

MERIDIAN AUDIO DSP7200SE LOUDSPEAKERS

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Meridian DSP7200SE



Meridian is not your average hi-fi company by any means. It has always been technologically advanced, a state of affairs that became apparent to the world at large when MLP or Meridan Lossless Packing was incorporated into the DVD-Audio format – a move that presumably netted the company a decent R&D budget for quite some time. Most of the loudspeakers that the company makes are active types with DSP (digital signal processing) crossovers. And 2014 marks the 25th anniversary of Meridian's first 'digital' loudspeaker, the D6000, claimed to be the first of its kind in the world. The SE or 'special edition' speaker range has been created to mark this anniversary, and the DSP7200 is the middle model in a range of three SE floorstanders.

The SE suffix indicates a number of changes to the DSP7200 that preceded it, not the least of which is a beryllium dome on the tweeter in place of an aluminium one. Beryllium is desirable because of its excellent stiffness-to-mass ratio, combined with an uncanny degree of self damping. The only drawbacks are cost and fragility. This model also has new DACs and amplifiers onboard, and even the driver baskets are new. These parts are available as an upgrade to existing DSP7200 speakers, but what isn't an option are the clamp rings incorporated to increase the rigidity of drive unit fixing. This can't be applied to earlier loudspeakers because the clamp rings requires a different shape of driver opening.

The biggest change that SE ushers in is something called the EBA (Extended Bass Alignment) firmware algorithm developed by Richard Hollinshead, the director of engineering at Meridian. EBA is essentially a means of time-aligning the output of the bass driver with the other drivers in the speaker. It introduces a 27 millisecond delay to the upper bass, midrange, and treble frequencies, which means the signal gets to the the lower bass 27ms before the other drivers. Richard did this because in loudspeakers (as opposed to acoustic instruments), bass notes arrive after higher notes because of the relative size of the drivers. It's a state of affairs that some try to ameliorate by placing treble drivers further back on the cabinet, either by angling the baffle or putting a step in it. However, to replicate Meridian's EBA physically, the tweeter would need to be several metres behind the bass units. This isn't practical, so Meridian has created DSP filters

that delay the signal sent to the upper bass, mid, and treble drivers, so the wave front that arrives at a listener's ears is time-coherent across the frequency range.

The DSP7200SE is a magnificent speaker in the flesh. It is superbly finished in high gloss piano lacquer and shows every sign of great attention to detail in its design and construction. The amplifier, for instance, has a curved heatsink that is the same shape as the rear baffle. The lowest part looks like heatsinking but is merely there to cover the connections; cables are routed via a slot underneath this cover. This speaker only accepts digital signals via coaxial S/PDIF or Meridian's proprietary Speakerlink system that travel through flat cables terminated in RJ45 plugs (as seen on Ethernet cables). Speakerlink is a discreet cable that can easily be hidden under carpets, but as this is an active design you will need very well placed power outlets to give the impression of wireless operation. The port is also behind this lower grille, but you have to make an effort to see it.



The cabinets not only look good, but have been carefully thought out. Meridian uses European birch plywood that's selected for tightly packed growth rings, which give it greater density than conventional cabinet materials. This is laminated around an aluminium core that is doped with epoxy resin to keep resonance at a minimum. The drivers are fixed in place with the aforementioned clamping rings, pieces that are in machined aluminium for maximum rigidity. Internally, the cabinet has three cross braces to further minimise movement.

The speakers have approximately one DAC per audio frequency band, so being a three and half-way design, the DSP7200SE incorporates four multi-bit, delta-sigma DACs per loudspeaker, and all are 24/192 types with 128x oversampling. I say 'approximately' because in practise the mid and bass system get a DAC each, but the treble gets two, used differentially, for maximum performance. There is one power amplifier per driver, and each driver gets 150 watts, making a total of 600 watts for each channel.

It is possible to drive the DSP7200s with a non-Meridian source, such as a streamer or CD transport with coaxial output, but in practice this doesn't tend to happen. Usually the DSP7200s are sold with either Meridian's 818 Reference Audio Core controller or the 808V5 Signature Reference CD player at the helm. Both components act like digital preamplifiers *in situ*, with both digital and analogue inputs, and Speakerlink outputs. The speakers themselves have a display that indicates operational state and volume level, and they default to standby when the controller is switched off.

The system supplied for review included the 808V5 disc spinner alongside a Control 15 streamer with built in touch screen and hard drive. This system was formerly called Sooloos and was

among the very first to offer a touch screen full of album art that you could scroll through and choose your music. If you cast your mind back to a pre-iPad world, that was pretty hot stuff. Now that the rest of the audio world has caught up with streaming, and offer apps that perform most of the same functionality on your smartphone or tablet, the Control 15 looks a bit pricey, but it's nice to have such a large display. There is also a control app dubbed Meridian Core Control to put on your iPad.

Setting up this system is a bit different to usual, but it shares the need to send the streamer's output to the controller via an Ethernet switch. You can send it directly as I discovered on my first solo attempt at set up, but this doesn't route the signal through the SLS (Sooloos) input. Speaker connection is not left/right as per usual but master and slave; here I got it right the first time pretty much by luck (instruction manuals are for wimps, after all), and noticed that the master speaker (left channel) has a slightly different display to its underling.

