AVM Ovation SD 6.2 Preamplifier/DAC

Winning the Darwinian Struggle for Digital Sound

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To put it mildly, this is a time of turmoil in the high end. The growing demand for state-of-the-art analog LP and tape components is one side of that turmoil. The other side is the shift away from discs to streaming and high resolution.

It would be nice if audiophiles could hope for some island of stability that would make the high end a safe refuge, but digital is in an age of audio Darwinism: Higher sampling rates (with or without MQA), streaming vs. stored files, and accessing music via software such as Roon or JRiver or via traditional music storage. On top of this, a wide range of surround-sound music titles presents a challenge to stereo, and may yet become a major part of the high end.

Ironically, all of this high-end survival of the fittest is also occurring just as the high end is becoming increasingly isolated from the rest of the audio jungle. High-end manufacturers and audiophiles may fight over the finer details of digital, but the general public largely doesn't care. In fact, the public seems to be trending towards a form of zombie apocalypse—a world where humans go through ordinary life tied to fashion-statement earphones and portable players, and then wander blankly into oncoming traffic.

And audio is only part of this new zombie apocalypse. Popular surround videos seem more and more decoupled from an interest in music and audio quality, and more focused on sound effects and "immersion." The world is also increasingly dominated by computer gaming and now has virtual reality on its immediate horizon—a development that seems likely to open a whole new way of becoming the living dead.

Digital Darwinism

Fortunately, high-end Darwinism is evolving some real successes, and ones that do not present any risk of creating audio zombies. The AVM Ovation SD 6.2 is a serious new entrant in this neo-Darwinian struggle. It combines an analog preamp with a DAC that can handle virtually any current digital music format from 32-bit/352kHz PCM to DSD128. It can also decode virtually any streaming format such as MP3, WMA, AAC, OGG Vorbis, FLAC, WAV, AIFF, and ALAC, as well as DSD.

This makes the Ovation SD 6.2 extraordinarily versatile, although it does have a few neo-Darwinian limits. It does not have a phono preamp but you can always add an outboard phonostage. The Ovation can be connected to your network via Ethernet or Wi-Fi, playing files from a NAS, USB stick, or other sources on the network. The supplied music-management software, however, is limited; it won't display album art and isn't ideal for managing a large music library. The Ovation SD 6.2 does not offer MQA decoding, although the manufacturer hasn't commented on whether this will be a future option.

I have no better idea of where this puts the AVM Ovation SD 6.2 in the sonic evolutionary chain than you do. Audio evolution never stops, and we are years away from the perfect "everything-included" digital playback unit. Still, the Ovation SD 6.2 appears to be flexible and advanced enough to justify a serious investment. Today's buyer should demand a broad, well-chosen range of contemporary features and capabilities, and the Ovation SD 6.2 provides them. Moreover, it is designed to make upgrading its firmware easy, and it has modular circuit boards that are simple to swap and upgrade. No product available today or in the foreseeable future can guarantee cutting-edge features in this age of constantly evolving digital options, but the Ovation's combination of upgradable software and modular hardware goes a long way toward realizing that ideal.

Most importantly, the AVM Ovation SD 6.2 is one of the best-sounding digital units I've heard. Assuming that what you really care about is the music, the Ovation SD 6.2 is an exceptional state-of-the-art product right now, in the area where it really counts.

Technology

Before I focus on the sound, however, I should address the AVM's technology and some of its other features. As you might expect in an $8995 unit of German origin, it is beautifully manufactured. If you look inside, it has one of the cleanest modular layouts

Specs & Pricing

Analog inputs: One balanced, one unbalanced
Digital inputs: SPDIF optical (x2), SPDIF coax (x2), USB, AES/EBU
Outputs: One balanced, one unbalanced, one line-out
Streaming formats: MP3, WMA, AAC, OGG Vorbis, FLAC (192/32 via LAN), WAV (192/32 via LAN), AIFF (192/32 via LAN), ALAC (96/24 via LAN)
Supported media server: UPnP 1.1, UPnP-AV, and DLNA-compatible server, Microsoft Windows Media Connect Server (WMDRM 10), DLNA-compatible server (NAS)
Web radio: vTuner Internet Radio Service
Digital signal processing: Up to 192kHz/24-bit (USB, 32-bit/384kHz)
Upsampling frequency: Native, 44,1, 48, 88, 96, 176, 192kHz
Dimensions: 430mm x 130mm x 370mm (17" x 5.1" x 13")
Weight: 12kg (26 lbs.), plus standard flight case of 6kg (13 lbs.)
Price: $8995

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I've seen, and as I noted earlier these modules are designed to allow easy future swaps and upgrades.

