



RENKUS-HEINZ



PRESS RELEASE: **FOR IMMEDIATE RELEASE**: MARCH 2008

RENKUS-HEINZ POWERS NEW ZEALAND'S NORTH HARBOUR STADIUM

NEW ZEALAND – When North Harbour Stadium in Auckland, New Zealand approached Marshall Day Acoustics to propose a new Sound system for their 12,000 seat grandstand, the expectations were high. Having suffered ten years with a budget-driven and ageing system that had well-passed it's use-by date, something special was needed for a venue looking to secure its future as a nation-leading outdoor arena.

North Harbour Stadium was built in 1997 and designed to be a multi-purpose outdoor sports & entertainment venue capable of holding up to 25,000 people in the burgeoning Auckland suburb of Albany. As well as hosting large concerts, it is also the home to Rugby Football's North

Harbour team, and regularly hosts high profile international sporting & entertainment events. The grandstand complex also doubles as an impressive conference and function venue.

The Sound system had to be capable and flexible enough to cater for all the possible audience and event requirements, and be future proof to suit North Harbour Stadium's plans for expansion.

Enter Audio Telex in conjunction with Marshall Day, who developed a comprehensive state-of-the-art design using EASE acoustic simulation software and based around Renkus-Heinz loudspeakers.

The grandstand posed some fairly serious issues to achieve the desired results. The 12,000 seats were housed in a massive half shell roof and the three tiered levels meant without careful calculation, gaps and hot spots would appear in the coverage when the stand was in full flight. Given the open design of the stand, the suggested loudspeakers would have to be weather resistant as well. Due to the weight loading on the roof structure the Renkus-Heinz CDT520 was chosen as the mid-high speaker. On the outside, it looks like an oversized horn but it is essentially a high power 10" MF and 2" HF mid-high speaker without the unnecessary weight and extra expense of an outer cabinet. As the main speakers needed to be IP rated, this also did away with the additional cost of fibreglass IP rated enclosures for the mid-highs. The low frequency cabinets and components were weather treated and fibreglass coated by Renkus-Heinz and (like the CDT520's) are rated to IP559.

The final design was a system of five clusters of Renkus-Heinz speakers, each cluster containing a CELK15-2KW dual 15" low frequency cabinet and three CDT520 10"/2" mid-high horn speakers to achieve maximum intelligibility, even coverage – and of course incredibly loud if required.

Bartons Sound of Auckland were awarded the contract for supply and installation of the sound system (completed December 2006). They had previously been involved in the with the on-field PA which also included some older Renkus-Heinz speakers. Murray Dick, Operations Manager for the stadium said, "It's quite funny - the only thing we kept from the old sound system was the same brand of speakers that are used in the new installation". The grandstand loudspeakers are powered by Lab.Gruppen C-Series power amplifiers – three C48-4 models and two C68-4 amps providing over 20,000 watts of amplification to the Renkus Heinz speakers, and the 26 Turbosound Impact50T 100V speakers used for the under-balcony fill.. The four channel Lab.Gruppen amplifiers needed only 10RU of rack space and were zoned to allow the different sections of the clusters to be adjusted during the commissioning phase. Bartons also made use of the in-built NomadLink port on the C-Series amplifiers and supplied a Lab.Gruppen NLB60E network bridge for amplifier control and monitoring. The NLB60E allows connection via Ethernet to a PC or control system and provides key performance functions such as remote power on/off, power sequencing, amplifier status and muting specific channels or groups.

The entire system is controlled by the MediaMatrix Nion n3 DSP audio processor allowing specific tuning of individual loudspeakers, crossover points and particular voicing for the Renkus-Heinz clusters and balcony fill. A MediaMatrix CAB is installed in a second room to provide a CobraNet link between the NION and the Lab.Gruppen amplifiers.

Renkus Heinz provided the perfect solution for grandstand's main speaker system. They are proven in many international stadiums and are available weather resistant to IP559, enabling them to withstand the inherent issues of outdoor stadiums and the high humidity of the Auckland



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region. On hearing the system fired up for the first time during commissioning, Thomas Kelly from Audio Telex was confident that the system would match the predictions made in EASE. He wasn't disappointed. Thomas commented, "It took a fair amount of tweaking in EASE to find the best combination of speaker models and positions but the end result speaks for itself. The system sounds spectacular. Intelligibility for commentary is fantastic and I think we were all pleasantly surprised at just how huge the system sounded with music as well".

Since commissioning in early 2007 the sound system has now had a full work out with various events having been successfully held at the ground. The sporting calendar in New Zealand revolves mainly around winter sports like Rugby Union Football and the new system more than just survived the winter months – it sparkled through the roar of the crowd, wind and rain. Murray Dick was pleased to reveal when asked about the improvement from the old equipment, "100% better".

It was also acknowledged by North Harbour Stadium that they were now in possession of not only the first major Renkus-Heinz stadium sound system in Australasia, but probably the best sounding stadium sound system in New Zealand. The idea wasn't lost on Marketing Manager for North Harbour Stadium, Chris Kemp saying, "We don't want to tell people we have a new sound system, we just want them to hear the difference when they walk into the stadium".

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Headquartered in Foothill Ranch, California, Renkus-Heinz, Inc. is the worldwide leader in the design and manufacture of audio operations networks, digitally steerable arrays, powered and non-powered loudspeakers, system specific electronics and fully integrated Reference Point Array systems. For additional information contact:

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