



TARGETLOCK
TL3000C

| USER MANUAL



Ensure your firearm is unloaded before proceeding. If you pause use and then resume later, reconfirm that the chamber is still empty.

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GLOSSARY

Press: Press and release the button.

Long-press: Press and hold the button for 2 seconds.

[Menu Items]: Menu items are enclosed in square brackets to indicate menu navigation steps clearly.

Main Screen: Refers to the screen where image and reticle are displayed. It is the default screen that your scope enters when powered ON.

Menu: Refers to the screen where menu items are displayed, including the main menu and sub-menus.

Legends:



- **Warnings:** Critical instructions that must be followed to ensure personal safety and prevent permanent damage to the device or data.



- **Cautions:** Important instructions that must be followed to ensure safe, proper, and effective operation.



- **Notes:** Notes from the product team explaining specific and critical information about the device/feature.



- **Navigations:** Indicates the step-by-step path to access a feature. For example, the sequence below means navigating from [Main Menu] to [Ranging Modes], selecting [Continuous Ranging]:

[Main Menu] > [Ranging Modes] > [Continuous Ranging]



LASER SAFETY

AVOID DIRECT EYE EXPOSURE. This device is classified as a **CLASS 2 LASER PRODUCT** in accordance with IEC 60825-1:2014. It emits both visible and invisible laser radiation. Do not stare directly into the laser beams or view them with optical instruments.



Laser Active Indicator

Whenever the **Laser Icon** is displayed on your screen or interface, it indicates active laser emission. This symbol means that the invisible Laser Rangefinder (LRF), the visible alignment laser (VIS), or both are currently powered on and transmitting. Always ensure the device is pointed in a safe direction when this icon is visible.

Visible Laser Two-Step Activation (Double-Safe)

To prevent accidental eye exposure and unintentional visual signature, the visible (VIS) alignment laser utilizes a two-step safety activation system. The VIS laser will only emit when both the software toggle is enabled and the physical switch is engaged.

To activate the VIS laser:

1. **Enable the Software Toggle:** Navigate to **[Main Menu] > [System Menu]** and set the **[Visible Laser]** switch to ON.
2. **Engage the Physical Switch:** Rotate the external rotary switch to the **"L"** gear.

If the rotary switch is moved to the **"L"** gear while the software toggle is set to OFF, the visible laser will remain disabled.

Laser Specifications

This product complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

- **Visible Alignment Laser (VIS)**
 - **Wavelength:** 515 nm
 - **Max. Output Power:** 0.8 mW
 - **Emission Duration:** Continuous Wave (CW)
- **Laser Rangefinder (LRF - Invisible)**
 - **Wavelength:** 900 - 908 nm
 - **Max. Output Power:** 0.39 mW
 - **Emission Duration:** Pulsed (PD = 20 ns)



INCLUDED BATTERY SAFETY

The TL3000 includes two USB-C rechargeable batteries, which can be charged using the built-in USB-C port or an external compatible battery charger.



DO NOT attempt to charge the battery using the USB-C port and a battery charger **SIMULTANEOUSLY**, as dual charging can damage the circuitry or cause a fire or explosion.



DO NOT charge the battery with "1 to 2" or "2 in 1" split cables featuring a single input and multiple outputs; using these can trigger a voltage mismatch that permanently damages the cell.



When charging two batteries simultaneously using USB-C cables, keep the battery poles separated to prevent a short circuit.

When charging the included battery via its USB-C port, ensure you use a compliant USB adapter that provides a 5V output and a current rating of at least 0.8A.



DEVICE INTRODUCTION



Built on ARKEN's commitment to rugged precision, the TARGETLOCK TL3000 is a high-performance ballistic laser rangefinder designed for seamless rail integration. Housed in an ultra-compact chassis, it pairs a 3,000-yard ranging capability with an industry-leading ballistic engine and full Kestrel® and Calypso® connectivity to deliver rapid, precise firing solutions for competitive shooters and long-range hunters.

