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D'Agostino Relentless 800

The hi-fi world's most powerful amplifier – the aptly named Relentless – has spawned two new offspring, but the 'baby brother' of the duo still weighs in at 145kg apiece
 Review: **Ken Kessler Lab: Paul Miller**

Lame analogies – both banal and obvious – spring to mind when one is directed to review an amplifier which is a little over half the power of its predecessor. One thinks of cars offered with engines of half the horsepower of a dearer sibling, of second growth wines, and other half-pint offerings. But the D'Agostino Relentless 800 Mono Amplifier – a heady £236,000 per pair – delivers the wattage that provides its model name: 800W per chassis. And that is conservative [see PM's Lab Report, p47].

The original Relentless monoblock [HFN Mar '20] – CEO Dan D'Agostino's 'dream of an amplifier without limits' – is now superseded by two siblings, the massive Relentless Epic 1600 and 'baby sister' Relentless 800 (with no Epic in its name), seen here. Let's get the physically daunting stuff out of the way first...

Each Epic 1600 monoblock weighs 258kg, the 800 a marginally more manageable 145kg. Lucky owners will welcome a team of beefy shleppers when receiving either. *Once in situ*, you will not be moving them around. Halving the power may have halved the weight, but you still need two spaces on the listening room floor to accommodate each of the 800's 549x264x660mm (whd), which is a limited saving over the 1600's deeper, wider and taller 572x280x826mm (whd).

NEEDLE MATCH

Available in silver, black or custom finishes, with a distinctive copper trim, the Relentless 800 dominates the view in front of the listener almost as much as would any loudspeaker. This is not a discreet little block of chocolate like a Meridian amplifier of yore, nor a Quad 303 the size of a loaf of sourdough. The Breguet watch dial-inspired

RIGHT: A pair of stacked 1320VA toroidal transformers [left] and bank of four 100,000µF/100V reservoir electrolytics [centre, under black plate] dominate the interior. This PSU feeds the bridged/balanced output stage – 21 pairs of complementary On Semi power transistors per side of the bridge [on copper heatsinks]

meter, a D'Agostino signature, glows a comforting green but its 'time-keeping' is less accurate... As its moon-tipped needle swings past the midday position the amp is delivering a little under 20W/8ohm, not the indicated 800W, as confirmed by PM [p47]. It will deliver this sort of power but, by then, the needle will be hard right and your speakers firmly in the red zone. Truth is, such is the power of the Relentless 800, if the metering were accurate then you'd barely see the needle twitch!

Once installed, these are as set-and-forget as any good amplifier should be. The sides of each chassis are channelled for convection-style cooling, while the top is suitably vented to keep the heat at bay – so no egg-frying safety issues emerged in our testing.

Around the back, the unit reaffirms Dan D'Agostino's insistence on robust connectivity suitable for a powerhouse.

Inputs are on balanced XLR only, while the solid copper speaker terminals are designed for spade lugs, not 4mm bananas. A toggle at the rear turns on the power, while a soft-touch button under the fascia – another D'Agostino hallmark – switches the units on from standby. As this might

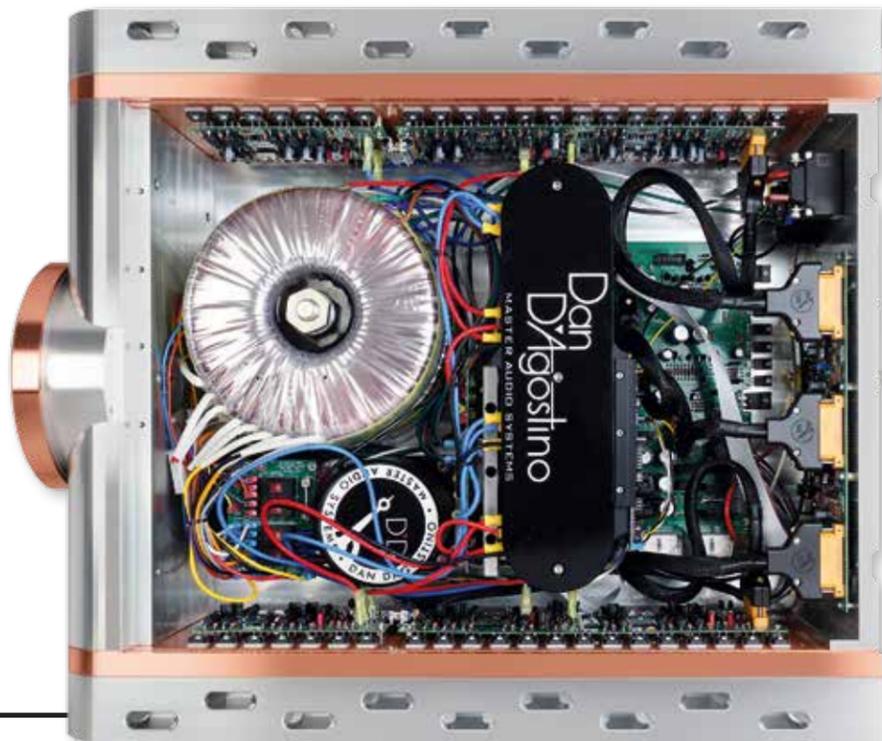
inconvenience some, eg, those as slothful as I, the back panel also has 12V trigger sockets for system-sync'd switch on. Lastly there's an industrial-strength 30A locking connector for the AC mains, another touch which tells you that

