



Classic Audio Design Pty Ltd
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The Principal Audio Monitor - Points of Difference

PRODUCT

1. Performance ahead of Features. The overwhelming majority of studio monitor brands in the contemporary market place are feature driven as opposed to performance based. Not so the **GROVER NOTTING®** Principal Audio Monitor range where the aspiration to the highest performance and reliability standards prevail over (often) meaningless features, convenience or price point.
2. All **GROVER NOTTING®** models employ an Infinite Baffle enclosure design. From our observation, most present generation studio monitor products use a vented (ported) enclosure principle. Whilst correctly designed vented enclosures offer augmented low frequency response, this comes with penalties, including vent noise, phase errors and poor control of cone movement below cut-off.
3. All **GROVER NOTTING®** Principal Audio Monitors exclusively uses the HuonLabs Bandwidth Extension Module (BEM). This technology is electrically deployed in each system to optimise enclosure and loudspeaker parameters. The clear benefit to the listener is tightly controlled and highly defined bass extension from remarkably compact enclosures.
4. Most contemporary audio monitor producers; incorporate the amplifier into or onto the enclosure. This creates significant compromises due to space limitations, microphonics, heat build-up and related service life and reliability issues. This configuration also requires power as well as signal lines to each loudspeaker location. These compromises can introduce extraneous noise to the critical listening environment. The **GROVER NOTTING®** Universal Series is available with an optional, purpose built remote power plant, and the Mastering and Low Frequency Augmentation Series are complete turnkey systems. They include the speaker, transfer function and power amplification, in the form of a rack mounting power plant system, allowing remote location and control. This neatly avoids the performance, reliability and service compromises associated with fully integrated designs.
5. All **GROVER NOTTING®** models employ unique and the most highly refined paper cone and soft dome HF transducers available, incorporating patent and patent pending technologies. All are hand assembled and both manually and electronically tested. These transducers are not mass produced on automated assembly lines in a low cost disconnected manufacturing environment.
6. All **GROVER NOTTING®** products are created from a 'first principle' design approach. Therefore they are authentic and uniquely Australian, being manufactured by their designer in Melbourne Australia.
7. Unique power plant systems have been developed in Australia by lead designer Hugh Dean to drive all **GROVER NOTTING®** Principal Audio Monitors. Power amplifiers are normally ranked on carefully measured harmonic distortion. However, the relationship between THD and critical listening is difficult; an amplifier may deliver very low measured distortion, but sound veiled, or even bright and unmusical, when playing music. The measurement/listening conundrum has occupied some of the finest engineering minds over the last eighty years, and has driven intense efforts to measure those psychoacoustic properties which define a musical sound reproductive system.

These efforts have not been entirely conclusive, but they have revealed a human, subjective dimension to what has always been seen as an engineering problem. The real issue has been the way in which we perceive music.



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At **GROVER NOTTING®** we have created power plant systems that not only measure well, but are innately musical. This project has consumed many years, commencing with an exhaustive analysis of the history as well as technology of audio amplification. We have examined musical perception, and the mathematical aspects of chromatic scales. The lessons learned have driven the creation of simple, reliable but unusual copyrighted electronic circuits which offer extremely low distortion, very low noise, and exquisite musical engagement.

8. At the heart of all **GROVER NOTTING®** full and extended bandwidth models is a unique and copyrighted 4th order filter, designed by Dr Neville Thiele, using original techniques not seen in other filters. Considerable objective and subjective (technical and musical) testing proved that this passive system outperformed all other transfer systems including other passive filters and active DSP based devices.

9. All **GROVER NOTTING®** models have been designed with significant built in head-room before onset of distortion. This ensures maximum dynamic range and zero signal compression. For example; all HF devices feature a massive motor structure. Each HF device is then critically aligned to ensure consistent spectral output across the model range. All power plants are equipped with significant output capability and are system matched to ensure stress-free operation. A system will never approach anywhere near clip in normal operation. It is our view, that many studio monitor brands do not place sufficient emphasis on the issue of distortion-free headroom.

10. As a result of this attention to excellence, all **GROVER NOTTING®** models share consistent and exemplary voicing and imaging characteristics. This is achieved by working with minimal component variants, and also by employing identical design techniques in all models. Some of these techniques are obvious, many aren't.

CORPORATE

11. Classic Audio Designs Pty Ltd the owner and manufacturer of the **GROVER NOTTING®** brand, understands and acknowledges the need for positive outcomes for all.

12. Classic Audio Designs Pty Ltd only present authentically engineered designer products, by employing a combination of original thought and proven technologies supported by a rigorous R&D regime, and most importantly, practitioner feedback and validation.

13. Classic Audio Designs Pty Ltd commits to carefully managing its product portfolio ensuring it remains fresh, relevant, compelling, and never over-exposed or de-valued.

14. Classic Audio Designs Pty Ltd will strive to maintain a constant client friendly culture with an engineering and security focus.

15. Classic Audio Designs Pty Ltd commits to a de-corporatized commercial environment.

16. Classic Audio Designs Pty Ltd is committed to environmental best practice within its manufacturing and marketing regime. Our organisation utilises eco-friendly products and deliberately minimise the distances between supply chain elements wherever possible.