

# Alpine Ski Race Gate Positioning System

Hemisphere GPS introduces GateMate, a portable Alpine ski racing gate placement and tracking system. First used at the Olympic Alpine Skiing events in Whistler (Canada), GateMate incorporates Hemisphere GPS' Crescent or Eclipse technology and custom designed software in a portable Windows Mobile package, GateMate allows course workers to reduce by more than half the average time to place gates on a course.

The current system used on Alpine ski courses involves manually recording gate locations using various landmarks and measuring tapes to triangulate the position of each gate. When the gates are removed to groom and clear the course, course workers use the previous measurements to place the gates in their original positions - this can take many hours. With GateMate course workers can map the gates to under 1m of their original location without the use of landmarks or measuring tapes in a fraction of the time. In a typical situation one person uses GateMate to mark the gate location and the other person places the gate. The system can also be upgraded to provide gate locations accurate to the centimetre level.

Hemisphere GPS' R200 DGPS dual frequency receiver with RTK was used with GateMate at the Olympics to accurately plot gate positions, allowing the event crew to precisely recreate the course path when the gates were moved for snow grooming. Detailed course distances and elevations were logged with GateMate for technical review with the racing committees. This data was also uploaded to Google Earth for further visualization.

GateMate's intuitive user interface includes a strategic gate numbering system that allows gate tracking from start to finish. GateMate enables users to pinpoint, position, and number a gate at the same time, making removal and replacement efficient and fast. GateMate can be integrated with Google Earth and set to simulate a lifelike run on the screen. The Google Earth map along with the GateMate data allows users to see the gates and entire course up close and personal.

GateMate is compatible with the XF102 DGPS receiver which tracks GPS and SBAS (WAAS, EGNOS, etc.) signals, and with the R200 Series of dual frequency DGPS receivers for use with RTK via base station or cellular.

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