

# R-1356-2.4ZB Wireless, Ruggedized PDA Data Receiver with Read15 Software

*Hand-held convenience, wireless communication via the ZigBee® Networking protocol, and multi-purpose Read15 alignment software*

## ■ A powerful, pocket-sized readout

The R-1356-2.4ZB uses a rugged, IP 67 PDA combined with our Read15 software to display the data for our A-1519/A-1520 wireless targets and any of our L-730/740 Series rotating lasers. When combined with our R-1307-2.4ZB Readout, it can also display the data for our 2-axis targets.

## ■ Read15 software supports five targets and multiple alignment functions

The R-1356-2.4ZB Readout comes with Hamar Laser's Read15 alignment software and can display data for up to 5 single-axis targets and two 2-axis targets.

## ■ Read15 Software features

- 2-Point Buck-In wizard
- Roll alignment Buck-In tool
- Date recording for up to 500 points
- Adjustable data averaging to minimize air noise

## ■ Selectable System ID allows two alignment systems to work side-by-side

The radios employ a frequency-hopping protocol to avoid interference with other radio devices that might be operating at the same frequency. The radio allows the selection of different system IDs so that 2 or more systems can work in the same area and will not interfere with each other.



## The R-1356 features:

- A rugged PDA with a sealed wireless transmitter and an IP 67 environmental rating that can survive water up to three feet with no harm.
- Long battery life of 15 hours with a 2½ hour recharge time.
- Read15 software pre-installed for basic alignment functions.
- Data display for up to five wireless targets.
- Wireless range of up to 133 feet.
- Compatibility with any of Hamar Laser's continuously rotating lasers.



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# Read15 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.

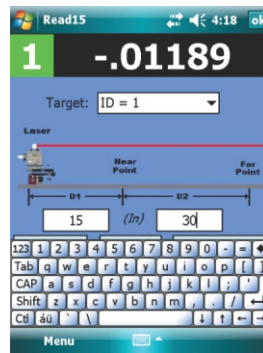
- **Absolute Mode** - in **ABS** mode, the value indicates where the laser plane hits the target cell relative to the target's electronic centerline (zero). These values are shown in white.
- **Zero Mode** - when **Zero** mode is selected, Read 15 applies an offset to the display. All target values then 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.



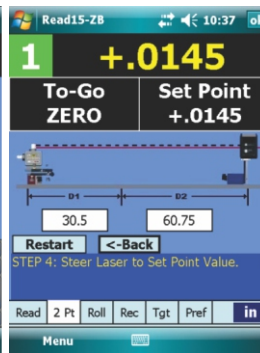
## Easy 2-Point, 3-Point and Roll Alignment Buck-In Capabilities

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.

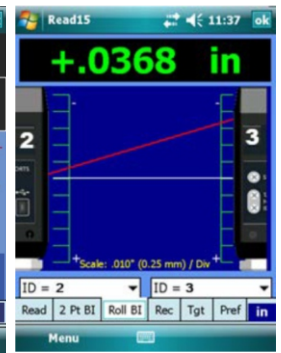
- **2-Point Buck-In** - using our shortcut, (the Remote Buck-In Formula) this tab is used to make the laser parallel to two reference points even in difficult setups where the laser is far from the reference points.
- **3-Point Buck-In** - add a third reference point to the 2-Point Buck-In procedure 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



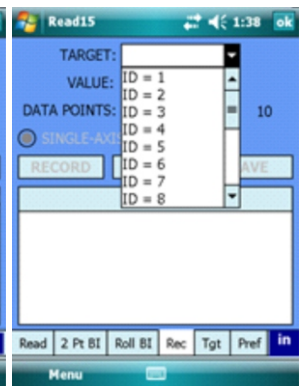
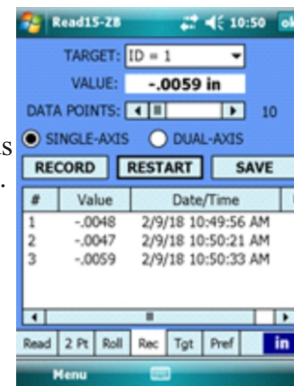
Roll Buck-In Tab showing the alignment of the laser to Targets 2 and 3.

## 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.

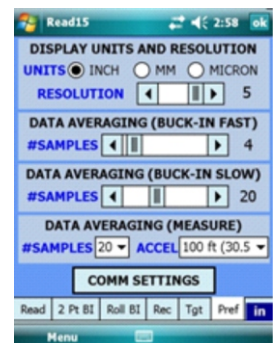
### Other features:

- 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.



# Specifications

## Specifications:

<b>Size:</b>	6.92" L x 3.92" W x 1.96" H (17.6 cm x 10.0 cm x 5.0 cm)
<b>Weight:</b>	1.23 lb. (558 grams) including rechargeable battery
<b>Resolution:</b>	.01", .001", .0001" and .00001" (0.1, 0.01, 0.001 mm)
<b>Battery life:</b>	15 hours with active use (recharges in 2½ hours)
<b>Power:</b>	Field swappable 5200 mAH Li-ion rechargeable battery
<b>Range:</b>	Wireless range of up to 133 feet (40.5 M)
<b>Transmit Power:</b>	1.25 mW (+1 dBm) / 2 mW (+3 dBm) boost mode
<b>Radio Frequency:</b>	2.4 GHz DSSS (Direct Sequence Spread Spectrum)
<b>Environmental Rating:</b>	IP 67, Dust proof and waterproof to 3 feet (1 M)

## Agency Certifications for the XBee® 802.15.4 Series 1

**FCC (United States of America) Certification**

**Contains FCC ID: OUR-XBEE**

**IC (Industry Canada) Certification**

**Contains Model XBee 802.14.4 IC:4214A-XBEE**

**Complies with ETSI (Europe), C-TICK (Australia) and Telec (Japan)**