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THE BEST FOR LESS: LEEMA STRIKES SONIC GOLD



THE ULTIMATE GROUP TEST



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ARCAM MS250 Audiophile CD player/server



NAD C355BEE Sensational sound



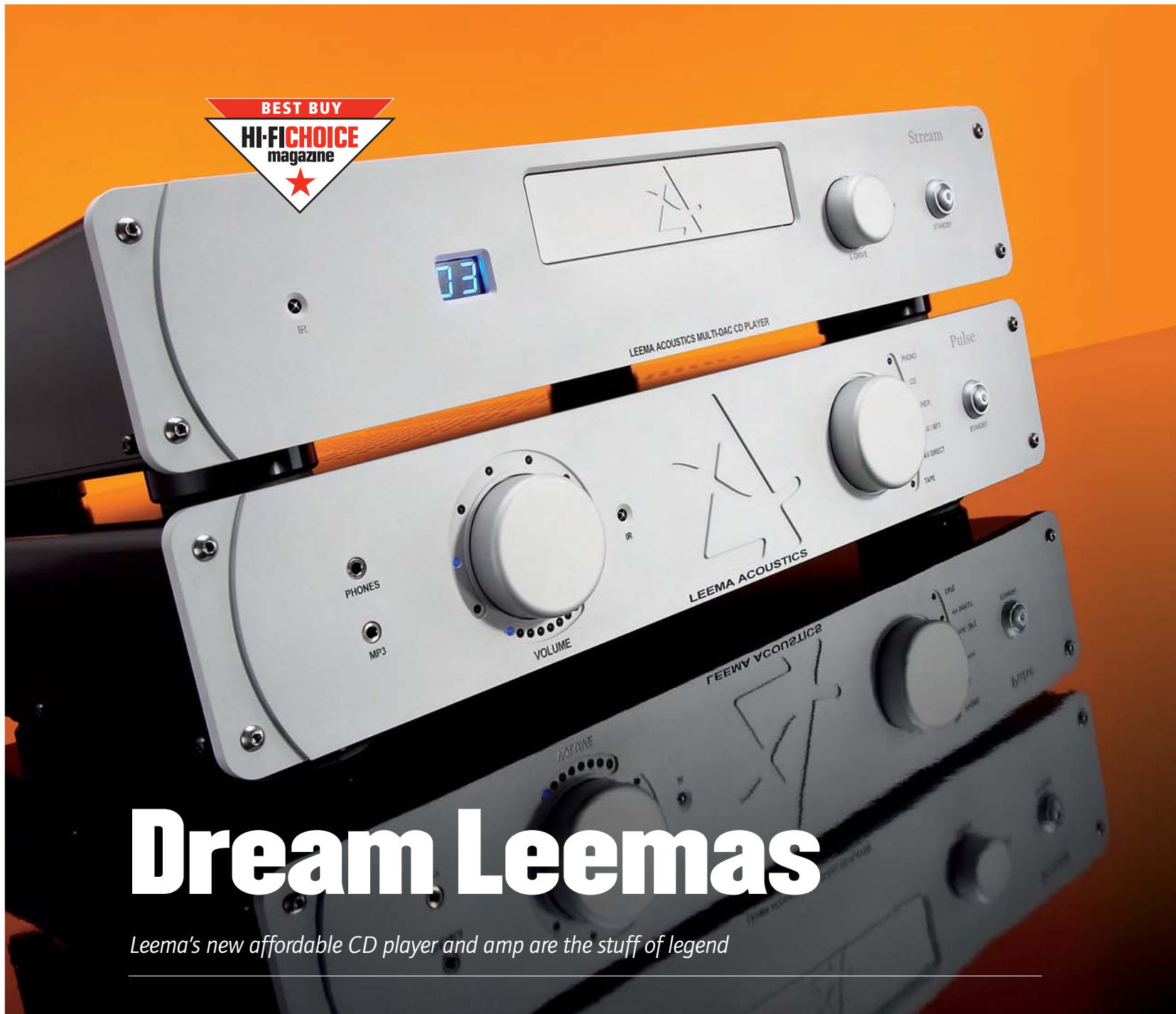
SPENDOR S5/3R The classic returns!

