



KinAiry provides a volumetric performance evaluation of your **laser tracker or laser radar** in your environment. Utilizing NIST's **Interim Field Test Procedure IR-8016<sup>1</sup>**, KinAiry tests and verifies spherical coordinate measurement systems that use cooperative targets—including laser tracker and laser radar systems of most **any make or model**. The KinAiry evaluation process **takes just 20-30 minutes** and delivers objective, traceable results in a graphical analysis comparing directly to your instrument's Maximum Permissible Error (MPE).

## COMPREHENSIVE TESTING

Traditional laser tracker and laser radar field checks consist of 2-face (front sight/back sight) tests or short reference bar measurements. While these have value, they don't exercise the tracker sufficiently to evaluate performance over a larger working volume. That's why NIST designed a volumetric test to assess the total health of a tracker or laser radar in the field.

**The KinAiry process takes a series of measurements on a 2.3 meter bar**—strategically oriented to fully evaluate both the ranging and angular measurement components of a tracker or laser radar.



*When installed on a Brunson portable stand, KinAiry can be set up in nearly any location.*

**The test is quick and easy to run**, occupies a small footprint, and provides the ultimate confidence in your laser tracker or laser radar performance... **right in your environment.**

## IN YOUR ENVIRONMENT

While there is no substitute for the periodic testing a laser tracker or laser radar receives at the manufacturer's facility, it is equally important to be confident that your instrument survived the ride home and is operating within spec on the production floor. The role of interim field testing is to evaluate instrument performance and identify errors in conditions of actual use. It answers the question, "**How is my tracker or laser radar performing right now?**" Results from interim field testing can be used as a required check in the quality audit trail, to confirm instrument performance prior to critical measurements, and to track performance over time.

## OBJECTIVE, TRACEABLE RESULTS

**Many companies own laser trackers and laser radars from different manufacturers**, all of which have built-in, firmware-specific field checks requiring operators to be fluent in various test methodologies. **KinAiry consolidates these device-specific processes into one system check.** The operator follows a simple script to capture test points using the metrology software of choice along with KinAiry's calibrated 2.3 meter artifact in multiple positions. The data is transferred to KinAiry, where it is analyzed and presented in a colored graphical plot comparing the tracker's actual performance against the manufacturer's



*Folding mirror expedites beam buck-in process.*

Maximum Permissible Error (MPE). **KinAiry objectively qualifies the performance of any tracker using a NIST traceable process.** Industry has waited a long time for this!

## INNOVATIVE DESIGN AND PROCESS

KinAiry's innovative features revolutionize the use of long reference bars in the field. The length artifact, a rotating 2.3 meter reference bar, is calibrated and certified on-site by isolating the ranging element of the instrument through an innovative buck-in process. **KinAiry's software guides the operator** through point measurement, which takes about 20 minutes, then analyzes the data and renders a colored plot that instantly diagnoses the health of a tracker or laser radar.

1. NIST IR 8016: "A Proposed Interim Check for Field Testing a Laser Tracker's 3-D Length Measurement Capability Using a Calibrated Scale Bar as a Reference Artifact". Download free from [www.brunson.us/nist-field-test](http://www.brunson.us/nist-field-test)



## SOLUTION PACKAGE

### System Components

- Positioner
- Mirror and Gimbal Mount
- Spanner Wrench
- EasyConnect Base
- Retroreflector Counterweights (2)
- Modular artifact (shown in case, right)



## SPECIFICATIONS

### Artifact Length

8' 0.025" / 2.43 m

### Artifact Rotation

360° with 45° stops

### Solution Weight

Positioner: 24.6 lbs/11.2 kg  
 Length Artifact: 32.7 lbs/14.8 kg  
 Case (packed): 95 lbs/43.1 kg

### Required but not Included

KinAiry software  
 Computer with Windows 7 or later  
 High quality retroreflector for laser tracker applications  
 Three matte-finish spheres for laser radar applications  
 Model 230 shop stand or  
 Model MAS2000TA portable stand

When the KinAiry bar is mounted to this Brunson stand...	The tracker must have an "eye height" of...
Shop Stand (230-0)	49-53 in. (124-134.5 cm)
Portable Stand (MAS2000TA)	49-60 in. (124-152.5 cm)

## SOFTWARE LICENSE OPTIONS

### Option #1: Software Seat

- Works with 1 computer
- License is valid for 1 year

### Option #2: USB Dongle

- Software can be loaded onto any computer but must have the dongle plugged-in to run
- Dongle contains software and software key
- License is valid for 1 year

### Additional software seats

- Additional seats/dongles can be purchased at a discounted rate.

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[www.brunson.us/KinAiry](http://www.brunson.us/KinAiry)

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