

Weigh In Motion (WIM)

Prevention of Overload and Imbalance Conditions

MARKET

Rail Infrastructure

AVAILABLE

Worldwide

L.B. Foster's Weigh In Motion (WIM) is a low-cost solution that can reduce derailment conditions and infrastructure damage by detecting and alarming on overloaded or imbalanced vehicles at track speeds.

L.B. Foster has developed this state-of-the-art WIM system built on the solid foundation that the Company's Wheel Impact Load Detector (WILD) has provided the industry for more than 20 years.

The WIM system provides accurate vehicle weight and alerts on overload, side-to-side imbalance, and end-to-end imbalance conditions.

Available as an add-on capability to the Wheel Impact Load Detector or as a stand-alone wayside installation, the Weigh In Motion system is a must-have for any railway.



KEY BENEFITS

- Monitor Individual Vehicles
- Monitor Fleet Performance
- Improve Safety
- Reduce Track Damage
- Reduce Operating Costs
- Reduces the Need to Take Individual Rail Cars Out of Service for Weighing
- Monitor Load Environment

KEY DESIGN FEATURES

- Train, Vehicle, and Wheel Information
- Bi-Directional Traffic
- Automatic Car Counting and Identification (With Valid Car Library)
- Robust Hardware (20 plus Years of Design and Improvements)
- Self-Diagnostics
- Automated Alarm Notifications
- Available as a Stand-Alone System or as an Add-On to the WILD

Wheel Impact Load Detector (WILD)

FUNCTIONALITY & APPLICATION

Using statistical analysis of multiple vertical load measurements recorded by the detector, an estimate of the static weight of a rail car is derived to determine if the rail car is overloaded or imbalanced beyond safe operating limits. These systems are stand-alone, strain-gage measurement arrays like the WILD, which cost-effectively monitor vehicle weight and detect weight-based alarm conditions.

The high speed WIM system reduces the need to take individual rail cars out-of-service for weighing. Low speed or revenue-scale weigh in motion systems command a very high price and require special vehicle handling, which usually will require out-of-service operations.

L.B. Foster's high speed WIM system provides an alternative to weigh bridges by delivering a +/- 2% weighing accuracy over 95% of the time for a fraction of the cost.



TECHNICAL SPECIFICATIONS

- Operating Speeds – 10 mph to 180 mph (50 to 300 km/h)
- Resolution – 100 lb. / 445 newtons
- Measurement Zone – 50 feet (16 meters)
- Hardened Electronics in 19" rack
- Power – 120/220 volts AC or 24 volts DC
- Power – Approximately 4 amps at 24 volts DC
- System Operating Temperature -40° to 158° F (-40° to 70° C)
- Bungalow (Inside) Electronic Components 32° to 131° F (0° to 55° C)