

stereophile

ELECTRONICALLY REPRINTED FROM MAY 2015

A ROUND MAN CANNOT BE EXPECTED
TO FIT INTO A SQUARE HOLE

MUSIC IN **BY KALMAN RUBINSON** THE ROUND

THIS ISSUE: KR reports on surround sound at the 2015 CES and listens to Classé's Sigma SSP and Sigma AMP5.

Classy Acts

CLASSÉ SIGMA SSP SURROUND-SOUND PREAMPLIFIER-PROCESSOR

I reviewed Classé's flagship preamplifier-processor, the SSP-800, in 2011,³ well after its original release, because I wanted to wait for the HDMI 1.4 update and its attendant audio format support. It did just about anything one could expect of a modern pre-pro, and its sound was excellent, whether from digital or analog sources, or whether it processed the sources or transmitted the analog unmolested. Since then we've seen the rise of wireless and wired streaming, but the SSP-800 (\$9500) can do that fed by an S/PDIF source or a good external DAC; even today, I'd be hard put to criticize the SSP-800.

Four years later, Classé has come up with the Sigma SSP: smaller, lighter, sleeker than the SSP-800, and little more than half the price: \$5000. (The Sigma SSP measured 16.9" (433mm) W by 3.7" (95mm) H by 14.4" (370mm) D and weighs 18.1 lbs (8.21kg). All of that is to the good—but has anything been lost?

Features? There's no doubt that the pre-pro market is a varied population. At one end are those who want a pre-pro to anchor a home theater with multiple screens while feeding and controlling remote A/V zones. At the other end are those who want a pre-pro with minimal video facilities but a wide array of analog and digital inputs, including phono, and the ability to bypass any digital conversion for all analog signals. No one product suits all, and, as I've been told by Classé's Dave Nauber, many difficult decisions led to the Sigma SSP, which occupies a cannily chosen middle position a bit closer to the latter extreme.

Consequently, the only video inputs or outputs are HDMI. There are seven HDMI inputs on the rear panel and one on the front, to accommodate lots of modern sources, but only one HDMI output. There are three coaxial (RCA) and two optical (TosLink) digital inputs, but only one coaxial (RCA) digital output. The analog inputs

comprise one pair of balanced (XLR) and two pairs of single-ended (RCA) jacks. The analog outputs are one pair of XLRs and eight pairs of RCAs. The Sigma SSP doesn't support multiple zones, but one pair of its RCA outputs can be assigned as an L/R pair for a remote location or for multiple subwoofers. The SSP-800 has a parametric equalizer with up to five bandpass filters per channel; the Sigma ups that to an even more effective nine filters per channel. So the Sigma SSP has more HDMI inputs than the SSP-800, but doesn't support composite or component video. Digital in/out is comparable, as is stereo analog in/out, but the Sigma lacks an analog 7.1-channel input as well as the full array of XLR outputs for all channels.

Here's where the cost analysis came in. How many users today require the 7.1 analog input when all formats but DSD can be decoded by the pre-pro? As for the XLR outputs, Nauber claims that allocating a given budget for each single-ended output permitted engineering to optimize performance for that output, compared to spreading it across the virtually doubled number of parts required for a balanced output. Still, XLR in and out is maintained for L/R, and, significantly, you can avoid A/D conversion to enjoy an entirely analog signal path for all stereo sources simply by opting for digital bypass mode (all DSP processing switched off). "If no processing is applied, analog signals remain in the analog domain, even if not specifically set to digital bypass."

But the Sigma SSP adds support for DLNA audio via Ethernet and AirPlay—ideas not yet born when the SSP-800 appeared, so we didn't miss them. Today, however, they're almost essential, and the Sigma's implementation of

1 See www.stereophile.com/category/ces-2015.

2 See John Atkinson's explanation at www.stereophile.com/content/ive-heard-future-streaming-meridians-mqa.

3 The actual model reviewed was the functionally identical CT-SSP; see www.stereophile.com/content/music-round-43-page-3.

The Sigma SSP adds support for DLNA audio via Ethernet and AirPlay.



them is excellent, supporting a variety of compressed and uncompressed formats, including ALAC, FLAC, and WAV up to 24/192—all two-channel only, of course, as on every competing product today.

