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Power and poise

This sophisticated stereo amp system combines impressive muscle with exceptional refinement

PRODUCT Classé CP-700 and CA-M400

TYPE Preamplifier and monoblock power amplifiers

PRICE (CP-700) £5,450; (CA-M400) £3,950 each

KEY FEATURES (CP-700) Size (WxHxD): 44.5x12.1x41.9cm ● Weight: 22.4kg ● Inputs: four single-ended (RCA phono), two balanced (XLR) ● Outputs: one single-ended, one balanced, one tape ● (CA-M400) Size (WxHxD): 44.5x22.2x47cm ● Weight: 37kg ● Inputs: one single-ended, one balanced ● Rated power: 400 watts per channel (8 ohms)

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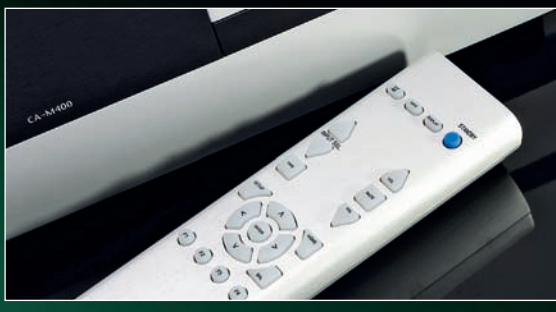
Classé makes two ranges of audio electronics: the top-flight Omega series and the more down to earth, but still aspirational, Delta. This latest preamp and monoblock combination represents the top of the Delta tree.

The distinctive broad radii and contrasting colours of the Delta components are the work of Morton Warren, a name you may recall from the time when B&W launched its original curvy 800 series. While this connection could have been coincidental, the fact that B&W now owns Classé would suggest otherwise.



"This is a very fine example of what can be achieved with a decent budget and some extra-box thinking."

The casework is more than just attractive. It is also designed to isolate the electronics from vibration. To this end, both steel and aluminium are used together and large feet made from a material called Navcom Limbsaver (developed for target shooting and archery) were selected for their ability to offset any resonance within the supporting surface.

The CP-700 preamplifier sports another distinguishing feature of the Delta range in its touchscreen control panel. This is a very fine example of what can be achieved with a decent budget and some extra-box thinking. It's a clever way of addressing the differing control needs of the various components within the range, all the while maintaining consistency of appearance and economy of production. With the DVD players and processors, this screen can be used to view video footage, but with this stereo preamplifier it brings easy access to a wide selection of controls. Touch screens are not quite as tactile or responsive as mechanical alternatives, but they work well enough once you get the knack.

Among the multitude of options are the ability to set the name, volume offset and balance setting for each input. If you name an input 'SSP', it becomes a unity gain input; in other words, it bypasses the volume control. This is useful when integrating a home cinema system into the hi-fi, but dangerous in the wrong hands.

You can also adjust the rate that the rotary control changes volume, but the standard speed-sensing setting is logical enough – the faster the knob is turned the greater the volume steps. This did catch us out a few times, though; for instance, when the preamp has 'gone to sleep' and turned off its display, one way of awakening it is to turn the knob. This can sometimes send it to 0.0 and be a little reluctant to go back up to the 40-50 range where we wanted it.

The CP-700's back panel features a large multipin socket, which hooks up to an external power supply via a usefully long umbilical cable. This supply houses two boards, one handling the conversion of AC to DC and the other managing the regulation of the supply to the preamp. Elsewhere on the back panel, you will find balanced and single-ended inputs and outputs, alongside an RS-232 control port, in/outputs for IR commands and the DC triggers that are popular in the US. Last but not least, there's the remote handset – an attractive and intuitive piece of aluminium and rubber that lights up blue at your touch. Nice.

The CA-M400 monoblock is a hefty lump of a power amplifier that is specified to double its 400-watts-into-eight-ohms output into a halving of load and weighs in at a respectable 37kg. While it has both balanced and single-ended inputs, you need to switch between the two on the front panel. This is something end users won't do as often as reviewers and thus of limited entertainment value, but it looks good. Other connections are for triggers, firmware updates and Classé's bus system. Inside the case, Classé has deployed three types of transistor in order to create a balance of qualities that it argues a single variety, with its inherent strengths and weaknesses, cannot duplicate. So there are J-FETs in the input stage, MOSFETS in the driver stage and bipolar output devices.

SOUND QUALITY

With this much power on tap, one thing you are guaranteed is an assured and relaxed sound; the MA-400s are unlikely to break sweat when driving the majority of loudspeakers. But it was encouraging to find this pairing also has an impressively light touch for its class.

