

HOUND



Day & Night Technologies

Ballistic Thermal Monocular

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## HOUD SERIES BALLISTIC THERMAL MONOCULAR

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# HOUND SERIES

Ballistic Thermal Monocular

## SAFETY INSTRUCTIONS

- Do not point the device at intense light sources such as the sun or open flames, as this may permanently damage the thermal sensor.
  - Device operating temperature:  $-4^{\circ}\text{F}$  to  $122^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$ ).
  - If the device malfunctions, contact customer support ([info@dnptoptics.com](mailto:info@dnptoptics.com)). Do not attempt to disassemble the device.
- 

## DESCRIPTION

The HOUND Ballistic Thermal Monocular is a portable, lightweight handheld thermal imaging device designed for superior performance in all lighting conditions. With advanced features such as a built-in ballistic calculator, precision rangefinder, and different thermal palettes, the HOUND series delivers accurate and reliable data for professionals and enthusiasts alike.

## PACKAGE CONTENT

- |                                     |               |                     |
|-------------------------------------|---------------|---------------------|
| ● HOUND Ballistic Thermal Monocular | ● Wrist Strap | ● Microfiber Cloth  |
| ● Eye Cup                           | ● Lanyard     | ● HOUND Quick Start |
| ● Carrying Pouch                    | ● USB-C Cable | ● HOUND User Manual |



## SPECIFICATIONS

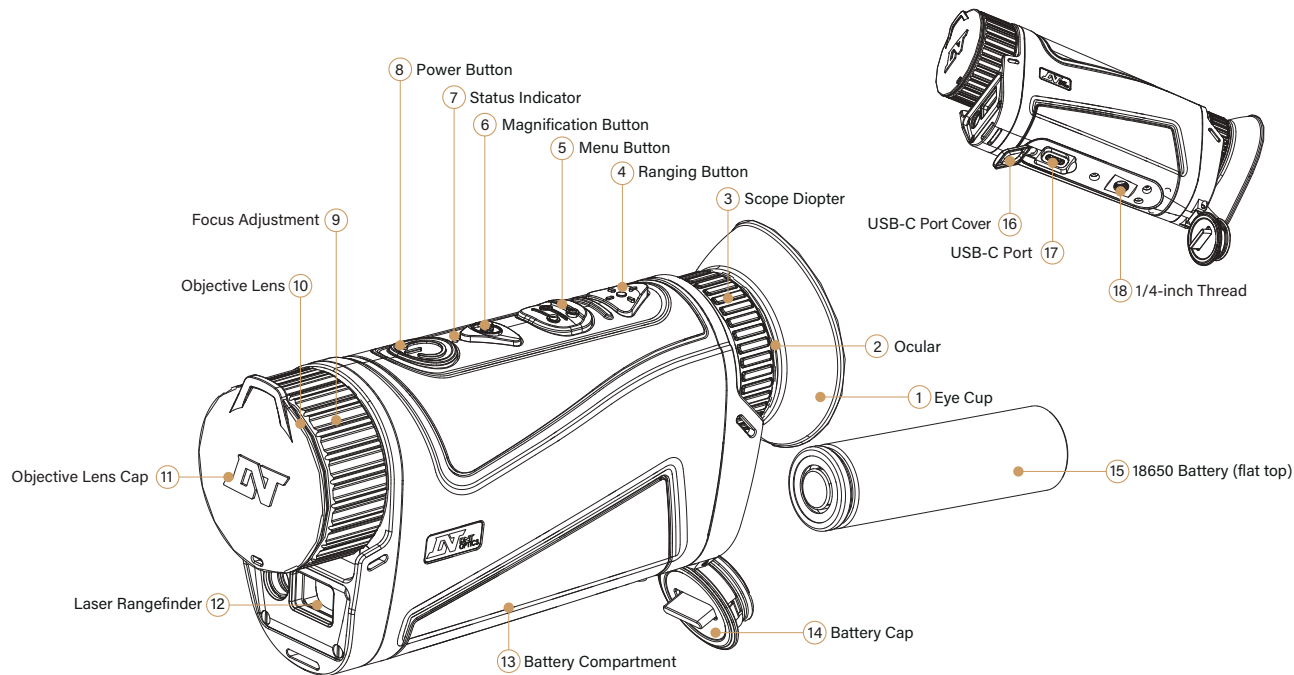
|                         | Model                             | H315R                     | H325R                    | H635R                     |
|-------------------------|-----------------------------------|---------------------------|--------------------------|---------------------------|
| Sensor Specifications   | Sensor Resolution                 | 384 × 288 pixels          | 384 × 288 pixels         | 640 × 512 pixels          |
|                         | Sensor Type                       | Uncooled Infrared Sensor  |                          |                           |
|                         | Sensor Frame Rate                 | 50 fps                    |                          |                           |
|                         | Pixel Size                        | 12 × 12 μm                |                          |                           |
|                         | NETD                              | ≤ 18 mk (@25°C)           |                          |                           |
|                         | Eye Relief                        | 25 mm                     |                          |                           |
|                         | Base Magnification                | 1.5x                      | 2.5x                     | 2x                        |
|                         | Digital Zoom                      | 1.5x, 3x, 4.5x, 6x        | 2.5x, 5x, 7.5x, 10x      | 2x, 4x, 6x, 8x            |
| Display Specifications  | Display Type                      | Micro - OLED              |                          |                           |
|                         | Display Resolution                | 1024 × 768 pixels         |                          |                           |
|                         | Display Refresh Rate              | 50 Hz                     |                          |                           |
| Optics Specifications   | FOV (H × V) degrees / yd @ 100 yd | 17.7 × 13.3 / 30.7 × 23.0 | 10.6 × 7.9 / 18.4 × 13.8 | 12.6 × 10.1 / 21.9 × 17.6 |
|                         | Objective Focal Length            | 15 mm                     | 25 mm                    | 35 mm                     |
| Power Specifications    | Battery Type                      | 18650 Battery (Flat-top)  |                          |                           |
|                         | Operating Time                    | 5.5 h                     |                          | 5 h                       |
|                         | External Power Supply             | 5V USB-C                  |                          |                           |
|                         | Net Weight                        | 288 g / 10.16 oz          | 299 g / 10.55 oz         | 310 g / 10.93 oz          |
|                         | Dimensions                        | 155 × 48 × 72 mm          | 155 × 48 × 72 mm         | 157 × 51 × 72 mm          |
|                         |                                   | 6.1 × 1.9 × 2.8 inches    | 6.1 × 1.9 × 2.8 inches   | 6.2 × 2.0 × 2.8 inches    |
| Physical Specifications | Storage                           | Built-in Storage, 32 GB   |                          |                           |
|                         | Ingress Protection Level          | IP67                      |                          |                           |

