



# ASTRA

THE OPTICS STANDARD

## HBX-1600B Laser Rangefinder Binocular

### Quick Start Guide



## Specifications & Features

Magnification	10X
Objective Lens Diameter	42 mm
Prism Type	BaK4 Roof Prism
Close Focus	3.3 yards
Minimum Ranging Distance	10 yards
Eye Relief	15.1 mm
Exit Pupil	4.2 mm
Field of View	330 ft. at 1000 yds.
Water-Resistance Rating	IPX67 (IPX7 Water-Proof & Dust-Proof)
Fogproof	Yes
Lens Coating	Fully Multi Coated
Prism Coating	Silver Coated
Housing Material	Composite with Rubber Armoring
Dimensions	6.42"x 5.12"x 2.17"
Total Wt. (including battery)	27.51 oz.
Laser Type	905 nm Class 1 Eye-Safe
Display Type	High Transmission LCD
Reticle Selection	4 Optional Aiming Reticle Choices
Range Response Time	0.15 seconds (Standard Mode Only)
Battery Type	CR-2 3-volt Lithium
Battery Life	Approximately 5,000 to 10,000 Readings
Laser Range (Reflective)	10-1,760 yds.
Laser Range (Tree)	10-1,000 yds.
Laser Range (Deer)	10-800 yds.
Horizontal (Angle Corrected) Mode	Yes
Angle with Line of Sight Mode	Yes
Archery Mode	Yes
Gun Mode with Ballistics	Yes
Golf Mode with Pin Lock and Slope	Yes
SCAN Mode	Yes
Light Transmission %	84.8% (Left Barrel) / 74.3% (Right Barrel)

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## What's in the Box?

- ◆ 10 Power x 42mm Laser Rangefinder Binocular
- ◆ Soft Premium Carry Case
- ◆ Astra Bino Harness
- ◆ Microfiber Lens Cleaning Cloth
- ◆ Objective Covers with Cord Attachment
- ◆ Eyepiece Lens Cover
- ◆ Astra Optix™ Decal Sticker
- ◆ CR-2 3-volt Lithium Battery (Battery Pre-Installed)
- ◆ Quick Start Guide

