

# STEREO

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER  
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## Everything okay?

Primare's reputation for quality is well established, but does the new CD32/I32 CD/Amp Combo have the ingredients to honour it?

Apart from some AV product introductions, the Swedish manufacturer Primare has recently been quiet in HiFi circles. But since late 2009 when distribution in Germany was won by Elac, things have started to change for the better. The Swedes' latest products, the CD32 CD Player and I32 amplifier, have exactly the right combination of virtues to re-establish momentum for the brand in the two-channel hi-fi market.

Primare devices have always impressed with their flawless design, and this high standard has been improved again. At first look, the buyer discovers a solid, protective steel casing and the typically superior engraved aluminum fascias, providing a strong impression of quality. The only minor flaw being the plastic tray of the CD32, embellished with an aluminum drawer front.

Technically the CD32 scores twice. The player offers not only a selectable upsampling, that raises the sampling rate from the original 44.1 kHz to 48 or even 96 kHz, it reduces the dreaded clock vibration, and thus the jitter, as well. The Swedes rightly describe the two Burr-Brown PCM 1704 converter chips and DF11706 filter module used in this design as one of "the best true multi bit DAC/filter combinations" of the market. A socket for USB flash drives is at the rear. Their MP3 or WMA files are easily accessed and flawlessly activated via the remote control and bright, clear display. A switching power supply feeds the central microprocessor. Other parts of the design are fed via an R-core transformer with separate windings for the required voltages, which are then filtered individually and regulated.

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**The I32 is in Class D**

Primare uses a high-efficiency Class D amplifier technology for the I32 known as "Ultra Fast Power Device": UFPD in short. There is no question that you can produce high performance in this mode, and the Swedes prove it again. However, Class D amps must still defend themselves against the suspicion that they are only partially audiophile. With UFPD, Primare wants to circumvent all the pitfalls of standard Class D and provide the highest quality by realising stable gain and a high attenuation factor.

The Class D power amplifiers of the I32 use a switching power supply rather than a conventional transformer. Their integrated RF filters have a new active gain control system comprising coils and capacitors, placed before the speaker outputs.



**Both devices have the same character of performance: Their reproduction is refined, fluid and accurate. The soundscapes are very lively, agile and full of tonal and dynamic richness. The sound captivates and will never be boring. Both 32s appear as crystal clear as a Nordic lake: you can hear deep into the structure of the notes. The result is a flourishing noise-free playback with a transparent, natural mid-band concise rhythms and a tight, edgy bass.**

To achieve this performance, the sampling at 96 kHz should be enabled in the CD32 - as recommended by the high quality manual. At 44.1 kHz it sounds somewhat milky, slightly sibilant and slow overall, while at 48 kHz, nuanced voices are too hard. We pressed the red button on the remote control until "96K" appeared on the display, and suddenly Christy Baron's "Overjoyed" sparkled with its fascinating blend of color, spaciousness and detail.

**Particularly noticeable in the high performance of the I32 was the way that it handled B&W's 802 Diamond without a hint of trouble. It's not a flashy sounding amplifier: despite all the speed and lithe playfulness, it does its job discreetly and inconspicuously, yet with real commitment.**

**The Primare components are not only able to keep up with their peers, they're at the head of the list and are a powerful statement from the Swedes. A genuine recommendation for Nordic design in sound.**

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**PRIMARE CD32**

An impeccably-made CD player, with a clear display and fine, precise operation. The USB connector extends its range of applications. For the best sound, set upsampler to 96 kHz.

<b>Measurements:</b>	430 x 110 x 380 mm (W x H x D)
<b>Frequency Response:</b>	Linear, Maximum -0.8 dB at 20 kHz
<b>Signal-to-Noise Ratio:</b>	Digital 0 112 dB
<b>Quantization Signal-to-Noise Ratio</b>	(400 Hz/0 dB) 98 dB
<b>Distortion Factor</b>	(400 Hz/-60 dB) 0.23%
<b>Aliasing Distortion</b>	(-30 dB) 0.011%
<b>Converter Nonlinearity</b>	Up to -90 dB <0.4dB
<b>Detection Reliability</b>	Good
<b>Shock Resistance</b>	Good
<b>Rectangle / Pulse Response</b>	Good / Good
<b>Read Time</b>	9.1s
<b>Output Resistance</b>	RCA at 1 kHz 372 ohms
<b>Output Voltage at 0 dB</b>	2.09 V
<b>Power Consumption</b>	
Off	0 watts
Standby	<0.1 watts
On	18 watts

**LABORATORY COMMENT:**

There were no complaints for CD32 in the laboratory check. The digital signal processing uses a standard filter, the frequency response corresponds to the highest standards. Distortion is very low and the player is almost transparent in its delivery. Other positive features are the low output resistance and the very low current consumption in standby mode.

**EQUIPMENT**

One pair each RCA and XLR output jacks. The digital data stream can be coaxial, fiber optic or even symmetrically decreased. USB port for flash and hard drives, remote control with numeric keypad, dimmable, easy to read OLED display, selectable time display, auto-repeat, switchable upsampler.

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**PRIMARE I32**

Its sophisticated technology improves class D at high power, Sound has a natural, lively and pleasant "non-technical" character. In many ways, one of the most modern integrated amplifiers in its class.

<b>Measurements:</b>	40 x 110 x 400 mm (WxHxD)
<b>Distortion Spectrum:</b>	0.0016%
<b>Continuous Power at 8 / 4 ohm</b>	189 / 356 watts per Channel
<b>Pulse Power at 4 ohm</b>	384 watts per channel
<b>Distortion Factor at 50 mW / 5 watts / Pmax -1 dB</b>	0.009% / 0.0027% / 0.1 %
<b>Intermodulation at 50 mW / 15 watts / Pmax -1 dB</b>	0.02% / 0.018% / 0.12 %
<b>Signal-to-Noise Ratio CD at 50 mW / 15 watts</b>	66dB / 85 dB
<b>Channel Separation at 10 kHz</b>	66 dB
<b>Damping Factor at 4 ohms</b>	211
<b>Upper Limit Frequency (-3 dB, 4 ohms)</b>	55 khz
<b>Power Requirements Practice-Oriented</b>	
<b>Cross-Talk Tuner / CD (110 kHz/5 kohm)</b>	86
<b>Cross-Talk Front / Rear Band (10 kHz/5 kohm)</b>	76
<b>Synchronization error volume control up to -60 dB</b>	0.5 dB
<b>Power Consumption</b>	
Off	0 watts
Standby	<0.1 watts
On	26 watts

**LABORATORY COMMENT:**

Gosh, we couldn't believe our measurement tools with the rich performance from this compact amp. Continuous and pulse power are almost identical, which is typical of Class D. Also common is a broadband harmonic spectrum, where 5kHz dominates. However, the high damping factor is amazing, and distortion is very low. The power consumption in standby mode is also very low.

**EQUIPMENT**

Two XLR and RCA three high level inputs with adjustable gain and nameable individually. Optional media module for streaming / Internet radio, mute and balance function. Remote control.