The specs of the Sigma SSP and the SSP-800 are a toss-up. The SSP-800 accepts a marginally higher input level in analog bypass mode, and has a marginally narrower range of frequency-response deviation. On the other hand, the Sigma SSP has lower claimed THD+noise for digital sources, marginally higher output voltage, and slightly better signal/noise ratios for analog sources. But the differences are so slight as to be inconsequential.

Aside from the additions of headphone, HDMI, and USB connectors, the front-panel design is classic Classé: to the left of the crisp and responsive touchscreen are buttons for On/Standby, Menu, and Mute. To the right, nearly flush with the faceplate, is a large volume knob that responds reliably to the lightest touch. A small remote control is provided. It seemed too simple at first, but after setup, it was entirely capable of normal operations.

Setup procedures seemed identical to those of other Classé controllers, so

I was able to jump right in using the Sigma SSP's touchscreen or the OSD. The screen's ability to display live video will be particularly convenient when the Sigma SSP is kept in a closet or other remote location. I connected my Oppo BDP-103 universal Blu-ray player, music server, and cable box to the Classé's HDMI inputs and renamed them. The Oppo was also connected to a coax S/PDIF input and a stereo analog input, and the Sigma's RJ45 jack was connected to my home network. For these inputs I created two configurations: one with bass management and EQ, one without. The latter was for the input from my Mac mini-based music server, which has its own bass management, and Dirac Live EQ. The former was used for all other sources.

At first, I amplified the Sigma SSP's output with my Bryston 9B-SST2 power amplifier, but I did most of my listening with Classé's Sigma AMP5 (reviewed below). In both cases, I used the Sigma SSP's XLR outputs for L/R and its RCA outputs for the other channels, including the subwoofer. I began listening to the analog stereo feed from the Oppo via digital bypass (which many of us call analog bypass) and, with either amp, the Sigma SSP

offered a strikingly clean, transparent sound that immediately conjured comparisons with the SSP-800 and other very high-end controllers or preamps. For this, I used my go-to track, mezzo-soprano Marianne Beate Kielland singing Finzi's "Come Away, Death," accompanied by pianist Sergei Osadchuk, this time with the Oppo playing the SACD (2L-064-SACD). Further listening to a wider range of sources only reaffirmed that the Sigma SSP can be regarded as a superb stereo analog preamp, and all the rest of its bells and whistles as gifts.

The S/PDIF input fed from the Oppo sounded even better than the analog feed, while the A/D-D/A through the Sigma SSP was marginally but inconsequentially less so. I was more than happy with my local server feeding multichannel files to the Sigma SSP via HDMI at PCM rates of up to 24/192. From the remote server via DLNA/Ethernet, the sound was entirely equal in quality but limited to two-channel files. As a result, I quickly stopped making these tedious comparisons and moved on to more meaningful work, with other sources with two or more channels.

I used the Sigma SSP constantly over several weeks, and everything I

Sigma SSP internals (right). The HDMI 1.4 board is at the rear left and can be replaced with HDMI 2.0/600MHz when those parts become available. Even the TI-based DSP PC module may be replaced by one with 3D audio decoding features in the future.



tossed at it sounded as good as ever. More than occasionally, it offered more detail, and a more relaxed sound overall. This was particularly true after I'd transferred REW-derived correction filters for each channel, but even unfiltered there was a satisfying balance, coupled with strongly delineated bass and really wide dynamic range. The Sigma SSP offered an impressively spacious yet detailed re-creation of a symphony orchestra from one of my 2015 picks for "Records to Die For," Dvorák's Symphony 8 with Manfred Honeck leading the Pittsburgh Symphony (SACD/CD, Fresh!/Reference FR-710SACD)—and presented an audiophile favorite, Sara K.'s *Hell or High Water* (SACD/CD, Stockfisch SFR 357.4039.2), with all intimacy, warmth, and slam one could desire.

In designing this lower-priced preamplifier-processor, Classé seems to have made all the right choices without sacrificing sound quality in any way. In fact, I suspect that it may be an advance on its older sibling, and on other high-end processors of only a few years ago. A few of the SSP-800's features were eliminated, and it will be matter of personal preference whether those omissions are a problem. For me,

they aren't; moreover, the new features and cosmetics and the sonic clarity are more than adequate compensation. With digital or analog sources, the Classé Sigma SSP sounds more like a top-tier analog preamp than any pre-pro near its price. As such, it has carved out for itself a unique market niche.