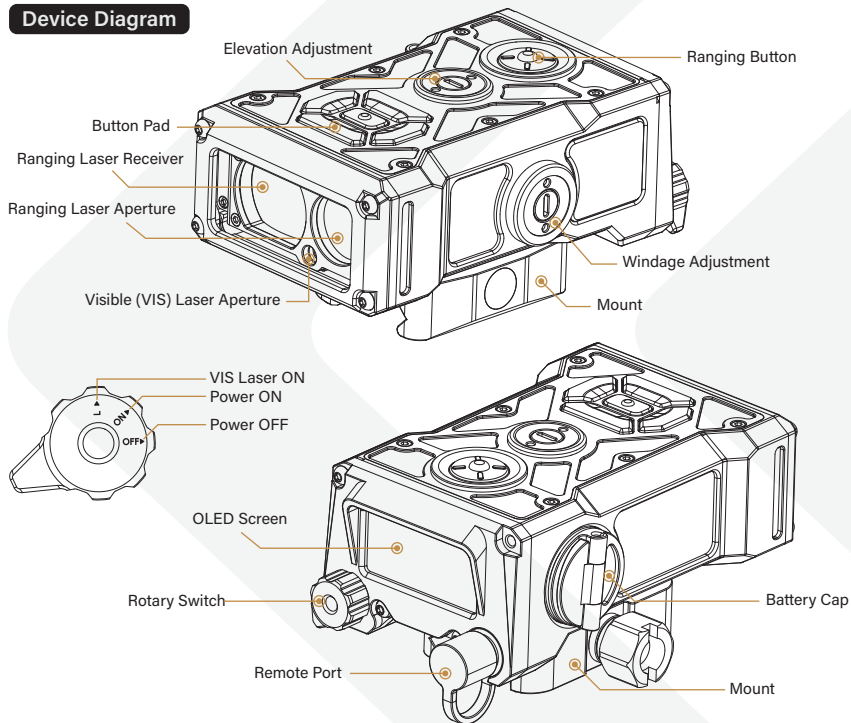


FEATURES

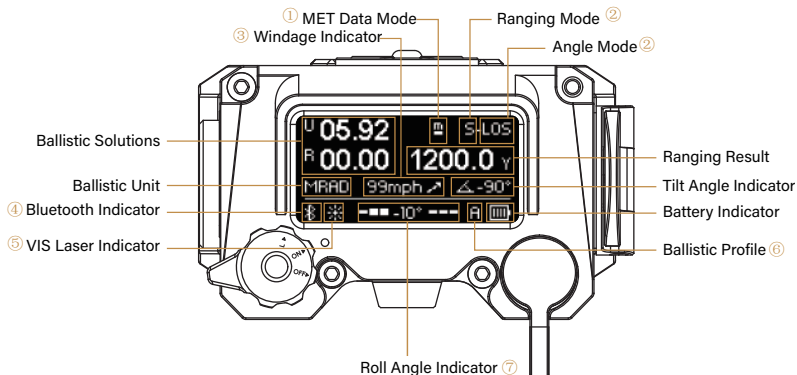
- **Extreme-Range Precision**
- **Included Wired Pressure Switch**
- **Real-Time Tactical MET Calculations**
- **Universal Ecosystem Connectivity**
- **Integrated Visible Laser Sight**
- **Fully Configurable Ballistic Profiles**
- **Ultra-Compact Aluminum Chassis**

D DEVICE OVERVIEW

Device Diagram



Main Screen OSD Elements



MET Data Sync Indicator ①	 indicates manual entry of meteorological data  indicates real-time MET data auto synchronization
Ranging Mode / Angle Mode ②	S for Single Pulse Ranging Mode C for Continuous Ranging Mode LOS for Line of Sight Angle Mode HCD for Horizontal Component Distance Angle Mode
Wind Status ③	Shows manually entered or synchronized wind information
Bluetooth Indicator ④	Displays when bluetooth is on
Laser Indicator ⑤	When displayed, either the LRF laser, the VIS Laser, or both are active; refrain from looking directly into the aperture
Current Ballistic Profile ⑥	Displays the active Ballistic Profile (A through J)
Cant Angle Indicator ⑦	The scope's roll angle measured relative to the bore axis.

Package Contents

• TL3000 × 1	• Alignment Target × 1
• Mounting Accessories × 1	• Reflective Sticker × 3
• Rechargeable 16340 Battery × 2	• Lens Cleaning Cloth × 1
• Charging Cable × 1	• Quick Start Guide × 1
• Wired Pressure Switch Kit × 1	• User Manual × 1
• Multi-Tool × 1	

S SPECIFICATIONS



LRF Laser Wavelength	905 nm
LRF Laser Class	Class 1
Max Ranging Distance	3,000 yd
Max Ranging Distance on Tree trunk	1,200 yd
Max Ranging Distance on Deer	1,100 yd
Ranging Resolution	0.1 yd
Ranging Accuracy	± 1 yd
Visible Laser Wavelength	515 nm green laser
Visible Laser Class	Class 2
Ballistic Engine	DNT Ballistic Engine
Mobile App Compatibility	DNT App
Wind Meter Compatibility	Kestrel® and Calypso®
Display Type	OLED Display with Anti-Reflection Coating
Battery Type	CR123A
Battery Life	5,000 Single Pulse Measurements / 6 hours under RWDC
Included Battery Type	USB-C Rechargeable 16340 Battery (For Trainings Only)
Included Battery Battery Life	3,000 Single Pulse Measurements / 2.5 hours under RWDC
Dimensions (LxWxH)	3.6 in x 2.3 in x 1.4 in / 92 mm x 59 mm x 35 mm
Net Weight	7.5 oz / 213 g
Ingress Protection Rating	IP67
Operating Temperature	-20°C to +50°C



CONTROL SCHEME



ARKEN OPTICS

Control	Main Screen	MET - Windage	MET-Atmo	Menu	Ballistic Data Adjustment Screen
LRF Button 	(Continuous Ranging) Press: Start ranging / Freeze current reading (and perform ballistic calculation if enabled) (Single Pulse Ranging) Press: Range once (and perform ballistic calculation if enabled)	[Auto] Press: Toggle wind speed units (mph / m/s) [Manual] Press: Record DoF	Press: Toggle units of the selected value (T: °F / °C; RH: N/A; BP : inHg / hPa)	/	/
Up Button 	Long-Press: Toggle auto / manual meteorological info	Press: Increase wind speed value Long-Press: Rapidly increase value	Press: Increase value of the selected digit Long-Press: Rapidly increase value	Press: Move cursor up	Press: Increase value / Toggle units
Down Button 	Long-Press: Toggle environment correction On / Off	Press: Decrease wind speed value Long-Press: Rapidly decrease value	Press: Decrease value of the selected digit Long-Press: Rapidly decrease value	Press: Move cursor down	Press: Decrease value / Toggle units
Right Button 	Long-Press: Adjust display brightness	Press: Adjust wind direction clockwise Press: Adjust wind direction clockwise	Press: Move cursor to the next digit	/	Press: Cycle through data fields
Left Button 	Long-Press: Toggle between single pulse and continuous ranging	Press: Adjust wind direction counterclockwise	Press: Move cursor to the previous digit	Press: Return to previous menu / Main Screen	Press: Save and return to previous menu
Center Button 	Press: Enter MET Panel - Wind Long-Press: Enter Menu Screen	Long-Press: Toggle Manual / External [Manual] Press: Cycle to MET Panel - Atmo [Auto] Press: Cycle to MET Panel - Atmo	Long-Press: Toggle Manual / External Press: Exit to Main Screen	Press: Confirm Selection / Save and Return to Previous Menu / Enter Submenu / Toggle ON/OFF switch Long-Press: Return to Main Screen	Press: Confirm selection Long-Press: Return to Main Screen

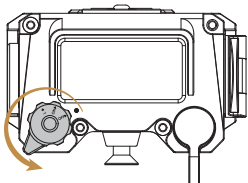
S SETTING UP TL3000

Installing Battery

Insert the battery with the positive terminal facing inward. Tighten the battery cap firmly by hand to prevent power loss under heavy recoil.

