VORTEX®

QUICK START MANUAL

IMPACT® 4000

BALLISTIC RAIL-MOUNTED LASER RANGEFINDER

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SPECIFICATIONS

DISPLAY SIZE	1.3" (33mm)		
DISPLAY TYPE	LCD		
	MAX REFLECTIVE RANGE	**TREE RANGE**	**DEER RANGE**
NORMAL MODE	Up to 2400 yds. (2195m)	Up to 2200 yds. (2012m)	Up to 1200 yds. (1097m)
ELR MODE	Up to 4000 yds. (3658m	Up to 2500 yds. (2286m)	Up to 1500 yds. (1372m)
MINIMUM RANGE	5 yds. (4.5m)		
ACCURACY	± 0.5 yds. @ < 100 yds.		
	± 1 yd. @ ≥ 100 yds. & ≤ 1000 yds.		
	± 3 yds. @ > 1000 yds.		
MAX ANGLE READING	± 89°		
BATTERY TYPE	CR123		
LENGTH	4.6" (117mm)		
HEIGHT	2.5" (64mm)		
WIDTH	3.2" (81mm)		
WEIGHT W/ BATTERY	16.0 oz. (453.6g)		

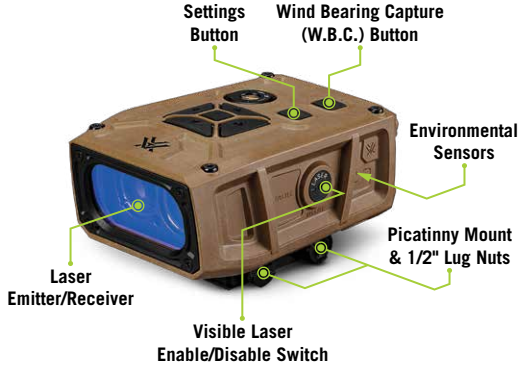
IMPACT® 4000 BALLISTIC LASER RANGEFINDER

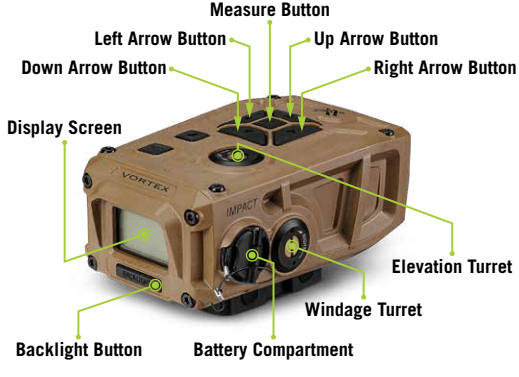
For long-range competitors and open-country hunters, the Impact® 4000 delivers range, ballistic, and environmental data all-in-one, without you ever having to come off the gun. Intuitive to use. Rugged and reliable. This advanced rail-mounted laser rangefinder integrates seamlessly with your rifle, providing point-and-shoot solutions — functioning in places your smartphone can't for deadly speed and precision no matter where you are.

The Impact® 4000 pairs, via Bluetooth®, with your mobile device and the GeoBallistics® App. Scan the QR code below to download the GeoBallistics® App with your Apple or Android device.

The QR code below will also give access to instructional videos.

SCAN QR CODE TO GET STARTED





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

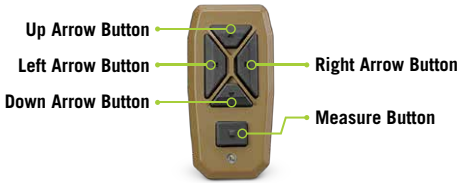
BUTTON NAVIGATION

SETTINGS BUTTON		• Opens and Closes the Settings Menu
WIND BEARING CAPTURE BUTTON		• Opens and Closes the Wind Bearing Capture Screen
MEASURE BUTTON		• Takes Range • Selects Menu Options
UP ARROW BUTTON		• Navigates Up in Menu Structure • Increases Manually Inputted Values
DOWN ARROW BUTTON		• Navigates Down in Menu Structure • Decreases Manually Inputted Values
LEFT ARROW BUTTON		• Navigates Back in Menu Structure • Navigates Left when Manually Inputting Values
RIGHT ARROW BUTTON		• Navigates Deeper into the Menu Options • Navigates Right when Manually Inputing Values
BACKLIGHT BUTTON	BACKLIGHT	• Turns ON/OFF Display Backlight

Note: To change the orientation of the Arrow Buttons on the Bluetooth® Remote, press and hold the button you wish to be "Up" and the "Measure" button for three seconds until the light blinks green.

IMPACT® 4000 BUTTONS

BLUETOOTH® REMOTE BUTTONS



BASIC OPERATION

Battery Installation and Replacement

To insert a new battery, flip up the finger tab on the Battery Cap and unscrew, counterclockwise, to remove. Insert a CR123 battery with the negative side (-) facing outwards. Reinstall the Battery Cap and ensure it is tightly closed.

To insert a battery into the Bluetooth® Remote, utilize the multi tool to unscrew the Battery Cap counterclockwise, to remove. Insert a CR2032 battery with the positive side (+) facing outwards. Reinstall the Battery Cap, turning clockwise, and utilize the multi tool to ensure it is tightly closed.