I have found layout and construction to be key indicators of audio quality, and the Ovation SD 6.2 has a housing made of 6mm-thick aluminum with a front plate that is 15mm thick. Another slab of aluminum divides the housing in the middle, separating all the power supplies in the front from the audio circuits in the back. Moving the audio circuits to the back shortens the signal paths, and the layout guides the airflow through the case to cool relevant parts while maintaining a temperature that ensures the circuit will perform at its best.

The layout of digital and analog audio circuits puts the streaming engine on the far left; the digital audio circuits, USB receivers, and DAC in the middle (with all the inputs); and the analog output stage on the right. All the active circuits are built upon multilayer boards with gold-plated conductors. The circuit boards are also coated in black instead of the standard green for more efficient and even heat dissipation. (The boards serve as their own heat sinks.) This helps stabilize temperatures in the densely populated circuits, while warmer parts like the power supplies are kept away from the digital audio components, which need lower temperatures for best performance.

AVM uses as many surface-mount-devices (SMD) as possible to further shorten signal paths and decrease the effects of stray magnetic fields. SMD requires expensive automated robotic assemblies to stuff the circuit boards, but it ensures that all units are made exactly alike, eliminating the human factor and increasing accurate repeatability.

Like most high-end manufacturers, AVM pays a great deal of attention to power supplies, and the Ovation features three separate switching supplies with extensive voltage regulation. As noted earlier, changes in digital standards (i.e. USB) may require hardware upgrades in the future. This is one reason for a modular design that makes swapping existing circuit boards easy. The USB receiver is located on a module that can easily be exchanged. The same applies to the DAC.

The DAC section is built around two ESS 9018 K2M Sabre32 DACs per channel for truly balanced conversion to analog. As noted, the DAC accepts PCM up to 32 bits and 382kHz, as well as DSD128. DSD is converted to analog by the DAC natively without an intermediate conversion to PCM. The Ovation offers user-selectable upsampling rates, up to 384/32. Down-conversion is also possible, although I don't envision a scenario in which this feature would be used.

The analog stage receives a balanced signal from the DAC, and the signal remains fully balanced throughout the audio circuits. The solid-state audio output stages are designed in a dual-mono configuration on completely separated and stacked PCBs. This design provides a channel separation of around 140dB. The circuit is DC-coupled, with a servo preventing DC from appearing at the output jacks.

The analog output stages use select, audio-grade op-amps. The volume control is located directly before the XLR and RCA analog output jacks to minimize signal path lengths.

The Ovation SD 6.2 also has a tone control, located directly before the output, which can be bypassed. A light touch on the bass control (100Hz corner frequency) can help in a given room and system. The same is true of the treble control, which affects the more audible portion of the upper octaves up to around 10kHz, but leaves response flat above this frequency.

Finally, the Ovation's Class A headphone amp provides exceptional sound quality. The Ovation SD 6.2 offers a well-designed remote control, but is a $699 option. Making the remote control optional makes sense because most owners will use a smartphone to set up and operate the Ovation SD 6.2 as well as to manage music playback on a daily basis.

Key Features

The Ovation SD 6.2 does not have a lot of flashy displays, but it is extremely flexible and easy to use. Its key features include the ability to handle virtually any type of digital input; accept analog inputs; stream Tidal via AVM's app; apply tone correction via the bass and treble controls; separately adjust and set input levels so each input has the same volume; adjust channel balance (this setting is not available using the remote control, a tablet, or an iPad); set several different levels of loudness control to compensate for the perceived reduction in bass and treble at lower listening levels; customize the remote-control operation; name the inputs; and set the analog inputs (one balanced and one unbalanced) to theater pass-through.

The full range of features are described in the operating instructions and AVM Network Guide available at avm-audio.com. As is the case with any new, complex digital product, both are essential reads.

Sound Quality

What really make the Ovation SD 6.2 exceptional are the nuances of its sound and its exceptional musicality. I've spent more than two months listening to the unit, as much for sheer pleasure as for review purposes. It will not turn a recording from the sonic equivalent of a sow's ear into a silk purse, but it will get the best out of a very wide range of digital recordings.