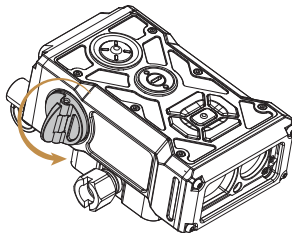
①

Turn the Rotary Switch to the **OFF** position:



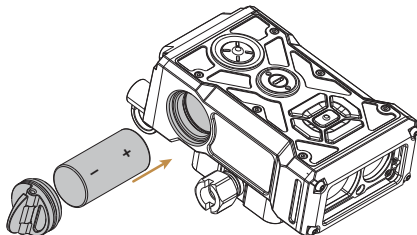
②

Unscrew the battery cap by hand:



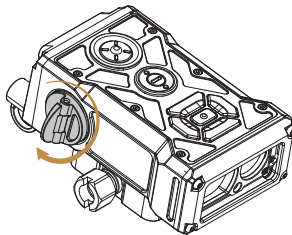
③

Insert CR123 battery with +/- polarity as shown on the TL3000 housing:



④

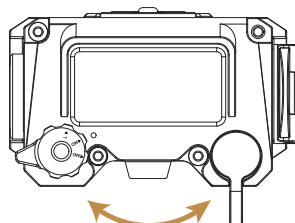
Hand tighten the battery cap



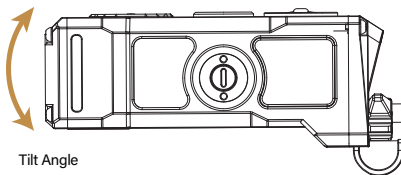
Gyroscope Calibration

Before mounting the TL3000 to your rifle, calibrate the internal gyroscope on a flat, level surface. This establishes a true-level baseline for accurate inclination and cant angle readings.

1. Ensure the TL3000 is remains level using one of the following methods:
 - a. Place the TL3000 on a flat, level surface. (You can verify the level with your phone's digital level.)
 - b. If the TL3000 is already mounted on a diving board with no inclination, use a bubble level to ensure the TL3000 is level.
2. Open **[Main Menu]** > **[System Settings]** > **[Gyroscope Calibration]**.
3. Select **[BEGIN]**.
4. Keep the device completely stationary in 8 seconds.
5. Calibration completes automatically when the 8 second countdown ends.



Roll Angle



Tilt Angle

Mounting TL3000

The TL3000 includes the ARKEN RigidI Precision Mount, which is designed to secure the device to standard MIL-STD-191 3 Picatinny rails.

Mounting Positions & Screen Rotation

- **Recommended Position:** Mount the TL3000 directly above your optic using a diving board mount.
- **Alternative Positions:** The TL3000 can be mounted at various angles around the rifle. Its internal sensors detect the device's orientation and automatically adjust the screen to display a landscape or portrait UI based on the mounting angle.



Alignment & Limitations

Regardless of where you position the TL3000 is positioned, it must be mounted as parallel to your scope's optical axis as possible to ensure accurate ranging and ballistic calculations.

If the unit is mounted in a vertical (portrait) orientation, the cant angle reading and compensation features are automatically disabled.

Installation & Torque Specifications

Proper torque is essential to prevent the unit from shifting under heavy recoil. A calibrated torque wrench is highly recommended for this process.

1. **Fasten Mount to the TL3000:** 35 in-lb (4 N.m).
Secure the ARP02 mount to the TL3000 chassis using the two included base screws.
2. **Secure to the Picatinny Rail:** 45 in-lb (5 N.m).
Attach the mounted assembly to your rifle's Picatinny rail and firmly tighten the mounting nut.

Field Expedient Method (No Torque Wrench): If you do not have access to a torque wrench, thread both the base screws and the main mounting nut until they are flush and hand-tight. Then, use your tool to tighten them exactly **1/4 of a turn** further. Do not overtighten.



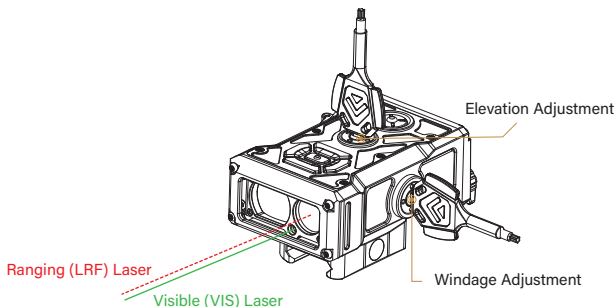
CRITICAL SAFETY WARNING

NO LIVE FIRE REQUIRED. The entire zeroing and alignment process for your TL3000 is strictly an optical procedure. You do not need to fire the weapon at any point during either the indoor coarse zeroing or the outdoor fine zeroing.

Before beginning this process, perform all standard firearm safety checks:

- Remove the magazine.
- Visibly and physically inspect the chamber to ensure the firearm is unloaded.
- Remove all live ammunition from your immediate workspace or bench.

The primary laser used to measure distance is an invisible infrared (IR) beam, which cannot be seen with the naked eye. To make the zeroing process fast and intuitive, ARKEN TL3000 is equipped with a visible (VIS) alignment laser that is perfectly co-aligned and parallel with the invisible LRF beam from the factory. By zeroing the visible laser, you are simultaneously aiming the invisible rangefinder. When you use the included multi-tool to adjust the Elevation and Windage, you are physically moving a single, unified internal module. Because the LRF emitter, LRF receiver, and VIS laser are all securely housed within this single module together, aligning the visible dot with your offset target guarantees that your entire ranging system is perfectly zeroed to your optic.



Parallel Zero vs. Converging Zero

To ensure accurate ranging at extreme distances, ARKEN recommends parallel zeroing for your Weapon-Mounted Laser Rangefinder (WMLRF). This means the laser is aligned perfectly parallel to your primary optic's line of sight.

While it might seem intuitive to zero the laser to intersect with your crosshairs at a specific distance (a **Converging Zero**), this creates an angular shift. Because you will be ranging targets anywhere from 50 to 3,000+ yards, forcing the laser to intersect the crosshair at a close distance means the laser will dive below your target at longer distances, resulting in false range readings off the foreground.

A **Parallel Zero** ensures that the mechanical offset (the distance between your scope tube and the laser emitter) remains constant at all distances. If your rangefinder is mounted 2 inches above your scope, the laser will hit exactly 2 inches above your crosshair at 100 yards, 1,000 yards, and 3,000 yards.

FIGURE 1: PARALLEL ZERO RECOMMENDED)

The laser beam and the optic's line of sight remain parallel, ensuring consistent alignment across the effective range.

