REINVENTING AN ICON

YAMAHA’S HIGH-TECH NS-5000 REVIEWED
The Oxford dictionary publishes the following sentence as describing the meaning of the word ‘icon’: ‘A person or thing regarded as a representative symbol or as worthy of veneration’.

In the audio industry, that same sentence would accurately describe Yamaha’s NS-1000, a classic speaker which even now, after nearing four decades since its introduction, remains highly sought after by music lovers, connoisseurs and collectors alike, commanding surprisingly high resale value.

In its day the NS-1000 represented a world-first with its use of beryllium tweeters and midrange domes (a very fast 12-inch paper driver was developed for the bass to marry with the tweeter and mid dome drivers’ sheer speed and attack). Yamaha followed the original NS-1000 and NS-1000M (classic three-way studio-style enclosures requiring short stands) with a couple of next-gen derivatives, but those didn’t achieve quite the market acceptance nor the revered status of the original design.

Fast forward to 2015 and an announcement from Yamaha set the audiophile world abuzz — a 21st century NS-1000 was to be released, with Yamaha redesigning the entire speaker but respecting the original’s legacy… paying homage to the design using the latest tech, if you like, to deliver a tribute that would become the new flagship offering from a company that has recently re-launched into the high-end space. Such a new speaker would have to certainly be a “representative symbol” of the Japanese giant’s long history, of its indelible mark in the annals of
A CLASSIC THREE-WAY CONFIGURATION FOR YAMAHA'S 'NEW CLASSIC'.
music reproduction – Yamaha’s reach extends, of course, from the artists’ instruments to the studio where the art is produced, and on to the end-of-chain equipment on which consumers enjoy the results.

**FROM PLANET ZYLON**

So, after that heady announcement in 2015, Yamaha worked diligently to bring to production and subsequently the market this new NS-5000. The new speaker bears a visual resemblance to its predecessor but now features a somewhat larger enclosure – promising a fuller, more full-range sound – while bringing forth a total driver and crossover redesign with the highest tech the company’s very talented engineers could possibly produce, in service of the music.

Like its predecessor, the NS-5000 is a three-way three-driver bass-reflex stand-mount speaker. Only a short stand is required, with Yamaha offering a dedicated perfect-fit (SPS-5000) bundled with the speakers.

Once again, Yamaha has designed and produced its own driver technology for the new speaker. Rather than using the difficult to produce beryllium for the diaphragm material, a new high-tech material has been used. Yamaha calls it Zylon – but it is from planet Earth – and it’s said to be a synthetic fibre known for its high strength, low weight and lack of resonant peaks (as inherent in most hard materials, even beryllium). Zylon is then coated with Monel, an aerospace alloy containing nickel, copper and iron and said to be exclusive to Yamaha. The material is used across all three drivers, from the 30mm dome tweeter to the 80mm midrange dome and finally on the 300mm bass driver. This promises an overall coherent tonal balance, with each driver sharing the same material construction while operating within its individual frequency band. The drivers feature large magnet systems, cast frames and metal face plates, with all voice coils wound with square copper wire. The tweeter’s Zylon construction is used across the entire driver from dome to surround, using a proprietary moulding system with the dome shape, thickness and fibre threads specifically designed to optimise sonic performance. Similarly, the midrange dome has been profiled with its own set of parameters for best performance within its specified bandwidth.

Finally the 300mm bass driver features a one-piece diaphragm (no centre dust cap with benefits in maintaining a higher level of structural integrity and better control of resonant peaks) with a deep profile which attaches to the voice coil at the centre. The woofer was specifically designed with FEM analysis to provide wide frequency response and low distortion. The drivers are protected with neat circular metal grilles that attach via embedded magnets within the cabinet. Such is the beauty of the speakers sans grilles that we promptly stuffed those right back in the box – but they are effective, there should you wish to use them in order to protect the drivers from inquisitive little fingers.

Yamaha has developed a ‘Resonance Suppression’ (RS) chamber – patent pending – which has been designed using proprietary acoustic analysis with a specific shape and profile customised for each of the tweeter and midrange drivers. The RS chamber features two tubes of different length tuned to nullify resonance peaks created by the drivers’ back wave. While allowing improved driver performance, the RS system also negates the necessity to over-stuff the enclosure with damping, something that is widely recognised as being deleterious to the reproduction of micro-detail retrieval.

Further resonance, this time across the enclosure, is mitigated via a uniquely designed ‘Acoustic Absorber’ which has been shaped to reduce targeted standing waves and, again, lessening the need for over-stuffing the internal enclosure volume.

Also designed with FEM analysis, the NS-5000’s 65 litre enclosure is extremely rigid and has been strengthened with careful bracing and reinforcing bars. Several enclosure materials were tested and Yamaha concluded that white birch laminated plywood from the island of Hokkaido (the cold climate bears a tighter grain/harder...
Yamaha’s reach extends from the artists’ instruments to the studio where the art is produced, and on to the end-of-chain equipment on which consumers enjoy the results.

