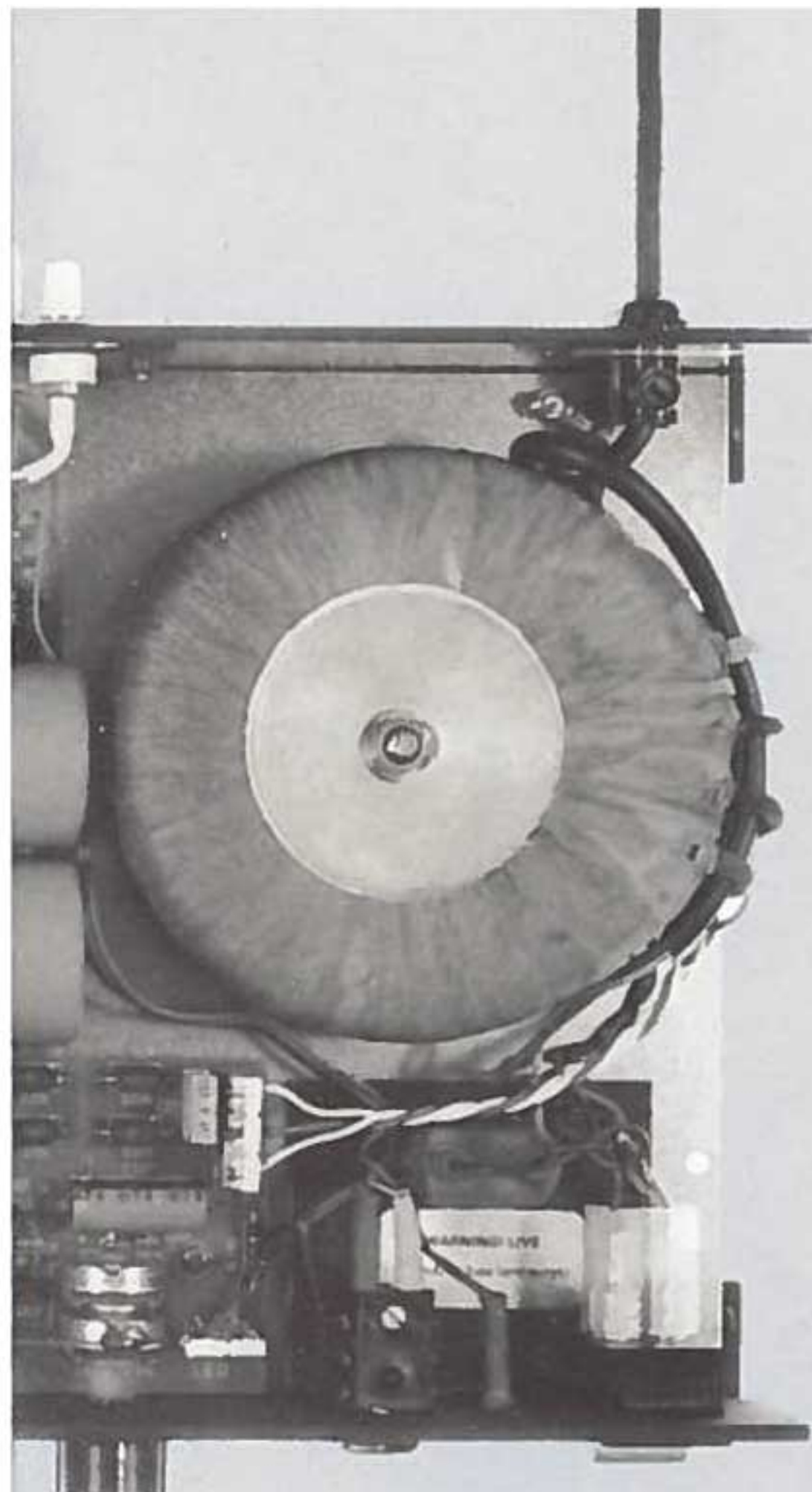
THD vs Power Output
1kHz

the range of 190 - 255 volts AC (95 - 128 volts AC if dealer adjusted), with corresponding variations in maximum output power. Voltages outside this range should not be applied.

Dimensions

WIDTH: 450mm
 DEPTH: 255mm
 HEIGHT: 60mm
 WEIGHT: 5kg

* HA10 moving-coil cartridge pre-amplifier (available from your A & R appointed dealer). Power Supply (15 volts) is available on pin 4 of MAG. P.U. Input socket (only when input is internally linked).



A&R
CAMBRIDGE

Sound Reliability.



THE A60 AMPLIFIER.

**Your nearest A & R appointed
dealer is:**



A&R

**Amplification and Recording (Cambridge) Ltd.
French's Mill
French's Road
Cambridge
CB4 3NP
Tel. Cambridge (0223) 354507**

The policy of Amplification and Recording (Cambridge) Ltd. is one of continuous improvement. We therefore reserve the right to change the material dimensions, specifications or design of our products shown or referred to herein at any time and without prior notice. Illustrations used in this brochure are intended as a guide only.

**Designed and produced by Hammond Advertising
Printed by Panda Press**