

**CAAS** *Audio*

**Elysian Pre-amplifier II (EPre II)**

User Manual

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# Elysian Pre-amplifier II (EPre II) Overview

The Elysian Pre-amplifier II (EPre II) is a reference standard balanced pre-amplifier designed to produce the highest audio playback quality possible.

The EPre II is machined from a single piece of extremely high grade aluminium, incorporating a dual monaural pre-amplifier with dedicated transformers and power supplies for the left channel, right channel and digital sections.

The EPre II is a true reference design which has met our aim to produce an outstanding sounding, unsurpassed pre-amplifier with a remote controllable relay switched volume control and both single ended and balanced inputs and outputs.

The EPre II houses six (three per channel) separate zero feedback, class A operating (with zero switching distortion), DC coupled amplifier modules. This unique topology allows selection of the correct amplifier module and allows the EPre II to configure the most direct and purest signal path possible for any input / output configuration.

The purest most direct connection will be achieved when operating in either single ended (RCA) to single ended (RCA) or balanced (XLR) to balanced (XLR) mode. When the EPre II is configured to operate in either of these modes, the signal path will consist of just the relay switched volume control and a single (or parallel for balanced) zero feedback ultra low distortion BJT buffer amplifier.

Volume control is achieved through a state of the art 128 step, silver contact relay switched, fixed precision resistor volume control. This is a state of the art complex system of switching relays, however sonically it outperforms all standard potentiometer based volume controls. The volume control operates from -64dB to 0dB in 0.5dB steps.

The EPre II has an extremely low noise floor with greater spacial refinement, dynamic accuracy and fine detail retrieval than any other pre-amplifier on the market.

All the analogue signal sections of the EPre II are DC coupled from the input to the output and have a very short signal path. Ultra low frequency DC servo circuitry (NIDS) is used to maintain extremely low DC operating levels.

The EPre II is fitted with twelve dedicated discrete regulated power supplies for both Left and Right analogue channels and seven separate regulated supplies for the digital sections.

The power supply is a key component in achieving the maximum performance from the audio sections and for this reason the EPre II is fitted with a high specification mains filter and three separate transformers, one for the analogue sections and two for the digital sections.

The CAAS Audio EPre II has been designed to produce the highest audio quality possible. This has been achieved through the following CAAS Audio proprietary technologies.

## **CAAS Audio EPre II Features**

- Single chassis dual mono construction.
- Single block aluminium construction.
- Three (3) pairs of balanced (XLR) inputs.
- Two (2) pairs of single ended (RCA) inputs.
- One (1) pair of balanced (XLR) outputs.
- One (1) pair of single ended (RCA) outputs.
- Firmware controlled relays and circuitry.
- 128 step silver contact, relay switched, fixed precision resistor volume control. 0dB to -64dB in 0.5dB steps.
- Remote control volume, input select and mute function.
- CAAS Link (12V trigger for CAAS power amps).
- DC Coupled from input to output.
- The EPre II utilises an Ultra linear, ultra low distortion, ZERO feedback, BJT Class A buffer stage for the purest signal transfer.
- Switched amplifier modules for the most direct signal path possible
- Separate transformers for the left analogue, right analogue and digital sections.
- 19 regulated power supplies: 12 dedicated discrete regulated power supplies (analogue sections) and 7 regulated supplies (digital sections).
- Solid aluminium hand held remote control.
- Available in All Silver or All Black.
- 350mm (W), 330mm (D), 80mm (H), 8.6kg.

## **CAAS Audio EPre II Specification**

Gain:	
SE-to-Balanced	+6dB to -58dB & Mute (128 steps of 0.5dB), RCA-to-XLR
SE-to-SE	0dB to -64dB & Mute (128 steps of 0.5dB), RCA-to-RCA
Balanced-to-Balanced	0dB to -64dB & Mute (128 steps of 0.5dB), XLR-to-XLR
Frequency Response	<1Hz to >300kHz (-3dB) DC Coupled 20Hz to 20kHz (+/-0.1dB)
Analogue Input	4V RMS (Max) per phase
Analogue Output	4V RMS (Max) per phase
Input Impedance	33 kohms (RCA) 33 kohms per phase (XLR)
Output Impedance	60 ohms per phase (XLR) 60 ohm (RCA)
THD	< 0.01% @1kHz (0dB level, 2V RMS)
Crosstalk	<-90dB
Output SNR (A-WTD)	~100dB
Output DC Offset	<+/-1mV
Power Consumption	< 20W (Idle), < 0.5W (Standby)
Fuse Rating	T500mA
Analogue Inputs	2 x L/R Pair RCA 3 x L/R Pair XLR
Analogue Outputs	1 x L/R Pair RCA (Variable) 1 x L/R Pair XLR (Variable)
Mains Transformers	3 x 15VA (toroidal)
Dimensions	350mm (W), 330mm (D), 80mm (H)
Weight	8.6kg
Remote	Solid aluminium

All specifications are subject to change at any time.

