

UNOFFICIAL REFERENCE

# BR4 Rangefinder

Personal Reference Copy of the Online Manual

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# Introducing the BR4

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Congratulations on purchasing your BR4 Ballistic Rangefinder. The device features Revic's advanced solver with wind and earth-based effects for accurate, fast corrections in MOA, MILS, or Shoot-To-Range Mode for BDC turrets. The data-rich display simplifies shooting, and improved ranging tools include target discrimination and long-range capability. Programming occurs via Bluetooth-connected devices, with Over The Air Update access.

# Section 1 — Quick Start / Battery Installation

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## Battery Information

- The BR4 uses a 3-Volt Lithium CR2 battery.
- Factory-installed batteries include an insulator sheet requiring removal before use.

## Installation Steps

1. Lift the hinged tab on the battery compartment cover and turn counter-clockwise.
2. Insert the battery with the negative end (–) first.
3. Reinsert the compartment cover and turn the hinged tab clockwise.
4. Press down on the hinged tab to secure.

## Initial Operation

1. Pull the tab on the lens cover to expose transmit and receive lenses.
2. Press and release the FIRE button to power ON.
3. Look through the eyepiece and aim the crosshair at your target.
4. Press and hold the FIRE button until a range displays.
5. The Angle Modified Range (AMR) appears momentarily in the upper left, then alternates to Line-of-Sight (LOS) range.

## Powering OFF

- After 20 seconds of inactivity, the unit enters sleep mode to conserve battery.
- The device automatically powers off 60 seconds after sleep mode activation.
- With active Bluetooth connection, the unit powers off after 5 minutes of inactivity.
- Reconnection to your device is required if sleep mode occurs during Bluetooth operation.

## Section 2 — Basic Operations

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### Display Backlight Adjustment

The backlight intensity adjusts via the Quick Menu using a short-press of the Menu button. The most recent brightness setting is recalled upon power-up or after waking from sleep mode. Detailed brightness instructions appear in Section 5.

### Aiming Box

The displayed aiming box matches the actual laser beam size and shape, allowing precise target alignment.

### Eyecup

The adjustable eyecup blocks extraneous light. Turn counter-clockwise while pulling up to adjust; turn clockwise and push down to return to original position.

### Focus Adjustment

The focus ring optimizes display and target clarity. Factory setting is infinity focus. Aim at a blank surface like a wall, then turn the ring clockwise or counter-clockwise for maximum clarity. Verify focus on distant targets.

### Buttons

The BR4 features a 4-button keypad on the top panel providing access to functions, programming, and operating commands.

## Section 3 — How the BR4 Works

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### LCD Display

A Back Mask Liquid Crystal Display (BMLCD) mounts within the optical system and projects information into the field of view via a beamsplitter.

### Laser Range Sensor

The unit emits a 905 nm eye-safe invisible laser beam. Distance measurement works by calculating the time for each pulse to travel to the target and return. Horizontal and vertical reticle lines display during laser transmission. Maximum laser duration is 10 seconds during distance acquisition.

### Target Responsiveness

The BR4 automatically provides optimal distance accuracy. Maximum range varies with target reflectivity and environmental conditions. Approximately 4,000 yards represents maximum range on reflective targets under ideal conditions.

### Target Selection Factors

- **Reflectivity:** Lighter colors and shiny surfaces provide better reflection.
- **Angle:** Perpendicular ranging versus angled ranging affects accuracy and MOA/MIL calculations.
- **Lighting:** Overcast conditions increase maximum range; sunny conditions decrease it.

### Altimeter

A barometric pressure sensor with a Gore-Tex® membrane measures station pressure (uncorrected to sea level). The system converts station pressure to equivalent altitude. Both readings are accessible via the Quick Menu under Section 5: Pressure.

### Temperature Sensor

Located at the unit's front for ambient exposure. Response delay occurs as housing temperature stabilizes to ambient conditions, potentially affecting ballistic calculations.

