

HADA-4B500

NETWORKABLE AMPLIFIERS

Digital Amplifiers



PRODUCT OVERVIEW

HADA-4B500 is a 4x500W digital amplifier that supports low and high impedance loads. The internal DSP, through the DSP Manager software, allows tailoring the input and output signal through parametric EQs, multi-band compressors, limiters, and delays and each configuration can be saved as a preset. In addition to the software option, input levels can be controlled via the front panel potentiometers, via remote controls using the rear panel GPI, or via a TCP/IP from third party control systems. All HADA series amplifiers include efficient thermal protection, DC protection, over current protection, and HF protection for total reliability in any kind of installation.

KEY FEATURES

- 4 x 500W outputs @ 4ohms.
- 2 x 1000W @ HiZ (100/70V) in bridge mode.
- 4 analogue inputs on Euroblock connectors.
- 4 GPI for remote volume control.
- 1 External Mute.
- Internal matrix mixer and signal processing
- HADA DSP Manager software for device configuration and control.
- Third party control via TCP/IP.

APPLICATIONS

- Leisure
- Hospitality
- Education
- Corporate
- Sports & Wellness

TECHNICAL SPECIFICATIONS

HADA-4B500

| INPUTS | |
|--|--|
| Number of Inputs | 4 analogue input channels |
| Analogue input connection type | IN1-4: 3-pin Euroblock, balanced, pitch 3,5 mm. |
| Input configuration | Digital matrix 4 in x 4 amp. out (Settings by HADA DSP Manager) |
| AMPLIFIED OUTPUTS | |
| Number of amplified outputs | 4 |
| Amplified output connection type | 2-pin Euroblock. |
| Output configuration | Lo-Z/Hi-Z, 70V/100V (Bridge mode), 4Ω/8Ω Output mode selection per channel/couple by software (Settings by HADA DSP Manager) |
| OUTPUT POWER (all channels driven @ 1%THD) | |
| Max output power @ 8Ω | 250W |
| Max output power @ 4Ω | 500W |
| Max output power @ 8Ω bridge mode | 1000W |
| Max output power @ 100V | 1000W (Bridge mode) |
| Max output power @ 70V | 1000W (Bridge mode) |
| SIGNAL | |
| Voltage gain | 31 to 37 dBV 33,2 to 39,2 dBu |
| Input sensitivity | -12 to 12 dBV -9,8 to 14,2 dBu 0,25 to 3,98 Vrms @ Nominal power |
| Input impedance | 21k (balanced) |
| Max input level | 22 dBV 24,2 dBu |
| Frequency response | 20Hz-20kHz (-3dB, 1W any load) |
| THD + Noise | < 0,01 0.015 Typ (@ 1kHz, from 0,1W to Full Power) |
| Crosstalk | >80dB (@ 1kHz) |
| ELECTRICAL | |
| Power supply | Universal, SMPS with PFC |
| AC mains requirement | 100-240 V @ 50-60Hz (±10%) |
| Power factor correction | > 0,92 |
| AC mains connector | IEC C14 inlet |
| POWER CONSUMPTION @230VAC | |
| Power Consumption (1/4 POWER, @ 4Ω) | 827W (all channels driven) |
| Power Consumption (1/8 POWER, @ 4Ω) | 427W (all channels driven) |
| Power Consumption (IDLE) | 25.5W |
| Power Consumption (STBY) | 20W |
| TECHNOLOGIES | |
| Amplification technology | Class D |
| Cooling | Fan (Forced air, front to back airflow. Temperature controlled continuously variable speed) |