Power Up

Once the battery is installed, the Impact® 4000 is in ready condition – the normal power-off condition when not ranging. To power up the Impact® 4000 from ready condition, press and release the “Measure” button. The default ranging screen, HCD, will display. To turn off the Impact® 4000, press and hold the “Measure” button for three seconds. The Impact® 4000 Auto-Shutoff default is three minutes. For instructions to change the Auto-Shutoff to one minute or disable Auto-Shutoff, see page 34.

Low Battery Icon

The Low Battery Icon displays once the battery reaches 20% life and stays on until there is no power or the battery is replaced.

Compass Calibration

Compass calibration is important for the accuracy of Wind Bearing Capture Mode. Read steps 1-5 of "Calibrating the Compass and Inclinometer" section before performing the following steps. The Impact® 4000 needs to be calibrated during initial setup and should be re-calibrated every time you significantly change location, typically 30 miles or more, and after battery changes. Calibrate your Impact® 4000 outside and away from large metal structures or objects.

Scan the QR Code below for links to video instructions on how to calibrate the Impact® 4000.

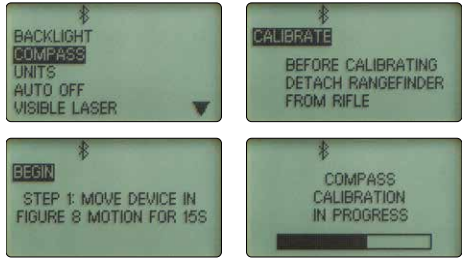
SCAN QR CODE TO GET STARTED

Important: Do not hit any buttons on the Impact® 4000 during this process unless specifically instructed to do so in the following steps.

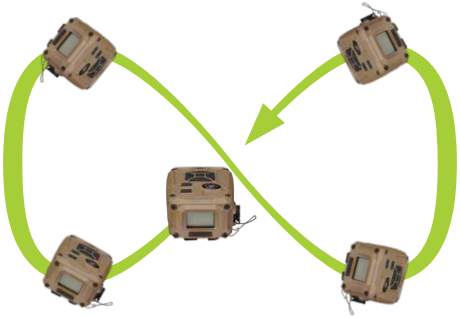
Important: Remove the Impact® 4000 from the rifle before beginning the calibration process.

Calibrating the Compass and Inclinometer

To navigate to the Compass screen, press the "Settings" button. Navigate to and select "Settings" to open the Settings Menu. Navigate to and select "Compass" to open the Compass screen. To begin calibration, select "Calibrate" on the Compass screen. Select "Begin" and complete the following steps when prompted.



1. Rotate the rangefinder in a figure eight for 15 seconds. Press the “Measure” button to continue.



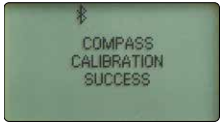
2. Rotate the rangefinder horizontally for 15 seconds. Press the “Measure” button to continue.

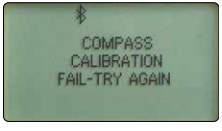
3. Rotate the rangefinder vertically for 15 seconds. Press the “Measure” button to continue.

4. Turn the rangefinder onto its left side and rotate it horizontally for 15 seconds. Press the “Measure” button to continue.

5. Turn the rangefinder onto its right side and rotate it horizontally for 15 seconds. Press the “Measure” button to complete.

The screen will read “Success” if the compass has successfully calibrated. If the screens reads “Fail - Try Again”, press the “Measure” button to restart the calibration and repeat this process until the Impact® 4000 is successfully calibrated.





MOUNTING

Once your Impact® 4000 has been calibrated it can be mounted to your weapon. Prior to mounting the laser rangefinder ensure your riflescope is mounted and zeroed to your desired zero distance.

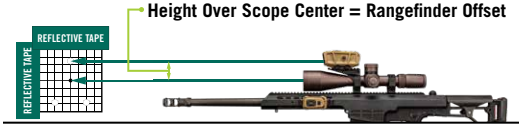
1. Mount your picatinny diving board mount or picatinny accessory rail and tighten to the manufacturer’s torque specifications using a torque wrench.
2. Place the Impact® 4000 Picatinny Mount on the rail and position it so its placement does not interfere with the adjustment of the turrets.
3. Using the provided 1/2" Nut Driver Tool, tighten the 1/2" Lug Nuts to 45 in-lbs. Using a torque wrench is recommended if available.

Note: If the Impact® 4000 is mounted on the side of the gun, the screen will auto-rotate accordingly.

ZEROING

To ensure the accuracy of the Impact® 4000 range and ballistic solutions it must be zeroed parallel to your riflescope. This allows you to aim the device with the center of your reticle at all distances. To zero, follow the steps below:

1. Before starting, your riflescope must be properly mounted and zeroed. Your Impact® 4000 must be calibrated and then mounted to your weapon.
2. Place the Small Reflective Target Sticker on the Alignment Target at the same measured offset that the Impact® 4000 is mounted from the center of the riflescope. Find common mounting offsets marked on the Alignment Target. Your offset may be different, it is good to measure left/right and up/down offset to the nearest 1/4" to verify the sticker placement.



