

## CREEK EVOLUTION 100A



To maintain a family resemblance with the lower powered amplifier, the **EVOLUTION 100A** is housed in a similar slim case with engraved front panel and solid metal control knobs as the **EVOLUTION 50A**. It is available with either a Black or Silver brushed aluminium front panel and uses the same ingenious soft push button design as the **EVOLUTION 50** series, offering excellent tactile feel and backlit optical indication of functions, for optimum user-friendliness.

The front panel features a large OLED (*Organic Light Emitting Diode*) display. The white on black display provides higher clarity and resolution than a normal display and has a wide range of customised graphic symbols. Display brightness levels can be changed or turned-off, if not required, via the menu system.

In addition to greatly increased performance, thanks to ingenious new circuit design, the **EVOLUTION 100A** has been equipped with 2 sets of high quality loudspeaker binding posts, with local and remote switching for A & B outputs. Optional extras include the ability to plug the Sequel mk2 Phono pre-amp inside and add the **AMBIT** FM/AM radio or **RUBY** DAC/Bluetooth/FM radio module to the expansion slot on the rear panel.

At the heart of any high-end amplifier there must be a good power supply; The **EVOLUTION 100A** uses a massive 360 Watt, low profile, toroidal mains transformer, with multiple windings for high and low voltages and current, to separate the power amp, pre-amp and digital circuitry. Creek's long-standing design policy of paralleling several small capacitors in the power supply creates an ultra-high specification capacitor, with low inductance and ultra low impedance. This significantly improves filtering and helps produce a very powerful and accurate sound from such a relatively small amplifier.

After testing several methods of building a high performance and high efficiency power amplifier, suitable for this new model, *David Gamble* – Creek Audio's Senior Engineer – created a unique Class G circuit especially for the **EVOLUTION 100A**. David chose to use four Sanken STD03 complimentary power Darlington transistors per channel, as used in the, the **EVOLUTION 50** which feature built-in thermal compensation. Compared to the the **EVOLUTION 50**, he improved the performance of the voltage gain circuitry, which, in combination with the output stage, now achieves extremely high open-loop gain and exceptionally low distortion, without sacrificing stability. The result is an exceptional power amplifier circuit with very low output impedance and high output current capability. This combination provides exceptional speed and control suitable for driving most loudspeakers.

To increase the power output of the smaller the **EVOLUTION 50**, yet still retain the same case size, David Gamble developed a cunning Class G circuit which runs normally at a lower voltage for power levels up to 25 Watts into 8 Ohms. When required to produce more than 25 Watts, the amp automatically swings to a higher secondary voltage, to increase the output power capability to over 100 Watts into 8 Ohms.

Statistically, average audio signals are mostly below half the maximum voltage swing available, which incidentally is only one quarter of the power. As the dissipation of lossy 'idle current' in a Class A/B amp (in the form of heat) is much lower for a 25 Watt amp than the potential 100 Watts in the **EVOLUTION 100A**, this solution dramatically improves the amplifier's thermal efficiency and helps to keep it slim and attractive.



The Pre-amp circuit provides high levels of flexibility and control, via unbalanced or balanced inputs. It has multiple input options, switched either electronically or by gold contact relays. It also has a State-of-the-Art electronic Volume, Balance and Tone controls. Volume control and op-amp circuit outputs are all buffered with constant current sources, to provide improved load tolerance and stable distortion characteristics.

Correct grounding is difficult, if not impossible, in an un-balanced amplifier, so Creeks has provided the consumer with a balanced line input for both the pre-amp and power amp input. The matching **EVOLUTION 50** also has a balanced output capability. In addition, the optional **RUBY DAC** module also benefits from having a dedicated balanced audio connection to the **EVOLUTION 100A**'s pre-amp, via its flat foil cable, to avoid potential ground loops inside the amplifier.

It is a modern listening trend for headphones to now be fed from low voltage sources, such as smart-phones and portable music storage devices. This required the development of low impedance headphones, to draw the required current to make them loud enough to satisfy the consumer. This trend has also necessitated a re-think of circuitry used in modern Hi-Fi amplifiers, to drive such low impedance headphones, together with the traditional medium to high impedance versions also.

Creeks Audio has taken the unusual step of driving the headphone output socket of their **EVOLUTION** amplifiers from a dedicated low impedance source. Instead of the headphone output being sourced from the power amplifier, the headphone output is derived from a dedicated amplifier, with only a few Ohms in series for protection against short circuits. This dedicated HP amp is now located on the pre-amplifier circuit board.

## **Technical Specification**

<b>Power Output</b>	>110 Watts into 8 Ohms
<b>Power Output</b>	>170 Watts into 4 Ohms
<b>Continuous Current</b>	>8.5 Amps (sine wave)
<b>Max Current</b>	+/- 26 Amps, current burst into 0.5 Ohms
<b>Output Impedance</b>	<0.05 Ohms 20Hz – 20Khz
<b>THD</b>	< 0.002%
<b>SNR</b>	>102dB
<b>Frequency Response</b>	10Hz – 100KHz +/- 2dB Line
<b>Gain</b>	33.3dB (x46) via power amp input
<b>Input Sensitivity</b>	650mV
<b>Crosstalk</b>	-80dB at 1Khz
<b>DC Offset</b>	< ±10mV
<b>Pre-amp Inputs</b>	5x RCA unbalanced – 1x Balanced XLR
<b>Power-amp Inputs</b>	Input 3 & 4 via RCA or XLR
<b>Outputs</b>	2 Pair
<b>Headphone output</b>	Dedicated low impedance amp (<50 Ohms)
<b>IR Bus</b>	Powered output for IR repeater
<b>Operating Voltages</b>	110V/230V Switchable
<b>Consumption (at idle)</b>	<20 Watts
<b>Consumption (at full power)</b>	500 Watts
<b>Weight</b>	9.0 Kgs
<b>Dimensions</b>	430x60x280mm W/H/D