

## **Legend Acoustics launches "big red" Big Reds**

Leading Australian loudspeaker manufacturer Legend Acoustics has launched a "big red" version of its Big Red (Kumbar Wirri) loudspeaker that won the 2008 Sound & Image award for Best Loudspeaker over \$2500. Dr Rod Crawford, chief designer at Legend Acoustics, said that the Big Reds previously had only been available in piano black because of the difficulties in matching real-wood veneers across the 2 modules (the upper module contained the tweeter & mid-range units and a lower module contained the bass drivers). However, by combining the 2 modules into a single cabinet, this has allowed the use of real wood-veneers, including red Australian jarrah which makes the speaker a true "big red".

The new Big Reds also in sound quality live up even more to their namesakes that are fast agile critters on the flat open Australian landscape. The improved "speed" of the Big Reds is partly a result of the now tapered mid-range enclosures with their non-parallel sides minimizing resonant standing-waves within the cabinets, Dr Crawford said. And now being narrower near the mid-range & treble drivers the diffraction of sound from the baffle is minimized, producing a very wide deep soundstage. Uniform dispersion is aided by the critically-curved tweeter guide that controls dispersion at the bottom of the treble to match it with the top of the mid, producing a more "natural" sound in rooms with their inevitable wall reflections.

The tweeter is the same treble unit used in the original Big Reds and now in Legend's top-of-range DEQX-active Tikandi loudspeaker, Dr Crawford stated. "This is the superb ceramic-coated aluminium tweeter from Visaton in Germany with its pistonic accuracy giving detailed and crystal clear treble without strain or hardness. However, for the mid-range unit, Legend replaced the original Scanspeak 170mm driver by a sibling of the SEAS 130mm mid-range used in the Tikandis. Its smaller Nextel cone does not break-up in the mid-range pass-band even with the gentler slopes of passive crossovers. Its very fast & detailed but non-etched sound is aided by the patented open-magnet structure of its motor. At its bottom end, the mid-range unit is allowed to roll-off naturally at around 150 Hz avoiding the need for capacitors in series with mid-range, again leading to a more open, natural sound".

"We have also taken the opportunity to improve the passive crossovers to make the frequency response flatter so they have an even more natural tonal balance" Dr Crawford claimed. "This involved re-aligning the mid-range low-pass filter in the crossover to better integrate with the treble. The crossovers use the same very high quality components - Wima capacitors (now by-passed by polystyrene capacitors in the treble), heavy-gauge air-cored inductors and non-inductive high-powered wire-wound resistors. All components are hard-wire soldered and the crossovers are connected to the drivers using Litz wire for minimum high frequency loss".

Also retained from the original Big Reds, and the Tikandis, are the two side-firing Peerless XLS 250mm bass drivers with their free-air resonance of a very low 19 Hz capable of producing very deep bass; while their very long throw of 20mm produces very high SPL levels with very low distortion. Because the 2 bass drivers are connected in-phase on opposite sides of the cabinet their action-reaction forces cancel, minimizing cabinet movement & vibration so reducing artificial "overhang" of notes and also improving imaging. The 2008 Sound & Image award especially commented on the quality of the Big Red's bass.

The bass units are now driven actively by built-in 300W BASH amplifier modules. BASH is an acronym for Balanced Amplifier Symmetrical Hybrid that as a patented hybrid amplifier combines the best of digital and analog technology. The power supply is digital with its high frequency top-up of the amplifier DC supply rails keeping them much more constant under music load leading to tighter, deeper bass. On the other hand, the power amplifier itself is analog class AB giving more musical bass. The active filters in the BASH amp modules allow them to be rolled off (to join with the mid-range units at 150Hz) without the need for very-large energy sapping capacitors and inductors, further leading to tighter, less-distorted bass. The mid-treble units then require as little as 25 watts of high quality external amplifier power to drive them successfully.

Recommended retail price for the single-cabinet real-wood veneer version of the Big Reds is \$8990. The 2-module version in piano-black is still also available for \$9990. Like all Legend Acoustic speakers the Big Reds are built in Australia. For more details see [www.legendspeakers.com.au](http://www.legendspeakers.com.au) or contact Legend Acoustics on 03 6295 0062.













