STEREO & VIDEO

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER
MAGAZINE: STEREO & VIDEO, RUSSIA
TRANSLATION FROM MARCH 2011 ISSUE
AUTHOR: VIACHESLAV SAVVOV

Prosperous Premier

It is not that easy to become a member of the High End Club. Membership is granted not just for high price and qualitative characteristics. The design should also possess a heritage and engineering philosophy well above the ordinary.

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER

Though there is no such word as primare in the dictionary. It could be that the word originates from primal, and is a noun which is formed from the word – like nightmare is to night! But enough speculation about the name, what of the products? Primare is a Swedish company, whose first product, an integrated amplifier, was released in 1986. The design was so radical for the time that it's considered a classic and exhibited at the Copenhagen Museum of Industrial Art. Primare believes new technologies often overload appliances with unnecessary features, which unreasonably complicate both setting-up and the control. In this respect Primare follows the true Viking vision that all innovation should carry the benefits of simplifying operation as well as improving 'performance'. The artistic signature of the brand is governed by the balance of performance, reliability, ease of use and aesthetic quality. It is a beautiful ideal, but is it followed in real life?

Let's take a closer look at the products. They belong to Primare's the newest 30 series range. The chassis are of matching heavy gauge steel, which provides strength, rigidity and screening, while being effective at damping vibrations from external sources. The buttons are raised slightly above the front panel, just enough to prevent it from getting dirty when the buttons are pressed. Both rotary volume and the amplifying input controls are extremely precise, proving quality of the parts and their workmanship.

At first glance it seems that both I32 amplifier and CD32 CD player have a fluorescent display but actually it is an OLED one, similar to technology used in mobile phones. It's clearer as well as being more comfortable to the eyes.

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER

In the system, I'd regard the player as the leading component. It has both balanced and unbalanced analogue outputs and three main types of digital audio output (coaxial, optical and AES/EBU balanced), and includes a USB input for playing MP3 files from external storage. Here, the display helps the search for the required tracks. The menu shows the names of five folders, with the selected folder being highlighted. Generally speaking, even with limited skill in handling the remote control (both appliances may be controlled from the same remote), you get all you need! The player's rear panel is also equipped with all the necessary auxiliary connectors including 12V triggers, external IR sensor inputs/outputs as well as the RS-232 interface. The I32 amplifier has identical interfaces. It enables the system to be installed in a closed rack or integrated with a larger home AV system. The audio signal path is as follows: The CD reader translates CD data into the AES/EBU signal and raises its sampling rate (so the user can raise it to 48 kHz, or 96 kHz, or leave the original 44.1 kHz) with jitter suppression. Then the signal is converted into analogue with twin high-performance Burr-Brown PCM1704 DACs and DF1706 digital filters (one of the best combinations available). The current is transformed into voltage without the use of the operational amplifiers, and the output stage comprises a single MOSFET transistor operated with an active current source. There are no capacitors used in the analogue signal paths to prevent any phase distortions.

The D Class UFPD (Ultra Fast Power Device) I32 Amplifier actively adjusts the feedback required to deliver a higher level of gain across the entire audio band, maintaining performance irrespective of the input signal frequency. This reduces THD, while the reactive load characteristics of acoustic systems do not affect its performance. That is why Primare says that the I32 system is able to drive any loudspeaker. Another noteworthy point is that there is some space in the amplifier's body especially allocated for a module to stream audio signals from either the internet or a computer, and to increase the number of connected audio sources.

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER

Subjective test results met the expectations set by our listeners, which were high from reading Primare's bold company statements. It turned out that such statements were not for fun! The CD player perfectly displayed all the finest colours of the sound while the amplifier brought life to the audio systems in our office that we were afraid would be rather too slow for it. It often seemed as if we were testing them due to the fact that the amplifier could be connected to any loudspeaker regardless of its price tag price without any fear of undermining their sound quality. It was amazing how the audio signal had been processed without loss to the spectrum, and how musical instruments were beautifully spaced in the sound stage! To try external sources we played jazz from an aged vinyl disc and it was mesmerising, literally. If you'll forgive the metaphor, the system treats the sound in a white-gloved way.

The system, with its refined design, resembles a well disciplined butler from an English movie. And its designers should be congratulated for their genuine desire to deliver the musician's skill to the listeners by neither concealing nor adding a single sound. Indeed it is a praiseworthy achievement!

Exterior features

The buttons are raised slightly above the front panel by just enough to prevent it from getting dirty when buttons are pressed. Unusually the front panel stands out somewhat from the appliance body, to isolate the display circuitry from the power circuits.

The Remote Control

There is a remote control for the amplifier only. Of course, the remote control is designed for use by both appliances. Visually, the remote control with rows of identical buttons does not look a high-end one.

Rear Panels

The designers have paid utmost attention to the balanced interfacing. The amplifier has two inputs, and the CD player is equipped with the balanced output of both analogue and digital signals.

Design Features

It is worth noting that appliances rest on three legs rather than four. It seems counter-intuitive but this seems to ensure steadier positioning on an uneven surface.

REVIEW: I32 INTEGRATED AMPLIFIER AND CD32 CD PLAYER

Stereo & Video Data

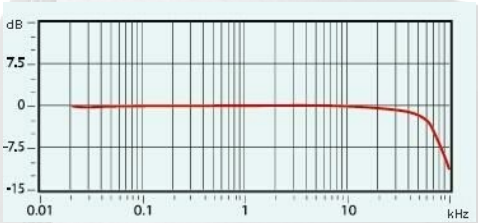
Laboratory tests are made by the Stereo&Video magazine, February, 2011

Player

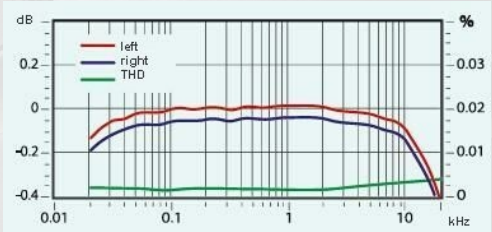
Frequency response	**0.45 dB**
Band unbalancing in 1 kHz frequency (L-R)	**0.05 dB**
THD in 1 kHz frequency	**0.0009%**
Peak THD	**0.0032%**

Amplfier

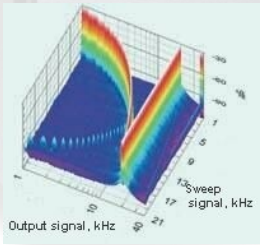
Power output with THD 0.1%, 8 ohm @ 80 Hz /1 kHz /10 kHz frequencies	**152 W/153 W/149 W**
THD at 0.5 Pout in 80Hz/1kHz/10kHzfrequencies	**0.013%/0.008%/0.040%**
Frequency response 20-20,000 kHz	**0.4 dB**
Frequency response 10/95 kHz	**0.14 dB/-11.25 dB**
Upper limit frequency at –0.5 dB /–3 dB /–6 dB	**25 kHz />65 kHz />80 kHz**
Damping factor	**88**
Channel separation (L-R/R-L)	**68 dB /72 dB**



[01] frequency response diagram



[02]frequency response/THD diagram



[03] player output signal spectrum

Notes

The frequency response diagram is flat to 20 kHz and then drops gradually to be more than 10 dB down at 96 kHz. An SACD player may easily be connected (recordings can be played with their full value because at 48 kHz the amplitude is down only 2 dB). It is recommended to connect the player using the balanced bus because any unbalanced signal will be transformed into a balanced one. Ripples in the frequency response of the player are equal to those of the amplifier. The channel unbalancing rate is lower than the hearing threshold, while the THD value is sufficiently low, within the “useful” frequency range.