## ■ FEATURES

- Precision Ballistics: Built-in ballistic calculator for accurate targeting.
- Thermal Palettes: Switch between White Hot, Black Hot, Red Hot, and Iron Hot modes.
- High-Resolution Display: HD Micro-OLED display with a resolution of 1024×768 pixels.
- Laser Rangefinder: Detects targets up to 1,200 yards (1,100 meters).
- Full-Screen Recording: Includes on-screen display, reticle, and rangefinder data.
- Wi-Fi and App Support: Seamless data transfer and ballistic adjustments via the DNT App.



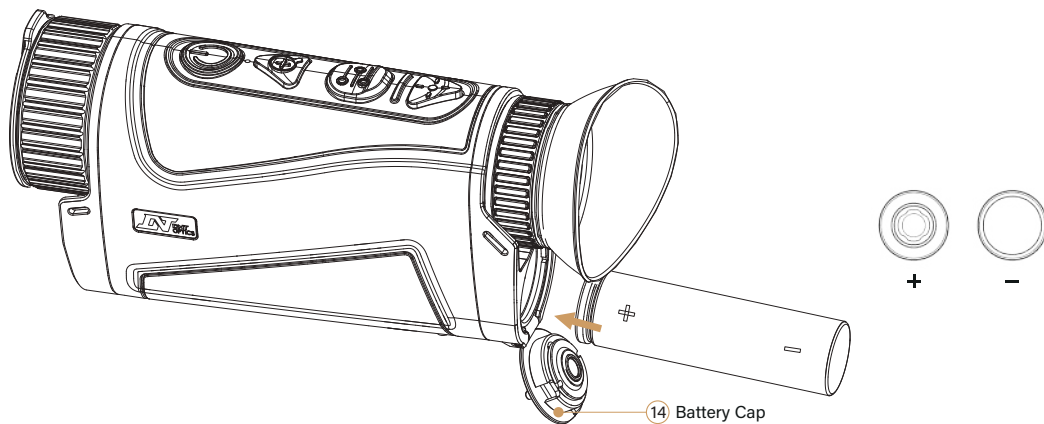
## MAIN PARTS AND CONTROLS



## ■ POWER SUPPLY

The HOUND device is powered by a rechargeable 18650 lithium battery (flat top). The battery can be installed or replaced as follows:

- Open the **Battery Cap** ⑭ by pressing the locking tab downward.
- Insert the 18650 battery (flat top) with the **"+" terminal facing inward**.
- Secure the **Battery Cap** ⑭ by pressing gently until it clicks into place.



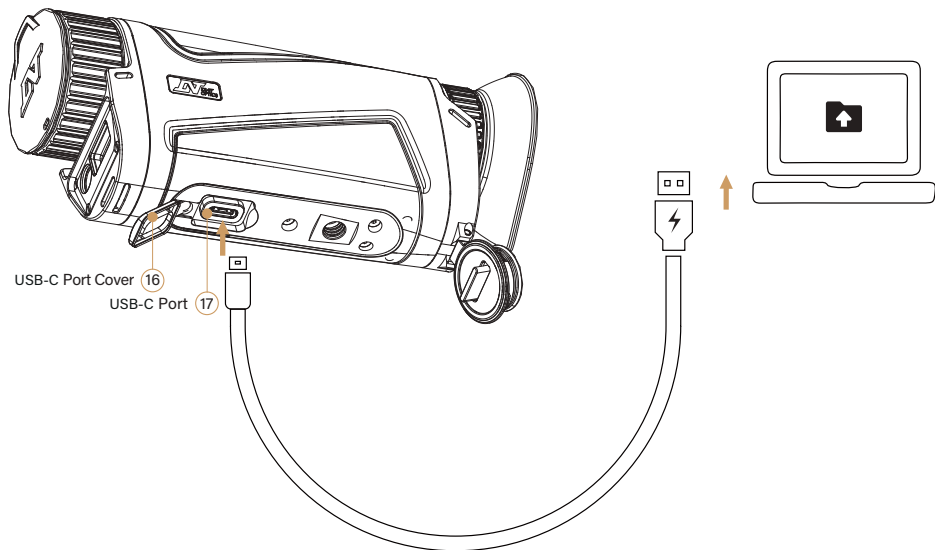


## DATA TRANSFER

The HOUND supports operation via an external USB-C power source.

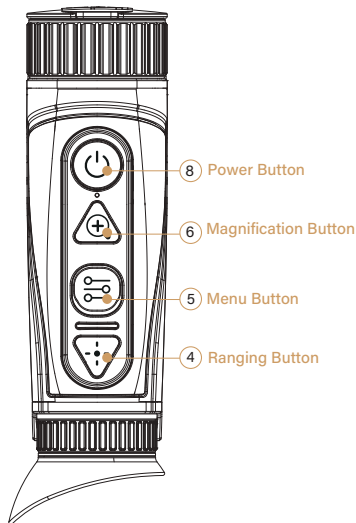
**Note:** The USB-C port does not charge the 18650 battery. Please remove the battery when using USB power and recharge it with an external battery charger.

The USB-C connection can also be used to download videos from the device. When plugged into a computer via a USB-C cable, the HOUND will appear as an external drive, allowing you to browse, open, and download files. Data transfer can also be performed via the DNT app.



## ■ CONTROL DESCRIPTION

To turn on the device, long press the **Power Button**  until the screen activates.