### Inclination Sensor

Located inside the housing, this sensor calculates inclination angle to target when range is obtained via the Fire button.

## Section 4 — Ballistic Profiles

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### Connecting to a Device

1. Download the Revic app from Google Play Store or App Store and create your ballistic profile.
2. Enable Bluetooth on the BR4:
  - Press and release the FIRE button to power on.
  - Press and hold the MENU button until **CONNECT** displays.
  - Short-press MENU until **bt on** appears.
  - Use UP/DOWN arrows to toggle between **bt on** or **bt off**.
  - Press FIRE twice to save and return to main display.
3. In the Revic app, select the Bluetooth icon to display available devices.
4. Select your BR4 Device ID number from the list.

### Selecting and Syncing Profiles

1. In the app's main screen, open the Sync Module.
2. Select the icon next to the ballistic profile you want to add to your BR4.
3. Press Sync to push selected profiles to the connected device (maximum 10 profiles).

# Section 5 — Menus

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## Quick Menu Access

Short-press the Menu button to access. Use UP/DOWN arrows to scroll, press Menu to select, or press FIRE to return.

### Temperature

The BR4 automatically calculates temperature. This can be overridden manually via the Quick Menu. Once manually changed, automatic temperature reading is disabled. To revert to automatic function, allow the unit to power off (5 minutes with Bluetooth connection) or remove and reinstall the battery.

To manually adjust temperature:

- Short-press Menu to enter Quick Menu.
- The first option is "Temperature" with flashing temperature and unit.
- Short-press Menu to enter the submenu.
- The numerical value flashes; use UP/DOWN arrows to adjust.
- Short-press FIRE to save and return, or press and hold FIRE to save and exit.

### Pressure

The Pressure function allows selection of display units: inHG, elevation, or density altitude.

To change pressure display:

- Short-press Menu to access Quick Menu.
- Press UP/DOWN arrows to reach "Pressure".
- Press Menu to enter the submenu.
- Use UP/DOWN arrows to scroll available options.
- Short-press FIRE to save and return, or press and hold FIRE to save and exit.

### Shot Vector

Displays degrees of inclination and compass heading for reference. Compass calibration is recommended when changing geographic locations.

### Profile

The BR4 stores up to 10 profiles. Load profiles using the Revic Ops mobile app. View profile settings and select active profiles via the BR4 menu.

To review or select loaded profiles:

- Short-press Menu button.

- Press UP/DOWN arrows until "Profile" displays.
- Short-press Menu to enter the Profile submenu.
- UP/DOWN arrows scroll through loaded profiles.
- Short-press FIRE to select desired profile and return, or press and hold FIRE to save and exit.
- To delete a profile: access profile menu, `DEL` will flash, short-press Menu, `NO` flashes, press UP/DOWN to toggle `NO / YES`, short-press Menu to delete.

**Note:** Profile data cannot be modified through the BR4; only deletion is possible.

## AMR Mode

Angle Modified Range mode displays the modified range due to shot inclination, with degrees of inclination shown in the lower-left corner.

## Target Mode

Choose between Near, Far, LR Near, or LR Far targeting modes through the Quick Menu. Factory setting is NEAR.

To change Target Mode:

- Short-press Menu to enter Quick Menu.
- Use UP/DOWN arrows until "Target" appears.
- Short-press Menu to enter Target Mode.
- Use UP/DOWN arrows to select preferred mode.
- Short-press FIRE to save and return, or press and hold FIRE to save and exit.

## Brightness

Four brightness options available: 1 (dimpest) to 4 (brightest).

To adjust brightness:

- Short-press Menu to enter Quick Menu.
- Use UP/DOWN arrows until `brt-1` displays.
- Short-press Menu to enter Brightness menu.
- Use UP/DOWN arrows to select preferred setting.
- Short-press FIRE to save and return, or press and hold FIRE to save and exit.