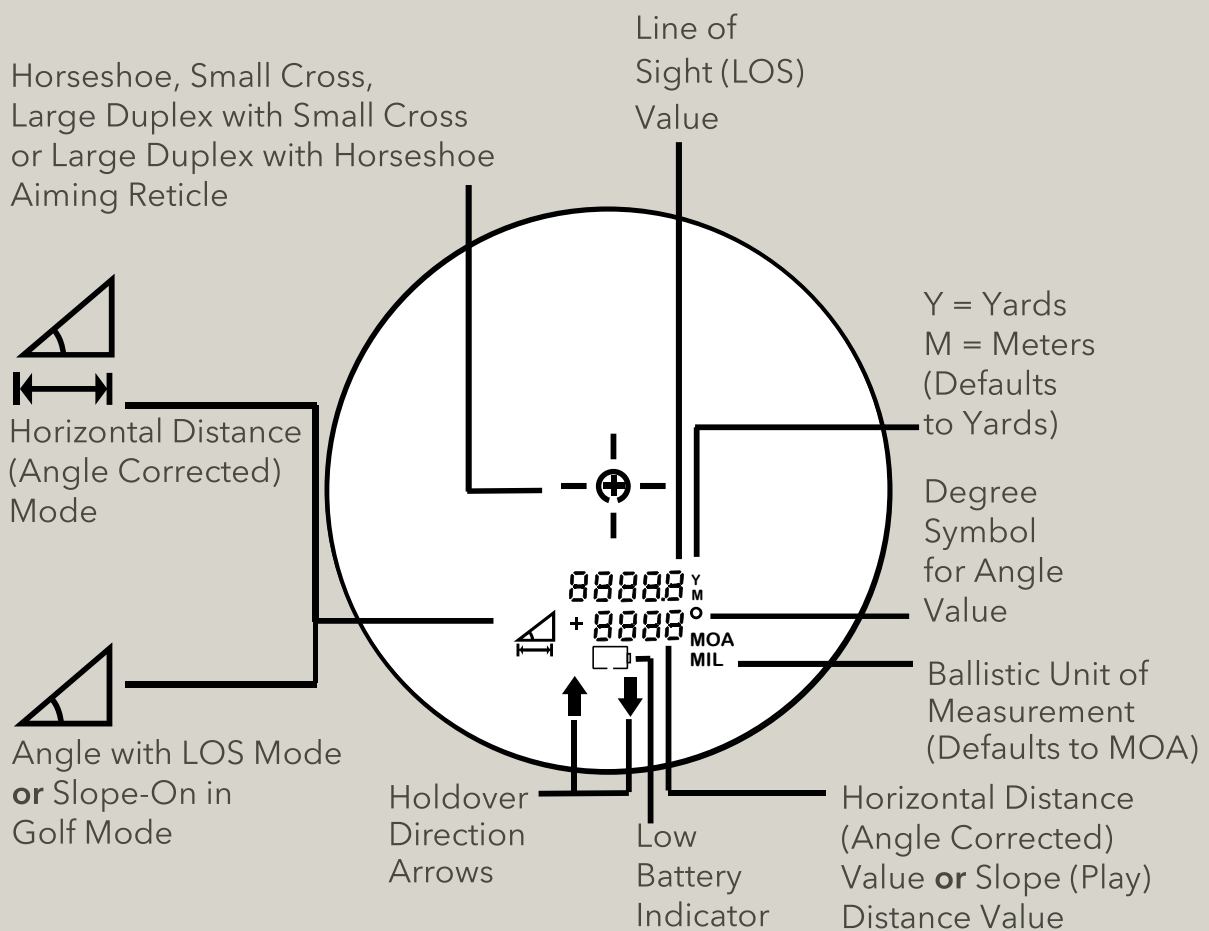


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# Your Rangefinder at a Glance



## High Transmission LCD



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**1. Connect the Battery:** Open the **Battery Cover** and remove the plastic insert from the top of the battery.



**2. Twist Up/Down the Eyecups:**

**Twist up**

◆ When not wearing eyeglasses



**Twist down**

◆ When wearing eyeglasses



**3. Adjust the Eyepiece Spacing:** Look through the binocular eyepiece and adjust the barrels inward or outward until you can see a complete circular image.



**4. Focusing the Binocular & Reticle**

**4.1. Focusing the Reticle:** Press the **Power (Range) Button** to turn on the rangefinder **High Transmission LCD** display. Rotate the **Reticle Focus** until your **Aiming Reticle** is in focus.



**Out-of-Focus Reticle**

**In-Focus Reticle**



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### 4.2. Focusing the Binocular Image:

Aim at an object, cover the left side objective (or close your left eye), and rotate the **Center Focus Wheel** until the image appears sharp in your right eye.



### 4.3. Adjusting your Diopter:

To compensate for the difference in your eyes, aim at the same object, and cover the right-side objective (or close your right eye) and rotate the **Eyepiece Diopter Focus** until the image in the field of view is clear and focused.



Out-of-Focus Image

In-Focus Image



Your binoculars are now focused individually for each of your eyes. When you view at a different distance, you only need to focus the image using the **Center Focus Wheel**.

### 5. Measuring Distance:

Aim the **Aiming Reticle** on the object you want to range and press the **Power (Range) Button** to display the distance. Your unit factory default setting is in the **Horizontal (Angle Corrected) Mode**.

The Line of Sight (LOS) value is displayed for 2 seconds.



The angle-corrected Horizontal Distance ( $\triangle$ ) value is displayed at the bottom of the display for 2 seconds. Both values will continue to flash back and forth for 12 seconds.





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### 6. Menu Settings - Button Operation Summary

Press Power Button to turn on and to measure the distance.

Hold Power Button to SCAN.

Press Power Button to cycle between menu items when in the menu.



Hold Mode Button to enter menu.

Press Mode Button to confirm selections in the menu.

Hold Mode Button to exit menu.