# Important Precautions (Mandatory)

## **Water and moisture**

The EPre II should not be used near water. Care should be taken not to allow the EPre II to fall into water or other liquids and ensure that liquids are never spilled onto or into the EPre II.

## **Power sources**

The EPre II voltage and current rating is indicated on the rear panel of the unit. This will state either 240Vac or 120Vac. Two T1A time-lag fuses are included for 120V versions and two T0.5A fuses are included for the 240V versions. The input frequency rating of the power supply is 50Hz to 60Hz. The EPre II typically draws less than 20W during the normal operation. Please verify that the indicated voltage requirement is consistent with the mains voltage in your location.

## **Grounding**

We provide a standard IEC AC mains cable that fits into the rear of the EPre II. The EPre II is equipped with an earth ground provided by this cable and connection. DO NOT defeat this ground, the EPre II should always be grounded. It is dangerous to operate the EPre II without a ground connection. Additionally the EPre II may not function correctly without a ground connection.

## **Power and Signal cables**

The EPre II is supplied with a power cable that meets UK legislated requirements. As with all audiophile equipment the power cable should be the last item attached and the first item removed whenever equipment is added or removed from the audio chain. Any cables (power or signal) should never be connected or removed while the equipment or supporting equipment is powered up. Failure to pay attention to this precaution may result in damaged equipment.

## **Ventilation**

Audio equipment may run hot. The installation must allow for this heat dissipation. We recommend free air circulation around the product. This can best be achieved by leaving at least a 20cm gap around the unit. The EPre II should not be installed or situated near any other source of heat (e.g. central heating radiator or on top of an amplifier).

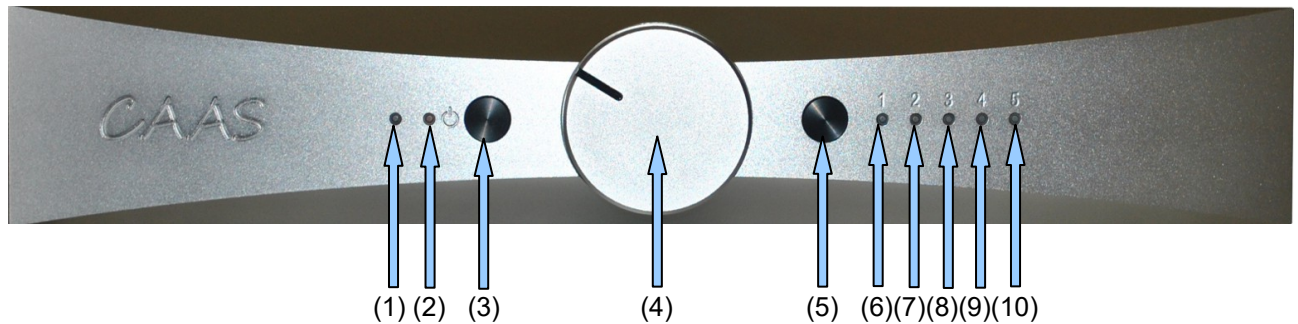
## **Servicing**

To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the EPre II. Please do not open the EPre II. There are no user serviceable parts inside the EPre II. Opening the EPre II will invalidate any warranty offered. Servicing must be referred to qualified service personnel only.

## **Burn in period**

As is usual with high end audio equipment, when you first power up the EPre II, you may not experience the maximum performance of this pre-amplifier, the EPre II can require a burn in period of up to 100 hours. Additionally the performance of the EPre II can vary slightly over its warm up period.

