

audition

equipment review

NuForce P-9/ Reference 9 v2 SE Pre/Monoblock Amplifiers

There has been resurgence in the technological developments in the 'Class D' mode of high fidelity amplification lately, with excellent examples like the ICE and Tripath modules making the audio world to 'sit up and take notice' of where the future of amplification may be heading. Class D does not stand for digital but for a highly efficient class of amplifier using the Pulse Width Modulation (PWM)

mode of operation that has been around way before digital techniques were employed for audio. There is a similarity between PWM and digital whereas the analogue signal is chopped up into pulses at a frequency beyond the audio band then reconstituted again at the output (and this is where Class D is erroneously described as 'digital') but that is where the similarity ends. What goes on in between input and output is vastly different.

Around 40 years ago many companies had a go at Class D with very limited success; the main problem was to successfully filter out the carrier frequency and switching artefacts without removing audio information at the same time. Component availability, filter design and experience with digital design techniques have come a long way since then and with the current emphasis on energy efficiency, Class D has seen a revival.

One company that has made leaps and bounds in Class D is NuForce, it has been burning the midnight oil with research and development, coming up with a new technique it calls an 'analogue switching amplifier' covered by numerous patents, it claims to have overcome previous difficulties in this class. The NuForce Reference 9 v2 monoblocks have received critical acclaim since their introduction to the

**Slim boxes
contain a
highly
sophisticated
pre and power
amplifier trio**

By Robert Smith

Vital Statistics

Dimensions:

210 x 45 x 406mm

Weight:

3.6kg (9 v2 SE, each)

Price:

\$4,299 (P9), \$6,499 (9 v2 SE, pair)

Distributor:

W.A.R Audio

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Osborne Park, Perth WA 6017

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(08) 9242 5538

Email:

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hi-fi world and have been refined even further, squashing any minor criticisms with a version 2 SE model that we have for review this issue. The designers upgraded the power supply to multiple low ESR capacitors in the v2 SE version, plus some extra decoupling in critical areas of the circuit to further enhance bass performance and overall transparency in the midrange.

Efficiency is the most notable feature of Class D, with the output stage being switched either 'on or off', internal heat dissipation within the amplifier is very low. Couple this with a high efficiency switch mode power supply (SMPS) and all the physically

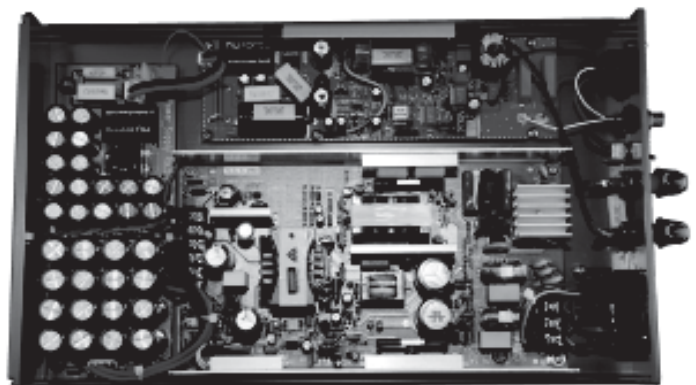
bulky bits like transformers and heatsinks are gone leaving you with a physically small, dynamic, package that we have here. Measuring only 220 x 60 x 380mm it is hard to believe that these little monos can put out 190 watts into 8 ohms and a peak power of 1300 watts into 2 ohms, normally the reserve of a much larger package. Internally it looks more like what you would find in a computer than a power amplifier, with its smart SMPS taking up around 70% of the available space and all constructed to a very high standard. The neat, businesslike outer anodized enclosure adequately dissipates the meager amount of heat that the amplifier develops, its temperature never elevated above warm even during quite loud listening sessions.

The input of the amplifier is fully balanced with XLR input or switched to unbalanced with a WBT Nextgen RCA input, output connections are via quality Eichmann three-way speaker terminals, so the needs of the demanding audiophile are fulfilled here. The power on/off switch is on the rear, adjacent to the IEC power input socket, so maybe the designers intend that you leave the units continually powered up with minimal standby power consumption in the absence of any signal. The comprehensive and well written owners manual gives a lot of insight to what the designers have set out to achieve with their

revolutionary design and individual printouts on distortion performance after post production soak testing are supplied with each amplifier, evidently technical skill and quality control is a very high priority with this company which they backup with a five year warranty.

Moving along to the P-9 preamplifier things get a little bit more conventional with full analogue circuitry and linear power supplies. The power supply and microprocessor control circuits are housed in a separate case to the preamplifier to minimize interference entering the signal circuitry. The two chassis are interconnected via a one metre computer type, 15-way D connector umbilical cord. NuForce enlisted the talents of legendary designer Demian Martin of Spectral fame to design the preamplifier circuits of a discrete component, ultra low noise, ultra wideband design, utilizing JFETs, MOSFETs and bi-polar transistors to compliment the speed and transparency of the NuForce power amplifiers. Being of a wide bandwidth design, special attention has been paid to shielding this sensitive circuitry to RF standards from noise and interference by encasing each gain module in a heavy copper shield. The preamplifier gain cell is a DC coupled design with no capacitors in the signal path, this is powered by a conventional, toroidal transformer fed, series regulated, power supply of generous proportions with additional shunt regulation close to the active circuitry.