### 6.1. Menu Settings - Menu Operation Summary

- ◆ Distance Units Selection
    - Y / M
  - ◆ Aiming Reticle Selection
    - Horseshoe
    - Small Cross
    - Large Duplex with Small Cross
    - Large Duplex with Horseshoe
  - ◆ Standard Mode (Std)
    - Horizontal (Angle Corrected) with Line of Sight
    - Angle with Line of Sight
    - OFF (Only Line of Sight)
  - ◆ Archery Mode (ArCH)
  - ◆ Gun Mode with Built-In Ballistics
    - Bullet Drop Units Selection: MOA OR MIL
    - Ballistics Group & Zero Distance (100yd or 200yd) Selection
  - ◆ Golf Mode with Pin Lock and Slope Technology: When locked on to the golf flagstick, a Duplex reticle (  $\begin{matrix} - & | & - \\ - & | & - \end{matrix}$  ) will flash giving you visual feedback confirming you have measured the golf flagstick.
- In Golf Mode, your rangefinder will also provide you the adjusted distance (Slope value) based on the angle of decline or incline to the flag.

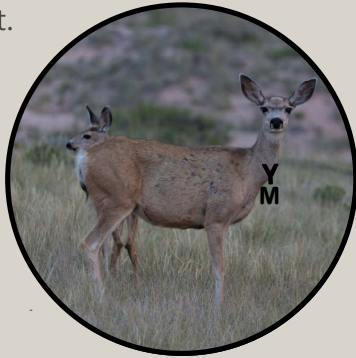


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## Quick Start

**6.2. Yards & Meters Selection:** In the menu press the **Power (Range) Button** to cycle between Yards (Y) and Meters (M). Press the **Mode Button** to select.



**Note:** Each time you turn on your range-finder, the currently selected mode (Std, ArCH, GoLF or Gun) will flash on the display for 2 seconds.

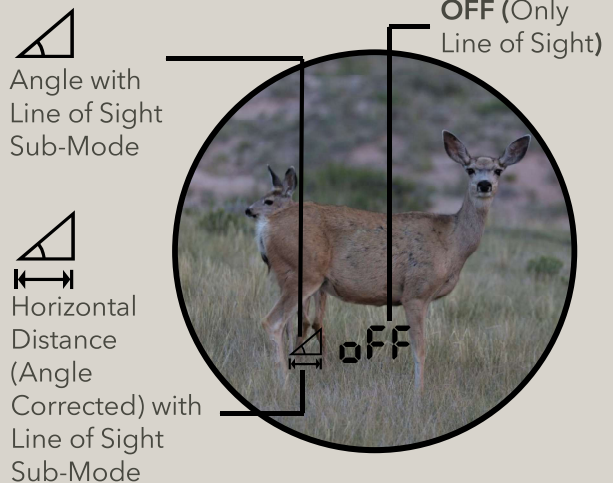
**6.3. Aiming Reticle Selection:** In the menu press the **Power (Range) Button** to cycle between a Horseshoe, Small Cross, Large Duplex with Horseshoe and Large Duplex with Small Cross. Press the **Mode Button** to select.



**6.4. Select the Operation Mode:** Press the **Power Button** to cycle between **Standard Mode (Std)**, **Archery Mode (ArCH)**, **Golf Mode (GoLF)** or **Gun Mode with Ballistics (Gun)**. When the selection you want to use is blinking, press the **Mode Button** to select.



**6.5. Sub-Modes under Standard Mode:** Press the **Power Button** to cycle between each sub-mode. Press the **Mode Button** to select.





## Quick Start

### 6.6. Gun Mode with Ballistics Selection:

#### ◆ Holdover Units Selection - MOA or MIL:

Press the **Power Button** to cycle through these selections and press the **Mode Button** to select.