## Settings Menu Access

Press and hold the Menu button (3 seconds) to access. Use UP/DOWN arrows to scroll, press Menu to select, or press FIRE to return.

## Connect (Bluetooth)

Enable or disable Bluetooth through this menu.

To activate or deactivate Bluetooth:

- Press and hold Menu to enter Settings Menu.
- "Connect" is the first option.
- Short-press Menu to enter Bluetooth settings.
- Screen displays `bt-on` .
- Use UP/DOWN arrows to toggle between `bt-on` and `bt-off` .
- When `bt-off` is selected, the Bluetooth icon disappears from the display.
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

**Note:** Factory setting is `bt-on` , indicated by a flashing Bluetooth icon in the display.

## Base Wind

Set the base wind magnitude to apply to ballistic solutions. This deactivates Spin Drift, Aerodynamic Jump, and Coriolis effects and applies to all profiles unless changed in other wind functions.

To set Base Wind magnitude:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to `bWind` .
- Short-press Menu to enter Base Wind adjustment.
- The wind icon illuminates and numerical value flashes.
- Use UP/DOWN arrows to adjust magnitude.
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

## Units

Four measurement options available:

- **Y/US:** Yards for distance, US units for everything else.
- **Y/SI:** Yards for distance, SI (System International) units for everything else.
- **M/US:** Meters for distance, US units for everything else.
- **M/SI:** Meters for distance, SI units for everything else.

To set desired units:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to `unItS` .
- Short-press Menu to enter Units menu.
- Use UP/DOWN arrows to change units.
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

## Latitude

Latitude adjusts manually only through the BR4.

To set current latitude:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to **Lat XX** .
- Short-press Menu to enter Latitude menu.
- **XX** flashes on display.
- Use UP/DOWN arrows to change latitude.
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

### **Coriolis Effect**

Enable or disable this function to apply to all selected profiles.

To toggle Coriolis Effect:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to **Erth on** .
- Short-press Menu to enter menu.
- Screen displays **Erth on** with **on** flashing.
- Use UP/DOWN arrows to toggle between **Erth on** and **ErthoFF** .
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

### **Spin Drift**

Enable or disable this function for all profiles.

To toggle Spin Drift:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to **SPIn on** .
- Short-press Menu to enter menu.
- Screen displays **SPIn on** with **on** flashing.
- Use UP/DOWN arrows to toggle between **SPIn on** and **SPInoFF** .
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

### **Aerodynamic Jump**

Enable or disable this function for all loaded profiles.

To toggle Aerodynamic Jump:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to **AEro on** .
- Short-press Menu to enter menu.
- Screen displays **AEro on** with **on** flashing.
- Use UP/DOWN arrows to toggle between **AEro on** and **AERooff** .
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

## Compass

Calibrate the device and establish a baseline for North.

To calibrate compass:

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to `Ca1 Now` .
- `Ca1 Now` flashes with numerical value starting at "0".
- Rotate the BR4 along all axes in a gyroscopic motion.
- Numerical value indicates completion percentage.
- `ca1-dNe` displays when complete.
- Press and hold FIRE to save and exit Settings Menu.

## Section 6 — Modes

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### Range Only Mode

Maximum range reaches approximately 4,000 yards depending on target reflectivity and environmental conditions.

#### Procedure:

1. Look through eyepiece and aim crosshair at target.
2. Press and hold FIRE button; crosshairs display while laser is active.
3. Scan mode activates after 0.5 seconds, continuing up to 10 seconds.
4. If target not acquired in 10 seconds, release FIRE and repeat.
5. After measurement displays, release FIRE.
6. Line-of-sight distance briefly displays, then updates with ballistic solution.

### BDC Mode (Ballistic Turret in Revic Ops app)

BDC appears in the upper left display and alternates to Line of Sight (LOS) to indicate Shoot-To-Range (corrected distance) and LOS distance.