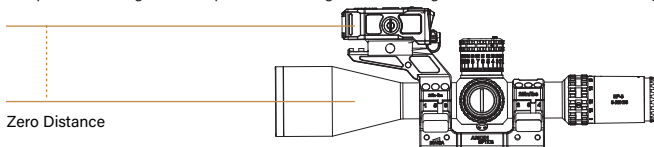
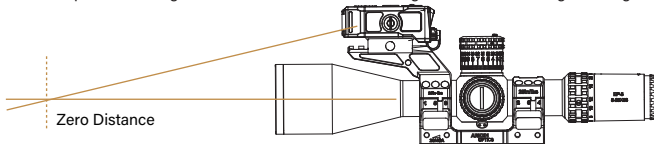


FIGURE 1: PARALLEL ZERO RECOMMENDED)

The laser beam intersects the optic's line of sight at the zero distance, then diverges from the line of sight at longer ranges.



Zeroing Steps

In contrast to a traditional scope, the TL3000 does not cross the bullet trajectory at a specific distance. Rather, it requires parallel alignment with your optic to ensure the laser and rangefinder point in the precise direction of your line of sight. Although a converging zero brings the TL3000 on target at one set distance, the separation between your point of aim and the laser splash expands as target distance increases. Conversely, a parallel zero maintains a constant offset regardless of distance.



BEFORE ZEROING

- Ensure the TL3000 is securely mounted and aligned as parallel as possible to your rifle scope.
- Confirm your rifle scope is properly zeroed.
- Place the rifle on a level surface and verify that both barrel angle and cant indicators read zero.

Gyroscope Calibration

If either indicator shows drift, calibrate the gyroscope before continuing:

1. Ensure the TL3000 remains level by:
 - a. Remove it from the rifle and place it on a flat surface.
 - b. Use a bubble level to ensure the scope is leveled.
2. Open **[Main Menu]** > **[Gyroscope Calibration]** .
3. Select **[BEGIN]**.
4. Keep the device completely stationary in 8 seconds.
5. Calibration completes automatically after the 8 second countdown.

Prepare the Alignment Target

If using ARKEN's Rigid Precision DB30 or DB34 diving board mounts, apply reflective tape directly to the designated location on the alignment target, as this distance is pre-measured. Otherwise, proceed with the following steps:

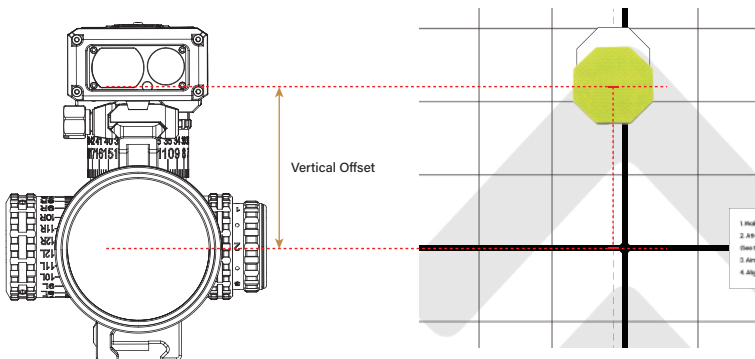
1. Measure the Mechanical Offset:

Using calipers or a ruler, measure the vertical offset from the center of the rifle scope's objective lens to the center of the VIS laser aperture when the TL3000 is mounted directly over the scope centerline. Measure both vertical and horizontal distances if mounted in any other position.

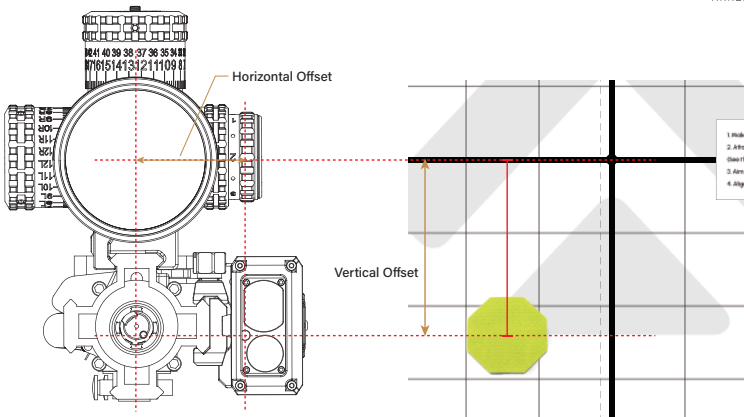
2. Mark the Laser Impact Point (LIP):

On the provided alignment target, plot the LIP by mirroring your measured vertical and horizontal offset values. Hold off on attaching the reflective sticker until completing the Coarse Zero phase in the subsequent step.

Diving Board Mounting Position



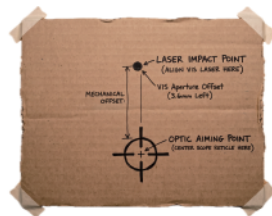
Side Mounting Position



NOTE

Due to a slight mechanical offset (3.6mm) of the VIS laser aperture relative to the center of the TL3000, use the dashed vertical line on the target to mark the horizontal offset when using a diving board mount.

If the included alignment target is lost or unavailable, scan this QR code to download a printable replacement. Ensure "True to Scale" is selected during printing so that each grid square correctly measures 1 in x 1 in. Alternatively, you can also draw on a piece of paper or cardboard.



Indoor Coarse Zero

Before heading to the shooting range, ARKEN highly recommends performing an indoor coarse zero. At an outdoor range in bright daylight, a laser that is significantly misaligned out of the box may miss your 50-100 yard target board entirely, making the visible beam impossible to find. Performing a coarse zero at close range indoors ensures your laser will be on paper when you transition outdoors for your final adjustments.



Why an Indoor Zero is Only "Coarse"

Because the distance across a room is very short (typically 10 yards or 30 feet), an indoor parallel zero will get the laser perfectly aligned for that specific distance. However, tiny angular errors that are invisible at 10 yards will become noticeable at 100 yards, and severely amplified at 1,000 yards. Therefore, this step is only to establish a coarse zero; you must still complete the 100-yard fine zero at the range.