Relentless models are built like military materiel. Wusses need not apply.

TRICKLED PINK

As explained in our interview with Dan [see sidebar, p45], devising a half-power (or thereabouts) version of the 1500W original was not simply a case of reducing

*'Once in situ,
you will not
be moving
them around'*



'If the needle is hard right, your speakers will be in the red zone'



DAN D'AGOSTINO

When asked what was lost from the Relentless Epic 1600 to develop the half-power model reviewed here, CEO Dan D'Agostino told us, 'Rather than sacrificing elements from the original Relentless, the development of the Relentless 800 served as a catalyst for innovation, ultimately leading to the creation of the Relentless Epic 1600. Every major section of the Relentless design – PSU, input, driver, and output stages – is enhanced in the new 800 mono amplifier'.

So what are the sonic differences between the 800 and 1600? Dan feels that, 'While both amplifiers offer similar tonal characteristics, it's during lower volume listening where we find the Relentless Epic 1600 truly shines' – an observation echoed by the amplifier's importer, Ricardo Franassovici of Absolute Sounds.

As for the Relentless Epic 1600's claim of double power, 'With nearly 100 output devices, it delivers Class A operation for the vast majority of people's listening. In our experience, this translates to a remarkably nuanced and detailed presentation beyond anything we have built before. But when the music requires it, nothing compares to the dynamic and transient capabilities of the Relentless Epic 1600'. Not that the 800 is a slouch [see Lab Report, p47].

If you've been considering a Relentless system but space is a concern, Dan confirmed something which you need to take on board if you're holding out for either a Relentless Integrated or a Relentless Stereo: 'At this point, we are not planning to offer either'. No time like the present, then.



the number of active devices or the capacity of the power supply. In practice, the company's development of its MxV amplifiers [HFN Aug '22] affected the entire range of models, with 'trickle-up' technology transitioning the original Relentless Mono amplifier into both 800 and Epic 1600 siblings.

NEW ROMANTIC

Having compared differently rated D'Agostino models in the past, eg, two Momentum amplifiers of varied ratings and mono vs. stereo variants, I know that they are voiced so closely to each other as to be instantly recognisable as 'D'Agostino', which is as it should be within any family of audio components. You wouldn't expect, say, two loudspeakers from the same brand to sound wildly dissimilar. And the same goes for power amplifiers.

The progression of the 'D'Agostino sound' over 40-plus years preoccupied my thinking while listening to the '800, through the same Wilson Alexia Vs [HFN Jan '23] that I had last heard the original

BELOW: While the copper sidecheeks are an integral part of the Venturi heatsinking, the casework is offered in both silver and black

ABOVE: Inspired by the Breguet watches of the late 18th century, the green illumination of this (decorative, not indicative) meter is adjustable

Relentless. Older readers know that Dan was one of the fiercest champions of Class A operation when founding Krell in 1980. He hates distortion, but here it's as if he's also reassessed elements of timbre presentation at the frequency extremes. What follows is what I think he's achieved.

Although I have a long history of hearing a combined D'Agostino/Wilson Audio/

Transparent audio chain, there were surprises in store, and they run parallel to the evolution of Wilson speakers under the aegis of Daryl Wilson. Knock me over with a feather, but Dan D'Agostino has discovered sweet, almost

romantic top ends. Which makes the name 'Relentless' somewhat ironic as aggression plays no part in this amplifier's behaviour.

BASS INVADER

At the same time, the bottom octaves were by some degree more lifelike than I have heard from a solid-state amp since those circa-1980s big Krells. But that's getting ahead of myself, because the ultimate arbiter of my findings came with the last 

'Bass notes travelled up my legs and settled on my chest'



MONOBLOCK POWER AMP



LEFT: Main AC power rocker is on the rear but standby on/off is via a soft-touch button under the front fascia. A single balanced XLR input is joined by massive speaker cable binding posts while the AC input is via a 30A locking connector and custom mains cable

track I played. Just as the previous two generations of Wilson speakers have traded hyper-forensic detail for more seductive upper registers, and the bass is warmer and more airy, so, too, do those observations apply to the Relentless 800.

