



REVIEW: SP32 HD AUDIOPHILE AV PRE-AMPLIFIER
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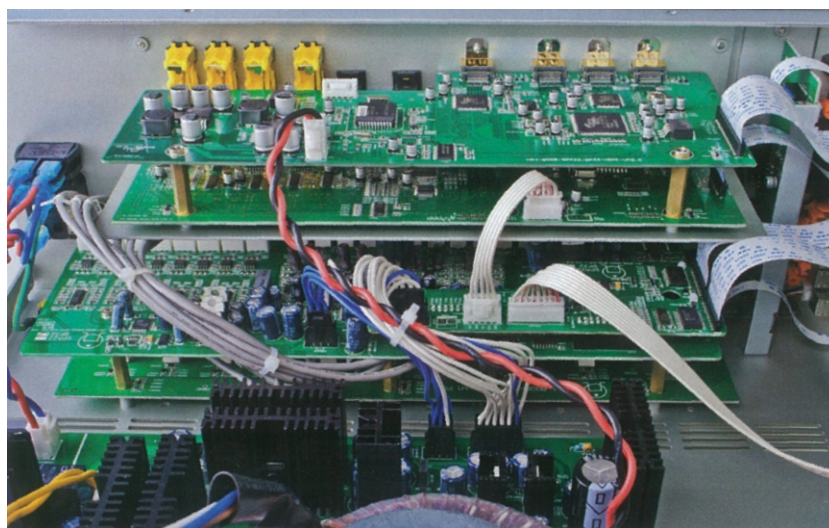


Hi-Fi Heavyweight from Sweden

Audiophile equipment offers an alternative concept to mass-produced consumer electronics. So does the Primare SP32 HD make a convincing case for the audiophile approach?

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Alongside the trendy furniture and world-famous car brands, Sweden also makes hi-fi products. The Primare products are a good example, in large part self-built and meticulously tested.



The fully-modular design enables the exchange of audio and video components at any time. The power supply with the multiple controlled operating voltages can be seen in the foreground

Future-proofing is a high priority at Primare, so a modular design was decided upon for this device. Thus, the surround processor can be upgraded to accommodate completely new surround formats. The same applies to the video section which supports the HDMI 1.3 standard at the moment and will be upgraded later this year to the latest HDMI 1.4 standard. This upgrade counts as one of the most sought after updates for 3D filmmakers. In addition installers will appreciate the SP32's trigger and RS 232 interfaces with AMX and Crestron etc, because they allow remote control of all audio and video capabilities: not even the supplied remote control is necessary if the processor is in a custom installed system. The SP32 HD is equipped with full HD audio processing, but does not neglect analogue. A bypass mode switches input signals via RCA and XLR through relays to bypass the entire digital processing. The volume control is a Cirrus Logic CS3318 type, which is constructed in eight channels and operates passively to a certain extent. Thus, at this stage, the signal degradation is at a minimum. The crosstalk of channels is absolutely negligible with values between -86 decibels (dB) to -96dB at 10 kHz. Generally, the SP32 uses short symmetric signal paths, effective cabling and a low-impedance grounding to suppress any interference internally, and the massive, beautifully crafted metal housing reduces external influences. Multiple regulated power supplies also help to reduce noise. Partly responsible for the absence of audio distortion are the WM8740 24 Bit 192 kHz D/A converter from Wolfson and the OPA2134 operational amplifier from Burr Brown, with NE5534 from Texas Instruments in the analog filters and the output driver stages.

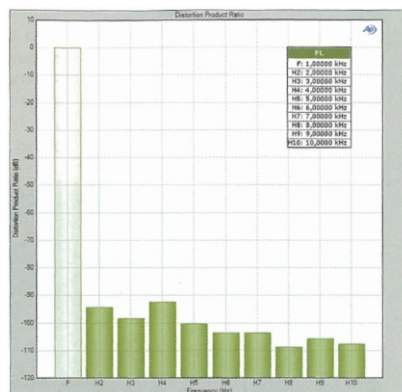
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These converters are fully employed through the existing AES / EBU digital interface: sampling rates are supported up to 192 kHz, which will be appreciated by lovers of high-quality CD drives or audio network streamers. Both Freescale DSPs will decode all standard 7.1 HD audio formats providing complete speaker management and sound and image synching. The Primare SP32 also provides stereo sound in surround formats very well: the analogue inputs are converted via professional Burr Brown PCM4202 A/D converters.

Whether it's a multi-channel audio or stereo source, the tonal reproduction of the SP32 can be described as vivid and detailed. It achieves the difficult balance of bass and low midrange warmth with the right amount of bright sound intensity. Thus, the depth and width of the acoustic stage in all playback formats is excellently represented. In the surround field, movements appear organic and not obvious. Speech intelligibility is excellent, so song and spoken words are reproduced vividly but with a relaxed quality without audible sharpening or hardening. Listening impressions are of a very natural sound, thanks to the Wolfson converter and the downstream analog filters, which are so well designed that they also do not affect the phase response and the group delay. This surround preamplifier is recommended for all those who take the sonic experience to heart and who do not want to get lost in the menu. So connect, install and enjoy the sound!



The back offers the audio enthusiast a rich selection of connection options with dual XLR inputs and AES / EBU digital connection



The distortion product ratio is harmonically influenced

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Features**General**

Manufacturer	Primare
Model	SP32 HD
Dimensions W/H/D	430 x 18 x 38.5 mm
Weight of complete system	12 kg
Measured stand-by power consumption	2.5W
Operating power consumption (approx)	55W
Power switch at the back	

Connections**Inputs / Outputs**

HDMI	3 / 1
Coaxial Digital Audio	3 / 1
Optical Digital Audio	3 / 1
Audio RCA analog *	8 / 6
Audio XLR analog *	2 / 4
Other connections	IR input, 3x 12V trigger
Data interfaces	AES/EBU, RS-232 (Crestron/AMX)

* stereo pairs

Features

Sound control	No - only bypass mode switchable
Speaker setup	Yes
Automatic measurement	No - only manually
Multi-zone support	Yes - second zone with sound and image
Upscaling	Yes
HD-Audio	Yes
Pro Logic IIz / Audyssey DSX	No / No
Stereo to surround upgrading	Yes
Network capabilities	No



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Measurement data (HDMI/96kHz/-20 dBFS/analog output -10dBV)

Frequency response deviation	(20 Hz—20 kHz) +/-0.088 dB
Signal-to-noise ratio (SNR)	85 dB
Dynamic performance (AES 17)	82 dB
Crosstalk at 10 kHz	-86 dB
THD+N Ratio	0.01 %, (0.004% at 0 dBFS)
THD+N Level	-93dBV
DFD (IMD) Distortion (IEC 60/118/268)	-85 dB
max. analog output level at 0 dBFS	26.6 dBv

Rating

Audio readings	16 / 16
Neutrality	5 / 6
Dynamics	5 / 6
Bass reproduction	6 / 6
Midrange reproduction	5.5 / 6
Treble reproduction	5.5 / 6
Quality of multi-channel processing	12 / 12
Playback quality	55 / 58
Operation / Installation	30 / 32
Features / Processing	47.5 / 57
Total	132.5 of 147 points
Price / Performance	Very good

Conclusion

Excellent 90 / 100

Rating key

100 - 95:	<i>reference class</i>
94 - 90:	<i>excellent</i>
89 - 85:	<i>very good</i>
84 - 70:	<i>good</i>
69 - 55:	<i>satisfactory</i>
54 - 40:	<i>sufficient</i>
39 - 0:	<i>poor</i>