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Dream Leemas

Leema's new affordable CD player and amp are the stuff of legend

PRODUCT Leema Stream/Leema Pulse
TYPE CD player and integrated amplifier
PRICE (Stream) £1,095; (Pulse) £1,195
KEY FEATURES **Stream** Size (WxHxD): 43.5x9x33cm
 • Weight: 10kg • Digital outputs: RCA phono
 • Analogue outputs: RCA phono, LIPS system integration
 • 8x 24-bit/192kHz stereo DACs
(Stream) Size (WxHxD): 43.5x9x37.5cm
 • Weight: 12kg • Rated power: 80 watts
 • Inputs: five RCA phono, minijack • Phono inputs: MM, MC • Outputs: tape, pre-out, LIPS system integration
CONTACT ☎ 01938 811900 🌐 www.leema-acoustics.com

Last year we got rather excited about the multi-DAC Leema Antila (HFC 291), a CD player – from a loudspeaker specialist – with an odd name that really delivered the 'sonic' goods. So when we saw the new Stream CD player at less than half the price, being demonstrated at the Heathrow show last September, we made the request for first dibs. Although it's felt like a long wait,

a four-and-a-half-month gap between pre-production and finished unit is quite normal when you pay as much attention to detail as the guys at Leema seem to do.

To accompany the Stream, Leema has built a more affordable version of its Tucana integrated amplifier. Called 'Pulse', it produces 80 watts, rather than the 150 offered by the Tucana, but the build comparison is to the same standard (albeit, without the fancy logo perforations on the top or the heat sinking down the flanks). There are also blue lights that indicate coarse and fine volume; those under the knob representing small increments and those around it, large ones.

Features are also pretty comprehensive with a phono stage that accepts moving coil and MM cartridges separately, a tape loop and preamp out. Next to these are more contemporary facilities, like a minijack for your MP3 player and another for headphones.

Those who need to integrate both stereo and home cinema set ups, will be pleased to see the AV direct sockets that allow the power amp section of the Pulse to be driven with an external multichannel processor. This means that the stereo speakers can be integrated into a surround system without compromising two channel performance.

The Stream is an unusually clean-looking CD player, thanks to the compact size of the display and the fact that there is only one knob and one power button. Leema calls this knob L-Drive, with the distinct possibility that 'L' stands for learner, because that's what you are until you can work out how to use it! We thought that the Cairn players were a little challenging to operate, but the Stream takes things further. Opening the drawer requires a three second push, while getting it to play only requires one. The tendency for the novice, however, is to press it again, once the



“Stream and Pulse are equipped with LIPS (Leema intelligent protocol system), which allows components to talk to one another.”

drawer closes and this instigates 'pause'. The two-digit display doesn't help either, because it has to resort to abbreviations to tell you what it's doing – it's no BMW!

Inside the box, Stream follows the theme established by the Antila, with multiple DACs. This time there are eight, rather than ten pairs, but this is still more than the majority of players. These are top notch 24-bit/192kHz delta-sigma devices, whose output is fully balanced thanks to the differential arrangement that having two or more pairs per channel allows.

The actual output on the player is only single ended – one way in which Leema could reduce costs without too much compromise. It also makes sense in the context of like-priced amplifiers, which rarely have balanced inputs.

The other differences to the Antila include conventional casework. The front is billet aluminium, but the rest is steel rather than stainless aluminium. The L-Drive is also a cost saver because it removes the need for numerous buttons and LEDs. What Leema has

seemingly succeeded in doing is retaining the key elements of the Antila, while reducing the cost of the surrounding architecture.

Both Stream and Pulse are equipped with LIPS (Leema Intelligent Protocol System), which allows components to talk to one another and significantly increases ease of use. The CD players are able to act as a master through LIPS, which means that the amp can be out of site and you can command it completely through the player, the display showing input selection and volume level. Another neat feature is the way the amp always drops the volume to a low preset level with an input change, so that there's no danger of damaging loudspeakers when switching between sources.

SOUND QUALITY

In order to get an idea of their individual characteristics, we tried these two components on their own prior to combining them. First up was the Stream, which we played through a Classé pre/power combo and Bowers & Wilkins 802D loudspeakers. Far from suffering

from the exposure that this set up undoubtedly offers, the Stream seems to revel in the resolution, delivering one of the most toe-tapping results we've encountered in a CD player for quite a while. It gets straight into the groove in such a convincing manner that you wonder if it's cheating by leaving something out. Although, to be honest, we couldn't find anything missing on well-played discs like the legendary Eva Taylor on the *Opus 3* label.

