

# Petite size, big performance

NEAT HAS AGAIN COMPLETELY REINVENTED ITS FIRST-EVER SPEAKER, THE PETITE, INSPIRED BY THE SUCCESS OF THE LIMITED EDITION 30TH ANNIVERSARY MODEL. CHRIS FRANKLAND CHECKS IT OUT

**The history of the Neat Acoustics Petite loudspeaker goes way back. In fact, it was the company's first commercially available model released in 1991. The version reviewed here is the Petite Classic at £1,995. It was introduced on the strength of popular demand from Neat's retailers and distributors after the success of the limited-edition 30th Anniversary Petite 30. Prior to that, there had been various iterations of the design: the original, the Petite II and the Petite SX.**

The 30th Anniversary model, though, was a ground-up redesign, using a new 150mm mineral-loaded polypropylene bass-mid driver and an Air Motion Transformer (AMT) tweeter. And the £1995/pr Petite Classic, Neat Acoustics founder Bob Surgeoner tells me, 'is essentially a stripped-down version of the Anniversary with a small change to the crossover to adjust the treble response'.

The cabinet is slightly smaller, in fact reverting to the original 30x20x18cm dimensions of the original Petite, and is available in textured black or satin white paint finishes.

The 15cm mid/bass driver, sourced from SB Acoustics and using a mineral-loaded polypropylene cone, is loaded with a dual-reflex port design. The smaller diameter port gives a low-Q tuning centred on 40Hz, while the larger port, partially blocked by a foam insert, has a broader band coverage centred on 80Hz. Neat says that in some larger rooms, removing the foam bung may improve overall performance.

AMT tweeters, favoured by Neat, use a pleated diaphragm with metal-etched voice coil positioned in a strong magnetic field. The membrane is much lighter than a conventional cone or dome and offers a fast transient response. The AMT tweeter in the Petite Classic, made by US company Dayton and measuring 30 x 40mm in the Petite Classic is a slightly smaller variant on the driver the company has previously used in the Iota Xplorer compact floorstanding speaker.

The crossover in the Neat Petite Classic uses low-loss air-cored inductors and high-voltage polypropylene capacitors and resistors and is hard wired rather than using a PCB. A 1st order crossover (6dB/octave) feeds the bass driver and a second order circuit (12dB/octave) the tweeter. The speakers have a nominal impedance of 6ohms and a sensitivity figure of 87dB/1 watt.

Neat recommends using the Petite Classic on a stand around 24in in height. So I pressed into play

an excellent pair of Kudos stands that I have in my arsenal of stands! As far as positioning is concerned, the company says purchasers should experiment, starting out with them around 12in/30cm from a rear wall and 24in/60cm from a side wall, with a toe-in of around 10 degrees.

I ended up with them in pretty much that precise configuration in my listening room, but the ideal position will vary, so always spend some time to move them around until you find that sweet spot. I also spent some time experimenting with the removal of the plug in the larger reflex port, but concluded that in my room – which is pretty much average-sized for the UK – Neat is absolutely bang-on when it says it's usually best left in place. Taking it out made the bass looser and less defined, and the midrange also suffered, with vocals less open. Experiment by all means, but unless you have a large room, the plug is best left in.

For my listening, I used two amplifiers: the Audio Note Meishu Tonmeister integrated valve amp (using single-ended 300Bs) and – as a kind of belt-and-braces measure – the much more powerful Hegel H390 (supplemented by a Puresound valve phono stage). Sources included an Audio Note TT3 turntable/Arm2/Io1 through an AN-S9 transformer, and for CD an Audio Note CD5.1x.

