

Top reasons to buy the Azur 851E and 851W

This pre and power amplifier combination delivers exceptional quality audio. Here are 10 reasons to choose the Cambridge Audio Azur 851E and 851W over other systems...

1 Immense power. Into 8 Ohms, the 851W outputs 200W per channel in stereo mode. Into 4 Ohms, this figure increases to 350W per channel! In bridged mono mode into 8 Ohms the 851W is a 500W monoblock amplifier. Into 4 Ohms, this figure increases to an incredible 800W!

2 Class XD amplification. The 851W runs our proprietary Class XD amplification. This combines the best of Class A and Class AB amplification, delivering the sound quality of a Class A amp while retaining the efficiency of a Class AB amp.

3 Incredibly low distortion. Every component within the 851E is designed not to interfere with the audio signal input and output, meaning that harmonic distortion and noise are so low that they're almost impossible to measure.

4 Further improvements. The 851E features a high-end-friendly range of inputs and an innovative solid state volume control – this retains audio signal purity and precision even at low volume levels.

5 Terrapin modules. Both the 851E and 851W use our proprietary Terrapin impedance buffering modules, for absolutely consistent sound across all sources.

6 Toroidal transformers. The 851E and 851W both uses a large toroidal transformer to deliver perfect power, with extremely low distortion. The 851W takes things one step further by using two separate toroidal transformers; one for the power amplifier itself and one for input and other circuitry.

7 Superior connectivity. The 851E has a wider range of input options than its predecessors, with eight inputs including three switchable between unbalanced RCA and balanced XLR – the latter ideal for connecting to modern high-end sources.

8 CAP 5 protection. protects the 851W, plus any connected equipment and speakers, ensuring ultimate reliability and peace of mind.

9 Private listening. The 851E's headphone output will deliver high quality sound too; great when not wanting to disturb others.

10 Full Metal Jacket: all the above points would mean nothing if these amplifiers were not built to last! From the all-metal casework and ultra rigid chassis, to the high-quality, high-power toroidal transformers, every component in the 851E and 851W is designed to give many years of listening pleasure.

Did you know?

The 851W is so powerful that a normal mains cable can't deliver the current required. We supply the 851W with its own dedicated, high performance 20 Amp mains cable!

Vital statistics:

851W

Power output (stereo): 200W per channel into 8 Ohms
350W per channel into 4 Ohms
Power output (mono): 500W into 8 Ohms
800W into 4 Ohms
Dimensions: 148 x 430 x 365mm (5.8 x 16.9 x 14.4")
Weight: 19.1kg (42.2lbs)

851E

Inputs: 3 x Balanced XLR
8 x Unbalanced RCA
Outputs: 1 x Balanced XLR Pre Out
1 x Unbalanced RCA Pre Out
1 x subwoofer output
Dimensions: 115 x 430 x 385mm (4.5 x 16.9 x 15.2")
Weight: 8.1kg (17.9lbs)

Hot Tip!

User friendly display: Features such as changing input names on the display allow you to customise the 851E to suit your system, making it simple to select and listen to sources.

Top-Tips

The ultimate amplifier combination

When we set about developing our Azur 851 Series of hi-fi separates, the brief was simple: to make a hi-fi system that sounds better than anything else out there. The award-winning 851 series is designed with one goal in mind – perfection. With this in mind, the Azur 851E and 851W are the ultimate pre and power amplifier combination.

By separating out pre and power amplifier functionality, our engineers were able to give each component the time and dedication that it needs to deliver the ultimate performance.

The 851E pre-amplifier is an analogue pre-amp that is so accurate, it's almost impossible to detect audio distortion. In fact, with every component designed not to interfere with the

audio signal input and output, harmonic distortion and noise are so low that they're almost impossible to measure.

The 851W power amplifier is our best ever sounding amplifier. Key to this is a refined version of our proprietary Class XD amplification. This combines the best of Class A and Class AB amplification, delivering the sound quality of a Class A amp while retaining the efficiency of a Class AB amp.

The 851E and W are, of course, designed to work in perfect synergy with each other – from the fully balanced XLR audio connectivity, to neat touches such as power syncing with each other - this pre and power amplifier combination not only sounds incredible, but works in perfect harmony too.

The inside story

Helping us to achieve this incredible sound are some other key features rarely seen at this price point.

