TENPOINT

CROSSBOW TECHNOLOGIES

DNT
OPTICS

CONTENTS

VISION HD 3-12X DIGITAL RANGEFINDING CROSSBOW SCOPE

VISION HD 3-12X
Digital rangefinding crossbow scope

SAFETY INSTRUCTIONS

◉ **DO NOT** attempt to disassemble the scope. Please contact us if there are any malfunctions.

◉ Device operating temperature -4F-122F (-20~50°C).

◼ DESCRIPTION

The VISION HD 3-12X Scope is a compact, versatile device designed for to operation in all weather conditions. With its exceptional image quality, it's ideal for hunting and shooting sports. The integrated laser rangefinder, combined with a ballistic calculator, ensures accurate shot placement.

◼ PACKAGE CONTENTS

- VISION HD 3-12X Scope
- Eye Cup
- Mount Accessories

- Battery Charger and USB Cable
- User Manual
- 21700 Battery (flat-top) × 2

SPECIFICATIONS

Sensor Specifications

Resolution	Frame Rate	Video Record Resolution
1920x1080 pixels	60 Hz	1800x1080 pixels

Optical Specifications

Base Magnification	Digital Magnification	Eye Relief
3X	3-12X	65 mm/2.7 inches

Diopter Adjustment	Detection Range	
±3D	400 m	

Display Specifications

Type	Display Resolution	Frame Rate
Micro—OLED	1920x1080 pixels	60 Hz

Power Specifications

Battery Type	Operating Time	External Power Supply
21700 Battery (flat top)	10 h	5V-TYPE C USB

Physical Specifications

Net Weight	Dimensions	Memory
522 g/18.4 oz	153.5x75.7x54.2 mm/6.0x3.0x2.1 inches	Built-in Memory, 32GB

Waterproof	WIFI/APP	Operation Distance
IP67	YES (DNT)	5-1000 M/5-1100 Yards

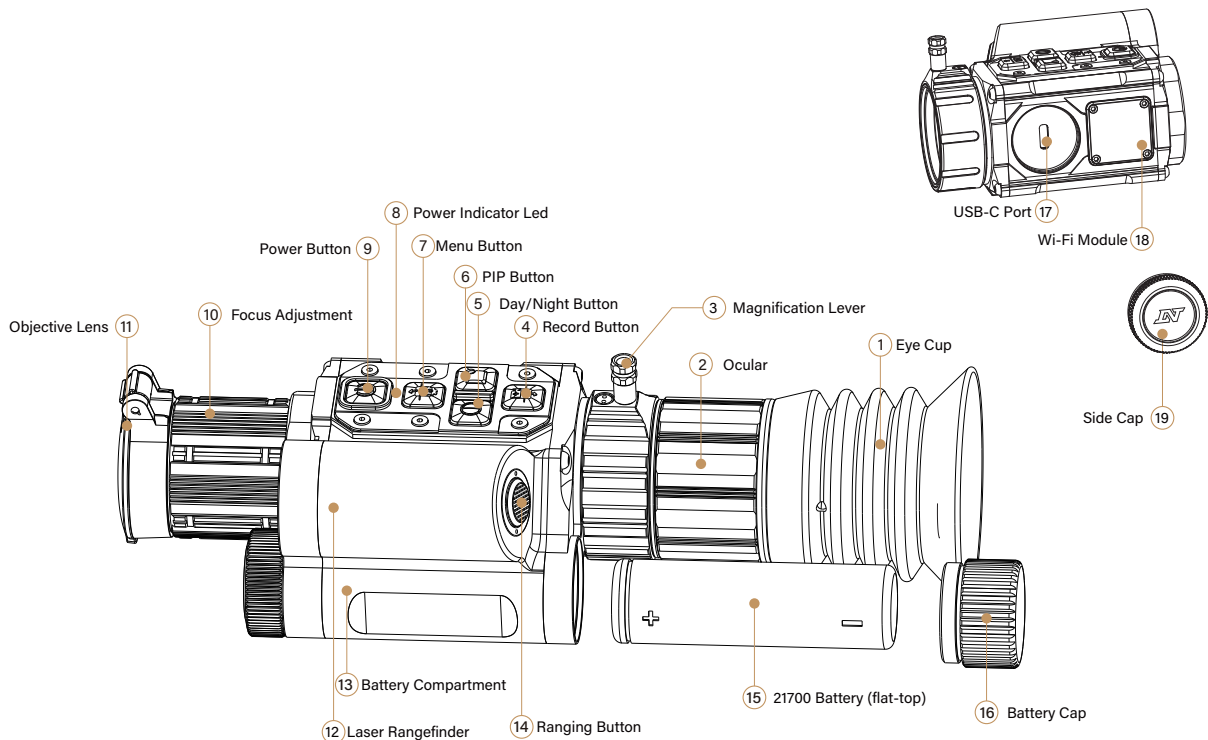| Operating Temperature	Recoil Proof	
-20~50°C/-4~122F	800 Gs	

