

High Performance Pavement Profilers Using the LCA-100



- **Objectives:** Accurately measure surface roughness
- **Solution:** **Jewell Instruments LCA-100**
- **Benefits:** High-precision and repeatability
- **Results:** Reliable and detailed surface profiles

Overview

[International Cybernetics Company, L.P. \(ICC\)](#) designs and builds equipment for road condition surveys, construction quality control, road asset inventory, and calibration site setup. Their equipment is sold globally to Department of Transportations (DOTs), Engineering and Consulting Firms, University and Educational Institutes, and Transportation Agencies. In addition to their equipment division, they also provide services with their fleet of equipment

throughout USA and Canada.

The [ICC IrisPRO High-Speed Profiler](#) (Figure 1) is renowned for its accuracy and repeatability and is in widespread use for both roads and airports. There are numerous applications where these profilers are used, including smoothness assurance, quality control, warranty validation, and runway smoothness analysis. Additionally, they are used by departments of transportation to set benchmark (reference) data for validating other equipment.

The [ICC IrisGO Portable High-Speed Profiler](#) (Figure 2) is available as an option, especially when high quality profile and roughness data are essential but require special care to and from collection locations. The IrisGO is easily transportable in a ruggedized shipping container for quick deployment to projects.

ICC's inertial profilers are renowned for exceptional accuracy and repeatability enabled by the Jewell Instruments LCA-100, routinely far exceeding the requirements of AASHTO and ASTM requirements.



[Jewell Instruments LCA-100](#)



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ICC utilizes the Jewell Instruments Custom LCA-100-5G high precision accelerometers in the IrisPRO and IrisGO line of profilers. These sensors are mounted vertically spot or lines lasers that are reading the surface changes of the pavement (Figure 4). The combination of the Custom LCA- 100-5G accelerometers and lasers provides data to

calculate IRI (International Roughness Index) and other industry standard indices.

The LCA-100-5G High Precision Accelerometer is a flexure suspension, servo inclinometer. This accelerometer is a precision grade sensing instrument with a robust design suitable for commercial, industrial, material handling and even aerospace applications.



Figure 1 - ICC IrisGO Portable High-Speed Profiler



Figure 2 - ICC IrisPRO High-Speed Profiler



Figure 3 - LCA-100-5G Mounting Above Laser

About Jewell Instruments

Jewell Instruments is a world leader in the design, manufacture, and distribution of high-precision products. Our expertise includes acceleration and tilt sensors, electronic compasses, avionics components, solenoids, and panel meters. The extensive application knowledge we have obtained through decades of experience allows us to provide custom solutions for a diverse group of industries. In fact, customers from all over the globe contact us for solutions to aerospace, medical, industrial, and telecommunications applications - to name a few.

To find out more, visit our website!



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