CAUTION

Do **not** use the included reflective tape for this indoor step. At close distances, the intense reflection from the visible laser can cause eye discomfort or fatigue. Use standard drawn marks or non-reflective tape for indoor targeting.

- 1. Position the Target:** Tape the alignment target prepared in the previous step to a wall across the longest clear room in your home or garage (ideally 10 yards / 30 feet away). Ensure the target is plumb and level.
- 2. Stabilize the Rifle:** Rest your unloaded rifle on a bipod, shooting bags, or a stable table where you can look through the scope without supporting the rifle's weight.
- 3. Align the Optic:** Look through your rifle scope and center your crosshairs precisely on the center mark (Optic Aiming Point).
- 4. Adjust the Laser:** Turn on the visible (VIS) alignment laser. Using the included multi-tool, adjust the elevation and windage turrets until the visible green dot rests squarely on the top mark (Laser Impact Point).



CRITICAL SAFETY WARNING

NO LIVE FIRE REQUIRED.

Before beginning this process, perform all standard firearm safety checks:

- Remove the magazine.
- Visually and physically inspect the chamber to verify that the firearm is unloaded.
- Remove all live ammunition from your immediate workspace or bench.

After completing the indoor coarse zero, place reflective tape on the marked offset point of the target. Upon arriving at the outdoor location, verify at close range that the VIS laser maintains the same relative offset from your scope's reticle. If you notice any significant deviation, recheck the mounting and alignment before proceeding.

1. **Set Target Distance:** Place the offset target 30 to 100 yards away from your shooting position. A greater zeroing distance provides a more representative reference for long-range use.

(Note: VIS laser visibility varies with environmental conditions. Clear or overcast conditions with good air quality generally provide better visibility of both the target and laser spot.)

2. **Power On Device:** Return to the firearm, switch on the TL3000, and remove the lens cover.
3. **Activate Visible Laser:** Ensure the Visible Laser feature is toggled on in the system menu (enabled by default), then turn the rotary switch to activate the VIS laser beam.
4. **Confirm Visibility in Field of View:** Look through the scope at the center of the target to verify that the VIS laser spot is visible. If the green laser dot is difficult to see, check it at a closer distance to confirm that the alignment matches your indoor coarse zero. If the spot is visible at close range but not at target distance, move the target closer to reduce the effects of ambient daylight.

5. **Adjust Turrets:** Keep the rifle completely stationary and, adjust the TL3000's elevation and windage turrets until the laser spot aligns precisely with the marked offset point.
6. **Verify Zero & Perform Ranging Check:** Leave the VIS laser on to confirm the offset position remains stable. Perform a test range measurement to verify that the TL3000 accurately ranges the point aimed at by your scope reticle.

Since the TL3000 is mechanically fixed to the exterior of your weapon system. When you adjust your scope's elevation or windage turrets (dialing), the internal reticle moves, but the TL3000 does not.

Dialing temporarily breaks your parallel zero. If you place your crosshair on a target while dialed, the laser beam will shoot over or past the target, resulting in a failed reading. To successfully range targets in the field, operators must use one of the two operating procedures detailed below.

Method 1: Range First, Dial Second (Standard Procedure)

This is the recommended method for all standard engagements. It guarantees the laser emitter and the optic's crosshair remain perfectly parallel during the ranging process.

Step 1. Reset Turrets to Base Zero Restore the parallel setup by dialing the scope's elevation and windage controls back to your original zero setting.	Step 2. Target Acquisition and Ranging Align your crosshair with the target center and trigger the rangefinder. With turrets set to base zero, the beam fires parallel to your sighting axis.
Step 3. Apply Ballistic Correction Note the measured yardage, check your drop table, and input the elevation or windage adjustments into the scope turrets.	Step 4. Take the Shot Reposition the reticle center on your target and fire.

Method 2: The "Hold-Off" Method (Advanced Procedure)

In time-constrained scenarios where returning to base zero is not practical (such as engaging multiple targets at varying distances), you must use your reticle to compensate for the dialed elevation and manually steer the laser onto the target.

Step 1. Verify Current Turret Value Check your elevation turret to confirm exactly how much adjustment is currently dialed above your base zero.	Step 2. Apply Reticle Offset Hold your crosshair above the target by the exact amount you are currently dialed. For example, if dialed 5 MRAD Up, you must hold the center crosshair 5 MRAD above the target.
Step 3. Fire the Laser Maintain this offset hold and activate the WMLRF. The laser will now successfully strike the target.	Step 4. Adjust Turrets and Engage Read the new distance output, adjust your turrets to the updated elevation for the new target, return your center crosshair to the target, and execute the shot.

OPERATIONAL RULE: Wherever your turret is dialed, your laser is pointing. If you dial **UP**, the laser shoots **HIGH**---you must hold your crosshair equally high to angle the weapon down and push the laser onto the target.

The TL3000 is powered by DNT Ballistic Engine, which calculates precise firing solutions based on your ballistic profile, distance/angle to target, and real-time environmental data.

Out of the box, the ballistic calculation overlay is disabled by default. To utilize the ballistic features, you must first enable the display and select the appropriate measurement unit for your setup.

Enabling Ballistic Calculations

1. Navigate to **[Main Menu] > [Display Ballistics]**.
2. Toggle the setting to **ON** to activate the ballistic engine and display firing solutions on the main screen.

Selecting Your Output Unit

Once ballistics are enabled, you must select the unit of measurement for your firing solutions (drop and wind holds). It is critical that you choose the unit that directly corresponds to your riflescope's turrets or reticle to ensure accurate adjustments.

In the **[Display Ballistics]** menu, choose one of the following options:

- **[MRAD]** (Milliradians)
- **[MOA]** (Minute of Angle)
- **[click]** (Calculates the exact number of turret clicks needed, you need to)
- **[cm]** (Centimeters)
- **[in]** (Inches)

Ballistic Data Settings

To configure your rifle and ammunition parameters, navigate to **[Main Menu] > [Ballistic Data Settings]**. From this page, all ballistic variables and measurement units can be adjusted to match your specific setup.



Syncing Ballistics from DNT App

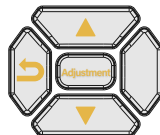
For a faster and more convenient setup, you can build your complete ballistic profile using the DNT App on your smartphone and wirelessly sync it directly to the TL3000.

