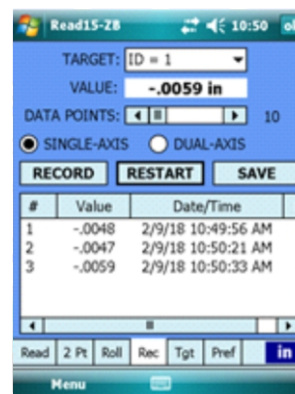


Read15 Readout Software

Supports up to five targets and provides easy alignment support

Read15 is an alignment program that runs under Windows CE™ on handheld PDAs. The program acts as a multi-target readout when used with Hamar Laser's A-1519-2.4ZB and A-1520-2.4ZB Wireless Targets and L-730/L-740 Series scanning lasers, providing a graphic display for basic alignment functions.

- The program can display data for up to five single-axis targets and two 2-axis targets with Zigbee communication capability.
- Values may be viewed easily from a distance by using a pop-up that displays the screen in *landscape* format.
- The 2-Point Buck-in tab offers an easy-to-follow Remote Buck-in procedure for bucking-in the laser to two reference points on a surface, making it parallel to the surface being measured.
- The Roll Buck-in tab is used to buck-in or align the laser plane to reference targets in roll alignment during the laser transfer process.
- Read15 can record up to 500 data points and save the data in an .XML or .CSV (Microsoft Excel) format. The program records the data point number, target value, date/time and units used in the measurements.
- The software features indicators for battery life and background light for each target. The Preference Tab allows the user to easily change and save settings for units, tolerances, resolution display preferences, communication parameters and other program features.



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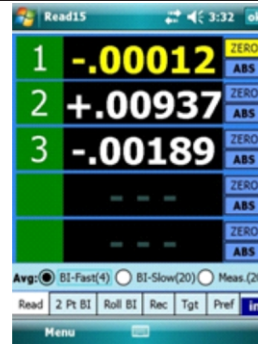
For a list of our distributors, please visit: http://www.hamarlaser.com/intl_distributors.htm

Read 15 Software Features

Viewing Data

Data can be viewed in either portrait or landscape modes. In portrait mode, the buttons to the right of the target reading boxes toggle between ABS (ABSolute) and Zero modes.

- **Absolute Mode** - in **ABS** mode, the value indicates where the laser plane hits the target cell relative to the target's electronic centerline (zero). These values are shown in white.
- **Zero Mode** - when **Zero** mode is selected, Read 15 applies an offset to the display. All target values then indicate the elevation of the point relative to the zeroed value. These values are shown in yellow.
- **Pop-up Mode** - allows the display values to be viewed from a distance.



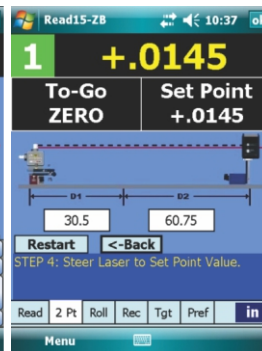
Easy 2-Point, 3-Point and Roll Alignment Buck-In Capabilities

A laser Buck-In makes the laser parallel to the surface being measured by using several brief procedures, depending on the type of buck-in being performed.

- **Two-Point Buck-In** - using our shortcut, (the Remote Buck-In Formula) this tab is used to make the laser parallel to two reference points even in difficult setups where the laser is far from the reference points.
- **Three-Point Buck-In** - add a third reference point to the 2-Point Buck-In procedure and the laser will be aligned to a surface instead of a line for measuring a table top, a surface plate, or several way surfaces.
- **Roll Buck-In** - used to align the laser plane (usually the side or rear plane) to reference targets in roll alignment.



2-point Buck-In, Step 1: Enter Dimensions



2-point Buck-In, Step 5: Steer to Set Point



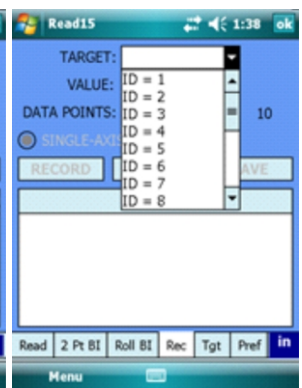
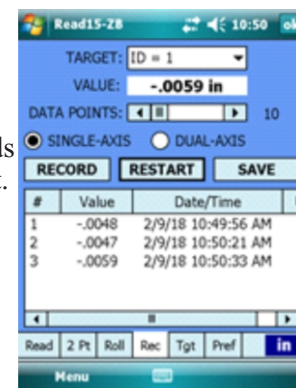
Roll Buck-In Tab showing the alignment of the laser to Targets 2 and 3.

Recording Data

The **Record** (Rec) tab is used to record data points. You can record up to 500 data points and save the data in an XML or CSV (Excel) format. **Read15** records the data point number, target value, date/time and units used in the measurement.

Other features:

- Export data to Excel or XML-compatible applications
- Record single or dual-axis targets
- Re-record over bad data points
- Use multiple targets to record data



Easy Setup Using the Preferences Tab

- **Radio Settings** changes the system radio ID so multiple systems can be used in the same area.
- **Measurement/Display Units** can be specified in millimeters, inches or microns.
- **Resolution** changes the number of decimal places (for example, from .1 to .123).
- **Noise Dampening** (Custom Averaging) averages readings from the target in order to reduce the amount of data variations (fluctuations) seen on the displays. These fluctuations can result from atmospheric turbulence or vibration of the surfaces where the laser and target sit.