To go back to digital Darwinism—and today's evolutionary competition between bit and sampling rates—the AVM Ovation SD 6.2 has a key strength that I've found in all of the very best DACs and digital front ends. It both exposes the differences between various bit and frequency rates and minimizes their musical importance. This may seem contradictory until you actually start listening.

I have a number of recordings from my friends that make direct comparisons of MP3 to 16/44.1, 16/48, 22/88, 24/96, and 24/192. I also have a range of similar professional recordings from sources like Linn that include 24/352.8 PCM and DSD64 and 128.

I find these sources to be more useful in making comparisons than much of the material you can buy on the web. Far too often, recordings that claim to be "hi-res" give you no real data on the actual performance and source of the recording (e.g., whether it was actually made in a high-resolution format, and how it was produced and altered before it was made commercially available). In all too many cases, with what claim to be "hi-res" commercial downloads I find that I am listening to a transfer from an older analog recording, where changing the bit and sample rate makes no meaningful difference, or to a digital download that sounds different from my original CD in ways the make me wonder if the "hi-res" version really uses the same master or has been tweaked. It is a little like buying a very expensive wine without having any reliable provenance, and having nothing more to show its origin that a label picturing a non-existent chateau.

When the only difference in recordings is the bit and sampling rate used by two different machines to record the same music at the same moment, however, I find the sonic differences are subtle and often musically insignificant compared to the choices made in microphone, mike placement, mix, and venue.

Digital Darwinism is only one part of the fight for survival in the audio jungle, and often a less important one. Much also depends on the digital front end. Once you go above 16 bits and 44.1kHz, sonic differences are often very minor or inaudible with really cheap CD players and poor computer interfaces. At the same time, such differences tend to be most audible with digital playback equipment that is good, but not great. For reasons I can only guess at, good-but-not-great players have more trouble with CD bit and frequency rates than great players, and directly comparable 24/88 or 24/96 recordings sound better than CD rates on such players with more consistency.

This is far less true, however, if one goes on to 192kHz or 352.8kHz, or shifts to DSD64 and 128. I have yet to hear a convincing demonstration that hi-res recordings above 24-bit/96kHz—or from PCM to DSD64 and 128—really improve musical realism in even the best players. Even when I feel I can hear a difference, it requires a level of attention to upper-octave detail that can detract from the musical listening experience, and the level of difference—real or imagined—has no impact on the other, far larger aspects of musical sound quality.

What I do notice, however, is that the very best digital units like the Ovation SD 6.2 differ from their competition in minimizing the differences between CD sound and 24/96, and improving MP3 as well. The differences in dynamics in the upper bass/lower midrange, and the presence of any upper midrange hardness and excessive energy, diminish significantly.

I first noticed this with the Meitner XDS1, then with the PS Audio Directstream DAC as it was upgraded, and I now hear it with the Ovation SD 6.2. I should stress, however, that this superiority is a matter of nuance. It will not alter your sex life, make you cry, raise you to a level of transcendental ecstasy, or alter your bodily functions. At the same time, the ability to get the very best out of CD is critical to anyone with a large existing library of CD recordings.

I have not heard MQA under controlled enough conditions to judge it, but I do feel that much of the current focus on bit and sampling rates focuses on the wrong evolutionary path in high-end Darwinism. It puts upper-octave detail before preserving the natural warmth of music, and this is a matter largely of the miking and production values rather than the bit and sampling rates.

Jonathan Valin addresses these sonic issues in a very different way in his comparison of the Wilson and Magico speakers in his review of the Magico M Pro in Issue 255, but I believe he focuses on a key aspect of sound quality that is just as important in the differences between the Ovation SD 6.2 and far too many competing units. Every component in the audio chain is voiced to some degree by its design team. The voicing in digital front ends is far subtler than in speakers, but overall sound quality is still the critical standard and getting the balance of upper midbass and lower midrange is essential.

Equally importantly, the Ovation SD 6.2 gets depth, width, and imaging right, to the extent that source material makes this possible. Low-level dynamics are as good, detailed, and lifelike as I have heard from any player, and the sound of the upper octaves is open, provides life and air, and delivers consistent pleasure.

Unlike with some products, I also did not find myself gradually tailoring my music selection to suit the player—by dynamics and timbre, analog or non-analog origins, or the age of the digital technology used to make the recording. The Ovation SD 6.2 did not change the character of any recording, but it got the best out of my collection, and I went through one hell of a lot it because of the pleasure I had listening to this unit.

Highly recommended! tas