### On Main Screen, Use the Buttons as Follows:

|                                                                                                                        |             |                      |
|------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|
| <div>8 </div> <div>Power Button</div> | Long Press  | Power the device off |
|                                                                                                                        | Short Press | Enter/exit standby   |

|                                                                                                                                |                    |                          |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------|
| <div>6 </div> <div>Magnification Button</div> | Long Press         | Adjust screen brightness |
|                                                                                                                                | Short Press        | Adjust zoom levels       |
|                                                                                                                                | Quick Double Press | Activate NUC             |

|                                                                                                                       |                    |                                 |
|-----------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|
| <div>5 </div> <div>Menu Button</div> | Long Press         | Open/exit the menu              |
|                                                                                                                       | Short Press        | Switch between thermal palettes |
|                                                                                                                       | Quick Double Press | Switch between imaging modes    |

|                                                                                                                          |             |                          |
|--------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|
| <div>4 </div> <div>Ranging Button</div> | Long Press  | Start/stop recording     |
|                                                                                                                          | Short Press | Activate the rangefinder |

### In the Settings Menu, Use the Buttons as Follows:

|                                                                                                                                  |             |                    |
|----------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| <div>6 </div> <div>Magnification Button</div> | Short Press | Move the cursor up |
|----------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|

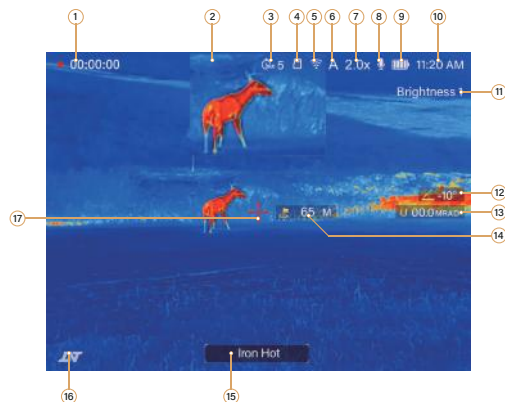
|                                                                                                                            |             |                      |
|----------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|
| <div>4 </div> <div>Ranging Button</div> | Short Press | Move the cursor down |
|----------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|

|                                                                                                                         |             |                        |
|-------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|
| <div>5 </div> <div>Menu Button</div> | Short Press | Confirm your selection |
|-------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|

### In Submenus (Level 2 or 3), Use the Buttons as Follows:

|                                                                                                                         |             |                                      |
|-------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|
| <div>5 </div> <div>Menu Button</div> | Long Press  | Return to the previous page          |
|                                                                                                                         | Short Press | Confirm/move the cursor to the right |

## ON-SCREEN DISPLAY



- ① Recording Indicator: Indicates that the video is being recorded
- ② PIP Window
- ③ NUC: In auto mode, a 5-second countdown appears before shutter activation
- ④ Storage Status Icon: Only visible if there is an issue with the internal storage
- ⑤ Wi-Fi Icon: Only visible when Wi-Fi is on
- ⑥ A: Active Ballistic Profile (DOPE)
- ⑦ Current Magnification (e.g. 2.0x)

- ⑧ Microphone: Shows if audio is being recorded with video

( Microphone ON, Microphone OFF)

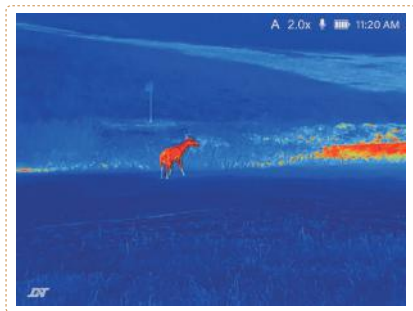
- ⑨ Battery Level:

| Icon | Status      | Battery Status      |
|------|-------------|---------------------|
|      | Low Battery | 0% ~ 10%            |
|      | 1 bar       | 10% ~ 20%           |
|      | 2 bars      | 20% ~ 50%           |
|      | 3 bars      | 50% ~ 80%           |
|      | 4 bars      | 80% ~ 100%          |
|      | USB Powered | Connected to type C |

- ⑩ Current Time
- ⑪ Current Screen Brightness Level (1-5)
- ⑫ Gyroscope Angle
- ⑬ Ballistic Solution
- ⑭ Target Distance
- ⑮ Current Thermal Palette
- ⑯ DNT Watermark
- ⑰ Ranging Icon

## ■ MENU LIST

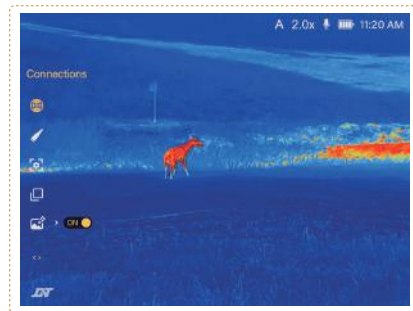
On the main screen (Figure 1), press and hold the **Menu Button**  to open the settings menu (Figure 2).



