

## PRIMARE IN-TOUCH»

JANUARY 2009

### THE 2009 ROADMAP» END OF BUILT-IN OBSOLESCENCE?

We're doing our bit for a greener planet with a new range of upgradable modular designs, as epitomised by the SPA22 home cinema amplifier and SP32 audiophile A/V processor. Their innovative open architecture looks beyond the latest fad or next format war by providing an easy way to upgrade entire audio, video and control sections as new technologies arrive. As with PC upgrades proprietary video, DSP and communications boards, incorporating optimised versions of the latest digital processing, are simply plugged-in to replace the previous ones. In a single step, Primare has 'built-out' waste and obsolescence and secured long-lasting satisfaction for lovers of film and music.

#### SP32/SPA22 HD AUDIO and VIDEO UPGRADES, Projected for Q2 2009

##### AUDIO UPGRADE FEATURES

- Onboard decoding of Dolby TrueHD and DTS-HD Master Audio Codecs.

##### VIDEO UPGRADE FEATURES

- HDMI up-scaling to 480P/576P, 720P, 1080i, 1080P, 1080P/24p over 24/50/60Hz, with user selectable bypass for deep color signals.
- HDMI Audio support, over I2S and SPDIF, user selectable feature to have the audio processed by the SP32/SPA22 or forwarded to the TV.
- Five HDMI inputs, two HDMI outputs (not simultaneous): the user selects which output to use (1 or 2).
- Analogue video up-conversion to HDMI with OSD. Setup menu available on HDMI. HD component input signals are supported
- Analogue video conversion remains the same, composite, S-video and component -> composite, S-video and component outputs.

**These are the standard upgrade features. However, continuous review of development means that the final upgrade version may be further improved.**



## WELCOME»

Welcome to the first of a series of regular updates from the Primare team. At the start of 2009, we're embarking on a series of quite radical (for us) product releases, uniting new models replete with the virtues you've come to expect from us with a progressive and imaginative modular upgrade program – not software mind, but proper hardware! While many companies have talked about this, we're doing it! This means that the best of Primare can be incrementally improved and refreshed, which is good for generating life-long customers. We'll look back on 2009 as a breakthrough year, not just for the innovative products but also to celebrate better communication with you and your customers, and even better product support. It's our objective to make Primare a bigger, more satisfying and rewarding experience for all Primare junkies.

Sincerely,

*The Primare Team*

## IN THIS ISSUE»

- » The 2009 Roadmap
- » Let Joy Be Uncompressed
- » Five Blu-ray Facts



SPA22



SP32

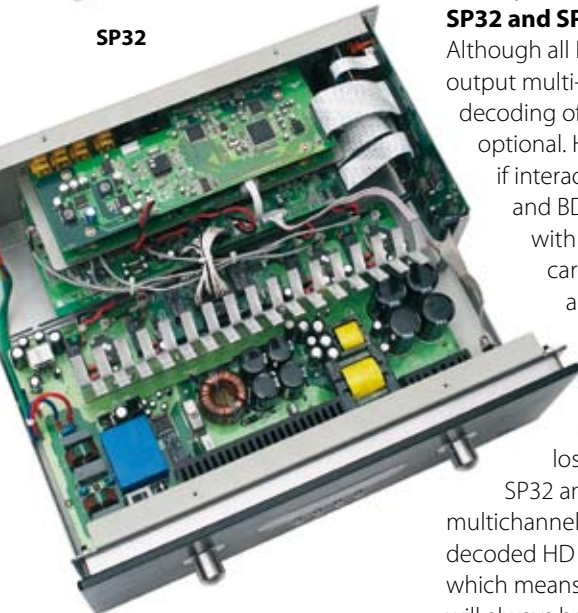
## LET JOY BE UNCOMPRESSED »

### ENJOY THE MAXIMUM RESOLUTION AND PERFORMANCE FROM BLU-RAY WITH PRIMARE'S SP32 AND SPA22 DESIGNS

Blu-ray Disc offers a new and dynamic level of audio resolution from lossless audio codecs. But amazingly, while most attention has been placed on encoded Dolby and DTS HD formats, a native HD version of the original multichannel soundtrack has existed on Blu-ray Disc all along in the form of uncompressed multi-channel LPCM.