Manual Adjustment Procedure

To manually enter or edit your ballistic data directly on the device, follow these steps:

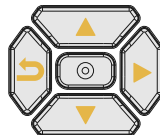
1. Navigate and Select:

Once inside the Ballistic Data Settings page, use the UP and DOWN Buttons to move the cursor to your desired parameter. Press the CENTER Button to enter the adjustment panel for that specific item.



2. Adjust the Value:

Inside the adjustment panel, press the **RIGHT Button** to move the cursor between the different digits. Use the **UP** and **DOWN Buttons** to increase or decrease the highlighted number until it matches your data.



3. Save and Exit:

Once you have finished adjusting the value, press the **LEFT Button** to save your changes and return to the main Ballistic Data Settings page. Repeat this process for the remaining parameters.

Syncing Data from the DNT App

Pairing your TARGETLOCK TL3000 with the DNT App allows you to easily create, edit, and wirelessly transfer custom ballistic profiles directly to your device.

To sync your data, follow these steps:

STEP ①

Install the DNT App

Download and install the DNT App on your mobile device (available via QR codes for both Android and iOS).



Android



iOS

STEP ②

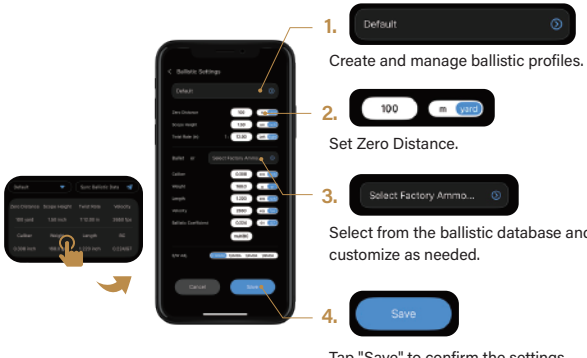
Connect via Bluetooth

Ensure Bluetooth is turned on for both the TL3000 and your mobile device, and the TL3000 isn't connected to other Bluetooth devices.

Open the DNT App, navigate to the Ballistics Page  , and tap the Bluetooth icon  . Select your TL3000 from the device list and tap "Connect".

STEP ③

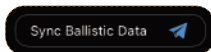
Edit Ballistic Profiles In the DNT App, go to the Ballistics Page  and tap the data tile to edit your ballistic profiles. You can create and manage profiles, set your zero distance, and select from the factory ammo database to customize as needed. Once finished, tap "Save" to confirm the settings.



1. **Default**
Create and manage ballistic profiles.
2. **100 yds**
Set Zero Distance.
3. **Select Factory Ammo...**
Select from the ballistic database and customize as needed.
4. **Save**
Tap "Save" to confirm the settings.

STEP ④

Sync to the TL3000 Tap the "Sync Ballistic Data" button in the app, then select your desired data slot (A, B, C, etc.) to instantly transfer the completed profile to the TL3000.



Ballistic Parameters



The accuracy of the TL3000's firing solutions depends entirely on the data you provide. To ensure precise holds and dead-on accuracy in the field, it is critical to enter the exact ballistic profile for your specific rifle and ammunition combination.

Parameter	Description	Data Source
Zero Distance	The exact distance at which your rifle hits dead center on the target.	Determined by your own range setup when sighting in your rifle (commonly 100 yards or 100 meters).
Scope Height	The vertical distance from the center of your rifle's bore to the center of your scope's main tube.	Measure with a ruler or digital caliper from the center of your rifle's bolt/bore axis up to the midpoint of the scope tube.
Muzzle Vel	The speed at which the bullet exits the barrel, measured in feet per second (fps) or meters per second (m/s).	Printed on factory ammunition boxes (estimated), or measured precisely using a chronograph at the range.
Caliber	The physical diameter of the bullet.	Printed on your ammunition box, stamped on the cartridge head, or engraved on your rifle barrel.
Weight	The mass of the individual bullet projectile.	Printed prominently on the factory ammunition box (e.g., 140 gr, 168 gr).
Length	The physical end-to-end length of the individual bullet projectile (excluding the brass cartridge case).	Listed on the bullet manufacturer's website, or measured directly using a digital caliper.

Parameter	Description	Data Source
BC (Ballistic Coefficient)	A numeric rating of how efficiently the bullet cuts through air resistance (using G1 or G7 models).	Printed on ammunition boxes, or listed on the bullet manufacturer's website.
Twist Direction	The direction (Right-Hand or Left-Hand) that the rifle barrel's internal rifling spins the bullet.	Engraved on your rifle barrel or in its spec sheet (standard production rifles are almost always Right).
Twist 1:N	The distance in inches required for the barrel's rifling to complete one full 360-degree rotation.	Stamped on your rifle barrel (e.g., "1:8" or "1 in 8") or listed in the manufacturer's manual.
Click Units	The angular measurement system used by your scope's adjustment turrets (MRAD/MIL or MOA).	Printed directly on your scope turrets, near the reticle, or in the optic manual.
Click Value	The specific shift produced by turning your scope turret by one single click.	Engraved on top of your scope turrets or turret caps (e.g., "1 Click = 0.1 MRAD" or "1 Click = 1/4 MOA").

Battery Life

TL3000 uses non-rechargeable CR123(A) batteries; a 3.0 V, 1500 mAh battery can last 6 hours in our “Real World Duty Cycle (RWDC)” battery testing model.



Real World Duty Cycle (RWDC)

Under the Real World Duty Cycle (RWDC) test model, screen brightness is set to Level 2 (medium), while the unit automatically performs a single-pulse range measurement every 3 seconds against a 500-yard target. Continuous ballistic calculations are performed throughout the test until the battery is depleted and ranging is no longer available.

Designed to simulate frequent field use, the RWDC test demonstrates how a single 1500 mAh battery, combined with power-saving features such as Auto Screen-Off and Auto Standby, can provide reliable operation for an extended day in the field.

The included rechargeable batteries are best suited for zeroing, practice, and casual use. Due to their lower overall capacity and non-linear discharge characteristics, the battery status indicator may remain at Level 4 (full) for several hours before rapidly dropping to level 1. The rangefinder may become unavailable shortly after the indicator reaches Level 1.

