



PRODUCT MANUAL

# **DIAMONDBACK<sup>®</sup> HD 2000**

LASER RANGEFINDER

## Specifications

<b>MAGNIFICATION</b>	7x
<b>OBJECTIVE LENS</b>	24mm
<b>MAX REFLECTIVE RANGE</b>	Up to 2000 yds. (1829m)
<b>TREE RANGE</b>	Up to 1800 yds. (1646m)
<b>DEER RANGE</b>	Up to 1400 yds. (1189m)
<b>MINIMUM RANGE</b>	5 yds. (4.5m)
<b>ACCURACY</b>	± 1 yd. @ ≤ 100 yds. ± 2 yds. @ ≥ 100 yds. & ≤ 500 yds. ± 3 yds. @ ≥ 500 yds.
<b>MAXIMUM ANGLE READING</b>	± 60°
<b>FIELD OF VIEW</b>	Linear @ 1000 yds. 335' Angular 6.4°
<b>EYE RELIEF</b>	16mm
<b>BATTERY TYPE</b>	CR2
<b>BATTERY LIFE</b>	2000 + Range Cycles at Brightness Level 3
<b>LENGTH</b>	4.1" (103.4mm)
<b>HEIGHT</b>	3.1" (79.5mm)
<b>WIDTH</b>	1.8" (45mm)
<b>WEIGHT W/ BATTERY</b>	7.6 oz. (215.5g)

## DIAMONDBACK® HD 2000 LASER RANGEFINDER

The Diamondback® HD 2000 is an essential companion for the everyday hunter, archer, and shooter. This angle compensated rangefinder features two target modes, Normal and Last, and two range modes, Horizontal Component Distance (HCD) and Line of Sight (LOS) Mode, for any ranging environment.



Images are for representation only.  
Product may vary slightly from what is shown.

## BASIC OPERATION



### Battery Installation and Replacement

To insert a new battery, flip up the finger tab on the Battery Cap located on the bottom of the unit and unscrew, counterclockwise, to remove. Insert CR2 battery with the positive side (+) facing outwards. Reinstall Battery Cap and ensure it is tightly closed.



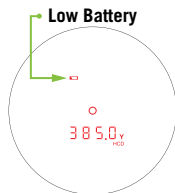
Battery Cap

### Power Up

Once the battery is installed, the Diamondback® HD 2000 is in ready condition – the normal, power-off condition when not ranging. To power up the Diamondback® HD 2000 from ready condition, press and release the “Measure” button. The HCD or LOS ranging screen will display. The Diamondback® HD 2000 will power down automatically after 20 seconds of non-use.

### Low Battery Icon

The Low Battery Icon comes on at 25% and stays on until there is no power or the battery is replaced.



### Adjusting the Diopter

Rotate the Diopter clockwise or counterclockwise until the image is in focus. This may have to be adjusted slightly when viewing at different distances.



### Attaching the Wrist Lanyard

The Lanyard provides a secure way to carry your rangefinder.



Loop the Lanyard through the attachment socket.

### Utility Clip

The Diamondback® HD 2000 comes with a Utility Clip on the unit's left-hand side. You can switch Utility Clip's side by unscrewing the 2mm hex screws on the left-hand side, and the 2mm hex screws on the unit's right-hand side. Reinstall the Utility Clip on the unit's right-hand side and replace the plate and 2mm hex screws on the left-hand side.



## MODE SELECTIONS

### Changing Modes on the Diamondback® HD 2000

The Diamondback® HD 2000 is factory set to the angle compensating HCD range mode, Normal target mode, yards, and brightness level 3.

#### To Change Modes

Press and release the “Measure” button to power the unit On. To change modes, press and hold the “Menu” button until the Mode Selection screen appears (about 2 seconds).

Scroll through the mode options by clicking the “Menu” button. To adjust a mode, click the “Measure” button.

To save your settings and exit the Mode Selection screen, press and hold the “Menu” button for at least two seconds.



Use the “Menu” button to activate the Mode Selection menu and scroll through mode options.

Use the “Measure” button to adjust the mode.