First on the TT3 was the half-speed mastered version of John Martyn's excellent *Solid Air*, a true workout for any hi-fi system. Martyn's vocals are notoriously difficult to convey well and the double bass accompaniment is weighty and tends to fall apart on a poor system, but what I heard from the Petite Classic truly took me by surprise. Now, I know Neat speakers and I have always been a fan, but the Classic was open and articulate on Martyn's vocals and guitar, conveyed the attack of the vibes nicely, and handled the acoustic bass superbly well, with great weight, movement and tunefulness. There was a musical coherence about the sound that







**HIFICRITIC**  
HIGHLY RECOMMENDED

### Specifications

#### Neat Petite Classic

Price	£1,995
Type	Two-way bass reflex, staggered tuning
Sensitivity	87dB/1 watt
Impedance	6 ohms
Dimensions	300mm x 200mm x 180mm
Amplifier power	25W to 150W
Weight	7kg
Finishes	Textured black, satin white

was instantly appealing: whereas sometimes with speakers you tune into something that you may or may not like, on initial impressions the Petite Classic seemed an extraordinarily competent all-rounder.

I stuck with vinyl for the next track, which was 'Broad Daylight' from Ben Sidran's *The Doctor is In*. I know Sidran's voice so well – both from his albums and CDs but also from seeing him live on a few occasions at Ronnie Scott's in London – that it takes only a few bars for things to jar if they're not right. However, here again vocals were open and had great presence and humanity, while piano had weight, impact and power, with drums and percussion delicate, pacy and nimble. A truly excellent performance from the Neats.

#### Power, presence, bite and detail

Switching to CD as the source, I played 'Honey Dipped' from sax ace Dave Koz's *Saxophonic*, and again I was struck not only by the sheer weight of bass from a speaker so small, but also how well controlled and tuneful it was. Koz's saxophone had power, presence, bite and detail without ever becoming glaring or harsh. The impetus and drive of this great track were also handled well and the music really moved.

In fact, I was so getting into the music that I let it run on to 'All I See is You', with Koz switching from alto to tenor. I was again amazed at how this small speaker conveyed the movement, weight and dynamics of this syncopated track, while keeping Koz's tenor sax sweet and detailed. Complex drum parts were also handled just right, without getting offensively forward or hopelessly lacklustre.

Back to vinyl for one of my favourite Bruce Springsteen tracks, 'Racing in the Streets' from his *Darkness on the Edge of Town* album. This is a beautifully open, atmospheric and dynamic recording and straight away the Neats conveyed the openness of his vocals and the body and dynamics of the piano on the intro. And then, when that stonking bass line kicks in, the Neats were not found lacking. The bass line was powerful, deep, well controlled and tuneful. Again, an extraordinary performance from such a small box, I thought.

#### Articulate vocals

Just to round things off, back to CD for the high-energy 'No One Emotion' from George Benson's *20/20*, which really flew with its driving, pumping bassline perfectly conveyed by the Neats. Benson's vocals were articulate and full of character, lacking any discernible nasty edges: lesser speakers can make his voice sibilant and less intelligible.

Now, how did I fare with the two amplifiers, given that the Audio Note pumps out around



8W into 8ohms or 4ohms, while the Hegel boasts 250W into 8ohms? I tried both: with a sensitivity of 87dB/W/m, it would be reasonable to be cautious about how well the Neats would respond to a lower-powered valve amp.

Having listened extensively to both, I can say with confidence that both amplifiers drove the speakers perfectly well. If you have a huge room or like high volumes, then perhaps something with more power would be advisable, but I found the Meishu Tonmeister were more than sufficient on everything I played. Potential owners, if valves are their thing, might also consider the Audio Note Cobra (25W) or the excellent Rogers E20a II (20W).

#### Understated solidity

The looks of the Petite Classic may be on the understated side, but they are well made and use high-quality components throughout. There's a feel of solidity when you pick them up and I for one liked their lack of obvious 'bling', but what you do get is quality where it counts – and that's more than skin-deep.

I was mightily impressed by the Neat Petite Classic and, being familiar with many of its competitors, I would feel confident in saying that they must rank as one of the strongest contenders at their price point. They are detailed, musically coherent, articulate, dynamic and punch well above their weight when it comes to quality and power of bass. Anyone in the market for speakers around £2,000 should check them out.