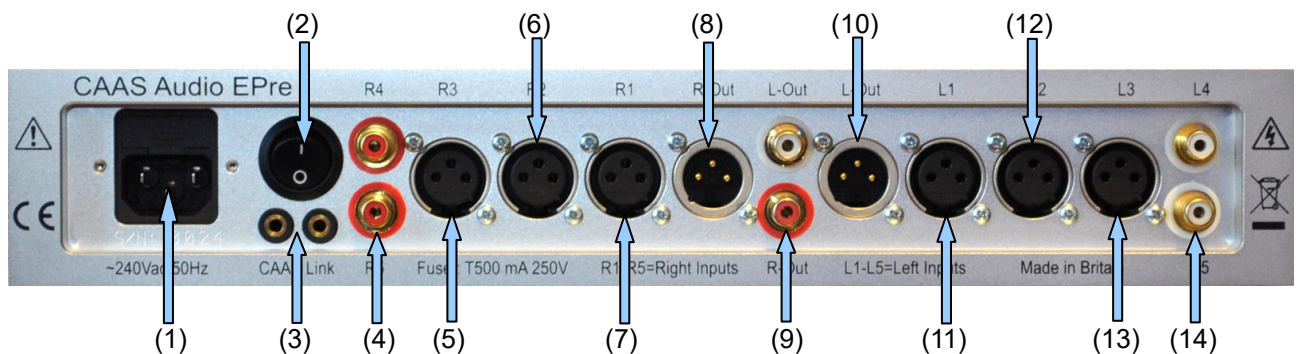
## EPre II Front Panel Explained



1. IR sensor (for remote control).
2. Standby LED (red for standby).
3. Standby / On select button.
4. Volume control knob.
5. Input select button (toggles through inputs).
6. **1** LED (Balanced input 1 selected, XLR).
7. **2** LED (Balanced input 2 selected, XLR).
8. **3** LED (Balanced input 3 selected, XLR).
9. **4** LED (Single ended input 4 selected, RCA).
10. **5** LED (Single ended input 5 selected, RCA).

The selector switch on the front panel cycles through the inputs. By pressing and releasing this button, you can toggle through the inputs, **1, 2, 3, 4, 5** and then back to **1** etc... Input **1** is the default turn on selection. These inputs can also be selected using the remote control.

## EPre II Rear Panel Explained



1. Mains power input and Fuse.
2. Power switch.
3. CAAS Link (12V trigger for the control of CAAS power amplifiers).
4. Single ended RCA inputs 4 & 5 (Right channel).
5. Balanced XLR input 3 (Right channel).
6. Balanced XLR input 2 (Right channel).
7. Balanced XLR input 1 (Right channel).
8. Balanced XLR output (Right channel).
9. Single ended outputs (Left & Right channels).
10. Balanced XLR output (Left channel).
11. Balanced XLR input 1 (Left channel).
12. Balanced XLR input 2 (Left channel).
13. Balanced XLR input 3 (Left channel).
14. Single ended RCA inputs 4 & 5 (Left channel).

# Getting Started

Thank you for purchasing a CAAS Audio Elysian Pre-amplifier II (EPre II). The Elysian range have been designed to meet the highest standards of performance, sound and build quality.

The EPre II should arrive in a well packaged box weighing slightly under 10kg. This should mean that your EPre II arrives in pristine order. If this is not the case please contact your retailer immediately.

**While unpacking, please take care to always lift with bent knees and a straight back, using your leg muscles to lift, in accordance with government HSE guidelines.**

## ***Installation***

The EPre II is a single chassis dual mono pre-amplifier.

The EPre II analogue audio circuitry operates in class A mode and therefore the EPre II will operate warm to the touch. For this reason adequate ventilation is mandatory. Place the EPre II in its preferred listening position, taking care to insure that it has adequate ventilation (CAAS recommend > 20cm all around & >30cm above), is not close to any heat radiating sources and is installed on an equipment stand capable of supporting in excess of 10kg weight.

Ensure when connecting the power cable that any extension leads necessary are rated at 13A or above. (Do not use extension cables unless absolutely necessary).

## ***The Mains Supply***

The EPre II is available in two standard mains input versions; the 240V UK and European and the 120V USA. Please check the rear of your unit to make sure the right input voltage is marked.

## ***The Input Output Options.***

The EPre II has two pairs of single ended (RCA) inputs and three pairs of balanced (XLR) inputs on the rear of the unit. All inputs are DC coupled from input to output (this is done for maximum sound quality) so please ensure that the source components do not exhibit a large output DC offset.

When connecting the interconnect cables, observe the flow polarity of your cables. Only ever connect and disconnect the cables while the amplifier is powered off or in standby mode (front panel red LED illuminated). Take care not to short circuit the connectors or cables at any time as this may damage the EPre II. Once you are certain that all cables are correctly fitted at both ends, you are ready to power up the EPre II.

## ***Operation***

Power the EPre II up by turning the switch on the rear of the unit to the ON (I) position. This is a mechanical switch and will disconnect the product from the main supply. Once turned on the front red standby LED will illuminate (the EPre II is in standby mode). Press and release the front panel standby button once (the button next to the red standby LED), this will switch the EPre II ON and the first blue LED (input 1), on the other side of the volume control will illuminate. All the EPre II audio circuitry is powered down while in standby mode and only powered up when the EPre II is fully switched on. Once switched on, the EPre II may take as long as 20 minutes to reach optimum performance.

Once fully ON the EPre II remote will operate and all functions can be accessed (volume up, volume down, input select and mute). To select a different input, press and release the input select button either on the remote or on the front of the unit (next to the blue LEDs at the right of the volume control). Each press will toggle to the next input so keep pressing and releasing until you have the right input. The input numbers on the front panel (above each LED) directly relates to the rear panel inputs.



