

darTZeel NHB-18NS preamplifier

A new approach to preamplification

The **darTZeel NHB-18NS** is the logical partner to the now acclaimed NHB-108 model one power amplifier.

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 66 dB (77 dB in total).

The advantages of these new circuits, whose designs are patent pending, are in the same league as the NHB-108 model one power amplifier: 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. As for the NHB-108, 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 sound reproduction quality Never Heard Before.

Instead of offering a preamplifier based on the same approach as that of our competitors, 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 dis-

abled according to the user's choice. The signal is then directly routed to the volume control module.

- A whole new volume control module, which 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 men-

tioned above, this new design is patent pending. As soon as the patents are confirmed, darTZeel will be pleased to describe in detail how such signal treatment is possible.

The **NHB-18NS** is not only new in these aspects. We have also included all the features already implemented in our now famous NHB-108 model one, as follows:

- Only 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):

- 6 inputs: 1 phono, 1 full floating XLR and 4 RCA/BNC 50-ohm Zeel inputs.
- All 6 inputs can be Home Theater bypassed (HT bypass).

- 1 XLR full floating 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 battery powered by its own battery bank, offering 15 hours of listening pleasure before a charge is needed.

A very sophisticated, regulated and dedicated supply for every input and

output is provided, ensuring the lowest power supply impedance possible.

A smart automatic function is provided as standard, allowing full battery operation when listening, and charging mode being activated when the pre-amp 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:	>	4 volts RMS for RCA and XLR outputs, 2 volts RMS@ 50 ohms (darT outputs)
Input impedance	:	Line RCA > 30 kohms, from 5 Hz to 200 kHz
	:	Line XLR > 15 kohms, from 20Hz to 40 kHz
	:	BNC 50 ± 1 ohms
Output impedance	:	50 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:	>	100 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	:	25 kg (approx).



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