Power Saving

To maximize battery life in the field, the TL3000 features built-in power management settings. These features are triggered after a set period of inactivity, defined as no button presses and no physical movement (detected by the internal gyroscope).

Navigate to **[System Settings]** > **[Power Saving]** to configure the following options:

Auto Screen-Off

This function reduces power consumption by approximately 50% by turning off the display, while leaving the core system fully operational.

- **Time Options:** 0.5 min, 1 min, 3 min, or OFF.
- **System Status:** The system continues to run in the background. If enabled, external Bluetooth devices (such as environmental sensors) will remain connected and actively sync data.
- **How to Wake:** Any slight movement of the device or a button press will instantly turn the screen back on so you can resume operation.

Auto Standby

This function places the unit into its lowest power consumption state without fully powering off.

- **Time Options:** 1 min, 3 min, 5 min, 10 min, or OFF.
- **System Status:** The screen turns off and the system enters standby. Unlike completely powering off the device, Auto Standby preserves your last measured distances and active ballistic solutions on the display after waking up.
- **How to Wake:** The device cannot be woken by movement in this state. You must press a button to wake the unit from Standby.

The TARGETLOCK TL3000 utilizes the DNT Ballistic Engine to integrate comprehensive meteorological (MET) data into your firing solutions. This module factors in critical environmental variables—including wind speed, wind direction, temperature, relative humidity, and barometric pressure. These metrics can be entered manually or synced from them seamlessly from compatible external environmental sensors such as Kestrel and Calypso.

Main Screen MET Adjustments

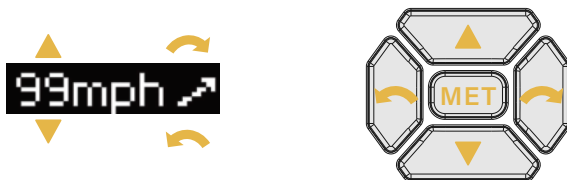
When Ballistic Calculation is active, MET data is enabled by default to supply environmental compensations. You can confirm MET data is active by checking for wind information and the MET Data Mode indicator on the main display.

To exclude MET variables from the ballistic solver, Long-Press the **DOWN Button**. Once MET data is removed from the main screen, it will no longer factor into ballistic calculations. Disabling MET mode retains your last modified values, carrying them over for use in future sessions.

The indicator at the top of the main screen displays the Wind Data Mode: **A** signifies that Wind data is automatically synced from external sensors, while **M** indicates manual input. You can toggle between Auto and Manual mode directly from the main screen by long-pressing the **UP Button**. Alternatively, this mode can be configured within the Wind panel (see the next chapter for details). The Auto and Manual modes for Atmo data operate independently from those for Wind data, meaning adjustments to one mode will not impact the other.



While in MET Manual Mode, quick wind adjustments can be made from the main screen:



- **UP / DOWN Buttons:** Adjust Wind Speed
- **LEFT / RIGHT Buttons:** Adjust Wind Bearing
- **CENTER Button:** Enter MET Module

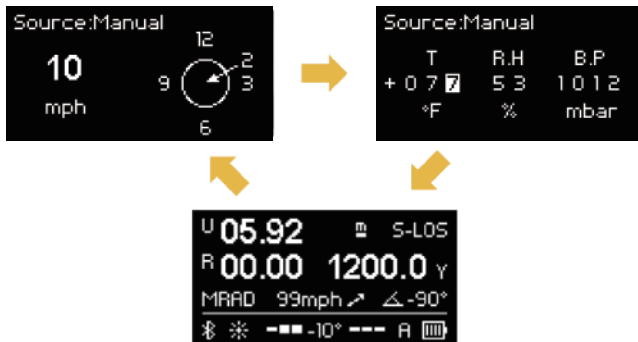


NOTE

If a target distance has already been measured, the ballistic solution will automatically re-calculate whenever the MET data is updated (whether manually or automatically). The shortest update interval is once per 3 seconds.

MET Panel

For Miscellaneous MET settings, press **CENTER Button** to enter the MET Panel - Wind, where you can adjust Wind Speed, Wind Bearing; Press again to enter MET Panel - Atmos, where you can adjust Temperature, Relative Humidity and Barometric Pressure.

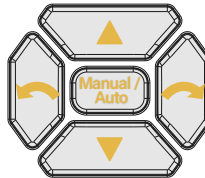
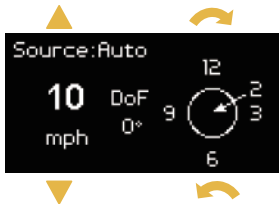


Long-press the **CENTER Button** to switch between Auto and Manual Mode within either the Wind or Atmo panel. This mode dictates whether MET values are edited manually or synchronized automatically with an external sensor. Connecting an external sensor automatically activates Auto Mode.

Wind Panel

In manual mode, adjust the wind speed value using the **UP** and **DOWN** Buttons (long-press to adjust rapidly). To switch the wind speed units between m/s and mph, press the **LRF** Button.

To adjust the relative wind bearing—the direction of the wind relative to your direction of fire (DoF)—use the **LEFT** and **RIGHT** Buttons to rotate the bearing counterclockwise or clockwise, respectively.



UNIT

To toggle between Manual and Auto Mode, long-press **CENTER** Button. When set to Auto Mode, wind speed and direction values update automatically on the TL3000 according to the sync interval defined in the **[Bluetooth]** menu.

Wind Direction Configuration

Different environmental sensors read and sync wind direction in various ways. Some devices provide relative wind Directions, while others use a built-in compass to provide an absolute true-north heading (e.g., 10 mph at 12°N).

You can configure how the TL3000 processes this incoming data by navigating to **[Bluetooth]** > **[Wind Bearing]**. Select the setup below that matches your connected device:

Kestrel® Devices (With Built-In Compass)

These models read absolute wind Direction. The TL3000 needs to establish your Direction of Fire (DoF) to accurately calculate the relative crosswind.

- **Setting:** Select [**Auto**].
- **DoF Setup:** An additional DoF indicator will appear in the MET-Wind Panel. To calibrate it:
 1. Hold the Kestrel upright and point the back of the unit directly at your intended target.
 2. Press the **LRF Button** on the TL3000.
 3. The TL3000 will capture the Kestrel's active compass heading, store it as your DoF, and use this reference to automatically compute the relative wind direction for all subsequent readings.