Note: The Alignment Target grid consists of 1" squares for easy measurements.

3. Hang the Alignment Target, in a safe direction, at 50-100 yards using the Large Reflective Tape Strips. Use one piece of tape on the top of the target and one on the side of the target.
4. Turn the Visible Laser Switch on the side of the laser rangefinder to “Enable” utilizing the provided Torx® T-10 Tool.

5. Turn the Visible Laser ON from the Settings Menu. To do so, press the “Settings” button. Navigate to and select “Settings”. Navigate to and select “Visible Laser” and select “ON”.

   Note: While the Visible Laser is ON, all ranging and ballistic functions are disabled.
6. Utilize the Large Reflective Tape Strips to locate the target with the Visible Laser. The Visible Laser may not be well aligned to start.
7. Align your riflescope’s crosshair to the center dot of the Alignment Target, and use the Flat Head Tool to adjust the Elevation and Windage Turrets to align the Visible Laser to the Small Reflective Target Sticker.
8. Your Impact® 4000 is now zeroed parallel to your riflescope.
9. Turn the Visible Laser Switch on the side of the laser rangefinder to “Disable” utilizing the provided Torx® T-10 Tool and turn the Visible Laser OFF from the Settings Menu following the instructions from Step 5.

Once the Impact® 4000 is calibrated, mounted, and zeroed it must be setup to your specifications to ensure accurate ballistic solutions for your shooting scenario.

SETUP MENU

Changing Modes on the Impact® 4000

The Impact® 4000 is factory set to the angle compensating HCD Range Mode, Normal Target Mode, .308 Winchester Profile, and Range Card OFF.

To Change Modes:

Press the "Measure" button to power on the unit, and then press the "Settings" button to open the Main Menu. Navigate to and select "Setup". In the Setup screen, you can access both Range and Target Mode Selection screens.

As you progress through the Mode Selection, you may exit at any time and save your settings by pressing the "Settings" button and the unit will then return to the Range screen.

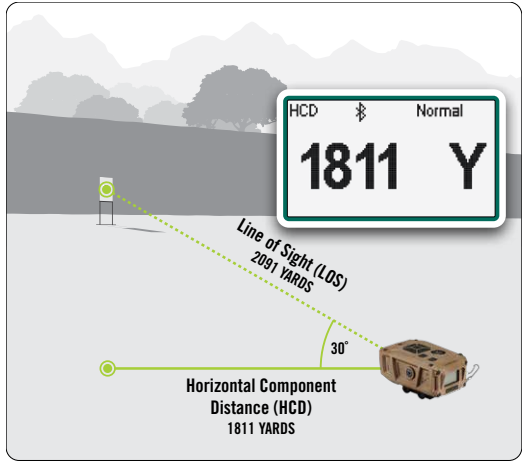
Range Mode Selection

Choose between HCD, LOS and BAL Modes

On the Setup Menu screen, toggle to and select "Range Mode". You can choose between the HCD, LOS and BAL displays. The selected mode will be designated with an arrow. Return to the Setup Menu screen and continue to Target Mode Selection.

HCD Mode

The Horizontal Component Distance Mode (HCD) will be your primary mode when not using the on-board ballistic solver. The yardage number displayed is the critical horizontal component distance. The displayed HCD yardage number is corrected for shot angle and needs no extra user input; shooters simply use the appropriate level ground bullet drop for the range displayed and shoot.

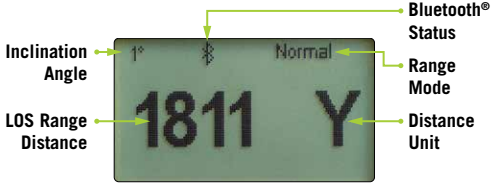


Note: To correctly account for wind, you need to know the line of sight distance to the target as it is based on how far the bullet travels to the target. This can be achieved using the LOS or BAL Mode.

LOS Mode

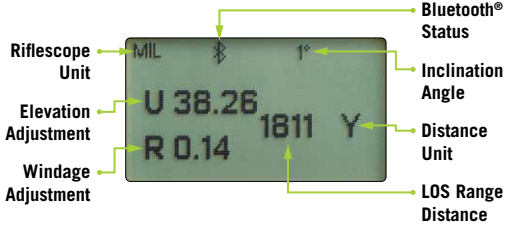
The Line of Sight (LOS) Mode is intended for rifle shooters who are using slope correcting ballistic drop data cards, ballistic cell phone applications, or other devices with ballistic programs and who are shooting at distances beyond 500 yards and with slopes greater than 15 degrees.

The range number displayed in LOS Mode is the actual line of sight range with no ballistic correction for slope. Most of the commonly used ballistic devices can provide independent slope correction for bullet drop data and require actual line of sight range input. Using the 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. While in LOS Mode, Inclination Angle of the target is also displayed on the screen. Downward angles are denoted with negative numbers.



BAL Mode

When in Ballistics (BAL) Mode, in addition to the Range, the Slope Incline in degrees, Riflescope units in MOA, MIL, or inches, and the Ballistic Correction based on the selected profile are also displayed. To use the on-board ballistic solver, you need to be in BAL Mode. When in BAL Mode, line of sight measurements are used to calculate ballistic solutions.