CLASSÉ SIGMA AMP5 FIVE-CHANNEL POWER AMPLIFIER

For the Sigma series power amplifiers, Classé took the switch-mode power supply and proprietary class-D amplifier technology they'd lavished on their Delta CA-D200 amplifier (\$4000) and put it into a new chassis for the Sigma AMP2 stereo amplifier (\$3500). What's notable is that the five-channel Sigma AMP5, with the same power supply and class-D amp, and identical watts-per-channel and stereo specs, costs only \$5000. If there's a catch, it's that the Sigma AMP5 is rated at 200Wpc RMS into 8 ohms, all channels driven, but can achieve 400Wpc into 4 ohms only with two channels driven—like the CA-D200 and the Sigma AMP5. This is due to limitations in AC mains/power and, bench tests aside, will not limit real-world use.

The Sigma AMP5 weighs 23 lbs and is designed into the same small,

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sleek case as the Sigma SSP. The two models' front panels, too, are identical, except that AMP5's central screen is merely decorative, and its only control is a matching On/Standby button. The rear panel is also similar to the SSP's, with five channels of RCA inputs, but only two channels with XLR inputs. Of course, it's logical that one would usually choose the latter for the main Left/Right channels, as I did, but there's nothing to keep you from using all of the RCA inputs, or even from using the XLR inputs for any other channels. On the input (left) side of the rear panel are a USB port (for firmware updates), an RS232 and CAN BUS connectors (for command and control), and IR and trigger in/outs, along with an IEC power port and a fuse post. On the right are five pairs of multiway speaker posts.

I slipped the Sigma AMP5 into the



Sigma AMP5 (above) shows the 5 pairs of speaker outputs, two of them with both RCA and XLR inputs.

Sigma Amp5 internals (right). The proprietary circuitry and DSP effectively eliminate dead-band-time when both halves of the amplifier are off; it is similar to switching distortion in a linear class-AB amplifier. The SMPS with Power Factor Correction pulls AC power more smoothly so that components sharing the same AC Mains circuit are uninfluenced.



rack, and connected it to the Sigma SSP with XLR (L/R) and RCA cables. I also linked it to the SSP via the CAN BUS (RJ-45) connectors, which let me control and monitor the AMP5 from the SSP's display and OSD. Nothing unusual or problematic.

Having switched directly over from the Briston 9B-SST2, I immediately heard that the Sigma AMP5 opened up the midrange and ameliorated the slight nasality I've come to expect from my Paradigm Studio60 speakers. Of course, I ran it through the gantlet of standard music test tracks, from solo voice (Marianne Beate Kielland singing "Come Away, Death") to Saint-Saëns's "Organ" Symphony, as performed by Christoph Eschenbach and the Philadelphia Orchestra, with organist Olivier Latry (Ondine ODE 1094-5). The midrange and treble were pure and smooth—something of a surprise for a class-D amp—and the bass was powerful, delineated, and extended. More important, the

Sigma AMP5 imposed no coloration or character on the music, but seemed utterly transparent. I've been enjoying a new recording of Mozart's *Requiem*, with Masaaki Suzuki leading the Bach Collegium Japan (SACD/CD, BIS-2091). This is a new version of the work, completed and edited by Suzuki's son, Masato (organist for this performance), and it doesn't so much surprise as electrify. The AMP5 revealed an open, continuous soundstage populated by an array of players and singers, each retaining a presence in space—presences that, to my surprise, closely matched the booklet's centerfold picture.

I heard a different kind of electricity from Alison Krauss and Union Station's *Live* (2 SACD/CDs, Rounder ROUN0515). This set of greatest hits was performed before an enthusiastic audience who assert their presence in the surrounds; the band, up front, is very clear. Despite the lack of any

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discrete center-channel information, there is no gap or deficit in the presentation of the soundstage. With the clarity and dynamics of the Sigma AMP5 and SSP, I can say, with little hyperbole, that I heard every voice and every plucked or strummed string instrument in this stirring concert, almost as if I were there.

As with the Sigma SSP, Classé has brought to the Sigma AMP5 their acknowledged high-end sound quality at an appealing price. I've been impressed with several recent class-D amps, but the Sigma AMP5 brought me a new level of performance that easily competes with or outperforms comparable nonswitching designs. That's progress.

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