

darTZeel *new* NHB-18NS preamplifier

A *new* approach to preamplification

The *new* darTZeel NHB-18NS is the logical partner to our NHB-108 and NHB-458 power amplifiers.

In keeping with the very same philosophy, darTZeel uses dedicated circuits reduced to their most basic form. Here again, there is no application of any overall negative feedback. The delicate, small audio signal amplified by the NHB-18NS only passes through 7 silicon junctions from input to output, including the 11dB full discrete

gain stage. For the phono stage, we only add another 6 junctions, for a maximum additional boost of 72 dB (83 dB in total).

The advantages of these new circuits, whose designs are patented, are in the same league as in our NHB-108 and NHB-458 power amplifiers: an extreme, pure sound quality never achieved before.

Leading-edge audio electronics

At this level of performance, every detail is of prime importance.

The delicate, small signal delivered by the sources is amplified by discrete devices, or by means of matched transistors embedded in dedicated integrated circuits. No operational amplifier is used in the entire signal path. All components used in the NHB-18NS preamplifier, with no exception whatsoever, are based on the finest products being produced by leading-edge industries at the present moment.

The first aim of the NHB-18NS is to provide a sound reproduction quality **Never Heard Before**.

Instead of offering a preamplifier based on the same approach as that of our competi-

tors, we at darTZeel chose to think differently, offering for the first time in the world what previously seemed impossible:

- No contact or switches or relay of any kind for the selection of the sources. This revolutionary feature brings a new level of transparency. Instead of routing the signal through a selector box, each input has its own dedicated input module, which is enabled or disabled according to the user's choice. The signal is then directly routed to the volume control module.
- This volume control module completely avoids the use of any potentiometer, stepped attenuator or analog switch array in the signal path. The sound signal is

attenuated in a fully analog passive way, within a range of 96 dB in 192, 0.5 dB steps without the use of any VCA or other active component.

Both of these breakthroughs constitute a big step in the right direction: no harm to the signal.

As mentioned above, this design is patented.

The NHB-18NS is not only *new* in these aspects. We have also included all the features already implemented in our power amplifiers, as follows:

- Only one small local negative feedback at the inputs.
- One small, symmetrical, local negative feedback in the voltage gain stages.
- Open loop, free of all negative feedback for the output stages.

In addition, the NHB-18NS also includes multi-amping capability by using darT to Zeel 50-ohm links.

Some key features are (per channel):

- *new* alphanumeric display for user-friendly operation.
- 6 inputs: 1 *new* MC phono, 1 *new* XLR and 4 RCA/BNC 50-ohm Zeel inputs.
- 1 *new* XLR output.
- 3 BNC 50-ohm darT outputs, ready for tri-amping, with optional built-in passive filters.
- 1 RCA output.
- 1 RCA record output (fixed level).



Power supply

The **darTZeel NHB-18NS** is an authentic dual mono pre-amplifier, from input to output, with separate grounds for left and right channels.

Each channel is powered by its *new* LiFePO₄ battery bank, offering 8 hours of listening pleasure before a charge is needed.

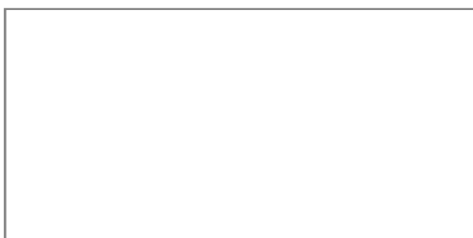
A smart automatic function is provided as standard, allowing full battery operation when listening, and charging mode being activated when the preamp is switched off. Hum is gone forever, and there is no need to worry about knowing if batteries need to be charged or not.



Technical Specifications

Output voltage:	>	5 volts RMS for RCA and XLR outputs, 2.5 volts RMS@ 50 ohms (darT outputs)
Input impedance	:	Line RCA > 30 kohms, from 5 Hz to 50 kHz Line XLR > 15 kohms, from 5 Hz to 50 kHz BNC 50 ± 1 ohms
Output impedance	:	50 ± 1 ohms
Bandwidth	:	5 Hz to 500 kHz, +0, -1 dB
Rise time:	<	500 ns
Slew rate:	>	24 V/μs, peak-peak
THD:	<	1% from 10 Hz to 100 kHz
Temporal distortion	:	None
S/N:	>	92 dB (A) @ 2 volts RMS output for line inputs, > 70 dB (A) for phono input
Power consumption	:	7-60 watts, depending on working conditions
Dimensions	:	440 (W) x 170 (H) x 335 (D) millimeters
Weight	:	24 kg

Your Authorized Dealer :



darTZeel Audio SA
2, chemin Louis-Hubert
CH-1213 Petit-Lancy / Geneva
Switzerland
www.darTZeel.com