Target Mode Selection

The Impact® 4000 provides two target modes: Normal Mode and Extended Laser Range (ELR) Mode.

On the Setup Menu screen, toggle to and select "Target Mode". You can choose between Normal and ELR Mode. The selected mode will be designated with an arrow. Return to the Setup screen and continue to Profile Selection.

Normal Mode

The Impact® 4000 comes preset to Normal 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.

Extended Laser Range (ELR) Mode

This mode allows for ranging smaller, less reflective targets at extended distances. It is ideal for ranging when Normal Mode is unable to obtain a desired range. A longer response time may be required to receive the desired range.

Profile Selection

The Impact® 4000 comes with ten common default Ballistic Profiles. The profiles can be used as is or customized to reflect your specific rifle and bullet combination.

The default profiles include .308 Winchester®, 6.5 Creedmoor®, .223/5.56, .30-06, .300 Winchester® Magnum, .270 Winchester®, 7mm Remington® Magnum, .243 Winchester®, .22-250 Remington®, .22 Long Rifle.

On the Setup Menu screen, toggle to and select "Profile". You can choose between the 10 ballistic profiles. The selected profile will be designated with an arrow.

To edit a profile, ensure it is designated with the arrow and then select it. You are able to customize the Bullet information, Rifle information, or Rename the profile.

Bullet Information Screen

To edit the Bullet information, use the up and down arrows to toggle to and select “Bullet”. To edit a field, when highlighted, press the “Right Arrow” button to select the data and use the up and down arrows to modify the data. Press the “Left Arrow” button to return to the field list. Return to the previous screen to continue to the Rifle information.

Caliber (in):
The bullet’s diameter in inches.

Weight (gr):
The bullet’s weight in grains.

Length (in):
The bullet’s length in inches.

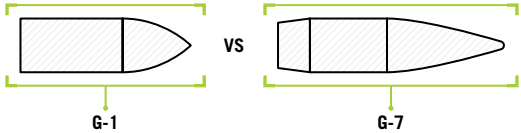
Ballistic Coefficient:
The bullet’s Ballistic Coefficient as it correlates to the drag function.

Note: Find these values on the ammunition’s box or on the manufacturer’s website.

Drag Model – G1 vs G7

This information may be printed on the box if you are using manufactured bullets. If you are using custom loads, use the Drag Model listed on the packaging for your bullet. If the Drag Model is not listed on the packaging, this information can usually be found on the bullet/ammo manufacturer’s website.

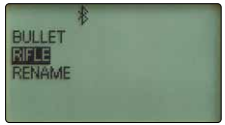
In general, G1 is better for flat-based bullets typically used with pistols and muzzleloaders. G7 is more common and better for longer, boat-tailed bullets which are common for center fire cartridges.



Note: Drag Model options: Multi G1, Multi G7 or CD, can be imported from the GeoBallistics® App. When using these the Ballistic Coefficient will read “MULTI” or “CD” and the Drag Model will read “MULTI G1”, “MULTI G7” or “CD” based on your selection.

Rifle Information

To edit the Rifle information, toggle to and select “Rifle”. To edit a field, when highlighted, press the “Right Arrow” button to select the data and use the Up and Down Arrows to modify the data.



Sight Height

Height from the center of the rifle bore to the center of the optic. The measurement units can be set to standard (inches) or metric (centimeters) in the Settings Menu.

Zero Range

The distance at which you have zeroed your rifle. The measurement units can be set to standard (yards) or metric (meters) in the Settings Menu.

Barrel Twist Rate

Barrel Twist Rate is the distance covered for each revolution of the bullet within the barrel. For example, if your barrel is denoted as “1:8”, this means the bullet will complete one full rotation every 8 inches and you should enter “8” into this space. This information may be marked on the rifle barrel, or on the manufacturer’s website.

Note: If your barrel has a left-hand twist, you must enter the Twist Rate via the GeoBallistics® App and denote it with a negative or minus sign. A negative sign will then be displayed before the Twist Rate on the device. If you cannot find the Twist Rate for your barrel, we recommend inputting 10. This value is used in conjunction with Bullet Length to calculate Spin Drift.

Muzzle Velocity

Muzzle Velocity (MV) is the projectile’s speed as it leaves the muzzle. You can find this information on the packaging from most ammunition manufacturers, or their websites. We highly recommend that you use a chronograph to verify this information. The measurement units can be set to standard (ft/s) or metric (m/s) in the Settings Menu.

An MV Temp Table can be input via the GeoBallistics® App. Scan the QR code on page 6 to see the Full Product Manual for directions on how to do so. If an MV Temp Table is active, the calculated MV will be displayed with a T preceding it. Ex: T2743.

Sight Units

Choose the Sight Units you would like to have your drop chart displayed with MIL, MOA, or inches. This information will be based off the angular unit of measurement your riflescopes turrets and reticle are laid out in.

Renaming a Ballistic Profile

To rename the Ballistic Profile, toggle to and select “Rename”. Use the Left and Right Arrow buttons to select which character to change and the Up and Down Arrow buttons to toggle through the keyboard options. After renaming the profile, return to the Setup screen.