**Note:** BDC selection is controlled from the Revic Ops mobile app and cannot be changed in the BR4.

### MOA/MILs Correction Display

Correction displays in the lower-left corner marked as MIL/MOA. LOS distance displays in upper left corner.

**Note:** MOA/MIL selection is controlled from the Revic Ops mobile app and cannot be changed in the BR4.

### Range Mode

#### No Ballistic Calculation

- Line of Sight Only.
- Angle Modified Range and LOS range alternate.

#### Ballistic Calculation

- Ballistic calculations always show with distance (MOA or MIL is profile setting).

- BDC off displays LOS only (profile setting).
- When BDC is on, range output alternates between LOS and BDC range (profile setting).

## **Scan Mode**

Scan mode activates after 0.5 seconds of laser firing and continues up to 10 seconds, acquiring different ranges as different targets are identified. For targets with poor reflectivity, press and hold the Fire button while aiming. The BR4 continuously emits laser pulses to acquire target distance data.

## **Targeting Modes**

### **Near**

Allows easy acquisition of small targets without inadvertently capturing background targets with stronger signal strength. "Near" displays above the range in upper left. This mode typically ignores far objects and only acquires the closest/strongest targets.

### **Far**

Allows brush, fog, and other obstructions to be ignored, acquiring only background targets. "Far" displays above the range in upper left. This mode typically ignores close objects and only targets the farthest objects.

### **Long Range Near**

Provides more accurate target differentiation by acquiring more data of the intended target area. "LR Near" displays above the range in upper left. This mode processes more data than non-Long Range modes, so stabilizers like tripods are recommended. Use if "Near" mode produces no solution.

### **Long Range Far**

Ignores obstructions such as brush and fog to display only background target data. "LR Far" displays above the range in upper left. This mode processes more data than standard "Far" mode, so stabilizers are recommended. Use if standard "Far" mode produces no solution.

# Section 7 — Setting Wind

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## Wind Vector Input

Wind vector input provides more accurate wind solutions by enabling both direction and speed input, compensating for headwind, tailwind, aerodynamic jump, and spindrift.

To change Wind Vector input:

- From main display, short-press UP/DOWN arrow keys to set wind direction.
- When the vector indicator flashes, use UP/DOWN arrows to move the indicator reflecting current wind direction.
- Short-press "Menu" to switch to speed input.
- The wind magnitude numerical value will flash.
- Use UP/DOWN arrows to adjust the wind magnitude value.

## Setting Base Wind Magnitude

- Press and hold Menu to enter Settings Menu.
- Use UP/DOWN arrows to scroll to `bWind`.
- Short-press Menu to enter Base Wind magnitude adjustment.
- The wind icon in the upper right quadrant illuminates and the numerical value flashes.
- Use UP/DOWN arrows to adjust Base Wind magnitude.
- Short-press FIRE to save and exit, or press and hold FIRE to save and exit Settings Menu.

**Note:** The Gunwerks wind bracketing technique works well to estimate base wind at 5 mph.

## Section 8 — Truing

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In some instances, adjust your ballistic profile to represent real-world performance (lower projected impact from ballistic profile). Use the Truing function for this adjustment.

### To adjust Truing

1. Range your target first.
2. Press and hold Menu to enter Settings Menu.
3. Use UP/DOWN arrows to scroll to `truInG`.
4. Short-press Menu to enter menu.
5. Screen displays `XX Y` in upper display with `.0 MOA` flashing.
6. Bottom shows `adjust`.
7. Use UP/DOWN arrows to increase or decrease MOA from base reading.
8. Short-press Menu to advance to next screen.
9. `bc 0.XXX` displays with `bc` flashing.
10. Use UP/DOWN arrows to toggle between `bc 0.XXX` and `MV XXXX`.
11. Select `bc` to change ballistic coefficient or `MV` to change muzzle velocity.
12. Short-press Menu to confirm selection.
13. `dnE` displays; truing corrections are saved.
14. Adjustment updates remaining ballistic data; value saves to current profile.
15. Short-press FIRE to exit, or press and hold FIRE to save and exit Settings Menu.