| | | |
|----------------------------|--------------------------|---|
| | Maximum fan noise | 46dB (Maximum acoustical noise @1m) |
| PROTECTIONS | | |
| | DC protection | Yes (Protects loudspeaker and installation against DC and infrasonic signals at the outputs) |
| | HF protection | Yes (Protects the loudspeakers against non-audible, strong, non-musical high frequency signals) |
| | Short-circuit protection | Yes (Protects the amplifier from overcurrent, short circuit or other stressful events for the output stages with output reduction or MUTE (automatic protection reset)) |
| | Thermal protection | Yes (Output power reduction when output stages operating temperature up to 90 °C (194 °F) Mute when output stages operating temperature up to 100 °C (212 °F)) |
| REMOTE CONTROL CONNECTIONS | | |
| | ON / OFF | No |
| | GPIs | x4 GPIs (0-3.3V) (5-pin Euroblock connector, rear panel) |
| | External MUTE | Yes, dry contact (2 pins Euroblock connector, rear panel. Euroblock pitch 3,5 mm) |
| LOCAL CONTROL | | |
| | Attenuators | Front panel knobs (Defaults: Amplified OUTs attenuators) |
| | Output mode settings | Lo-Z/Hi-Z, 70V/100V, 4Ω/8Ω Output mode selection per couple of channels (Software) |
| | RUN/SLEEP mode | Yes, front panel push-button (Operates when pressed more than 3 seconds) |
| | Power ON/OFF | Yes, back panel switch (Red LED indicator) |
| CONNECTIVITY | | |
| | Ethernet | Ethernet Base-Tx 100Mb (CAT5 up to 100m. Settings by embedded web application) |
| | Programming and control | HADA DSP Manager Application |
| MONITORING | | |
| | Signal Present | SP LED (White) per channel (trigger @- 40 dBV) |
| | Clipping | CLIP LED (Red) per channel |
| | Limit | LIMIT LED (Red) per channel |
| | Mute | MUTE LED (White) per channel |
| | Prot. | PROT. LED (Red) per unit + MUTE of the protected channel |
| | Thermal | THERMAL LED (Red) per unit (Temperature limiter) |
| | Ext. Mute | Ext. MUTE LED (White) per unit |
| | Data | DATA LED (White) per unit (ON when DATA) |
| | On | ON LED (White) per unit (ON when RUN) |
| | Standby | ON LED (White) + PROT. LED (Red) in standby mode |
| DIGITAL ENGINE | | |
| | Processor | Dual core 64bits |
| AUDIO CONVERTERS | | |
| | Sampling rate | 96 kHz |
| | Resolution | 24 bit |
| | Dynamic range | 113 dB |