Range Cards

A Range Card can help provide quick and accurate ballistic solutions that can be used again and again. The Impact® 4000 has the capability to store ten Range Cards. Within each Range Card, ten targets can be stored.

To build a Range Card, navigate to and select “Range Card” on Setup Menu. On the Range Card screen, select “ON” to turn on the Range Card feature.

To select which Range Card you’d like to edit, toggle to and select “Card Manager”. Select which card you’d like to edit. To rename the Range Card, press the “Right Arrow” button and select “Rename”. Use the Left and Right Arrow buttons to select which character to change and the Up and Down Arrow buttons to toggle through the keyboard options. After renaming the Range Card, press the “Settings” button to exit the menu and return to the Range screen.

Building a Range Card

Line up your riflescope to your target and press the “Measure” button to range. The measured range will show up as A. You can change this range until you are satisfied with the distance by pressing the “Measure” button to range again or changing it manually by pressing the “Right Arrow” button to select the range and adjust the distance using the Up and Down Arrow buttons. If you are satisfied with your range, move onto the next target by pressing the “Down Arrow” button to move to letter B. Continue these steps until all the targets are entered.

To save the Range Card, press the “Settings” button and select “Yes” when asked to save changes.

Note: The Range Card will save the Target Distance, Inclination Angle, and Direction. If you update your wind or weather parameters, your range card ballistic solutions will automatically update accordingly.

To turn OFF the Range Card, press the “Settings” button to return the Main Menu, select “Setup”, toggle to and select “Range Card” and toggle to and select “OFF”. Return to the Main Menu and continue to adjust the Impact® 4000 Settings.

SETTINGS MENU

Changing Settings on the Impact® 4000

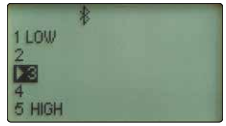
The Impact® 4000 is factory set to Brightness Level 3, Standard Units, Auto-Shutoff set to 3 minutes and the Visible Laser set to OFF.

To Change Settings:

Press the “Settings” button to open the Main Menu. Navigate to and select “Settings” to open the Settings Menu. In the Settings Menu, you can access Backlight, Compass, Units, Auto-Shutoff and Visible Laser settings. This menu is also where you can reset your device to factory settings.

Backlight Selection

Choose Between Five Brightness Settings

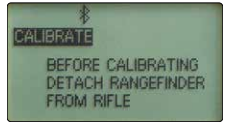


The Impact® 4000 features five Backlight brightness settings. Toggle through the five settings and select your desired brightness level. Return to the Settings Menu.

Note: This adjusts the brightness of the Backlight. To turn the Backlight on/off, press the “Backlight” button under the Display Screen on the Impact® 4000.

Compass

The Impact® 4000 compass needs to be calibrated during initial setup and should be re-calibrated every time you significantly change location, typically 30 miles or more. Calibrate your Impact® 4000 outside and away from large metal structures or objects.



For instructions on how to calibrate your Impact® 4000 see the “Calibrating the Compass and Inclinometer” section on pages 13-16.

Note: You need to remove the Impact® 4000 from your rifle before calibrating.

Unit Selection

The Impact® 4000 offers the selection of standard or metric units. This will set all applicable Riflescope Units, Weather Units, and Distance Units to that unit of measure. To customize each unit individually, navigate to and select “Custom”. Press the “Right Arrow” button to open the Custom screen, where you can edit Riflescope Units, Weather Units, and Distance Units independently. To change the unit of measure, navigate to the unit you’d like to change, press the “Right Arrow” button to select the current unit of measure, then use the Up and Down Arrow buttons to toggle through the unit options. Once you have selected your desired unit of measure, press the “Left Arrow” button to return to the list. Repeat until all units are set to your preferences. Return to the Settings Menu to adjust the Auto-Shutoff settings.

Auto-Shutoff Selection

The Impact® 4000 offers two Auto-Shutoff options: 1 minute and 3 minutes. It is also possible to turn off the Auto-Shutoff feature. Once you have made your desired selection, return to the Settings Menu.

Visible Laser Selection

The Impact® 4000 comes equipped with a Visible Laser to be used for zeroing the rangefinder. The Visible Laser Switch must be enabled on the side of the rangefinder using the included Torx® T-10 Tool to function. If the Visible Laser is ON, the red alignment laser will turn on. The use of the Visible Laser is only permitted for zeroing. No range or ballistic solutions can be calculated while the Visible Laser is ON. Return to the Settings Menu. Turning the Visible Laser Setting to OFF will re-enable ranging functions of the device.

Reset Selection

The Reset screen can be used to restore the Impact® 4000 to factory settings. Select “Erase All Data & Restore” to reset the device. Press the “Setting” button to return to the Main Menu and continue on to Connected Devices.

Note: This will clear your Range Cards, Rifle Profiles, and all other selections made. If you wish to save a copy of your Range Cards, Rifle Profiles prior to performing this step, make sure to sync your device with the GeoBallstics® App.