These speakers are also unusual for having only three feet. This is a good idea because there is no danger of one foot being unevenly weighted but not so good for stability in the event of being ram-raided by a passing nine-year-old. Meridian has countered this with two extra feet that don't touch the ground unless the cabinet leans. It also supplies spikes or flat feet to suit different floor finishes.

Set up with regard to placement seemed to require more distance to walls than usual. This was possibly due to a rear firing, ground level reflex port, but it's not a good speaker for people for whom space is a finite commodity.

The DSP7200SE has quite a dark balance; that is, the midrange and treble seem slightly recessed by most standards, so anything that thickens or reinforces the bass is undesirable. It is also desirable to point them at the sweet spot, so that you hear as much mid and high frequency energy as possible.



The balance is not dissimilar to Linn's active loudspeakers that also use DSP, as it's the sound of minimum distortion and maximum control as created by algorithms, and it takes a bit of getting used to. Of course, if you have a larger than average room with minimalist furnishing, lots of glass and an uncarpeted floor, it's probably perfect – those being the sort of room you see in lifestyle shots for a number of loudspeakers including Meridian. This balance, while somewhat at odds with what is usually considered transparent, is not unrevealing. In fact, quite the opposite is the case; you can hear a lot of detail and recording character. Using the Meridians to compare source components for instance is extremely illuminating.

There are various reasons for this, but significant among them is a very low noise floor. There are clearly some major advantages to keeping the signal in a relatively robust digital form for as long as possible, relative insensitivity to RFI (radio frequency interference) being one of the more obvious ones. The other advantage of active systems is that the bass usually has more power; the grip that an amplifier can exert on a drive unit when there is no crossover in the way is naturally pretty strong, and that is apparent here. The drawback with less sophisticated active systems is that the limitations and distortions of the amplifiers are more obvious for the same reason. That is not something you get with this Meridian; it is controlled and muscular, but you only hear this in the absence of overhang and bass extension. There is no sense of grain through the midrange and treble. With Lorde's 'Royals' from the album *Pure Heroine* [Universal], which has some very meaty low end on it that causes many larger speakers to struggle, the DSP7200SE showed that excesses experienced with other models were not caused by the room – the usual excuse – but the inability of the amplifier/loudspeaker combination to keep a grip on low frequency energy. Through the Meridian, even low synth notes have leading edges and clearly defined beginnings and ends.

This track and others also revealed that this Meridian is well suited to higher replay levels; the sound is extremely clean which means no harshness when you turn up the wick. The control also means that bass timing is precise. The overall sound is not obviously pacy because of the balance but with acoustic material you get a clear sense of tempo which makes for engaging results. You also hear recording quality very easily and the better that is the more enjoyable the results. I connected a few alternative sources to the 808 to see how that would alter the result and discovered that on the whole those sources produced a brighter, more open result than the Control 15. This could be because I was using analogue connections rather than Ethernet or it might just be a reflection of the Meridian source.

Vinyl from a Rega RP8 with Apheta cartridge and Trilogy 907 phono stage delivered real presence with Patricia Barber's *Modern Cool* [Premonition Records], serving up vigour and three dimensionality in spades. Barber's voice sounds exceptional as does the bowed double bass and percussion on 'Constantinople'. The tempo of the source is very clear from the off, seemingly offsetting the speaker's characteristic restraint in this area. The track also sounded rather good at volume, delivering massive scale in the context of clean, extended bass and a sense of control that encourages higher levels still. The new Doug Sax remaster of *Modern Cool* is a lot better than I thought.



I also tried an alternative digital source in the form of the Resolution Audio Cantata streamer with a Naim UnitiServe supplying the data. The Cantata has a warm balance that's closer to the Control 15, but the system exposed just how much reverb is added to Gregory Porter's voice on 'No Love Dying' [*Liquid Spirit*, Blue Note], that and the amount of soul power he manages to convey. Philip Glass' soundtrack for *Koyaanisqatsi* [Nonesuch] has some wonderful low organ on it that underpins deep male voices, and here you feel the full extension and massive power of the production, with none of the flap that most systems get into. It's very difficult to achieve this degree of control with a passive system, and so it's mighty entertaining when it comes along. You could quite easily turn into a level obsessed bass-head with these Meridians at your command. Brendel's piano playing [The Complete Beethoven Sonatas, Philips] is if anything more spectacular; his virtuosity combined with Beethoven's genius is brought home loud and clear. It's work like this that really shines on this system.

The Meridian DSP7200SE may not sound like a conventionally transparent system in terms of balance, but that could well be because it achieves a level of neutrality denied to the majority. When it comes to reproducing acoustic sounds at realistic levels this system is very convincing indeed. The price may be high and the approach pretty well unique but the results speak for themselves. It's not hard to hear why Meridian continues to command respect in and beyond the cocoon of the high end.

Technical Specifications

Type: 3.5-way, four-driver, floorstanding speaker active DSP controlled amplification.

Driver complement: One 25mm beryllium dome, short horn tweeter; one 160mm polypropylene midrange driver; two 200mm long throw bass drivers.

Inputs: one phono digital S/PDIF, one balanced digital AES/EBU on RJ45.

Amplifiers: four x 150 Watt RMS.

Crossover frequencies: 500Hz, 4kHz

Frequency response: 30Hz – 32kHz +/- 3dB

Dimensions (HxWxD): 1072 (no feet) x 350/180mm x 415/217mm.

Weight: 55kg/each

Price: £23,995/pair

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