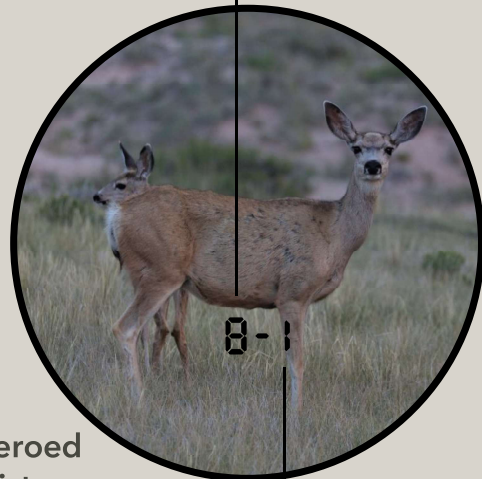


◆ **Ballistic Group Selection and your Zeroed Distance:** Select the ballistic group number that best matches or is similar to the ammunition load you are using from the **Popular Manufacturer's Loads** table on the next page.

Press the **Power Button** to cycle through 10 available ballistic groups. Each comes with two zero distance choices. Press the **Mode Button** to select.

**EXAMPLE:** If you are zeroed at 100 yards and are using a Hornady .223 Rem. cartridge with a 40 Grain V-Max bullet (ballistics group 8), you would choose **8-1** in the laser rangefinder menu.

#### Ballistic Group Number (1-10)



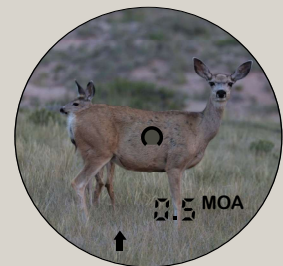
Zeroed Distance  
1=100 yard  
2=200 yard

◆ When using this mode, the line of sight will display for 2 seconds, followed by the ballistics adjustment value for 2 seconds. Both values will continue to flash back and forth for 12 seconds.

#### Line of Sight



#### Ballistics



**Note:** The up arrow indicates you would adjust your riflescope elevation turret in the upward direction by 0.5 MOA in order to correct for the bullet drop. If a down arrow appears, then you would adjust your turret in the downward direction by the amount of MOA displayed.





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## Quick Start Popular Manufacturer's Loads

Brand	Cartridge	Bullet Weight (In Grains)	Bullet Type	Muzzle Velocity (FPS)	Ballistics Group Number	B.C.
Hornady	.223 Rem.	40	V-Max	3,800	8	0.200
Federal	.223 Rem.	55	BT	3,240	7	0.266
Hornady	.22-250 Rem.	50	V-Max	3,800	8	0.242
Winchester	.22-250 Rem.	55	PSP	3,680	7	0.197
Federal	.243 Win.	55	BT	3,850	8	0.276
Remington	.243 Win.	100	CL-PSP	2,960	6	0.356
Federal	.25-06 Rem.	85	BT	3,550	8	0.329
Remington	.25-06 Rem.	120	CL-PSP	2,990	6	0.362
Federal	6.5 Creedmoor®	95	V-Max	3,300	7	0.365
Hornady	6.5 Creedmoor®	143	ELD-X	2,704	5	0.625
Remington	.270 Win.	130	CL-PSP	3,060	6	0.336
Winchester	.270 Win.	150	PP	2,850	5	0.345
Remington	7mm Rem. Mag.	140	CL-PSP	3,175	7	0.390
Winchester	7mm Rem. Mag.	175	PP	2,860	6	0.427
Hornady	.30-30 Win.	140	Mono-Flex	2,465	3	0.277
Winchester	.30-30 Win.	170	PP	2,200	1	0.254
Remington	.308 Win.	150	CL-PSP	2,820	4	0.314
Hornady	.308 Win.	165	SST	2,840	5	0.447
Federal	.30-06	150	JSP	2,910	5	0.313
Remington	.30-06	180	CL-PSP	2,700	4	0.383
Federal	.300 Win. Mag.	150	Fusion	3,200	7	0.410
Winchester	.300 Win. Mag.	180	PP	2,960	6	0.438
Winchester	.338 Win. Mag.	200	PP	2,960	5	0.308
Remington	.338 Win. Mag.	250	CL-PSP	2,660	4	0.431

If you do not see your manufacturer's load in the popular loads table above, visit [www.astraoptix.com](http://www.astraoptix.com) to see our complete **Master Ballistics Table** with many more factory loads.