CONNECTED DEVICES MENU

The Impact® 4000 can connect with other Vortex Relay™ devices to maximize shooting accuracy and efficiency through real-time data sharing. Vortex Relay™ is a closed network that recognizes and remembers every Vortex Relay™ enabled device in your long-range toolkit. Set it up once, and it reliably connects every device, every time. Connecting multiple Vortex Relay™ products seamlessly integrates you ballistic tools and transmits information between devices so you don't have to, keeping information up-to-date and consistent across devices.

Note: The Impact® 4000 can operate as a stand-alone device. Connection to other devices is not required.

Devices

The Devices screen allows you to view, add, or remove devices and connect your Bluetooth® Remote to the devices you'd like for it to control.

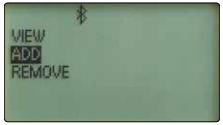
View

On the View screen, you can view which devices are currently connected via the Vortex Relay™ Network. To show up on the network, the devices must be previously added and turned on. When you select a device, you can see the latest firmware and software information by pressing the "Right Arrow" button.

Note: A network is a group of devices and/or mobile applications that communicate to each other. Devices can only be connected to one network at a time.

Note: On the Range screen, the Bluetooth® icon will change to a number to indicate how many devices are on the network. A "1" indicates that the Impact® 4000 is the only device on the network. A "4" would indicate that 3 other devices are on the network with the Impact® 4000.

Add



The Add screen is where you can add devices to your network. The Impact® 4000 will automatically find all compatible devices on the Vortex Relay™ Network that are turned on and within Bluetooth® range (approximately 30 feet) that are not already connected to another network. Select the device from the list that you wish to add. When the new device joins the network, if the Profiles or Range Cards are different, you will be asked on both devices which device's information should be used. Repeat to add any additional devices.

Note: When adding a Bluetooth® Remote to your Impact® 4000 device, it will automatically pair and control your device.

Remove

The Remove screen is where you can remove devices from your network. Select the device you wish to remove from the network.

Note: You can remove your Impact® 4000 device from your network. You would need to do this if you are shooting with a friend and wish to join their network or if you sell or lend your Impact® 4000 to someone else.

Connect Remote

The Connect Remote screen is where you can control which device your Bluetooth® Remote is paired to. Before doing so, you must make sure to add the Bluetooth® Remote to your network via the Add screen. Select your remote, and then select which device you'd like to connect your remote to. Connected devices will be denoted with an arrow. Return to the Connected Devices Menu to select which source you'd like to provide which information.

Blinking Red
- Not On a Network

Blinking Orange
- On a Network
- Not Connected to a Device

Blinking Green
- On a Network
- Communicating With a Device

Note: When the Bluetooth® Remote blinks red, it is not on a network. When it blinks orange, it is on a network, but not connected to any other device. When it blinks green, it is on the network and communicating with another device on the network.

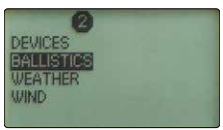
Note: You are not able to connect the remote to control the GeoBallistics® App.

To manually disconnect the Bluetooth® Remote from the Impact® 4000, but keep it on the network, press and hold the remote's "Left Arrow" button and "Right Arrow" button together for three seconds.

The Bluetooth® Remote can also be disconnected from the network manually by pressing and holding the remote's "Up Arrow" button and "Down Arrow" button together for three seconds.

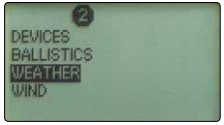
Ballistics

Once you have connected your devices to your network, select "Ballistics" on the Connected Devices Menu and select which device's on-board solver you'd like to provide ballistics. The selected device will be denoted with an arrow.



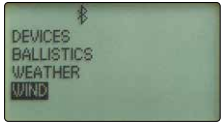
Weather

Select "Weather" on the Connected Devices Menu and select which device you'd like to provide weather information. The selected device will be denoted with an arrow. Weather can be sourced from the Impact® 4000 on-board Environmental Sensors, another Vortex Relay™ device, or from the GeoBallistics® App. The GeoBallistics® App can source weather from local weather stations or third-party wind meters.



Wind

Once you have connected your devices to your network, select "Wind" on the Connected Devices Menu and select which device you'd like to provide wind information. The selected device will be denoted with an arrow. Wind data can be manually inputted via the Impact® 4000 or sourced from another Vortex Relay™ device, or the Geoballstics® App. The GeoBallistics® App can source wind data from local weather stations or third-party wind meters.



WEATHER INFORMATION

When calculating wind/drop solutions in BAL Mode, it will be necessary to account for wind and weather for the most accurate solution. The Impact® 4000 comes with on-board Environmental Sensors to capture the following data:

- Direction (compass)
- Temperature (thermometer)
- Angle of Incline (inclinometer)
- Pressure (barometer)
- Humidity (hygrometer)

Access Wind, Weather and Wind and Target Direction screens by pressing the "Wind Bearing Capture" button and using the Measure button to toggle through screens.

Wind Screen

Wind Bearing Capture

The Impact® 4000 uses the patented Wind Bearing Capture to manually input Wind Speed and Direction. The Impact® will keep track of Wind Direction regardless of the direction the user is facing.