Kestrel® Devices (Without Compass)

Because these models cannot determine absolute direction, the wind Direction must be set manually.

- **Setting:** Select [**Manual**].
- **Operation:** When auto data syncing is enabled, the wind speed will update automatically in the MET-Wind Panel. However, you must manually adjust the wind bearing to match your conditions using the **LEFT** and **RIGHT Buttons** on the TL3000.

Calypso® Devices (Compatibility Pending)

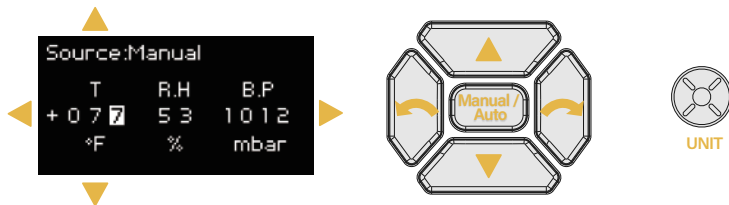
Calypso sensors are designed to read relative wind Direction directly, simplifying the calculation process.

- **Setting:** Select [**Auto**].
- **Operation:** The synced wind bearing is already relative to your position. The TL3000 will apply it directly to your ballistic calculation, and no DoF configuration is necessary.

Atmo Panel

In manual mode, adjust the value of the digit where the cursor is by using the **UP** and **DOWN Buttons** (long-press to adjust rapidly). Use **LEFT** and **RIGHT Buttons** to adjust the position of the cursor.

To switch the units of the selected value, press the **LRF Button**. To toggle between Manual and Auto Mode, long-press **CENTER Button**.



Switching between Auto / Manual Mode

Set your preferred measurement units in manual mode prior to pairing with external environmental sensors, as auto mode automatically adopts these settings. To freeze current MET data, switch to manual mode; the final values recorded during auto mode will remain saved.

Ranging Modes: Single Pulse vs. Continuous

The TL3000 offers two distinct ranging modes to adapt to different field conditions and target types. You can switch between modes in **[Main Menu] > [Ranging Modes]**, or long-press the **LEFT Button** in the Main Screen.

- **Single Pulse Ranging:** This mode fires a single laser pulse, returning the distance measurement instantly. If your ballistic engine is enabled, it will also automatically compute and display your firing solution immediately. Single Pulse is highly recommended for stationary targets and is the best choice for preserving your device's battery life.
- **Continuous Ranging:** This mode keeps the laser active for 15 seconds, providing real-time distance updates as you pan the device or track a moving object. Because the distance is constantly changing, the device will not automatically compute a firing solution. To lock in a specific distance and trigger the ballistic calculation during a scan, you must press the **LRF Button** a second time.

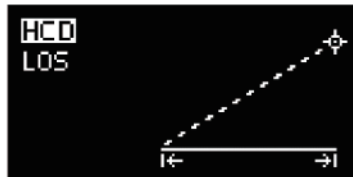
Distance Modes: LOS vs. HCD

The TL3000 provides two different distance measurement modes. Both modes fully support the internal DNT Ballistic Engine, but they feed data into the calculator differently.

- **Line of Sight (LOS):** This mode measures the direct, straight-line distance from the device to your target. When active, it measures the raw LOS distance and the exact incline/decline angle, and feeds both directly into the ballistic engine to compute a highly precise firing solution.



- **Horizontal Component Distance (HCD):** This mode uses the internal gyroscope to automatically calculate the angle-compensated horizontal distance. When active, it feeds only this flattened, compensated distance into the ballistic engine (without passing the specific angle data).



How to Choose: Default to **LOS** when relying on the TL3000's internal ballistic engine for long-range or steep-angle shots. By providing both the exact distance and the true angle, the engine can calculate the most accurate mathematical firing solution. Choose **HCD** if you prefer a simplified "shoot-to" distance display, or if you are shooting at moderate ranges where the nuanced angle data is less critical to the final hold.

Bluetooth & External Devices

The TL3000 features a built-in BLE Bluetooth module designed to connect with various external devices. You can connect to the DNT App for syncing ballistic profiles and performing over-the-air (OTA) software updates, or connect to external environmental sensors like Kestrel® and Calypso® for real-time weather data integration.

To access and manage your connections, navigate to **[Main Screen] > [Bluetooth]**.

Connecting to the DNT App

By default, the TL3000's Bluetooth is configured to connect with the DNT App.

- When the device's Bluetooth is turned on, open the DNT App on your smartphone to locate and pair the unit.
- The specific Bluetooth name of your TL3000 is displayed at the very bottom of the Bluetooth screen for easy identification.
- *Note: For detailed pairing steps, please refer to the "Syncing Data from the DNT App" section in the Ballistics chapter.*

Connecting to Kestrel® or Calypso® Sensors

To feed real-time environmental data into your ballistic engine, you must switch the connection mode to match your sensor.

1. In the Bluetooth menu, select either the **[Kestrel]** or **[Calypso]** option.
2. The TL3000 will immediately begin scanning for nearby compatible devices.
3. Once a successful connection is established, the external device's serial number will appear on the TL3000's Bluetooth screen to confirm they are paired.

Bluetooth Configuration Settings

While in the Bluetooth menu, you can fine-tune how the TL3000 receives data from your external environmental meters:

- **[Sync Freq.] (Sync Frequency):** This setting controls how often the TL3000 fetches updated weather readings from your connected external meter. You can choose between **[1 s]**, **[5 s]**, and **[10 s]** intervals. Note: A slower sync frequency can help conserve battery life on both devices.
- **[Wind Bearing]:** This dictates whether the wind direction is automatically synced from the external meter or input manually by the user. Select **[Manual]** if your specific wind meter does not feature a built-in compass or cannot read relative wind direction.



Over-The-Air Update

If the Bluetooth update gets stuck at a certain progress level, the Bluetooth connection may have been interrupted. Cancel the update in the App, move the TL3000 closer to or change its position relative to your mobile device, and try the update again.

F FCC WARNING



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.

Any 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. To maintain compliance with FCC's RF Exposure

guidelines, this equipment must be installed and operated with a minimum distance of 20cm between the radiator and your body. Use only the supplied antenna.





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