## RANGING MODE SELECTION

### Choose Between the HCD and LOS Modes

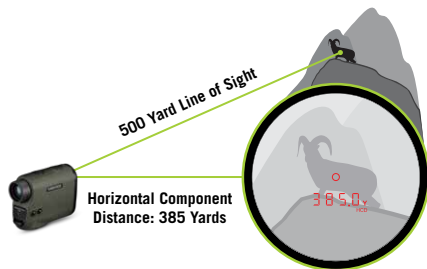
After activating the Range Mode Selection, press the “Measure” button to toggle between the HCD and LOS displays. Press the “Menu” button to save your desired choice and continue through to the Range Selection screen.



Choose between HCD and LOS mode.

## HCD Mode

The Horizontal Component Distance (HCD) display is intended to be your primary mode, used for most rifle and archery shooting applications. The yardage number displayed is the critical HCD.



The displayed HCD yardage is corrected for shot angle and needs no extra user input; shooters simply use the appropriate level ground bullet drop for the range displayed. Archers use the appropriate level ground sight pin for the range displayed.

### Use the HCD range mode in the following situations:

- Rifle shooting on level ground at any range.
- Rifle shooting out to ranges of 800 yards with mild slopes (less than 15 degrees).
- Rifle shooting out to ranges of 400 yards with moderate slopes (15 to 30 degrees).
- For all archery shooting.

**Note:** To correctly account for wind, you need to know the Line of Sight distance to the target as it is based on how far the bullet travels to the target. This can be achieved using the LOS mode.

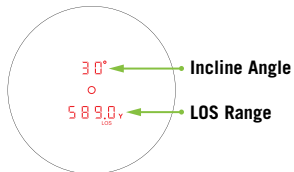
## LOS Mode

The Line of Sight (LOS) Mode is intended for rifle shooters using a slope correcting ballistic drop data card, or ballistic solvers and shooting at distances beyond 500 yards with slopes greater than 15 degrees.

The range number displayed in LOS Mode is the actual line of sight range with no ballistic correction for slope. Most commonly used ballistic solvers can provide independent slope correction for bullet drop data and require actual line of sight range input. Using LOS range when calculating bullet wind drifts under these steep slope/long-range conditions will provide a higher degree of accuracy than using the HCD range.

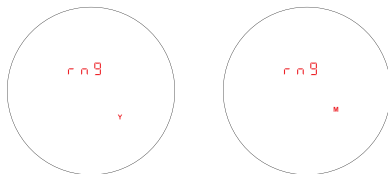
To use, simply input the LOS range number into the ballistic solver and use the LOS range when referencing ballistic drop cards with slope correction.

When in LOS mode, an additional number is displayed above the range number. This number is slope incline shown in degrees.



## Range Unit Selection

Press the "Measure" button to toggle between the Yards and Meters display. Press the "Menu" button to save your desired choice and move to the Brightness Selection screen.

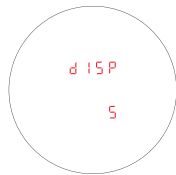


Choose between Yards and Meters.

## Brightness Selection

### Choose Between Five Brightness Settings

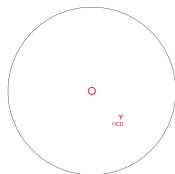
The Diamondback® HD 2000 provides five brightness settings. Press the "Measure" button to toggle through the brightness settings. Press and hold the "Menu" button for at least two seconds to save the desired setting. The unit will return to the power-up condition.



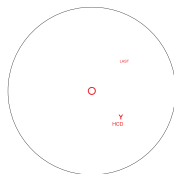
## TARGETING MODE EXPLANATIONS

### Choose Between Normal Mode or Last Mode

Press the “Measure” button to power the unit on. Press and release the “Menu” button to toggle between Normal and Last Mode. When in Last targeting mode, “Last” will be in the upper right-hand corner of the display. When in Normal targeting mode it will be blank.



Normal Mode



Last Mode

### Normal Mode

The Diamondback® HD 2000 comes preset to Normal target mode. This is the standard mode providing the target's range with the strongest range result. Normal Mode is the recommended target mode for most situations.

### Last Mode

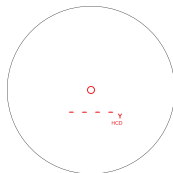
This mode displays the farthest distance when panning and scanning. It is ideal for ranging a specific target behind a group of objects, such as rocks, trees, brush, etc.



Range captured  
on farther elk.