The Keith Jarrett Trio's *Live at Montreux* is also highly revealing in this respect, but the Stream has no trouble getting to grips with the less than obvious rhythm of *Green Dolphin Street*, a tune that can often seem to meander with other players, but which really picks up its feet with the Stream treatment. A comparison with the less expensive, but reigning sub-thousand pound champ (Cambridge's Azur 840C) reveals nothing amiss in terms of detail. The Cambridge is laid back by comparison, the soundstage literally moving backwards when it takes over, which makes the Leema relatively forward, but not so that it's in your face. The Cairn Tornado, for instance, is a more forward and edge-of-the-seat player, which puts the Stream in the middle-ground.

Perhaps the most striking comparison, came with Barb Jung's *Trouble in Mind*, which has a full-bodied double bass providing the beat, ▶

Q&A

We talked to Mallory Nicholls co-founder of Leema Acoustics about these two components.



HFC How do you see your approach to amplifier design?

MS Fundamentally all the tech specs are important to us, but we're really about loudspeaker drive and current. Tucana is a high-output, high-current device and what we've tried to do with the Pulse is to draw on those parts. The complete voltage and driver stages are identical, albeit it's not a dual mono design so it's got a single transformer, but it's a very high-spec transformer so we've got good output current with similar distortion figures, but with reduced output power. The preamp section is very similar to Tucana. It has passive switching using gold palladium relays and we use a Burr Brown digital attenuator, which we use on all of our amplifiers because it does not degrade over time, unlike a motorised pot which will gradually get noisy.

It's unusual to have an MM/MC phono stage on an amp at this price as it presumably increases costs, why include it?

We thought it was an important feature to do, we wanted it to be a unique product at this price point and we wanted to give as good a bunch of features as we could, including the headphone out and the MP3 input. Having the separate inputs [MM, MC] means that you can run two arms and cartridges.

What about repeat and programme as options?

We don't currently have repeat in the software, but we will do by the end of this week, like the Antila it's a two-button function. There will also be 'drawer open' on the final Stream remote.

How do you get the player to time so well?

The thing that we concentrated on was timing in the filters that we use. We maintain very low jitter in both players, we then use DACs [Crystal 454X] that are very good from the timing perspective and we maintain that by not hurting it in the filters. The filters are optimised for timing performance in the square wave domain and we've found that the whole combination gives us good musicality.



which the Stream delivers in timely fashion, making the 840C seem leaden and ploddy. It's not just a tempo thing either, dynamics are also well catered for, which means that if there is life on the disc it will be sent to the amplifier in no uncertain terms. Even with relatively restrained discs like José Gonzalez's *Vener*, where there's rarely more than a voice and a guitar, the Stream finds the energy and vitality that was laid down in the studio.

Stream's timing talents with the Pulse amplifier are not quite as revealing as nine grand's worth of pre/power, but we think that this can be forgiven under the circumstances. What is most impressive about it, is that it doesn't make us keep thinking 'I wonder what this album would sound like through the bigger amps?' Imaging could, perhaps, be more precise and voices, though centrally placed, are not always as clear as they might be. But, the inflections and subtleties on display can still be appreciated.

