

HCA 40 "CLASS A" POWER AMPLIFIER

The **ILP HCA40** audio amplifier module offers the ultimate in high fidelity performance.

The unit, which is strongly biased into Class A, exhibits audible smoothness and clarity and has been designed for the ultra high definition performance associated with Class A operation.

This fully encapsulated module with integral heatsink requires only five electrical connections and can be quickly and simply mounted using the T-slots in the heatsink and the screws and nuts provided.



FEATURES

- ▶ 20 watt Class A performance
- ▶ Integral Heatsink
- ▶ Fully encapsulated
- ▶ Five electrical connections

TYPICAL SPECIFICATION HCA 40 Class A

Parameter	Value
Output power into 8ohms	20 watts rms
Power Supply Voltage (DC)	± 25 v
Weight	1050g
Dimensions (mm)	120x78x100
Panel Cutout (mm)	97x101
Loudspeaker Fuse	1.25A
Frequency Response (-3dB)	0.3Hz - 100kHz
Total Harmonic Distortion @ 1kHz	< 0.05%
Signal to Noise Ratio	85dB
Slew Rate	5V/uS.
Input Sensitivity	500mV rms
Input Impedance	20Kohms

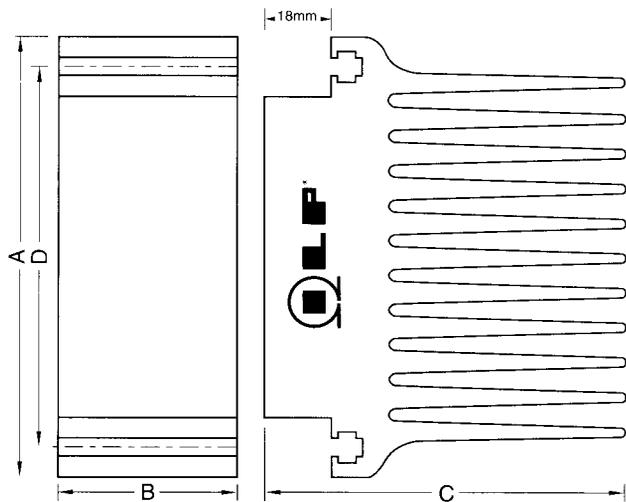
INSTALLATION NOTES

1. For normal usage and conditions the amplifier needs no supplementary heatsink; it must be mounted to allow a vertical flow of air through the fins.
 2. The amplifier must be powered from a true splitline (symmetrical) supply and under no circumstances should any attempt be made to use a single line.
 3. No input capacitor is required. An internal 100V working capacitor is fitted.
 4. For loudspeaker protection it is recommended that a quickblow fuse is mounted between the output and the speaker. The fuse rating in the table has been calculated to ensure fast rupture in the event of DC being presented to the speaker. It is advised not to use a higher rated fuse.
 5. Star earthing techniques should be employed to prevent hum loops. i.e. all 0 volt connections, including speaker return leads should be made at the power supply.
 6. Connecting leads between power supply smoothing capacitors and the module should be less than 300mm long. Longer leads may cause instability and module failure.
- In common with all Class A amplifier designs the HCA40 runs at a higher temperature than ILP's other amplifier modules, typically 55°C. It is important to allow adequate ventilation above and below the heatsink.

Note:

The HCA40 is designed to provide Class A performance when connected to an 8 ohm loudspeaker. Using any other load may degrade performance.

MECHANICAL DETAILS AND DIMENSIONS



	HCA40
A	120
B	100
C	78
D	107
Panel cut-out	97x101
Weight	1050g

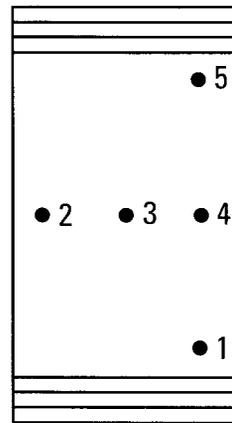
All dimensions are nominal and in mm, unless stated.

FIXING

The T slots in the heatsink extrusion allow easy mounting. Nuts and bolts are supplied. Size M4

CONNECTION DETAILS

HCA40



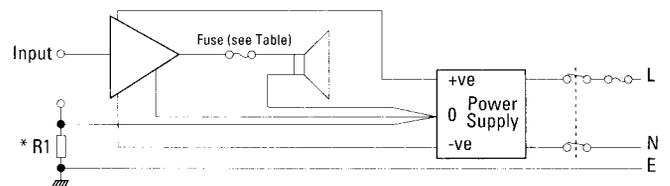
Base View

PIN

1. Positive Supply
2. Output
3. Input
4. 0 volt
5. Negative supply

APPLICATION CIRCUIT

HCA40



* In order to prevent earthloop problems when a pre-amplifier is connected we recommend the fitting of a resistor (R1) in the position shown. The value of R1 should be between 82 and 270Ω, ½ watt power rating.

POWER SUPPLY REQUIREMENTS

ILP recommend the following power supply components:

Toroidal Mains transformer – Part No: 43027 for 120 or 240 volt operation

Part No: 41027 for 220 volt operation

Bridge Rectifier and Smoothing Capacitor – Part No: DC20

For full details of Power Supply Units including connection and installation see ILP's Power Supply Data Sheet.



**COTTON ROAD · WINCHEAP
CANTERBURY · KENT CT1 3RB**
Telephone: (0227) 454778 Facsimile: (0227) 450507

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