SP32



SPA22

#### SP32 and SPA22 offer universal support for HD audio over HDMIv1.3

Blu-ray players can be configured to output multi-channel PCM from any Blu-ray Disc over HDMI. The Primare SP32 and SPA22 will perform accurate D/A conversion on the multi-channel LPCM bit-stream to deliver the highest resolution audio available on Blu-ray Disc right now, out-of-the-box. This means that while you wait for Primare's proprietary decoder board for Dolby TrueHD and DTS HD:MA, multichannel HD audio in its purest uncompressed form is already available through Primare's new SP32 and SPA22 models.

#### Blu-ray Interactive features through SP32 and SPA22

Although all Blu-ray players are required to output multi-channel LPCM audio, the internal decoding of Dolby and DTS HD audio is optional. However it may become essential if interactive features such as Bonus View and BD Live are to be enjoyed along with HD Audio. HDMIv1.3 cannot carry both an HD audio bit-stream and the interactive features. It's one or the other. Decoding in the player allows for the audio and interactive features to be mixed at source and without losing audio resolution. Primare's SP32 and SPA22 are equipped with multichannel analogue inputs to accept decoded HD audio from a Blue-ray player, which means that interactive Blu-ray features will always be available to their owners.

#### FullHD Video through SP32/SPA22 and HDMI

Most Blu-ray discs receive their film based content at 1080p resolution and 24p (frames per second). To ensure optimal video quality from source to screen (assuming the display is 1080p/24Hz compatible), both the SP32 and SPA22 will support 1080p at 24/50/60Hz.

## FIVE BLU-RAY FACTS »

- 1** Blu-ray Disc is the only source of 5.1 and 7.1 channel HD audio currently available.
- 2** LPCM has the highest bit rate of all three lossless codecs\* Most film soundtracks are mastered in 5.1-channel, 24-bit/48kHz PCM, so not only does it have the maximum potential bit rate of all three lossless audio codecs, it can also make a strong claim to be the purest as well.
- 3** Currently 73% of all Blu-ray Discs offer lossless multichannel audio, split this way: 26% LPCM, 26% DTS-HD:MA, 21% TrueHD [www.blu-raystats.com/Stats/Stats.php](http://www.blu-raystats.com/Stats/Stats.php)
- 4** Most Blu-ray players can be set to decompress Dolby and DTS HD audio formats and output them as uncompressed multichannel PCM audio. Even if the Blu-ray Disc doesn't carry the PCM soundtrack, it's still available from the player. [www.blu-ray.com/players/compare.php?p=1](http://www.blu-ray.com/players/compare.php?p=1)
- 5** You don't have to wait for the best quality HD audio from Primare. The SP32 and SPA22 will convey multi-channel PCM from player to loudspeakers in the best condition possible right now!

## BLU-RAY LOSSLESS AUDIO FORMATS »

**Three are available currently: multichannel LPCM, Dolby TrueHD and DTS-HD Master Audio.**

» **Multichannel LPCM:** Linear Pulse Code Modulation: LPCM (often referred to as PCM) is used for the lossless encoding of audio data in the compact disc Red Book standard; has been defined as a part of the DVD and Blu-ray standards and is used by HDMI. On Blu-ray it offers a maximum bit rate of 27.648Mbps, up to 8 channels of 24bit/96kHz audio and up to six channels of 24bit/192kHz audio. Under the standard, players must have the capability to support LPCM.

» **Dolby TrueHD:** Lossless encoding of up to 8 channels of audio, built on MLP technology. It offers a maximum bit rate of 18.64Mbps, up to 8 channels of 24bit/96kHz audio and up to six channels of 24bit/192kHz audio. Under the Blu-ray standard, support is optional.

» **DTS-HD Master Audio:** Lossless encoding of up to 8 channels of audio. It offers a maximum bit rate of 24.5Mbps, up to 8 channels of 24bit/96kHz audio and up to six channels of 24bit/192kHz audio. Under the Blu-ray standard, support is optional.