Birch) provided the best launching pad for the high quality Zylon drivers. High on the rear panel is the ‘Twisted Flare’ reflex port which is shaped to eliminate chuffing. Yamaha supplies foam bungs providing loading options for different listening environments with a choice of no bung, of course, small bung and fully ‘bunged’. After some testing, I used the small bung in my room and for my listening taste.

The NS-5000 features a very high quality crossover design stuffed with such German exotica as Mundorf MCap Supreme EVO audio capacitors, a Mundorf MResist Supreme attenuator and a massive woofer coil said to weigh approximately 1.6kg.

Yamaha specifies the NS-5000’s frequency response as spanning between 26Hz and 40kHz (-10dB) with an efficiency of 88dB (2.83V/1m) and an impedance of 6 ohms with a minima of 3.5 ohms.

The NS-5000 is finished to the highest standards – Yamaha’s piano gloss experience is clearly, deeply and lushly in evidence here. It’s a true mirror gloss to faultless standards… not a ripple in sight. And without the grilles, the attractive contrast of silver drivers and black gloss gained positive comments from visitors on several occasions.

**PERFORMANCE**

Powered – and tightly gripped – via our reference Gryphon Antileon EVO Class-A power amplifier, the NS-5000’s 300mm drivers displayed extraordinary control and dynamic power. This was a straight-hit moment upon playing the very first track from bass virtuoso Brian Bromberg’s Wood CD. The NS-5000’s bass tightness and punch was among the best ever experienced in our listening room. There was an extraordinary level of musical content and tonal truth on all bass material, making for a natural and truthful low-end presentation. It punched hard, with the speakers having a simpatico relationship with our room in terms of its bass output to deliver concussive power.
YAMAHA NS-5000 LOUDSPEAKERS

SPECIFICATIONS

YAMAHA NS-5000

TYPE: 3-way bass-reflex
WOOFERS: 300mm
MIDRANGE: 80mm dome type
TWEETER: 30mm dome type
FREQUENCY RESPONSE:
26Hz-40kHz (-10dB),
-100kHz (-30dB)
NOMINAL INPUT POWER:
200 watts
MAXIMUM INPUT POWER:
600 watts
SENSITIVITY:
88dB/2.83V/1m
CROSSOVER FREQUENCIES:
750Hz/4.5kHz
IMPEEDANCE:
6 ohms
(minimum 3.5 ohms)
DIMENSIONS (WHD):
395 x 690 x 381mm (with speaker terminals)
WEIGHT:
35.0kg/unit
WARRANTY:
Ten years, 12 months replacement
PRICE:
$19,999 includes dedicated stands
CONTACT: Yamaha Music Australia on 1300 739 411
www.yamahamusic.com.au

Experimenting with positioning delivered a massive soundfield, specifically a wide soundstage with images projecting laterally beyond the speakers while the depth perspective stretched far behind the speaker plane. Even with its wide baffle, the NS-5000s created images that were solidly focused and correctly placed (judging by the several dozen other speakers that have been in-house at one time or another).

Complex material – and I often use Curandero's Aras for this aspect of testing – was beautifully resolved into discrete musical lines while still maintaining the integrity of the melodic whole. These are very 'live' sounding speakers too. Listening to well-recorded material provided a transportation-to-the-venue type of presentation – an incredibly present midrange that brought purity and authenticity to all vocals too.

And the Zylon drivers, in this overall design, can wire minutiae, that’s for sure. It’s a mix of outstanding detail retrieval and utter transparency that guides you deep into the recording without ever tipping the scale into brashness (as I also found when I reviewed Yamaha’s largest Soavo speakers some time ago). The NS-5000 can swing it with the very best in electronics, right up to the uber high-end where it reveals its definitive powers, such as the quality of its design.

The use of the same material across all drivers not only provides tonal uniformity but with the NS-5000’s coherence, you also get natural note decay at a level on par with the best speakers I’ve experienced.

On Martha Argerich’s brilliant Philips Recordings’ release of her mastering of Rachmaninoff’s 3rd and Tchaikovsky’s 1st Piano Concertos, the piano’s hammer-on-string harmonics – across the entire keyboard left-to-right – showed Zylon’s resolving power with stunning note decay within a superbly-recreated ambient space. Argerich’s punctuations were not stunted and the attack was at times startling. To have both these aspects so precisely and beautifully rendered while also maintaining the dynamic integrity of the whole is the domain of the very best transducers – some many times the price of the NS-5000.

CONCLUSION

Backed by powerful global branding and with its remarkably long and rich history in the music business, Yamaha is back into high-end audio. With this new loudspeaker, the company pays respect to the original design while taking the concept way, way, forward.

The Yamaha NS-5000 is an outstanding package of cutting edge technology, imaginative engineering, aesthetic beauty and extraordinary performance… it’s a new icon worthy of veneration indeed.
TO HEAR THE FUTURE, ONE MUST FIRST LOOK TO THE PAST.

NS-5000

Once in a generation, an icon makes its mark.

With an enviable history for producing audio equipment that has shaped the way we listen to music, Yamaha introduces a landmark speaker to usher in a new generation of sound.

Introducing the NS-5000 - a nod to the past with cutting-edge technology and design that embraces the future.

Discover more at au.yamaha.com