



**FOR IMMEDIATE RELEASE; June 2008**

For more information, contact:  
Kim Mitchell: 615-823-1655  
[kim.mitchell@onesystems.com](mailto:kim.mitchell@onesystems.com)

## **Calgary's Canada Olympic Park embarks upon an ambitious sound-system upgrade with installation of One Systems Direct Weather loudspeakers and subwoofers.**

Located on the premiere site of the 1988 Olympic Winter Games, Canada Olympic Park hosts a number of inter-related sports events throughout the year. The 520-acre venue in Calgary, Alberta, recently embarked upon an ambitious five-year refurbishment program that will involve the installation of over 100 One Systems weather-proofed loudspeaker systems supplied by DBI Systems, the firm's local systems integrator. "Last year we tested a number of possible replacements for our current PA systems," recalls Jon Chesnut, manager of information systems at Calgary Olympic Development Association, the non-profit organization that maintains and operates Canada Olympic Park. "One Systems' 312CIM weather-proofed loudspeakers and 218Sub-W subwoofers blew everything else out of the water!"

Canada Olympic Park is unique from most former Olympic venues, since it continues to function as a multi-purpose competition, training and recreation area designed for year-round use by both athletes and the general public. Situated 15 minutes from downtown Calgary, during winter months the Park is home to more than a quarter-million ski and snowboard visits; it also offers introductory programs in bobsled, skeleton and luge. In summer months the Park boasts a mountain-bike park with more than 25 kms of single and open track trails, an obstacle course, trials park, BMX track and freeride stunts. "We have 12 keys areas whose distributed sound systems needed to be updated," Chesnut offers. "The original speakers were installed 20 years ago."

"In addition to handling voice announcements," the manager continues, "we needed loudspeakers that would be capable of high-quality music playback. The One Systems 312CIM is perfect for both functions, and offers outstanding power handling. But of equal importance is that they are environmentally sealed. It's not uncommon for our snow guns to be pointed at these speakers for hours at a time – we see them coated with between six and eight inches of ice during the winter months."

The 312CIM is a three-element, shaded-array loudspeaker system designed to produce high sound-pressure level vocal range content with high intelligibility. The cabinet features a trio of 12-inch, direct-radiator transducers configured in a shaded array; the upper element is also a coaxial system that features a large-format HF compression driver. The array produces vertical beam width control to below 200 Hz and maintains a 60-degree vertical-included radiation angle to below

300 Hz. A three-layer rain-shield design minimizes direct contact with the internal transducers. The enclosure and grill design are rated to IEC 529 IP45 - solid object penetration to 1 mm (0.04 inches - and water jets from any direction.

"Unlike most high-level vocal range systems," considers One Systems president Doug MacCallum, "the 312CIM is not a series of horns nested inside larger horns. These prior art designs suffer from poor vocal intelligibility and are characterized by that traditional 'honky' horn sound. Vocal fundamentals are reproduced by the 312CIM's three-element direct radiator design that does not suffer from the traditional colorations found in horn-based systems." The 312CIM system also offers a complete selection of array and flying/suspension hardware; all internal and external rigging and suspension hardware, as well as the metal grill, are made from stainless steel or high-strength aluminum.

"For our full-range application," Chesnut adds, "the 312CIMs will be coupled to 218 Sub-W subwoofers to provide full bandwidth operation at very high sound-pressure levels in a very small footprint. We have set up the Model 218 Sub-Ws to augment low-end frequencies below 90 Hz."

The 218Sub-W cabinet features a pair of 18-inch LF drivers mounted in a rectangular enclosure, a geometry that because of its larger internal volume provides increased low-frequency response compared to conventional trapezoidal units. The 18 mm birch plywood cabinet utilizes stainless-steel internal structural supports to enable a variety of suspension points. All external metal hardware elements, including the grill, are also fabricated from stainless steel. The 18I/O (Inside Only) LF drivers utilize a unique voice coil wind on the inside of the voice-coil support structure that allows for both high magnetic system displacement as well as increased thermal transfer.

According to Jerry Van Dyke, principal of DBI systems: "To date, we have supplied a total of 13 Model 312CIM cabinets and six Model 218 Sub-Ws. While seven of the 312CIMs will be mounted on various buildings using standard brackets and four-ohm connections, six of the 312CIMs have been modified to operate from a 200V line-distribution system and hence enable long-distance powering."

"Because there is no power available at distant speaker locations," Chesnut continues, "we need to be able to run long speaker lines from our Powersoft K20 power amplifiers – sometimes distances of a kilometer or more - using four-conductor 10-gauge cable. We tested a total of 16 amplifier brands, and the Italian-built Powersofts, which are capable of delivering 10 kW per channel into either four-ohm loads or 200V distribution lines, are our chosen amplifier platform. Since the One Systems 312CIM is rated at 5 kW, we run two 312CIM cabinets per channel; it's a perfect combination." Calgary Olympic Development Association's refurbishment program will continue through 2013.

Jerry Van Dyke, DBI Systems Integration | 403.287-8600 | [jer@dbisystems.ca](mailto:jer@dbisystems.ca)

Jon Chesnut, Calgary Olympic Development Association | 403.247-5610 | [jon.chesnut@coda.ca](mailto:jon.chesnut@coda.ca)

IMAGES:



\_G5G6602 . jpg



\_G5G8332Batchelor CAN . JPG