■ FEATURES

- Laser rangefinder and built-in ballistic calculator with 3-axis gyroscopic detection

- Ultra HD image quality: Micro-OLED Display of 1920x1080 resolution at 60 Hz

- Picture-in-Picture function

- Full-color images in low-light conditions

- One-shot zero

- 32GB internal memory

8 Power Indicator Led

Power Button 9

7 Menu Button

6 PIP Button

5 Day/Night Button

Power Button 9

10 Focus Adjustment

4 Record Button

3 Magnification Lever

Objective Lens 11

2 Ocular

1 Eye Cup

USB-C Port 17

Wi-Fi Module 18

Side Cap 19

13 Battery Compartment

12 Laser Rangefinder

14 Ranging Button

15 21700 Battery (flat-top)

16 Battery Cap

POWER SUPPLY

This device is powered by a rechargeable 21700 battery (flat-top). The device can also be powered using a USB power supply. The USB-C port does not charge the 21700 battery. Please remove the 21700 battery if using USB power. To recharge, please use USB battery charger.

Note: If the side cover is removed, the device will no longer maintain its IP67 waterproof rating.

Installing the 21700 Battery (flat top)

⑮ 21700 Battery (flat-top)   ⑯ Battery Cap
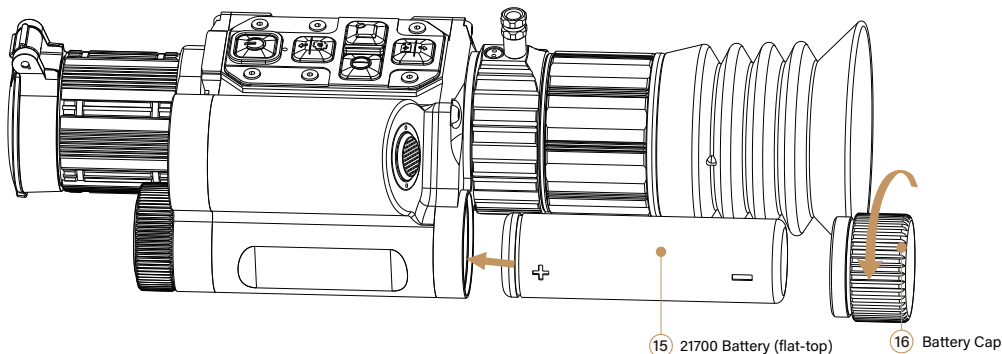
- Unscrew the Battery Cap ⑯ .

- Insert 21700 battery ⑮ into battery compartment, positive end (+) first.

- Screw the Battery Cap ⑯ tight till the end of the thread.
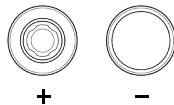
■ USB-C DATA TRANSFER
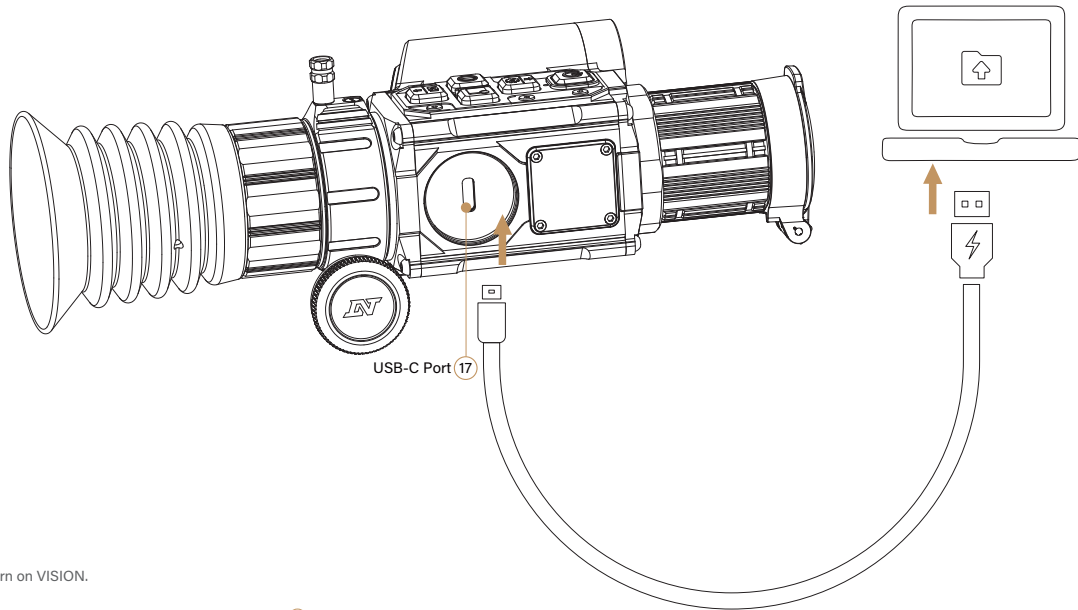
USB-C Port ⑰