- **Immense power.** Into 8 Ohms, the 851W outputs 200W per channel in stereo mode. Into 4 Ohms, this figure increases to 350W per channel!
- **Flexible configuration.** The 851W can be used in stereo, bi-amped or bridged mono configurations. In bridged mono mode into 8 Ohms the 851W is a 500W monoblock amplifier. Into 4 Ohms, this figure increases to an incredible 800W!
- **Class XD amplification.** The 851W runs our proprietary Class XD amplification. This combines the best of Class A and Class AB amplification, delivering the sound quality of a Class A amp while retaining the efficiency of a Class AB amp.
- **Incredibly low distortion.** Within the 851E, every component is designed not to interfere with the audio signal input and output, meaning that harmonic distortion and noise are so low that they're almost impossible to measure.

- **Further improvements.** The 851E also improves over its predecessor, the highly rated 840E, with a more versatile and high-end-friendly range of inputs and an innovative solid state volume control – this retains audio signal purity and precision even at low volume levels.

- **Terrapin modules.** Both the 851E and 851W use our proprietary Terrapin impedance buffering modules, for absolutely consistent sound across all sources.

- **Toroidal transformers.** The 851E and 851W both use a large toroidal transformer to deliver perfect power, with extremely low distortion. The 851W takes things one step further by using two separate toroidal transformers; one for the power amplifier itself and one for input and other circuitry, for a performance unaffected by audio output volume or dynamics.

Did you know?

The 851E is supplied with our new system remote, allowing you to control the amp, CD, DAC and streamer, all from the same remote.

Toroidal vs EI transformers

We strive for audio perfection which is why both the 851E and 851W feature powerful toroidal transformers. The 851W takes things one step further by using two separate toroidal transformers; one for the power amplifier itself and one for input and other circuitry!

Cambridge Audio was one of the first manufacturers to use toroidal transformers in the 1970s, and we continue to use them today. Some of the benefits of a toroidal transformer, over the cheaper, inferior EI transformers used by most other manufacturers are:

- ✓ High quality power output to the amplification circuits, with no clipping of the waveform signal, to provide a consistent signal
- ✓ No transformer noise, buzz or hum
- ✓ Sensational bass performance
- ✓ High power output, to allow large and demanding speakers to be driven at high volumes
- ✓ Large power reserves, to allow the transformer to deliver high peaks of volume when required
- ✓ Fully shielded against internal and external electrical interference, to maintain quality of power and signal

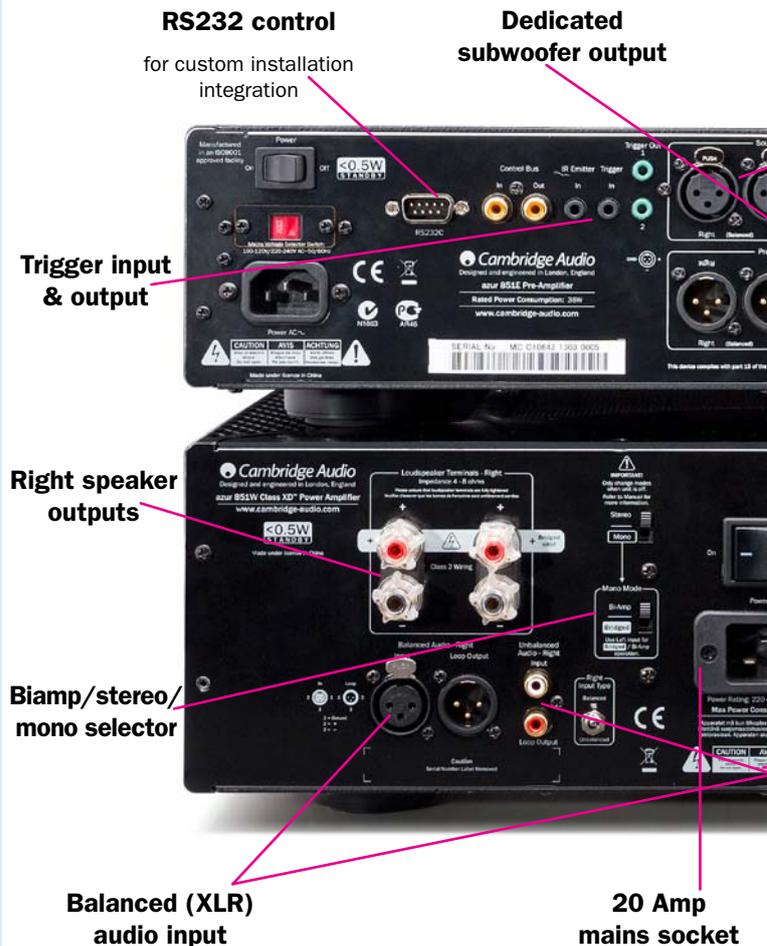


A typical cheaper EI transformer:

- ✗ Weak inconsistent signal
- ✗ No shielding
- ✗ Noisy
- ✗ Won't drive powerful and demanding speakers

'Terrapin' impedance buffering modules

Cambridge Audio's proprietary Terrapin modules are used exclusively in the 851E and 851W. When designing a stereo system, listeners are often encouraged to think about system matching, where components are handpicked to provide the best overall sound quality. People often assume this is due to the different audio characteristics, but frequently it is due to impedance (the relationship between voltage and current input/output) matching components. Products perform at their optimum when their input and output impedances match, or the products' audio circuits are decoupled from other connected equipment. By using Terrapin impedance buffering modules, we have minimised the effects of different components' impedances. This creates a system that can be paired with a far wider variety of audio sources, without risking any sacrifice in musicality or performance.



Class XD amplification

The two most common forms of amplification in hi-fi stereo amplifiers are 'Class A' and 'Class AB'.

Class A is typically used in extremely expensive amplifiers because it produces phenomenal sound quality. However, it's also very inefficient, generating substantial heat which needs to be managed – normally with many expensive heat sinks.

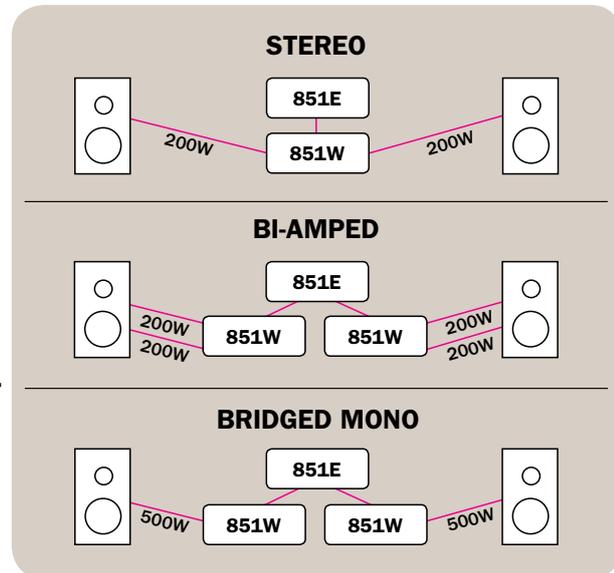
Class AB is more commonly used because it is far more efficient. However, this doesn't deliver quite the same sound quality as Class A because it generates distortion at the crossover point in high level frequencies, which is audible.

Not satisfied with either of these options, our engineers developed our patented Class XD amplification which adds voltage to a traditional Class AB design to shift the crossover point to a position where the audio distortion is not audible to the human ear. Class XD therefore combines the the sound quality of a Class A amp with the efficiency of a Class AB amp, and also means that customers' money is spent on further premium hi-fi components and technologies for great sound, rather than dealing with heat.

Azur 851E and 851W Pre and Power amplifiers

Flexible configuration

The 851W can be used in stereo, bi-amped or bridged mono configurations. In bridged mono mode into 8 Ohms the 851W is a 500W monoblock amplifier. Into 4 Ohms, this figure increases to an incredible 800W!



Superior connectivity

The 851E has a wider range of input options than its predecessors, with eight inputs including three switchable between unbalanced RCA and balanced XLR – the latter ideal for connecting to modern high-end sources. Plus flexible and configurable trigger and IR outputs, and control bus options make it easy to connect to modern power amps such as the 851W for power syncing.

Did you know?

The 851E features a solid state volume control. While the volume control itself is digital, the signal remains completely analogue. This innovative, solid state solution delivers absolutely precise and linear control and retains channel balance perfectly at low levels while ensuring the audio signal is left untouched.

Designer's note



"Our Class XD amplification is designed to deliver the best of Class A and AB in one. Power efficiency without crossover distortion – the result sounds simply stunning."

[Chris, Electronic Design]

CAP5 (Cambridge Audio Protection 5)

protects the 851W, plus any connected equipment and speakers, ensuring ultimate reliability and peace of mind.

- Over current – protects speakers from being driven too hard
- Temperature protection – in case of inadequate ventilation
- DC Detect – protects against the most common user errors in set-up
- Short circuits – to detect incorrectly connected speakers
- Clipping – prevents damage if the 851W is driven too hard

All metal design

Electronics (and therefore sound quality) are particularly susceptible to vibration; that's why we've used a low resonance, acoustically-dampened metal chassis to eliminate as much vibration as possible, ensuring that the most sound quality is extracted from each source.