(Figure 1)



Long press for 2s



(Figure 2)

In the settings menu, use the **Magnification Button**  and **Ranging Button**  to navigate up and down.



⑥ Magnification Button



Up



④ Ranging Button



Down



## MENU LIST

- Long press the **Menu Button**  to open the menu page.
- Use the following buttons to scroll through the 8 menu options: **Magnification Button**  : Move up. **Ranging Button**  : Move down.

| Icon                                                                              | Description                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 【Connections】 Turn Wi-Fi ON / OFF                                                                                                                                                                                                                                                                                                                 |
|  | 【Ballistic Calculator】 Turn ON / OFF Ballistic Calculation<br>Ballistic Data Settings<br>Display Ballistics: MRAD / MOA / cm / inches                                                                                                                                                                                                             |
|  | 【LRF Settings】 Ranging Modes: Single Pulse Ranging / Continuous Ranging<br>Ranging Units: Meter / Yard                                                                                                                                                                                                                                            |
|  | 【PIP Settings】 Off / Left / Center / Right                                                                                                                                                                                                                                                                                                        |
|  | 【Image Super Resolution】 ON / OFF                                                                                                                                                                                                                                                                                                                 |
|  | 【Thermal Image Settings】 Thermal Imaging Mode: Natural / Enhanced / Highlight<br>NUC (Non-Uniformity Correction): Auto Mode / Manual Mode<br>Palettes: White Hot / Black Hot / Red Hot / Iron Hot<br>Image Contrast: 1 / 2 / 3 / 4 / 5<br>Image Brightness: 1 / 2 / 3 / 4 / 5<br>Image Sharpness: 1 / 2 / 3 / 4 / 5<br>Hotspot Tracking: ON / OFF |

## ■ MENU LIST

- Long press the **Menu Button**  to open the menu page.
- Use the following buttons to scroll through the 8 menu options: **Magnification Button**  : Move up. **Ranging Button**  : Move down.

| Icon                                                                              | Description                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>【Function Settings】</b> Defective Pixel Repair<br>Auto Power Off: Auto shutdown after entering Standby Mode: Off / 10 / 20 / 30 minutes<br>Loop Recording: Off (default 10 minutes) / 1 / 3 / 5minutes<br>Audio Recording: ON / OFF<br>Gyroscope: ON / OFF / Calibration<br>Screen Brightness: 1 / 2 / 3 / 4 / 5 |
|  | <b>【System Settings】</b> Date / Time<br>Language Setting: English / Français / Español / Deutsch / Italiano<br>Format<br>Restore Default Settings<br>Available Storage<br>Version                                                                                                                                   |



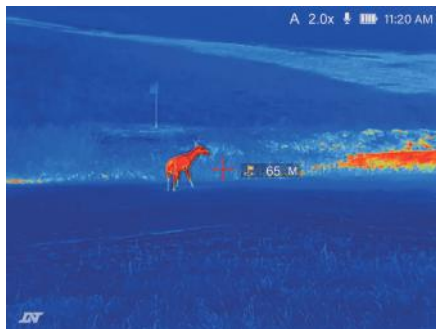
## ■ MAIN FUNCTIONS

### Laser Rangefinding

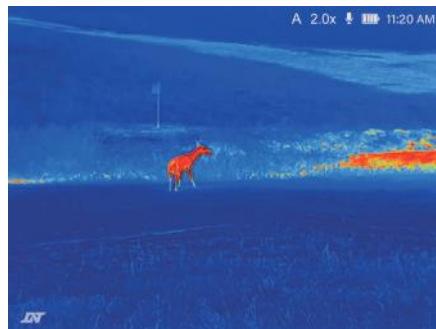
The HOUND's built-in rangefinder can operate in two modes: continuous ranging and single pulse ranging.

#### Mode 1: Continuous Ranging

- Long press the **Menu Button**  for 2 seconds to open the settings.
- Use the **Ranging Button**  to navigate to "LRF Settings">"Ranging Modes", and select "**Continuous Ranging**".
- Long press the **Menu Button**  until you reach the main screen.
- Short press the **Ranging Button**  to activate the rangefinder. (The screen will display the rangefinder icon and continuously update the target distance in real time.)
- To deactivate, there are three options:
  - Option 1:** When Ballistic Calculator is off, short press the **Ranging Button** .
  - Option 2:** When Ballistic Calculator is on, short press the **Menu Button** .
  - Option 3:** After 20 seconds of inactivity, the rangefinder will also turn off automatically.