Note: Be sure that the Impact® 4000 has been properly calibrated (see pages 13-16) before attempting to use the Wind Bearing Capture Mode.

Establishing the Wind Bearing and Speed:

1. Press the “Measure” button to turn on the Impact® 4000.
2. Press the “Wind Bearing Capture” button to enter the Wind screen. The Wind Speed and Direction will be displayed. The displayed direction is the direction the Impact® is pointed.

3. To manually adjust the Wind Speed, press the “Up Arrow” button to increase the Wind Speed or press the “Down Arrow” button to decrease the Wind Speed.
4. To manually change the Wind Direction, press the “Left Arrow” button to move the wind direction indicator counterclockwise or press the “Right Arrow” button to move the Wind Direction indicator clockwise. The wind indicator moves in 15-degree increments. Orient the wind direction indicator to represent the direction the wind is coming from. (ie: indicator direction is the Wind Direction).

   Note: If calibrated, the wind direction indicator will rotate as the device rotates regardless of the direction the user is facing.

Weather Screen

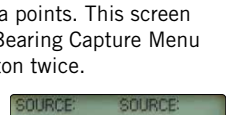
Temperature, Pressure, Humidity, and a calculated Density Altitude are displayed on the Weather screen. The Weather screen can be accessed from the Wind screen by pressing the “Measure” button once. The values for Temperature, Pressure and Humidity can be measured by the on-board Environmental Sensors, provided by another Vortex Relay™ device, or entered manually. They can also be provided by the GeoBallistics® App. When provided by the app, these values are not adjustable via the Impact® 4000. Use the Up and Down Arrows to toggle between “Internal Sensors” and “Manual”. When in Manual, you can manually change the weather information by pressing the “Right Arrow” button to toggle to the desired variable and then pressing the “Up Arrow” to increase or “Down Arrow” button to decrease the values.

Note: Density Altitude is calculated from the provided weather information and cannot be directly entered.

Wind and Target Direction Screen

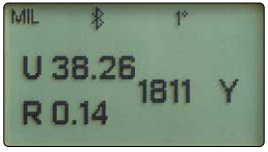
The Wind and Target Direction screen displays both the direction of the target from the shooter along with the direction of the wind in degrees. This screen also lists the source of each of these data points. This screen can be accessed via the Wind Bearing Capture Menu by pressing the “Measure” button twice.

Example: A target due north of the shooter is displayed as 0˚. Wind blowing from east to west will display as 90˚.



RANGING

Once the Impact® 4000 is set to your rifle's setup and preferences, and the wind and weather are captured, it is ready to range. With the Impact® powered up, position your riflescope's reticle on the target you wish to range, then press the "Measure" button to get the distance measurement. If in BAL Mode, a custom wind/drop solution will be displayed. The number on the top is your Elevation Correction and the number on the bottom is your Windage Correction. The direction you dial is signified on the left side of the correction with a "U" for up or "D" for down for the elevation and either a "L" for Left or "R" for right for windage. Simply dial or hold for the correction.



Note: If the laser is not able to range due to the reflectivity of the target object, or being too close, you will see a range return of zero. To range a new target, simply re-aim and press the "Measure" button again.

RANGEFINDING TIPS

Laser 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, air quality, and fog 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 stable position or platform with the Impact® 4000 will greatly increase your ability to range small targets at longer distances.
- If you are having difficulty ranging an animal or object, try ranging a different nearby object or switch to ELR Mode.

MAINTENANCE

Cleaning

Your Impact® 4000 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 Impact® 4000 are permanently lubricated, so no additional lubricant should be applied.

Note: Other than to remove the Battery Cap, 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. We recommend using the included sure fit cover for added protection during storage and transportation.

TROUBLESHOOTING GUIDE

The Impact® 4000 will not show up in the GeoBallistics® App in my device.

- Bluetooth® modules of a certain age may not be able to communicate with modern devices. Devices such as iPhone 6 and older, or Android 4.0 and older, may not work with the Impact® 4000.

I have paired my Impact® 4000 with my device, but they are not communicating.

- If you have successfully paired before, and the device and Impact® 4000 will not communicate, turn the device on and off on both your device and on the Impact® 4000.

My compass will not calibrate.

- If the compass will not calibrate, ensure you are calibrating the compass outside and away from buildings, cell towers, or other structures.
- If the Impact® 4000 calibration is off, then repeat the calibration. The Impact® 4000 may need to be recalibrated when changing geographic location, typically 30 miles or more.