● Turn on VISION.

● Remove the Side Cap to reveal the USB-C Port ⑰.

● Plug USB-C cable into VISION USB-C port. VISION will connect to your computer like a USB drive. You can browse and download video recordings to your computer as well as transfer files from VISION to your computer.

ON-SCREEN DISPLAY

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 Magnification

⑪ Gyroscope Horizontal Direction Angle

⑫ Built-In Memory (It Only Shows When Memory Error Occurs)

⑬ Wi-Fi (It Only Shows When Wi-Fi is on)

⑭ Mic (It Only Shows When Recording Audio is on)

⑮ Ballistic Profiles Info

⑯ DNT LOGO

⑰ Aim Point

⑱ Gyroscope Vertical Direction Angle

① Recording Indicator: this shows the device is recording.

② PIP Reticle

③ PIP Window

④ Ranging Reticle

⑤ Ranging Distance

⑥ Reticle

⑦ Current Screen Brightness Level

⑧ Current Time

CONTROL DESCRIPTION

Button	Status	Short Press	Long Press
(9)	Off	——	On
	On	Standby	Off
	Standby	Wake-up	——
	Reticle Zeroing	Freeze/Unfreeze	——
(7)	On	Set Reticle Color/ Ranging Reticle Color	Open Menu Setting
	Menu	Move Cursor up	——
	Reticle Zeroing	Move Cursor up	——
(6)	On	Adjust Brightness	Turn On/Off PIP
	Menu	Confirm	——
	Reticle Zeroing	Change Reticle X/Y Value Change Zeroing Profiles	Continuously Increase or Decrease the X/Y-axis Value of the Reticle
	Date Setting	Move Cursor Right	Save & Exit
	Time Setting	Move Cursor Right	Save & Exit
(5)	Color Mode	——	Black/White Mode
	Black/White Mode	——	Color Mode
	Zeroing	Change Reticle X/Y Value Change Zeroing Profiles	Continuously Increase or Decrease the X/Y-axis Value of the Reticle
	Date Setting	Move Cursor Left	Save and Exit
	Time Setting	Move Cursor Left	Save and Exit
(4)	On	Start/End Recording	Start RAV Recording (only in Manual Mode)
	Menu	Move Cursor Down	——
	Reticle Zeroing	Move Cursor Down	——

(9) Power Button
(7) Menu Button
Day/Night Button (5)
(6) PIP Button
Ranging Button (14)
(4) Record Button
Magnification Lever (3)

Ranging Button (14)

Magnification Lever (3)
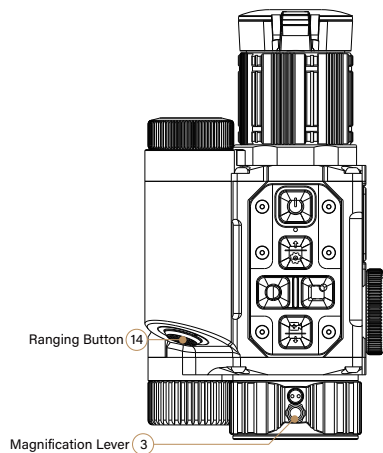
Button	Status	Short Press	Long Press	Rotation
(3)	On	——	——	Turn the Lever to the Left/Right to Zoom In/Out
	Reticle Zeroing	——	——	Turn the Lever to the Left/Right to Zoom In/Out
(14)	Ballistic Calculation Off	Show/Hide Ranging Icon and Distances	Turn Off Ranging	——
	Ballistic Calculation On	Ranging and Ballistic Calculation	Turn Off Ranging	——

QUICK START GUIDE

Turning On/Off the Device

To turn on the device, press and hold the **Power Button** (9) ⏻ for 2 seconds. The blue light indicator will turn on and the DNT logo will appear on the screen.