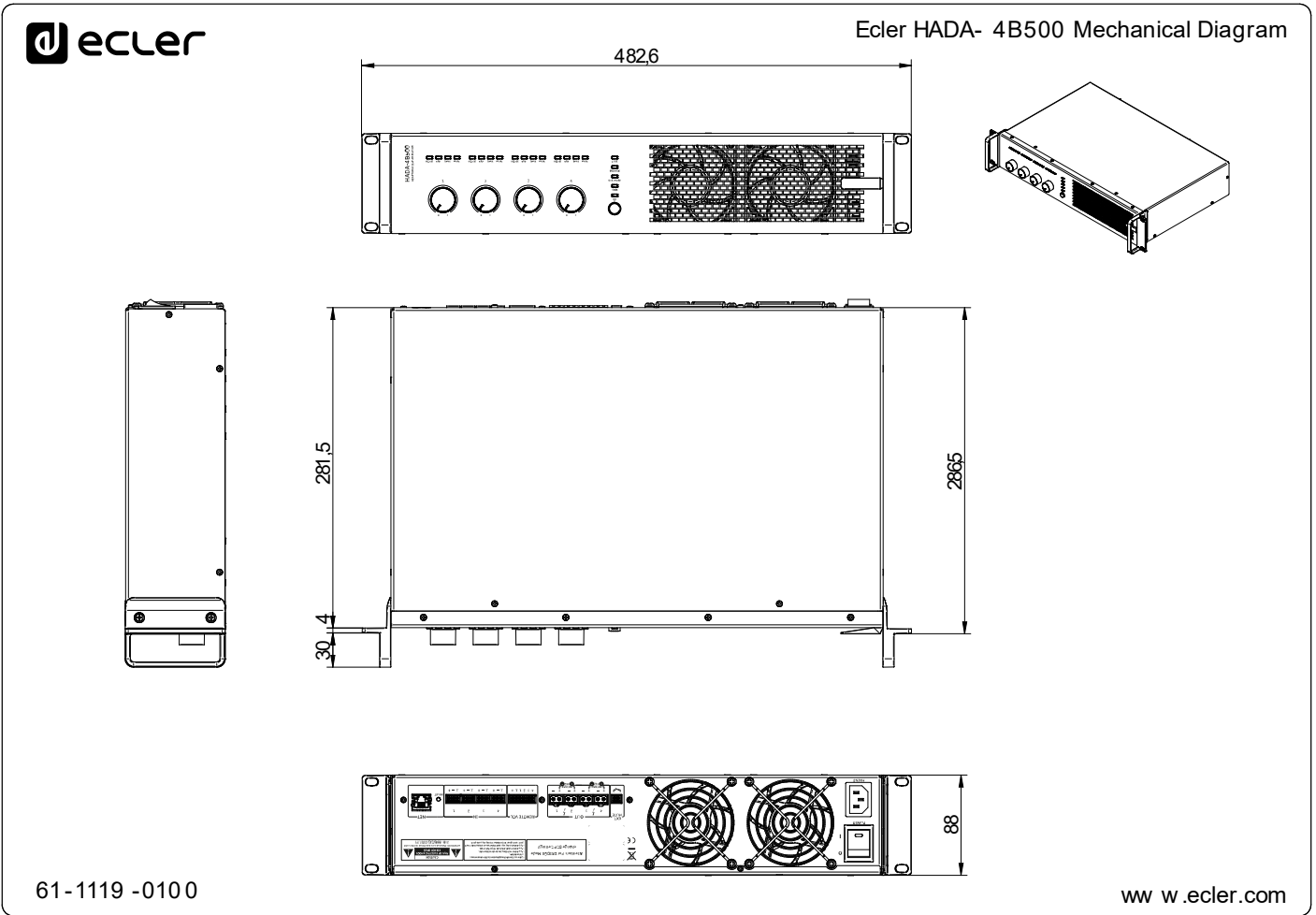
PROCESSING

| | |
|--------------------|--|
| Digital processing | 64 bit |
| Latency | 500uS (Analogue IN to analogue OUT) |
| Inputs processing | Delay, Parametric EQ, Limiter, Multiband compressor (Settings via HADA DSP Manager) |
| Outputs processing | Delay, Parametric EQ, Limiter, Multiband compressor (Settings via HADA DSP Manager) |
| Others | Preset management, 4x4 Matrix Mixer (Settings via HADA DSP Manager) |

PHYSICAL

| | |
|-----------------------------|---|
| Operating temperature | Min. 0°C; 32°F Max. 40°C; 104°F (performance may be reduced above 40°C) |
| Operating humidity | 5 - 80% RH, non-condensing |
| Storage temperature | Min. -10°C; 14°F Max. 50°C; 122°F |
| Storage humidity | 5 - 85% RH, non-condensing |
| Installation options | Rack 19" installation & desktop |
| Included accessories | EU Main cord, Euroblock Connectors (inputs /outputs), Desktop feet, rack 19" installation hardware |
| Optional accessories | - |
| Dimensions (WxHxD) | 482.6 x 88 x 281,5 mm / 19 x 3.46 x 11.08 in. |
| Weight | 5.6 Kg / 12.35 lb |
| Shipping dimensions (WxHxD) | 495 x 125 x 560 mm / 19.48 x 4.92 x 22.05 in. |
| Shipping weight | 7,7 8 kg / 16.97 lb |

MECHANICAL DIAGRAM



A&E SPECIFICATIONS

The amplifier must be an energy efficient four outputs Class-D power digital amplifier, containing 4 amplified outputs that can be configured per couple of channels in high impedance (100/70V) as 2x 1000W or low impedance as 4x 250W (8ohm) and 500W (4ohm) or 2x1000W (8ohm) in bridge mode. It shall support 4 analogue inputs.

The construction must be transformerless using Class-D amplifier technology and powered by an universal, regulated SMPS with PFC power supply . Each amplified output shall have integrated circuitry to protect against short-circuits or mismatched loads and over-heating. The amplifier must be Forced air cooled, front to back airflow, so that maintenance can be kept to a strict minimum.

The amplifier should be managed from its Windows application, including an internal matrix mixer and allow tailoring the input and output signal through parametric EQs, multi-band compressors, limiters, and delays. Each configuration shall be saved as a preset. The amplifier shall allow a 3rd party control system to query and modify various internal parameters via TCP/IP protocol.

The front panel shall contain an ON button accompanied by a white power indicator LED, white DATA indicator LED, white EXT MUTE indicator LED, a red PROT indicator LED and a red THERMAL indicator LED. A white SP LED's indicates the presence of an input signal, a red clip LED indicating the output operation at maximum level, a limit LED and mute LED shall be provided for each channel. The level controls shall be located on the front panel.

All connections shall be made on the rear panel of the unit. The signal input connections shall be balanced and performed using euroblock connectors. The output connections must be fitted with terminal block connectors. The amplifier should provide four remote control ports (GPI) compatible with devices such as the WPa series wall panels or common 10 Kohm linear potentiometers. The amplifier must have an external mute port which allows the activation / deactivation of the mute of audio outputs (zones) of the unit.

The amplifier shall operate on a 100-240V AC - 50/60 Hz mains network and shall be equipped with a removable power cord having a standard shuko (CEE 7/7) AC plug. The connector on the amplifier chassis shall be a fused IEC C14 type. The amplifier chassis shall be a 2UR steel constructed 19" housing. Depth from mounting surface to rear supports shall be 281,5 mm and the weight shall not exceed 5,6 Kg.

The amplifier shall be the ECLER HADA-4B500.



All product characteristics are subject to variation due to production tolerances. **NEEC AUDIO BARCELONA S.L.** reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications.

For technical queries contact your supplier, distributor or complete the contact form on our website, in [Support / Technical requests](#).

Motors, 166-168 - 08038 Barcelona - Spain | (+34) 932238403 | information@ecler.com | www.ecler.com