They are not the most dynamic-sounding amps on the block. Some of the competition have a more obviously exciting and energetic presentation, but those competitors don't have the same headroom and can't produce high levels with the degree of ease on offer here. On their own terms, the CA-M400s have an uncanny ability to peel apart the elements in a recording to reveal precisely what each one ▶

Q&A

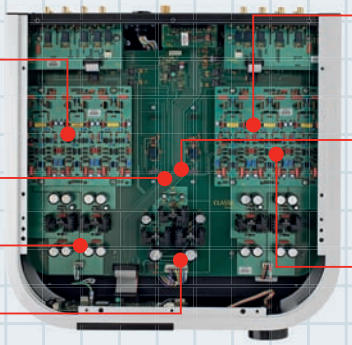
We discussed amplifiers with Dave Nauber, vice president of brand development at Classé

HFC What effect does vibration have on amplifier electronics?
DN The reason we pay attention to the chassis is because microphonic effects can degrade the performance of some circuitry. In other words, as PC boards and components vibrate, there are slight relative movements among the parts, which generate small signals, which are amplified and become part of the music signal. The worst offenders are vacuum tubes. In solid-state electronics, and especially with surface-mount components, the effect is dramatically reduced, but not eliminated. This is why people pay so much attention to equipment stands.

You use three types of transistor in the CA-M400's signal path. Why?
The choice of multiple transistor types is made to capitalize on their relative strengths and conceal their weaknesses. A J-FET input stage, for example, is easy to drive, relatively insensitive to interconnect cable variances, very low distortion and very low noise. The J-FET is an excellent voltage gain device. It cannot, however, deliver the current necessary to drive a proper output stage, let alone a loudspeaker. So MOSFET transistors are used after J-FETs because we can design the input stage to easily drive the MOSFET driver stage, which provides some of both voltage and current gain. The MOSFETs can in turn supply enough current to easily drive the bipolar output stage, which is widely recognized as being ideal for linearity and high current.

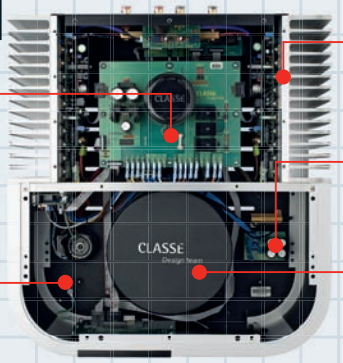
The Delta preamp topology appears to be completely different to your range-topping Omega preamp. Why?
The Omega was conceived as a cost-no-object reference preamplifier, yet it is several years older than the CP-700. It uses a resistor ladder network for switching volume and does not offer the isolation between single-ended and balanced outputs that the CP-700 does. On the other hand, the MkIII power supply is more extreme and the chassis more costly. I think of the Omega as a bit more brute force, 'throw money at it until you get the performance' and the CP-700 as more sophisticated and clever. People have different opinions about which is better, but for the money the CP-700 is a real bargain.

Detail – CP-700



- Four-layer circuit boards for optimum signal routing
- Space for optional phono module (left channel)
- +/- supply voltage regulation for left channel
- Power supply for control and monitoring circuits
- Single-ended output stage
- Left and right channels divided along centre line
- Non-inverting and inverting circuits for balanced output

Detail – CA-M400



- Separate secondary power supply for control and monitoring circuits
- Third independent power supply for monitoring/ sensor circuits
- Each 'half' of the balanced signal is a 200-watt amplifier module
- Surge resistor provides 'soft-start' feature on power up
- Large 1.35kVA toroidal transformer

contributes, without making the sound seem analytical. In combination with the preamp, they present the finest nuances in such an effortless fashion that your attention is never distracted from the music and its underlying message.

The Classé combo doesn't make a big thing about grip, speed or slam – it goes about its business in a remarkably neutral and unprepossessing way. This means the music has a better chance than usual of doing precisely what the artist, producer and mastering engineer had in mind. It also means that differences between musicians, instruments and recordings are very clear.

The smoothness on offer can give the impression that clarity is not as great as it might be, yet when you turn up the wick the presentation remains precisely the same. There is no sense of edginess or strain and as a result, high level listening is far more comfortable than usual. In this respect, these amps reflect the character of B&W's 800 Series speakers, which like as not were among the arsenal of transducers used by Classé's engineers. They are seemingly a little polite... and then the fun really starts.

Combining the delicacy of small amps with the power and control of the big boys, Classé's titanic trio covers all the bases. Sure, it's expensive, but it's good enough to compete with the best amp systems money can buy. **HFC**

Jason Kennedy

VERDICT – CP-700 PREAMPLIFIER

SOUND >> 95%
FEATURES >> 96%
BUILD >> 96%
VALUE >> 88%

CONCLUSION
Beautifully built, supremely flexible preamp is revealing and coherent. We've used it as a reference for months and don't want it to go!

HI-FI CHOICE >> 92%

VERDICT – CA-M400 MONOBLOCK

SOUND >> 93%
FEATURES >> 90%
BUILD >> 96%
VALUE >> 86%

CONCLUSION
A behemoth of a monoblock. If you want control without the character that often goes with it, this is a resolute and unflappable powerhouse.

HI-FI CHOICE >> 90%