## ***Warm Up Period***

Although the EPre II will produce exceptional performance from the first time it is switched on, this performance will improve as components settle in. The greatest improvement to performance will occur in the first 50 hours of operation. After 100 hours or so the pre-amplifier performance will remain consistently high.

Each time the pre-amplifier is switched on, the EPre II will require at least 20 minutes to reach its optimum operating conditions.

## ***Partnering Equipment & Components***

The Elysian Pre-amplifier II is a perfect match for CAAS Audio's DAS and E100 mono-block power amplifiers.

The Elysian Pre-amplifier II has a buffered output stage with a low output impedance and hence a good to high damping factor, therefore interconnect cable choice and power amplifier choice may be less critical than with some pre-amplifiers (specifically passive ones). Nevertheless, to maximise the audio performance, CAAS Audio recommend keeping interconnect cable lengths to an absolute minimum and ensuring that both left and right cables are identical in both length and type.

## ***CAAS Link***

CAAS Link is a proprietary control system design to allow connection and control between CAAS Audio products. The EPre II CAAS link incorporates a 12V trigger. When The EPre II is in standby mode 12V DC is applied to the CAAS Link port. When the CAAS Link cables are connected between the EPre II and any CAAS Audio power amplifiers, this connection will automatically power down the CAAS Audio power amplifier(s). When the standby / on button is pressed and the EPre II is switched ON, the power amplifier(s) will automatically switch on as well.

Note: The main power switch must be ON for the CAAS link to operate.

Important: CAAS Link is only to be used with CAAS Audio products.

## ***Ground Lift & Ground Loops***

The Elysian Pre-amplifier II is not fitted with a ground lift switch. CAAS Audio believe the practice of disconnecting grounds to be detrimental to the overall system quality and in some instances dangerous. The Elysian Pre-amplifier II has been designed to minimise internal ground loops and reduce the effect of connecting equipment ground loops. The Elysian Pre-amplifier II should operate with no audible mains hum. If mains hum (and / or ground noise) is present then the resulting noise is due to the preceding source components, the power amplifier or mains pick up on unconnected inputs and not the Elysian Pre-amplifier II.

## ***Maintenance***

The following routine maintenance should be performed on a periodic basis:

Clean the exterior surfaces of the unit with a soft, dry, lint-free cloth. Do not use alcohol, benzene, acetone-based cleaners, or strong commercial cleaners. Do not use a cloth made with steel wool or metal polish. If the unit is exposed to a dusty environment, a low-pressure blower may be used to remove dust from its exterior.

## Warranty (3 Year Guarantee)

To reduce the risk of fire, electrical shock or other injuries, the user should not attempt to service the EPre II. Please do not open the EPre II. There are no user serviceable parts inside the EPre II. Opening the EPre II will invalidate any warranty offered. Servicing must be referred to qualified service personnel only.

This warranty is offered in relation to purchases made in the United Kingdom, Eire and European Economic Area (EEA) only and shall be governed by the laws [applying in the country in which purchase of the product takes place]. Consumer statutory rights applying under the laws [pertaining in the country of purchase] shall not be adversely affected by any terms and conditions contained herein. All CAAS Audio products are covered by a standard 3-year manufacturers' warranty. This covers parts and labour, subject to terms & conditions. This warranty is not transferable outside the European Economic Area.

If a CAAS Audio product is defective in normal domestic use, due to a fault in materials or workmanship, CAAS Audio will at its discretion (and subject to the terms contained herein) either repair or replace it free of charge within a reasonable time after return of such product to CAAS Audio during the warranty period. This warranty is offered to the first purchaser only and covers the cost of parts and associated labour required to correct such defects in materials or workmanship arising and advised to your retailer or CAAS Audio during a period of three (3) years from the original date of purchase.

This Warranty does NOT cover:

1. Damage to CAAS Audio products while in the possession of a shipper, retailer, or consumer and not caused by defects in materials or workmanship.
2. Damage or defects caused by abnormal or unreasonable use (including repairs or alterations of products by a person or company other than CAAS Audio).
3. Damage to CAAS Audio products arising due to or from normal wear and tear.
4. Damage resulting from misuse, neglect, abuse, accidents, acts of nature, improper installation, improper removal or cleaning.
5. Damage resulting from failure to follow the instructions in the user manual or repair or attempted repair by unauthorised personnel or company.
6. Initial set-up, check-ups or charges incurred for installation of the product.
7. Any cause other than a product defect due to a fault in materials or workmanship.
8. Any product where the serial number has been defaced, modified or removed.
9. Any CAAS Audio product purchased outside the European Economic Area.

Note: The term "Damage" includes, malfunction, deterioration and failure to meet specifications.