It might be a mono track, but The Dave Clark Five's 'Glad All Over', via the remastered version on *All The Hits* [BMG BMGCAT408CD], exploits bass, maximum levels and transient attack – bass and treble transients. Like a Buddy Rich or Ginger Baker performance, it's engineered to give the drums prominence and through the D'Agostino amp became a Spectorian wall of sound. My listening took place on a ground floor with no basement nor

cavity below, yet the floor still shook. Bass notes travelled up my legs and settled on my chest, each slam so visceral that I understood how subsonic bass could be used as a lethal weapon. It was so loud I even felt my glasses vibrate, and had I not possessed a concern for the welfare of the loudspeakers – although I was assured they could take it – I might have reached my own threshold of pain.

LOUD AND CLEAR

Despite this barrage – relentless by name but not by nature – at no time was there any harshness, nor a single whiff

of clipping, constraint nor compression. Meanwhile, the non-percussive instruments, especially Denis Payton's saxophone, enjoyed uncanny positioning. Remember: this was a mono recording yet there was so much depth and such plentiful air around each player that (as with the best systems) the single-channel, dead-centre positioning

– instead of room-filling stereo – hardly seemed a sacrifice. It was, in a word, *huge*.

PLENTY OF JUICE

I was happy to headbang, but wanted to hear what this sledgehammer of an amplifier would do with something requiring delicacy and finesse. Juice Newton's *Greatest Hits (And More)* [Capitol CDP7464892] can sound strident on some systems, as the bulk was recorded during the 1980s when digital was still inherently edgy and studio techniques favoured treble tweaking. But better DACs and players over the years proved otherwise, so her crystal-clear vocals remain a yardstick to challenge even Linda Ronstadt.

Here the Relentless 800 gave a first glimpse of the revolution in the D'Agostino sound. Without yielding any of the transparency or detail retrieval, the sound on 'Break It To Me Gently' exhibited – as its title demands – a gentility that would be too easy to liken to the artificial euphony of fat tubes. The only reason I wasn't shocked by this is because I have been listening regularly to the MxV-updated Momentum 250 Stereo, so I was aware that in contrast to the meaning of the Relentless name, the power amplifier was actually forgiving of the Newton recording's less savoury traits.

In the same collection is a track I have long used for its unbelievable attack, and it's one that begs the unleashing of the system. Her version of 'Queen Of Hearts' has snappy redneck bass, stereo guitars crossing left and right, clapping, and all



ABOVE: Although the standing current of D'Agostino's latest amplifiers has been increased, the temperature of this 145kg alloy/copper case rarely exceeds 40°C

manner of activity. Above all of this are twin-vocalist harmonies in the best country pop manner. What could sound tonally like nothing more than glorified AM radio acquired what I can only describe as 'humanity'. I've played this song many, many times, but never have I heard it with such scale, cohesion or – crucially – freedom from any digital artefacts.

Another of my all-time favourite vocalists is Mickey Thomas, ex-Jefferson Starship and Elvin Bishop Band, so I played his take on Squeeze's 'Tempted' [*Marauder*; Gigatone GCD303]. When it comes to clarity and absence of textures (as opposed to those where the textures are the voice), Thomas has a wide range like Juice Newton, so it was valuable hearing the openness of the midband to discern the nuances. At a level that would have an exhibitor thrown out of a hi-fi show, each subtle voicing was conveyed with the kind of in-the-room veracity that makes the hairs stand up on your arms and neck.

THE WIZARDRY OF OZ

For the obverse of these two clear-voiced warblers, I looked to Ozzy Osbourne, his masterful *Under Cover* [Epic 82876743142]

showing exquisite taste in his versions of rock classics. Listening to 'Mississippi Queen', with its originator Leslie West providing a ferocious lead guitar break, Ozzy's rasp demonstrated vividly that the '800 was not even remotely saccharine, despite my ears telling

'It acquired what I can only describe as "humanity"'

me that it sounded as sweet as any massive solid-state amp I have ever heard – including the 'original' Relentless.

But there was more. Out came a vinyl copy of *Led Zeppelin II* [Atlantic SD 8236] with the famed Bob Ludwig cut. Within ten seconds of 'Whole Lotta Love', cranked up to 11, I experienced a rare audiophile epiphany. The mass, the slam, the scale, the presence: it was as close to real as it gets. ☺

HI-FI NEWS VERDICT

'Speechless' is not a term often applied to me, but after hearing Bonham's drumming at realistic levels, some 3m from the speakers, I was searching for superlatives. For sheer force and authority, the sibling Relentless 800 bears such similarity with the original Relentless monoblocks that I'm at a loss to justify needing more juice. Suffice it to say, Dan has done it again. This amplifier is a titan.