## RANGING

With the Diamondback® HD 2000 powered up, position the reticle on the target object you wish to range, then press and release the “Measure” button to get the distance measurement. If the laser is not able to range due to the reflectivity of the target object, or being too close, you will see a display similar to that shown here. To range a new target, simply re-aim and press the “Measure” button again.



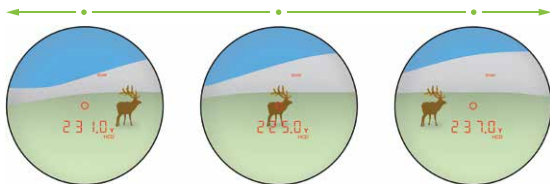
No Range Returned



## Scan Feature

Activate the Scan Feature by pressing and holding the “Measure” button. Keeping the button depressed will continuously measure as you pan back and forth across the target objects. “Scan” will flash in the upper, right-hand corner of the display while scanning.

### Scanning to get range:



Scan back and forth, watching for yardage number to display or change.

## Rangefinding Tips

Rangefinders work by emitting a brief pulse of light aimed at a target object. Distance is determined by the amount of time taken for the light to emit and return to the laser's internal receiver. A laser's ability to read range can be affected by many things, mostly relating to the target object.

- Light colors will usually reflect better than dark ones.
- Snow, rain, fog, and air quality will have adverse effects on ranging ability.
- Dull or textured surfaces will not reflect as well as a hard, shiny surface.
- Ranging under cloud cover can improve laser performance compared to bright, sunny conditions.
- Solid objects, such as rocks, will reflect better than bushes.
- Flat surfaces perpendicular to the laser will reflect better than curved surfaces or surfaces angled in relation to the laser.
- Ranging over water can sometimes cause false reflections and readings.
- At longer distances, larger objects will be easier to range than smaller objects.
- Using a tripod to steady the Viper® HD 3000 will greatly increase your ability to range small targets at longer distances.
- If you have difficulty ranging an animal or object, try ranging a different nearby object, or use the Scan feature to pan back and forth while watching for changes in range.

## MAINTENANCE

### Cleaning

Your Diamondback® HD 2000 requires very little routine maintenance other than periodically cleaning the exterior lenses. The exterior may be cleaned by wiping with a soft cloth. When cleaning the lenses, be sure to use products that are specifically designed for use on coated optical lenses.

- Be sure to blow away any dust or grit on the lenses prior to wiping the surfaces.
- Using your breath, or a small amount of water or pure alcohol, can help remove stubborn dried water spots.

### Lubrication

All components of the Diamondback® HD 2000 are permanently lubricated, so no additional lubricant should be applied.

**Note:** Other than to remove the Battery Cap and Utility Clip, do not attempt to disassemble any components of the rangefinder. Disassembling of rangefinder may void warranty.

### Storage

If possible, avoid storing your rangefinder in direct sunlight or any very hot location for long periods of time.

## FCC REQUIREMENTS

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## SAFETY AND PRECAUTIONS

Do not stare into beam or view directly without laser eye protection. Staring continuously into beam for prolonged periods of time could cause harm to your eyes. If used properly, this device is safe for your eyes and laser eye protection is not needed.

- Use the correct battery (CR2) and proper battery orientation.
- Do not look at sun.
- Do not activate “Menu” or “Measure” buttons while aiming at eye or looking into objective lens.
- Do not disassemble.
- Do not allow children to play with unit.



**Caution**—Use of controls, adjustments, or performance of procedures other than those specified herein may result in hazardous laser radiation exposure.





## **VIP WARRANTY**

**OUR UNCONDITIONAL PROMISE TO YOU.**

We promise to repair or replace the product. Absolutely free.

- ▶ **Unlimited.**
- ▶ **Unconditional.**
- ▶ **Lifetime Warranty.**

**Learn more at [VortexOptics.com](http://VortexOptics.com)**

[service@VortexOptics.com](mailto:service@VortexOptics.com) • 1-800-4VORTEX

*Note: The VIP Warranty does not cover loss, theft, deliberate damage, or cosmetic damage not affecting product performance.*

For additional and latest manuals, visit **[VortexOptics.com](http://VortexOptics.com)**



M-00325-1

© 2021 Vortex Optics

® Registered Trademark and TM Trademark of Vortex Optics. Patent Pending.