To turn it off, press and hold the **Power Button** (9) ⏻, and a 2-second countdown timer will appear. Continue to hold the Power Button to turn it off (the blue light indicator will also turn off).

Entering Standby Mode

Short press the **Power Button** (9) ⏻ will place VISION in standby mode. The screen will turn black, and the orange indicator light will appear. To exit standby mode, simply short press the **Power Button** (9) ⏻ again.

Ocular Adjustments

This is to achieve the best screen clarity for your eye, and it is independent of the target (therefore, you can set it with the objective lens cap closed). You can use the eye cup as a reference point for proper eye relief. Slowly spin the **Ocular** (2) either left or right until you have achieved the best clarity of the screen. Once it is set, you don't need to adjust it anymore.

Ocular (2)

Power Button (9)

Focus Adjustment (10)

Focus Adjustments

This is to adjust the focus of your image. Depending on how close or far you are to the target, spin the **Focus Adjustment** (10) either left or right to achieve maximum clarity. This is something that you may need to adjust frequently to ensure the target is in focus.

Zooming In/Out

Turn the **Magnification Lever** ③ right to zoom in.

Turn the **Magnification Lever** ③ left to zoom out.

Adjusting Screen Brightness

Short press the **PIP button** ⑥ to adjust the screen brightness in 5 levels (1 to 5).

Recording

Loop Recording

Short press the **Record Button** ④ to start loop recording, with each video lasting up to 10 minutes. To stop the recording at any time, simply short-press the record button again.

To adjust loop recording time, long press the **Menu Button** ⑦ to enter Function Settings, select "Loop Recording," and choose from off (default 10 minutes), 1 minute, 3 minutes, or 5 minutes.

RAV in Auto Mode

To activate RAV in auto mode, long press the **Menu Button** ⑦ to enter Settings, and select "Recoil Activated Recording" > "Auto Mode".

When RAV is in auto mode, the device will record 10 seconds before and after you shoot.

Magnification Lever ③

Record Button ④
PIP Button ⑥
Menu Button ⑦

⑤ Day/Night Button

Recording

RAV in Manual Mode

To activate RAV in manual mode, long press the **Menu Button** (7) to enter Settings, and select "Recoil Activated Recording" > "Manual Mode".

When RAV is in manual mode, the decvice will record 10 seconds before and after the **Record Button** (4) is long pressed. To extend the recording, long press the **Record Button** (4) again while the current recording is still in progress. Each long press adds 10 seconds to the recording, with a maximum total duration of 2 minutes.

To deactivate RAV, long press the **Menu Button** (7) to enter Settings, and select "Recoil Activated Recording" > "Off".

Magnification Lever (3)
Record Button (4)
PIP Button (6)
Menu Button (7)
(5) Day/Night Button

■ MENU LIST

Long press the **Menu Button** ⑦ ⚙ to enter the settings. There are currently 10 different sections in total. Once you are in the settings menu, the four buttons work like your typical TV Remote. Short press **Menu** ⑦ ⚙ & **Record Buttons** ④ 📹 to navigate Up & Down. Short press the **PIP Button** ⑥ ◻ to make the selection and short press the **Day/Night Button** ⑤ ◗ to go back.
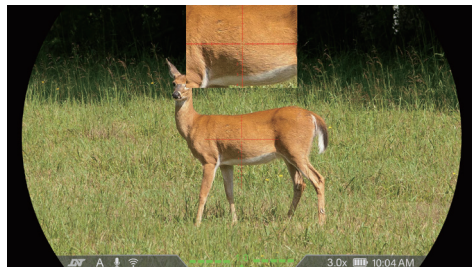
(main screen)

Long Press 2s

Connections

(menu)

