

# AUDIOFILE

## Private pleasure

Headphones perform best through a dedicated amplifier, writes **Greg Borrowman**.

**J**ust as a doctor uses a stethoscope to determine potential problems inside a human body, sound engineers use stereo headphones to reveal hidden faults in hi-fi systems and recording technologies. Music signals that seem perfect when reproduced by speakers rarely stand the scrutiny of high-quality headphones. Generally, headphones are used to find technical mistakes made during the recording process, such as an instrument that hasn't been placed properly in the stereo stage, or if the volume of one or more microphones has been adjusted too quickly.

However, headphones can also reveal nuances of musical performances that can't be heard with speakers, which can add to the appreciation of music. The Japanese conductor Seiji Ozawa, music director for the Vienna State Opera, listens to almost all recorded music using headphones.

There are many wonderful-sounding headphones and thousands of CDs that sound glorious when played through them, but there are few good headphone amplifiers. Most headphone amplifiers are hidden inside amplifiers and receivers, so all you ever see

of them is the headphone socket itself. This means manufacturers tend to skimp on quality. Internal headphone amplifiers usually share a power supply with the front panel display and digital signal processors. Often the amplifier is little more than a low-cost, multi-purpose integrated circuit, prone to distortion and overload, and quite noisy as well, adding unwanted background hiss.

If you want the best performance from a pair of headphones, you should use a dedicated headphone amplifier, which is a miniature version of a standard hi-fi amplifier except that its circuitry is optimised to drive stereo headphones with impedances of between 32 and 600 ohms rather than speakers, whose impedance is typically about four to eight ohms. The input for a headphone amplifier can be the line output of a CD or DVD player, or even a computer soundcard.

Most headphone amplifiers are made by headphone manufacturers, who understandably optimise their performance to best suit their own headphones. However, because it's made by a specialist amplifier

### INFO FILE

**Perreaux Silhouette SXH2**

**Headphone Amplifier**

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manufacturer, Perreaux's Silhouette SXH2 headphone amplifier has been designed to drive any pair of dynamic headphones from any manufacturer, irrespective of impedance or power requirement.

It can deliver from 110mW into 600 ohms to 2000mW into 32 ohms. More importantly, its signal-to-noise ratio is very high, at 105dB unweighted. This means you won't hear any hiss when you're listening to the quietest musical passages, or even the total silence between tracks.

Rather surprisingly the SXH2 has two headphone sockets, but only a single volume



control, so if you use two pairs of headphones, setting a volume level that suits both listeners might involve a compromise unless one pair of headphones has a volume control. In practice, headphone listening is often a solitary pursuit, so we weren't overly concerned by this oversight.

We connected the Perreaux directly to a CD player and found it effortlessly drove the five pairs of headphones we had on hand, singly or in pairs, enabling outstanding performance in every case, with sufficient power to take all models up to their maximum volume. At normal playback levels, the sound was much cleaner and far more dynamic from the SXH2 than when the same headphones were connected directly to the headphone socket of the CD player.

Music through headphones has never sounded so good.

*Greg Borrowman is the editor of Australian Hi-Fi magazine.*