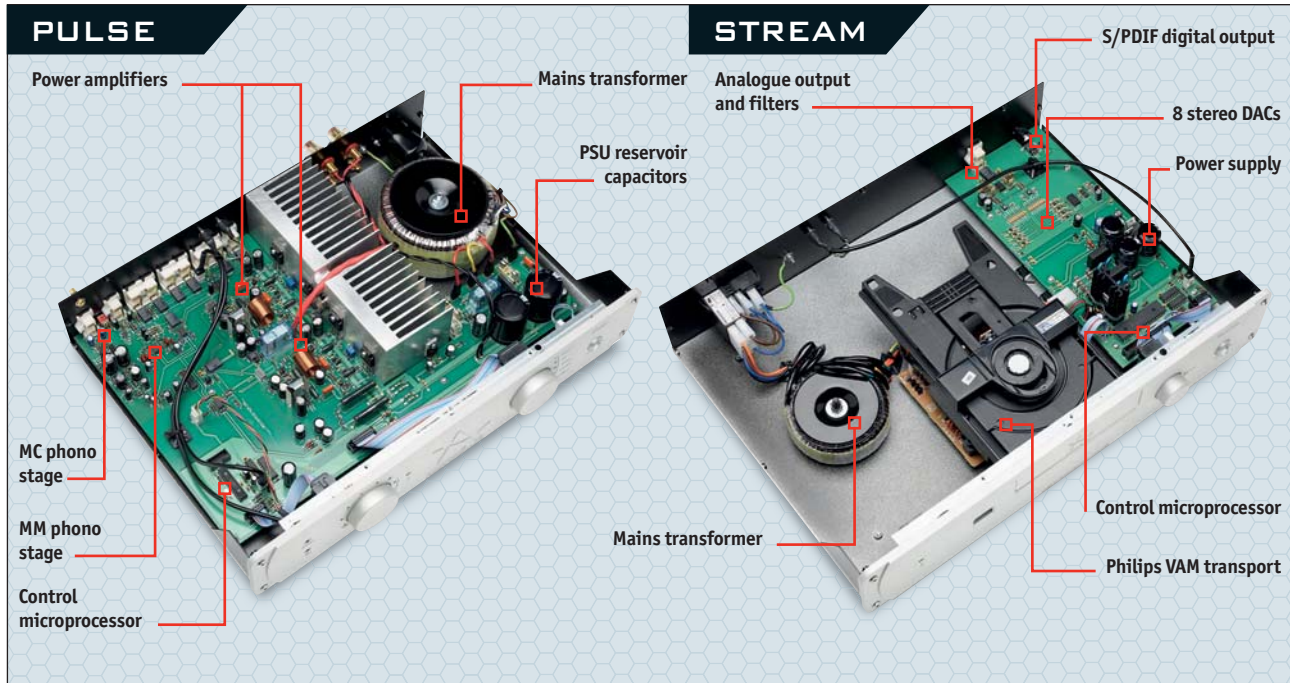
With Keith Jarrett for instance, it reveals the tape hiss and an awful lot of the incidental foot-tapping, alongside a very real and solid sounding piano. It can deliver something very close to palpable realism with the aid of the Bowers & Wilkins' 802D loudspeakers, which is very impressive given the asking price. We've heard plenty of more expensive amps struggle with the load offered by this speaker, let alone deliver top musical results through them.

And, while it may not be quite so transparent to timing, it lets enough through for you to know that the source is delivering the rhythmical goods. Tunes do indeed chug when the material calls for it – the Blues number; *When The Levee Breaks*, for instance. The degree of tangibility it brings to well-recorded pieces does a lot to help suspend the disbelief that is the raison d'être of a sound system.

As with the Stream, we used a Cambridge Azur component as a reference for the Pulse, this time the 840A amplifier. A design that has



Leema Stream CD player and Pulse integrated amp [Review]



“...the Pulse produces a wideband, dynamic result that is more than a match for the charms of any digital source.”

significantly more features, but costs £400 less. You'd expect the Pulse to cream it and you'd be right, but the 840A has upset previous pretenders, so this is not an easy task. Essentially the Leema amplifier delivers more detail and you can hear the resonance of the double bass strings and the timbre or tonal depth of voices rather more clearly, too. The difference is great enough to warrant an upgrade from Cambridge to Leema which, given that you usually have to

spend a bit more to make it worthwhile, is a good sign.

The Leema has one feature not to be found on the Cambridge, a phono stage. When connected to the output of a van den Hul Frog MC, sited in an SME IV arm on a DPS2 turntable, the Pulse produces a wideband, dynamic result that is more than a match for the charms of any digital source. The bass is particularly tuneful, with good depth to boot, continuing the tactile theme encountered

with the Stream and doing so in a highly engaging fashion.

Leema has managed to deliver a confident and inspiring sound from its latest and most affordable components. The Stream times like few other CD players can, while the Pulse has power and transparency that should have the likes of Arcam and Cyrus more than a little concerned. **HFC**

Jason Kennedy



VERDICT - LEEMA STREAM

SOUND ★★★★★	CONCLUSION Despite setting the bar rather high with Antila, we're bowled over by the result delivered by the Stream. It must rank as the most timely disc player at its price point.
FEATURES ★★★★☆	
BUILD ★★★★☆	HI-FI CHOICE OVERALL SCORE ★★★★★
VALUE ★★★★★	

VERDICT - LEEMA PULSE

SOUND ★★★★★	CONCLUSION The Pulse is also a stunner with an organic and revealing sound alongside good power reserves and great features. Could have been cheaper without the phono stage.
FEATURES ★★★★☆	
BUILD ★★★★☆	HI-FI CHOICE OVERALL SCORE ★★★★★
VALUE ★★★★★	