

The Naim Statement

MARTIN COLLOMS GETS A TOUCH OF INDIGESTION WHEN TRYING TO GET HIS HEAD AND HEART AROUND THE *NAC-S1* PRE-AMPLIFIER AND *NAP-S1* POWER AMPS



Wearing hearts on sleeves, Naim's designers have given their all to this hugely ambitious project. Getting the numbers right for an international flagship amplifier, such as great looks, very high power and low distortion, is still no guarantee of sonic excellence, and many such 'ultra luxury' projects from other makers have been announced with a great fanfare, only to pass swiftly into history. The number of 'super amps' around is quite surprising, as indeed are similarly ambitious loudspeaker designs; fashionable contenders might well include Soulution, Dartzeel, Constellation, Burmester and Vitus, but that's just for starters.

Massive Power

However, the numbers quoted for Naim's *Statement* are simply astounding: an increase of more than 6dB of loudness from the current *NAP500* flagship (rated at 140W/channel) is massive in audio terms. Achieving this objective numerically would have required increasing rated power to 560W, but in fact there's rather more, achieving the quaintly specified one British horsepower (otherwise known as 746W per channel, 8ohm loading). Furthermore this amplifier can deliver rather more than this on program material and this has been verified with equivalent test pulses, the claim securely backed by the inclusion of a 4,000W power transformer for each monoblock channel, and very high current transistor arrays at its output.

Anticipate therefore something like 800W/ch into 8ohms, together with a very good tolerance for difficult loading. The specification claims nearly 1,500W into 4ohms under continuous power, while an increase to a massive momentary 9,000W (short-term with 1ohm loading) is provided for music-related impulse signals. Copious internal supply reservoirs and regulators will easily meet that short term burst power demand. While it may be argued whether or not such a situation should occur in practice, flagship loudspeakers exist on the market with electrically complex impedances that may impose an effective loading for an amplifier that's as low as 1.5ohms. The Naim team was determined to ensure that its *Statement* creation would never trip up when driving such examples to full level on music programme.

Some speakers need 50amps peak at full power, and the *Statement* power amplifier would be able to deliver as much as 95amps peak for an admittedly very brief 0.1mS transient into a 1ohm load.

Two amplifier design schools of thought come to mind. One contends that small is better: that power supplies draw less current; electrical noise and vibration levels are lower; and the design is less complex with shorter signal paths. These examples demand high sensitivity loudspeakers with higher impedance, which tend not have particularly good low frequency extension unless they are very large. Certainly exquisite and communicative sound reproduction is possible by this route, especially with some of the specialist single-ended triode (SET) valve amplification.

However, an alternative school of thought recognises that big speakers with powerful deep bass need a good measure of both voltage and current in order to deliver a thrilling, dynamic, thundering and body-shaking performance. Some of these loudspeakers will also be of true audiophile quality and will therefore justify the use of an exceptional amplifier. Around 25 loudspeaker brands on the international market create high end designs of related quality and size, priced from \$150,000 to \$300,000. These include Avalon Acoustics, Focal, Magico, Gryphon, Dynaudio, Martin Logan, Marten, Nola, TAD, Estelon, Kharma, Backes & Muller, Tidal, Perfect 8, Avante Garde, MBL, Wilson Audio Systems and Sonus Faber.

Many of these luxury speaker designs are potential candidates for use with a Naim *Statement*, and its extreme load tolerance will help to maintain its sound quality even when confronted by complex and demanding electrical loading. Experience has also tended to indicate that the greater the reserve available, the better the sound, even at cruising levels where the reserve is barely called upon. This is because the relative stress level with the amplifier in respect of peak current, power, thermal and magnetic behaviour is a smaller proportion of the reserve, so the internal operating points are more stable and work at lower noise levels.

Powerful dynamics are the province of big amplifiers, and sometimes the largest amplifier