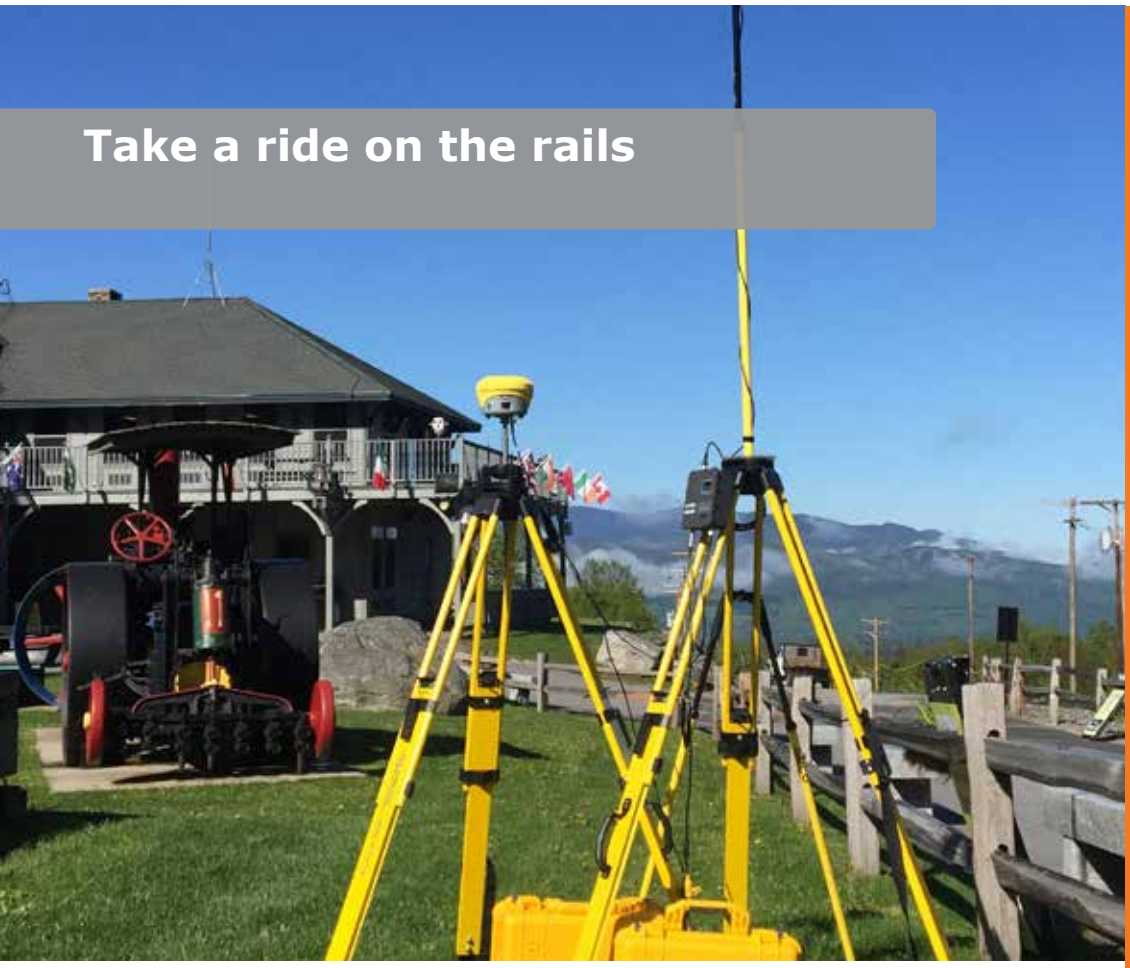
Take a ride on the rails



A ride up Mount Washington in New Hampshire, USA, will take you up a 5.2-kilometre long track with a 1093m change in elevation, at grades more than 37 per cent, through forested terrain and some of the most erratic weather in the country. As the tallest peak in the Northeastern United States, the mountain is the most prominent peak in the East.

Riding the rails

Since 1869, a cog-driven train has been making the ascent to the top easier for those wishing to enjoy the scenic views. Today, the Mount Washington Cog Railway is a National Historic Landmark running environmentally-friendly biodiesel locomotives.

For the train's 150th anniversary in 2019, the historic infrastructure is undergoing maintenance updates for a public anniversary bash. To ensure everything is on track (literally!) GeoMax GNSS solutions are in use.

Positioning for smooth rides

Transporting more than 120,000 passengers each year from the base to the summit, the Mount Washington Cog Railway staff have a responsibility to deliver a safe and enjoyable ride. To do that, they turned to New England Laser and the GeoMax Zenith35 Pro.

Collecting and monitoring positions of the railway's almost 5-km track at an elevation difference of about 1,200 m, New England Laser carefully installed a GPS Rover system to communicate to the base units. This ensures the track is consistently monitored for any

Cog Railway
Steeped in history, this marvel of 19th century technology and modern innovation is an exhilarating voyage through landscape and nature. The Mount Washington Cog Railway, a National Historic Engineering Landmark, is a "must do" for any visit to New England.

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potential deformations and GPS measurements are used to determine if adjustments are needed.

Standing up to the elements

New England Laser selected the Zenith35 Pro for its robustness to stand up to challenging environmental conditions. On a mountain top where the highest wind speeds ever observed by man were recorded at 372 km/h, this is a critical consideration.

Another consideration for project engineers was the efficiency the GNSS receiver could bring to the project.

"Over the length of the baseline, it is more accurate and efficient to use the GNSS receiver," said Alan LaRose, owner of New England Laser. "The Zenith35 Pro has increased productivity versus measuring with a traditional total station since many occupations would be needed to cope with the length and elevation change of the railway."

Assisting the staff with the continued maintenance and upgrades of the railway, GeoMax and New England Laser are honoured to support the 150 years of railway innovation.

New England Laser and Transit Company, with headquarters in New Hampshire, USA, is the master dealer of GeoMax products in the Northeastern Region of the United States. The company is committed to providing customers with the most dependable service in New England. The master dealer assists customers with their goals and increasing productivity while delivering on GeoMax's promise of an outstanding price-to-performance ratio.

In business since 1992, New England Laser and Transit has strived to grow its business with the focus on customer service. In March 2016, owners Alan LaRose and Joe Wallace opened their new state-of-the-art facility in Sunapee, N.H., to be able to provide their customers with the most outstanding customer service as well as promoting the full GeoMax product portfolio.

The compact and rugged GeoMax Zenith35 Pro features a Mil-spec IP68 dust and waterproof enclosure that can withstand a 2-m drop onto a hard surface. With a 555-channel multi-frequency support and full spectrum of satellite signals, the Zenith35 Pro will provide the Cog Railway with precise and dependable measurements for years to come.

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