**Note:** Truing function is unavailable without a selected profile and/or obtained range.

# Section 9 — Appendix

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## Care & Maintenance

The battery is the only user-replaceable part. Do not remove screws or disassemble the BR4, as this voids the limited warranty.

## Low Battery Warning

The BR4 monitors battery voltage, displayed on the left side of the LCD above the yards indicator.

- A constant battery power indicator is present.
- When the battery reaches one bar, replace the battery soon.
- Unit still operates, but replacement is recommended before profile changes or hunting.
- When voltage drops below one bar, system operation locks and the unit powers off.
- Battery replacement required to return to normal operation.
- All profiles save automatically.

## Protecting from Moisture and Dust

The BR4 is IP67 rated, providing protection from dust and rain, but does not withstand prolonged submersion (1-meter submersion for up to 30 minutes maximum).

## Precautions

### **Avoid staring directly at the laser beam for prolonged periods.**

The BR4 is designed to meet FDA eye safety requirements and is classified as eye-safe to Class 1 limits, meaning virtually no hazard exists with direct viewing under normal conditions. Reasonable precautions should be taken during operation. Avoid staring into the transmit aperture while firing the laser.

### **Never point the unit directly at the sun.**

Exposing the lens system to direct sunlight, even briefly, may permanently damage internal components and cause permanent eye damage.

### **Avoid direct sun exposure on the eyepiece.**

Exposing the eyepiece to direct sunlight damages the internal display. Keep the eyepiece cover in place when not in use.

**Do not expose the instrument to extreme temperatures.**

BR4 components are rated for temperature range of  $-4^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ .

## Protecting from Shock

The BR4 is a precision instrument requiring careful handling. It will withstand reasonable drop shock.

## Transport

When transporting the BR4, secure it in the provided carrying case with the eyepiece cover in place.

## Cleaning

Clean the BR4 after each use before returning to its carrying case. Check the following items:

- **Moisture:** If exposed to excess moisture, towel off and air dry at room temperature with battery removed and battery compartment open.
- **Exterior dirt:** Wipe exterior surfaces to prevent grit buildup in carrying case; isopropyl alcohol removes dirt and fingerprints.
- **Transmit and receive lenses:** Clean lenses after each use; failure to maintain clean lenses may cause damage.

## Storing

Remove the battery before storing if the unit won't be used soon. Storing temperature should be between  $-13^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ .

## Section 10 — Warranty & Service

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Revic Optics, a Gunwerks LLC subsidiary, warrants mechanical and optical parts free from defects for five (5) years and electronic parts for two (2) years from purchase date.

After the manufacturer's warranty period, Revic Optics will cover repair costs for mechanical and optical parts for an additional five (5) years and electronics for three (3) years on a goodwill repair basis (no legal entitlement).

During the warranty period, if defects appear, Revic Optics will, at its discretion and without charge for labor or materials, repair or replace defective parts or the product. If the product is unavailable, Revic Optics may replace it with an equivalent product.

This limited warranty does not cover failures from abuse, negligence, or unauthorized alterations, modifications, or repairs. Wear parts (rubber armoring, eyecups, carrying straps, cases) and damages caused by defects are not covered.

Warranty validity requires proof of purchase or warranty repair documentation (RMA) from Revic Optics. Return shipping is provided for warranty repairs. Products shipped abroad incur duties/taxes paid by customer. Products without proof of purchase are repaired at customer expense.

Other warranties (statutory or voluntary) agreed upon in other countries must be fulfilled by agreeing parties. This warranty is granted by Revic Optics, subsidiary of Gunwerks LLC, with jurisdiction in Park County, Wyoming USA.

**Warranty registration:** [www.gunwerks.com/productregistration](http://www.gunwerks.com/productregistration)

**Support requests:** <https://www.gunwerks.com/helpdesk/customer-care-15>

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