Sound Quality: 94%

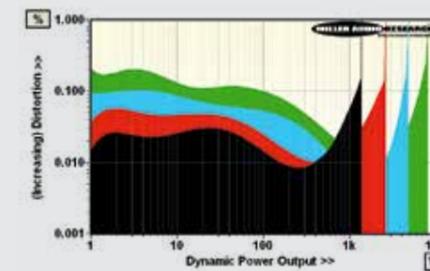


LAB REPORT

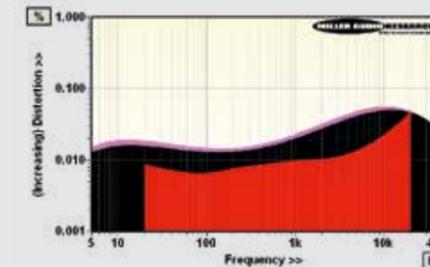
D'AGOSTINO RELENTLESS 800

In practice, the '800 has much in common with its Relentless parent [*HFN* Mar '20] including a total +26.3dB gain, a very wide 91dB A-wtd S/N ratio (re. 0dBW), a response that's not quite 'DC coupled' (-1dB/1Hz) and that rolls gently away at HF to -0.7dB/20kHz and -7.0dB/100kHz. The difference in 'character', not power, is realised by an increase in distortion – mostly 3rd/5th harmonic – and output impedance [see boxout, p46]. In practice, while the 800's distortion generally increases with frequency – as expected – from 0.014% to 0.055% from 20Hz-20kHz at 10W/8ohm [see pink trace, Graph 2 below], its trend of distortion versus power is less linear. In fact the 800's minimum 0.011%/1kHz distortion occurs at 200-300W/8ohm but is equal, and higher, at 6W and 600W (0.022%/1kHz).

This unusual trend of THD vs. output – seen with previous D'Agostino amplifiers – is clearly illustrated in Graph 1, all of which brings us to the 800's prodigious power output... Like the parent Relentless, the '800 is not only monumentally powerful – delivering 1170W/8ohm and 1990W/4ohm – but also sufficiently load-tolerant that it'll surely drive (read, melt) the most 'difficult' of loudspeakers with its dynamic output of 1403W, 2658W, 4901W and 8290W into 8, 4, 2 and 1ohm loads, respectively [see Graph 1]. This is equivalent to a maximum current of 91.1A (10msec at <1% THD) – the original Relentless had 106.4A in the tank! Otherwise, D'Agostino's conservative 800W/8ohm rating allows the brand to suggest a doubling of power into each halving of load impedance. And what of the power meter? Well, 1.3W/8ohm will register as 300W on the scale and 4W as 500W. And the magic 800W marker? That's achieved at 18.5W! PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 91.1A



ABOVE: Distortion versus frequency versus power output (1W/8ohm, black; 10W, pink; 100W, red)

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	1.17kW / 1.99kW
Dynamic power (<1% THD, 8/4/2/1ohm)	1.4kW / 2.7kW / 4.9kW / 8.3kW
Output imp. (20Hz-20kHz/100kHz)	0.066-0.11ohm / 0.58ohm
Freq. resp. (20Hz-20kHz/100kHz)	+0.02dB to -0.65dB/-7.95dB
Input sensitivity (for 0dBW/800W)	140mV / 3900mV
A-wtd S/N ratio (re. 0dBW/800W)	91.2dB / 120.1dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.014-0.055%
Power consumption (Idle/Rated o/p)	240W / 1.59kW (32W standby)
Dimensions (WHD) / Weight (each)	549x264x660mm / 145kg

FEELING THE HEAT

The latest circuit revisions to have worked their way into the MxV [*HFN* Jan '24] and, now, the Relentless amplifiers not only include the use of identical/symmetrical On Semi transistors in both the (high voltage) driver and main power output stages but also a general relaxation in corrective feedback, courtesy of these stages' generally improved linearity. This has been achieved without compromising overall bandwidth – the response is broadly unchanged – but juggled alongside a slight increase in odd-order distortion from, for example, 0.0015% in the Relentless to 0.021% in the '800 at 1kHz/10W/8ohm, as well as an increase in output impedance from 0.04-0.06ohm to the 800's 0.07-0.1ohm (all 20Hz-20kHz). Reduced feedback is also reflected in its thermal tracking, so where the Relentless's distortion decreased from 0.006%/1kHz/10W (cold) to 0.0035% over an hour and then 0.0015% as the amplifier slowly warmed from 20°C to 45°C [pink trace, inset Graph], the 800's THD increases with temperature from 0.011% (cold) to 0.017% over the first 30mins [black trace] and then to 0.019% [red trace] once its thermal latency is almost entirely resolved (~40°C) after a few hours. PM