**NOTE:** We recommend you visit a range and confirm that you are sighted in at one of the possible zero distances (100 yds. or 200 yds.). Then range and shoot at distances that you will most likely shoot at when in the field. Shoot according to the suggested ballistics adjustment value that is displayed to confirm that you have selected the optimum ballistics group number.

**Note:** In Gun Mode, it is normal for the rangefinder to take up to 1 second to return a range value.

In the **Standard Mode (Std)**, the rangefinder will return a range value in approximately 0.15 seconds.

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## Tips for Using Your Rangefinder

- ◆ Your laser rangefinder comes defaulted to the **Horizontal (Angle Corrected) with Line of Sight** distance mode. For archery or shooting, this mode will give you the angle-corrected shoot-at distance to use. For Archery only, use the Archery Mode (ArCH).
- ◆ If you turn off your rangefinder, it will keep the last settings used.
- ◆ This rangefinder also has **Angle with Line of Sight** mode. In this mode, it will display the **Line of Sight (LOS)** value for 2 seconds just under the aiming reticle followed by the **Angle** value at the bottom of the display for 2 seconds. Shooters can use this information to calculate holdover using a ballistics calculator.
- ◆ If using this rangefinder on the golf course, choose the **Golf Mode (GOLF)**. The **Golf Mode** features Slope and Pin Lock technology and will display the nearest distance value (Golf Flagstick) of a group of targets that are within your field of view. The Duplex reticle ( - ' - ) will flash giving you visual confirmation that you have locked on to the golf flagstick. In Golf Mode, your rangefinder will also provide you the adjusted Slope distance based on the angle of decline or incline to the flag.
- ◆ Under ideal conditions, your Astra Optix™ Laser Rangefinder can measure the distance of reflective objects out to 1,760 yds. It can also measure a deer out to 800 yds. The type of target you are ranging strongly impacts the maximum ranging distance.
- ◆ Shiny reflective objects such as metal buildings will range much better than less-reflective objects such as trees, animal fur, bushes or grass. Objects that are more dense, such as trees or rock, will range better than bushes or grass. Bright-colored objects normally range better than dark-colored objects.
- ◆ Rain, fog, snow, bright sunny days and dusty days will reduce the overall ranging performance. Cloudy days without fog, snow, rain or dust blowing in the air provide the best ranging conditions.
- ◆ Targets that have a flat surface 90° to the laser emitting from the laser rangefinder range better than targets that have a curved surface, or are positioned at an angle in relation to the emitted laser.
- ◆ If you have problems ranging your target, use the SCAN feature by holding down the **Power Button** to take continuous measurements.
- ◆ **IMPORTANT:** The adjustment value in the Gun mode is accurate out to 500 yards. This mode should not be used to take long-range shots at distances over 500 yards.

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## Register your Product

Please register your product to activate our **Handshake Warranty** online at [www.astraoptix.com](http://www.astraoptix.com) so it is covered in case anything happens to your product.



Scan our warranty QR code to go directly to our Handshake Warranty registration page.



Like us on Facebook to see the latest news for our Astra Optix rangefinders!



Follow us on Instagram to see our product photos and videos.



Subscribe to our YouTube channel to have a chance for promotions and giveaways.

## Warning

- ◆ Do not look directly at the sun with your rangefinder, as it could cause serious damage to your eyes.
- ◆ Do not aim the rangefinder at a person's eyes and do not look into the objective-lens side of the product when you are pressing the power button.
- ◆ Keep out of reach of small children.
- ◆ Only use a CR2 3-volt battery and do not use any outside power source.
- ◆ Do not attempt to open or take apart your laser rangefinder, as this will void your lifetime warranty, may damage your product and could cause electric shock.
- ◆ Class 1 Laser Product. Product complies with IEC60825-1: Ed. 3: 2014-05 and 21CFR1040. 10/11.

## We are here to help!

Don't hesitate to reach out to us if you have any questions or concerns about your product. On behalf of the Astra Optix family, we want to thank you for your purchase and support.



# Notes:

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