⑦ Menu Button

⑥ PIP Button

④ Record Button

⑤ Day/Night Button

▲

BACK   OK

▼

Icon	Description
⊕	【Connections】 Wi-Fi
◎	【Zeroing】 Zeroing
┼	【Reticle Settings】 Reticles: 1-FFP / 2-FFP / 3-SFP / 4-SFP / 5-SFP / 6-SFP / 7-SFP / 8-SFP / 9-SFP / Hide Reticle Colors: Red / Green / Yellow / Black / White
✐	【Ballistic Calculator】 Turn ON / OFF Ballistic Calculation Ballistic Data Settings Aiming Method: Holdover / Dial In Display Ballistics: MRAD / MOA / cm / inches / Off
⌖	【LRF Settings】 Ranging Modes: Continuous Ranging, Single Pulse Ranging, Timed Ranging 3s / 5s / 10s Ranging Units: Meter / Yard
▭	【PIP Settings】 Off / Left / Center / Right
⏺	【Recoil Activated Recording】 Auto Mode / Manual Mode / Off
🎨	【Image Settings】 Select between Natural Mode and Color Enhancement Mode
▤	【Function Settings】 Auto Power Off: Off / 10 / 20 / 30 minutes (Countdown will only start in standy mode) Loop Recording: Off / 1 / 3 / 5 minutes Audio Recording: ON / OFF Gyroscope: ON / OFF / Calibration IR Torch Type: IR-LED / IR-V (With IR Illuminator - Sold Separately) Screen Brightness: 1/2/3/4/5
⚙	【System Settings】 Date / Time Language Setting: English / Français / Español / Deutsch / Italiano Format Restore Default Settings Available Storage Version

■ MAIN FUNCTION

Reticle Zeroing

Long press the **Menu Button** ⑦ 🔼 for 2 seconds to open Settings. Short press the **Record Button** ④ 📹 down to "Zeroing" ⊙ , and short press the **PIP Button** ⑥ ◻ to select.

Short press the **Power Button** ⑨ ⏻ to freeze/unfreeze the current image, or short press the **Record Button** ④ 📹 to toggle "Freeze" to "On". Short press the **PIP Button** ⑥ ◻ to confirm freeze/unfreeze the current image.

● Short press the **Menu Button** ⑦ 🔼 to move the cursor up. Short press the **Record Button** ④ 📹 to move the cursor down.

● If the cursor is at the x/y axis, short press **Day/Night Button** ⑤ ◐ and the value will decrease by 1. Press and hold **Day/Night Button** ⑤ ◐ , and the value will continuously decrease. Short press **PIP Button** ⑥ ◻ , and the value will increase by 1. Press and hold **PIP Button** ⑥ ◻ , and the value will continuously increase.

● Select "Save", and short press the **PIP Button** ⑥ ◻ to confirm, save and exit.

● Select "Exit", and short press the **PIP Button** ⑥ ◻ to confirm and exit without saving.

① Zeroing Profiles 1: current zeroing profile info (total: 1-10)

② Freeze: freeze / unfreeze image

③ X=0: the horizontal position of the reticle (left and right)

④ Y=0: the vertical position of the reticle (up and down)

⑤ Save: save and exit

⑥ Exit: exit without saving

⑦ 3.0x: magnification setting

Reticle Zeroing Example

Steps:

1. Place the target 30-yards away. Adjust the focus to ensure that the objective lens presents a sharp image of the target.
2. On the target, choose a central aiming point and observe the point of impact (T).
3. Return the reticle to the original aiming point, hold steady on this aim point, and then short press the **Power Button** ⑨ ⏻ to freeze the sight picture.
4. Adjust the X and Y value to align the reticle with the point of impact.
5. Select "save", then short press the **PIP Button** ⑥ 🔲 to confirm, save the settings, and exit.

Note: Once the reticle has been changed (either moved), the magnification cannot be adjusted.
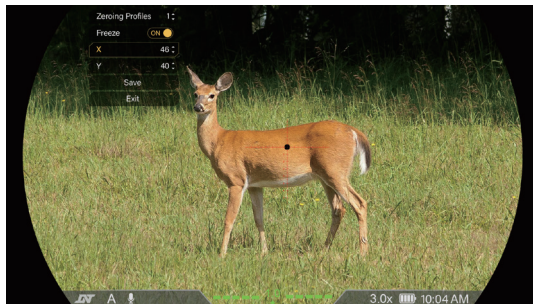
Continuous Ranging

- Long press the **Menu Button** (7) ⚙ for 2 seconds to open Settings, short press the **Record Button** (4) 📹 to move the cursor to "LRF Settings", short press the **PIP Button** (6) ▪ to select, move the cursor to "Ranging Mode", short press the **PIP Button** (6) ▪ to confirm your selection, and select "Continuous Ranging".