INDEX

Default Profiles

BULLET	.308 WIN	6.5 CREEDMOOR®
Bullet Weight	175gr	140gr
Bullet Diameter	0.308 in	0.264 in
Bullet Length	1.24 in	1.38 in
Barrel Twist	12 (1:12)	8 (1:8)
Drag Function	G7	G7
METRO	ICAO	ICAO
Ballistic Coefficient	0.243	0.326
WEAPON		
Latitude	43	43
Muzzle Velocity	2600 ft/s	2710 ft/s
Sight Height	1.75 in	1.75 in
Zero Range	100 yds.	100 yds.
Elevation Offset	0	0
Windage Offset	0	0
Elevation SSF	1	1
Windage SSF	1	1
Elevation Units	MIL	MIL
Windage Units	MIL	MIL

BULLET	223/5.56	30-06
Bullet Weight	55gr	165gr
Bullet Diameter	0.224 in	0.308 in
Bullet Length	0.75 in	1.17 in
Barrel Twist	12 (1:12)	10 (1:10)
Drag Function	G7	G7
METRO	ICAO	ICAO
Ballistic Coefficient	0.131	0.204
WEAPON		
Latitude	43	43
Muzzle Velocity	3240 ft/s	2800 ft/s
Sight Height	2.70 in	1.75 in
Zero Range	100 yds.	100 yds.
Elevation Offset	0	0
Windage Offset	0	0
Elevation SSF	1	1
Windage SSF	1	1
Elevation Units	MOA	Inches
Windage Units	MOA	Inches

BULLET	300 WIN MAG	270 WIN
Bullet Weight	180gr	130gr
Bullet Diameter	0.308 in	0.277 in
Bullet Length	1.24 in	1.24 in
Barrel Twist	10 (1:10)	10 (1:10)
Drag Function	G7	G7
METRO	ICAO	ICAO
Ballistic Coefficient	0.246	0.223
WEAPON		
Latitude	43	43
Muzzle Velocity	2960 ft/s	3100 ft/s
Sight Height	1.75 in	1.75 in
Zero Range	100 yds.	100 yds.
Elevation Offset	0	0
Windage Offset	0	0
Elevation SSF	1	1
Windage SSF	1	1
Elevation Units	MOA	Inches
Windage Units	MOA	Inches

BULLET	7MM REM MAG	243 WIN
Bullet Weight	160gr	100gr
Bullet Diameter	0.284 in	0.243 in
Bullet Length	1.40 in	1.03 in
Barrel Twist	10 (1:10)	10 (1:10)
Drag Function	G7	G7
METRO	ICAO	ICAO
Ballistic Coefficient	0.236	0.183
WEAPON		
Latitude	43	43
Muzzle Velocity	2950 ft/s	2960 ft/s
Sight Height	1.75 in	1.75 in
Zero Range	100 yds.	100 yds.
Elevation Offset	0	0
Windage Offset	0	0
Elevation SSF	1	1
Windage SSF	1	1
Elevation Units	MOA	MOA
Windage Units	MOA	MOA

BULLET	22-250 REM	22 LR
Bullet Weight	55gr	40gr
Bullet Diameter	0.224 in	0.224 in
Bullet Length	0.82 in	0.48 in
Barrel Twist	14 (1:14)	16 (1:16)
Drag Function	G7	G1
METRO	ICAO	ICAO
Ballistic Coefficient	0.12	0.121
WEAPON		
Latitude	43	43
Muzzle Velocity	3680 ft/s	1255 ft/s
Sight Height	1.75 in	1.75 in
Zero Range	100 yds.	50 yds.
Elevation Offset	0	0
Windage Offset	0	0
Elevation SSF	1	1
Windage SSF	1	1
Elevation Units	Inches	Inches
Windage Units	Inches	Inches

COMPLIANCE

United States

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Contains FCC ID: T7V1760A

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.

Canada

CAN ICES-3B/NMB-3B

Contains IC: 216Q-1760A

Australia and New Zealand

Japan

Class B ITE

この装置は、クラスB 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。 VCCI－B

Translation:

This is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

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.

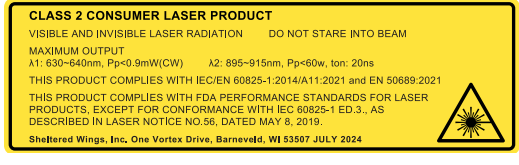
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate 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 (CR123A) 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.

SAFETY AND PRECAUTIONS

The Impact® 4000 Bluetooth® Remote contains a 3V CR2032 battery.

⚠WARNING

- **INGESTION HAZARD:** this product contains a CR2032, 3V button cell or coin battery.
- **DEATH** or serious injury can occur if ingested.
- A swallowed button cell or coin battery can cause **INTERNAL CHEMICAL BURNS** in as little as **2 HOURS.**
- **KEEP** new and used batteries **OUT OF REACH OF CHILDREN.**
- **SEEK IMMEDIATE MEDICAL ATTENTION** if a battery is suspected to be swallowed or inserted inside any part of the body.

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.

- If ingested, call a local poison control center for treatment information.
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above (manufacturer's specified temperature rating) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

NOTICE

Virtual Patent Marking Notice by Vortex Optics

This product may be protected by patents in the U.S. and elsewhere for Vortex Optics. **http://vtx.legal** website is provided to satisfy the virtual patent marking provisions of various jurisdictions including the virtual patent marking provisions of the America Invents Act and provide notice under 35 U.S.C. §287(a). Please visit **http://vtx.legal** to view list of products that may be covered by one or more U.S./Foreign patents or published patent applications.

VIP® WARRANTY

OUR UNCONDITIONAL PROMISE TO YOU.

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

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

You do not have to register, save the box, or a receipt for the Warranty to be honored.

Learn more at VortexOptics.com

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 the most up to date manual visit **VortexOptics.com**

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