(First short press the Ranging Button)

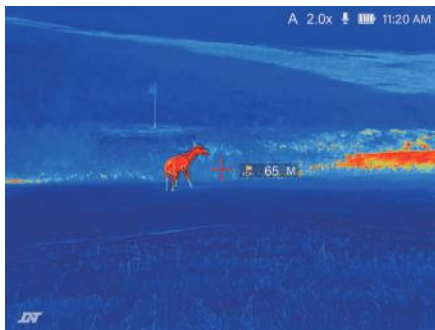


(Short press the Ranging Button or Menu Button)

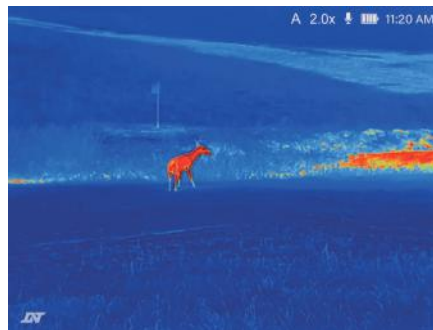
## Laser Rangefinding

### Mode 2: Single Pulse Ranging

- Long press the **Menu Button**  for 2 seconds to open the settings.
- Use the **Ranging Button**  to navigate to "LRF Settings">"Ranging Modes", and select "**Single Pulse Ranging**".
- Long press the **Menu Button**  until you reach the main screen.
- Short press the **Ranging Button**  to activate the rangefinder and measure the distance to a target.
- To measure a new distance, press the **Ranging Button**  again.
- To deactivate, short press the **Menu Button** . (The rangefinder will also turn off automatically after 20 seconds of inactivity.)



(First press the **Ranging Button**)



(Short press the **Menu Button**)



## Ballistic Calculator

The built-in ballistic calculator allows you to calculate precise point-of-impact adjustments based on ranging data.

### Ballistics Profiles

- Long press the **Menu Button**  for 2 seconds to open the settings.
- Select "Ballistic Calculator" > "Ballistic Data Settings" to set up your Ballistic Data.
- Use the **Magnification Button**  (up) and **Ranging Button**  (down) to navigate through the fields, as shown in Figure 1.
- Press the **Menu Button**  to select the desired field.
- Use the **Magnification Button**  (up) and **Ranging Button**  (down) to adjust the value up or down, as shown in Figure 2.
- Press and hold the **Menu Button**  to save the changes and exit the interface.



(Figure 1)

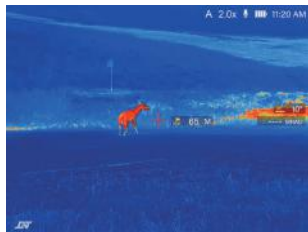


(Figure 2)

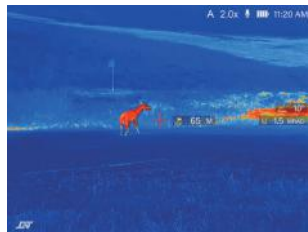
## Using the Ballistic Calculator

In the settings menu, toggle "Ballistic Calculator" on. The following steps show the operation in Continuous Ranging Mode:

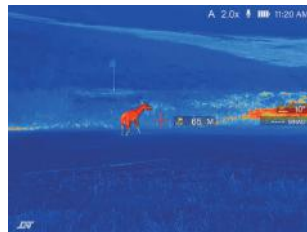
- First short press of the **Ranging Button**  : Activate the rangefinder. The target distance and gyroscope angle values will be displayed (see Figure 1).
- Second short press of the **Ranging Button**  : Enable ballistic calculation. The ballistic solution, along with the distance and gyroscope angle values, will be displayed (see Figure 2).
- Third short press of the **Ranging Button**  : Reset for a new target. The target distance and gyroscope angle values will be displayed (see Figure 3).
- Short press the **Menu Button**  : Deactivate the ranging function (see Figure 4).



