

# AUDIOENZ

New Zealand's hi-fi magazine

## An interview with Chris Ball of Image Loudspeakers

**Speaker designer**  
**By Michael Jones**

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Chris Ball has been building loudspeakers under the Audax and **Image** brands for well over quarter of a century. With a review of the revised version of the best-selling 414 model reviewed in this issue, *AudioEnz* took the opportunity to quiz Chris Ball on building loudspeakers.

**It's been well over two years since the original 414 was released - we [reviewed it in April 2003](#). What causes a manufacturer to revise a successful model? And what were you trying to improve?**

There's a personal challenge in improving something already accepted as excellent. The Image 414 is our most popular model and for that reason was the focus of any improvement, if this was indeed possible. We were already using the best drivers so to achieve this the only possible modifications would have to come from the electronic components and design. With the intention to replace some crossover components came the opportunity to re-look at the crossover design as a whole. The 'art' of a better speaker design should result in a more involving and real life portrayal of original recordings.

**Externally the 414mk2 looks the same. Have there been any changes to the cabinet or drive units?**

The cabinet is already substantially braced with internal elements to prevent colourations in the overall sound so there was nothing to be gained by changing anything there. As I've already said, we were already employing the best drivers. By best I mean quality assurance and consistency, ultra-high power handling and most of all, accuracy in sound reproduction.

**The crossover is the hidden part of a loudspeaker. Is this where the main changes have been made? What has changed here?**



This is where all changes have been made. The design of a crossover and the component choice is the heart of any good speaker. It was the task of veteran crossover design specialist Graham Bowers to somehow improve on what is accepted as being one of the best speakers in the New Zealand market. It took test time, patience and a lot of listening but the result is now obvious for all to hear. Electrically and acoustically, the changes are in the filter slopes and driver interactions around crossover points. As well, all series capacitors in the high frequency circuit have been replaced with extremely high quality polypropylene types. This is now a whole new speaker.



**The original 414 could prove problematical in some rooms, with the bass overwhelming the room. You started supplying port foam bungs to tame the bass, but these bungs weren't with our review samples of the 414mk2. What changes have you made to the bass response of the new 414s?**

With two 166mm drivers with massive 75mm voice coils pumping bass from each cabinet there can be quite a lot of air movement. In large rooms the 414's have not caused problems but have been known to affect the overall frequency balance in smaller rooms, often made worse when the speakers are placed too close to rear walls. Unfortunately we have no control over where Image owners choose to place their 414's so the only way to reduce the overall bass output into the listening room was to provide tuning filters.

It should be known that the (very low-end) bass response from the speaker is a function of the drivers, cabinet and reflex port. We have not changed these parameters. What was found though is that energy from the port at higher bass frequencies combined acoustically with the driver's output and this seemed to cause some problems. Without going into technical details here, the crossover employed now avoids the need to use the foam filters.

**The 414 has always been the most popular Image model. What reaction have you had to the mk2 version?**

Some years ago we were very keen to prove that the original Image 404 sporting a five star review award could be improved upon and in future known as the Image 414. Sales of the 414 have outstripped the 404. It is evident, even from initial feedback that the 2005 will be even more popular. We have only had totally positive feedback and that makes me very happy.

**The smaller 412 also has been released in a mk2 version. What has changed here?**

I don't refer to either the Image 412 or 414 as Mk2 versions. For Image any improvement is more an ongoing development that offers even better speakers to our loyal customers. Simply, they are the 2005 models. The Image 412 crossover has gone through very similar testing and listening stages to the Image 414 and the results are equally outstanding. The same high quality capacitors are employed in all new Image 412 models as in the Image 414. Once again, this is a whole new speaker.

**Any changes in the other models in your range?**

Yes, a spin off of the Image 412 changes in modified form can be found in the Image 418 (pictured right) that uses the same (412) drivers but with a 10" side firing low bass



driver. There are significant changes to this model in the midrange and treble regions.

**And what about the future? Any new models coming up?**

We've been working on a new flagship model called Paragon. This model has been the most time consuming project undertaken by Image and is almost complete. We are waiting for hand-worked multi-strand cable from Europe to fit and listen to before releasing. With 22 patterns required to construct one pair, and some three months to finish in gloss lacquer, it is more 'a labour of love'.

**For your [nearest Image dealer](#)**