The input switching from the five pairs of RCA sockets is handled by individual relays on each channel feeding an ALPS blue motorized volume control with all the internal wiring in a single stand high purity copper. Input 5 is allocated to a bypass



Technotalk

Product Type:

Pre/monoblock amplifiers

Inputs (P-9):

5 RCA, HT bypass

Total Harmonic Distortion (P-9):

0.0004% (20Hz-20kHz @ 1kHz)

Signal To Noise Ratio (P-9):

100dB @ 20Hz - 20 kHz

Maximum Output (P-9):

7V RMS

Power Output (9 v2 SE):

190 watts RMS (8 ohms)

300 watts RMS (4 & 2 ohms)

Total Harmonic Distortion:

0.03%, 1kHz, 10 watts

Signal To Noise Ratio:

100dB @ 100 watts

Input Impedance:

45 kohm

Finishes:

Black, Silver, Rose Copper
anodized aluminium

Technotalk specifications and recommended retail prices are supplied by the manufacturer

function to allow an external home theatre processor to feed the power amplifiers directly. As well as the standard RCA outputs there are balanced XLR output sockets on the rear of the chassis but the output is not truly balanced, it is only single ended (with pin 2, which is normally the negative output, grounded) but it does permit you to interface the power amplifier with a balanced lead to the preamplifier, although without the benefits of fully balanced operation.

A feature on the P-9 that had I found difficult to come to terms with, is the display; it's very small and very dull with a very restricted vertical viewing angle. It indicates input selection and volume level, hidden behind the central red perspex plastic strip on the fascia, but unless you are up reasonably close, looking straight on, under low ambient light conditions, it is unreadable and useless; maybe an upgrade here would be in order. The P-9 comes with a very sexy hexagonal wand remote covering input selection, mute, volume and power on/off for the preamplifier but not the Ref 9 monos, so like I said before, maybe they are to be left permanently on.

New technology brings new surprises and NuForce claim a revolutionary approach to audio amplification so we will connect them up see if they can live up to its claims. Signal source was my trusty Cayin CDT-17A CD player feeding a Perpetual Technologies P-3a DAC single ended into the NuForce P-9 with Neotech silver Teflon balanced leads to the Ref 9s and Axis Reference speaker cables to a pair of Magnepan MG1s. NuForce recommend a 72-hour break-in, but it was all happening straightaway; very clean and very fast, staggeringly so, listening to a lot of different equipment over the years you could tell this is something fresh and exciting.

The recommended break-in period was adhered to and serious listening started and a Barb Jungr *Walking In The Sun* CD slid into the tray. Wow! The midrange presentation of the vocals was outstanding, she was in the room or should I say she was out of the room because of the depth of the soundstage, she was beyond the window behind the speakers. Tonal accuracy was spot on, very natural, the best I have heard, and talk about revealing, everything was presented separately in space, as only



the best high-end equipment can do. The speed of the amplifiers was immediately apparent, blinding quick on transients with startling attack, lots of jump factor here, it surprised me even on familiar material. Of course I could not wait to try every demanding recording in my collection, drums, bass, strings, piano, vocals, all were reproduced with startling realism. Bass was extremely tight and extended; the Ref 9s clearly had more control than most amplifiers over the bass drivers, no doubt due to the extremely high damping factor available with the NuForce circuit topology. Dynamics too amazed me, the amplifiers never seem to run out of power or harden up when pushed hard, in fact I never found their limit and the noise floor was so low they would go to complete black during silence. The depth of the soundstage was remarkable as was the imaging, everything was pinpointed front to back, left to right in a most palpable manner, transparency, air, you got it. Pretty ordinary recording came out, well, pretty ordinary and bad recordings came out, you guessed it, unlistenable, NuForce does not take prisoners; they are ruthlessly accurate.

The performance of the Ref 9 v2 SE monoblocks was impeccable, the best that I have heard regardless of price, whilst with the P-9 preamplifier I have my reservations. I don't think that it matches the level of performance that has been achieved with the monos. It is not that the P-9 is not good, it is very good by any standard as a line level preamplifier but it is just that the Ref 9s are exceptional and they overshadow its performance. For the \$4,500 asking price I would like to see a balanced input and a fully balanced output together with an improved display and a revision to the digital steps of the servo mechanism controlling the continuous volume control.

With the NuForce you get the musical truth with unerring accuracy

right across the board, no warm and cuddly valve euphoria, no larger-than-life muscle amp bass presentation, just the truth and nothing but the truth. Can you stand the truth? I don't know. But if you are in search of perfection and scientific accuracy, the Ref 9 v2 SE monoblocks are probably the best amplifier you can get at any price; they deserve only the best ancillaries and you will be rewarded. **AVL**

Ancillary Equipment: Cayin CD-T17A CD player, Magnepan MG-1 loudspeakers, Neotech interconnects, Axis Reference speaker cables

O p i n i o n

The 'Opinion' expressed here is that of the reviewer, summarised in the form of a 5-star rating system, and should be considered as an integral part of the full contents of this Audition Equipment Review. As such, each category should be judged on its own merits and not necessarily used as a comparison with other equipment reviews in this, or other editions of Audio & Video Lifestyle magazine.

- ★ Shocker
- ★★ Average
- ★★★ Good
- ★★★★ Excellent
- ★★★★★ Perfection

"One company that has made leaps and bounds in Class D is NuForce, it has been burning the midnight oil with research and development..."

Performance

★★★★½

Build Quality

★★★★½

Compatibility

★★★★

Value For Money

★★★★