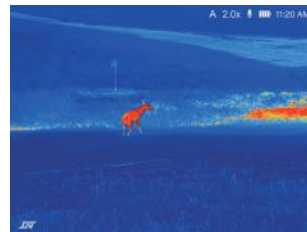
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)



## ■ APP CONNECTION

### Installing DNT APP

You can download the DNT App from Google Play (Android) or the App Store (iOS), or scan the QR codes below.



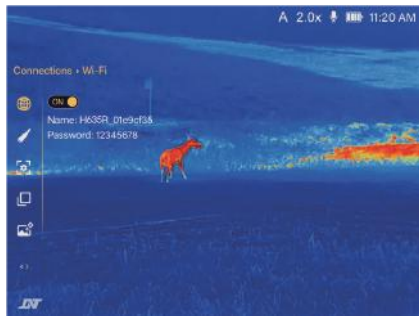
Android



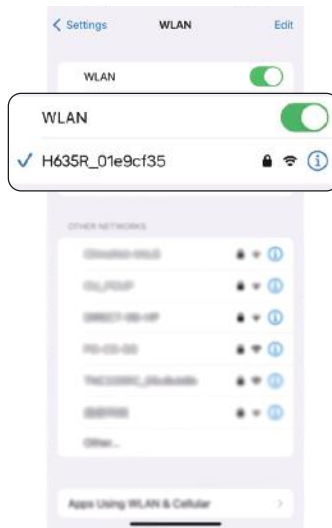
iOS

## Connecting App to Device

- In the settings menu, navigate to "Connections" > "Wi-Fi".
- Toggle Wi-Fi on. The device's Wi-Fi name and password will then be displayed, as shown in Figure 1.
- On your phone, open the WLAN settings, find and select the device's Wi-Fi name.
- Enter the password (12345678), tap "Connect", and wait for the connection to be established.



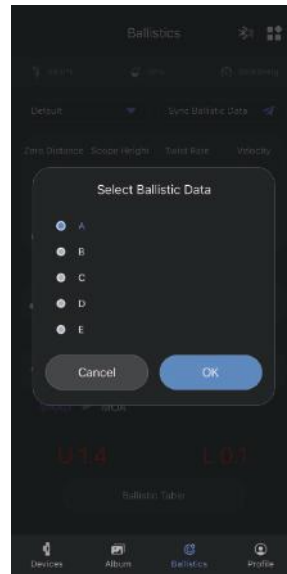
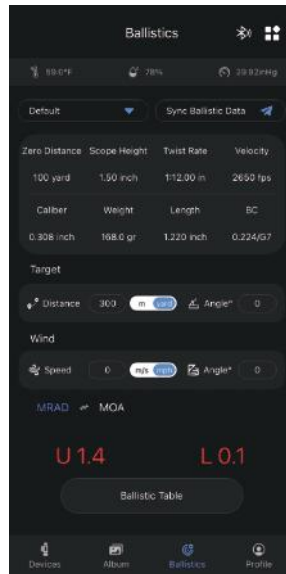
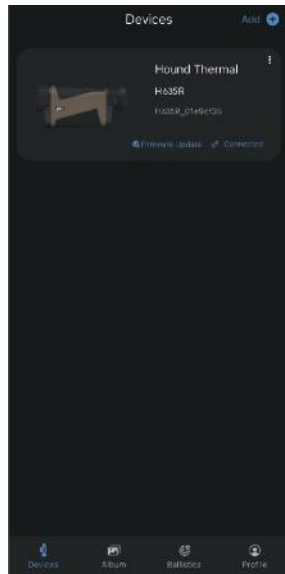
(Figure 1)





## Connecting App to Device

Once connected, use the DNT App to configure ballistics, transfer data, and update profiles.



## ■ TROUBLESHOOTING

- Device Not Powering On: Check battery orientation and charge level.
- Poor Image Quality: Adjust diopter, focus and thermal settings.
- Wi-Fi Connection Issues: Restart device and reconnect via the app.
- Inaccurate Ballistic Solution: Check if gyroscope is calibrated.

## ■ CUSTOMER SUPPORT AND WARRANTY ASSISTANCE

For support, troubleshooting, or warranty claims, contact our customer service team at: [info@dnptoptics.com](mailto:info@dnptoptics.com).



## ■ 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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