- Short press the **Day/Night Button** (5) ◑ until you reach the main shooting screen.

- Short press the **Ranging Button** (14) ⊕ to turn on range finding. The screen will display the range-finding icon ⌜⌟ and target distance. The target range will continuously update in real time as your target distance changes.

- Long press the **Ranging Button** (14) ⊕ for 1.5 seconds to turn off the ranging function.
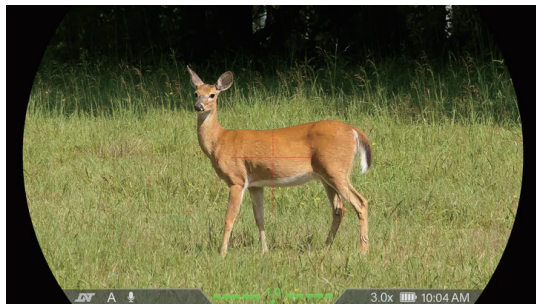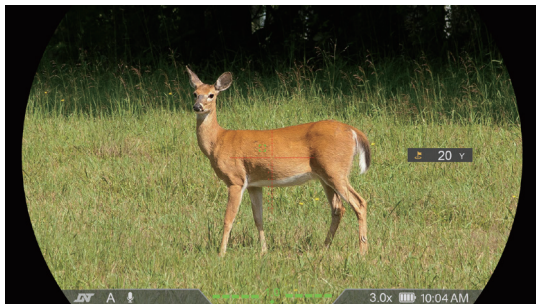
Range Finding

Single Pulse Ranging

- Long press the **Menu Button** (7) $\frac{\uparrow}{\phi}$ for 2 seconds to open Settings, short press the **Record Button** (4) 📹 to move the cursor to "LRF Settings", short press the **PIP Button** (6) 🔲 to select, move the cursor to "Ranging Mode", short press the **PIP Button** (6) 🔲 to confirm your selection, and select "Single Pulse Ranging".

- Short press the **Day/Night Button** (5) 🌓 until you reach the main shooting screen.

- Short press the **Ranging Button** (14) 🌐 to turn on the ranging function, and display the ranging icon and target distance. Press the **Ranging Button** (14) 🌐 again to measure distance again.

- Single pulse ranging will automatically turn off by long pressing the **Ranging Button** (14) 🌐 for 1.5 seconds or if unused for 20 seconds.

Timed Ranging

- Long press the **Menu Button** (7) $\frac{\uparrow}{\phi}$ for 2 seconds to open Settings, short press the **Record Button** (4) 📹 to move the cursor to "LRF Settings", short press the **PIP Button** (6) 🔲 to select, move the cursor to "Ranging Mode", short press the **PIP Button** (6) 🔲 to confirm your selection, and select "Timed Ranging" for 5, 10, or 15 seconds.

- Short press the **Day/Night Button** (5) 🌓 until you reach the main shooting screen.

- Short press the **Ranging Button** (14) 🌐 to turn on the range-finding function, and display the ranging icon and target distance. The device will continue to display target ranges for the duration selected.

- Timed Ranging will turn off with a long press of the **Ranging Button** (14) 🌐 .

Built-In Ballistic Calculator

Long press the **Menu Button** (7) $\frac{\uparrow}{\clubsuit}$ for 2 seconds to open Settings, navigate to the Ballistic Calculator, and toggle it "**ON**".

Ballistic Data Settings

After opening Ballistic Calculator from the Settings menu, select "**Ballistic Data Settings**" and it will open the following screen:
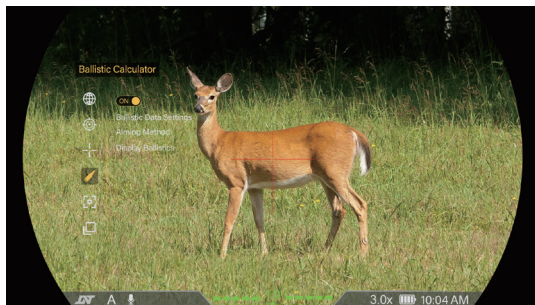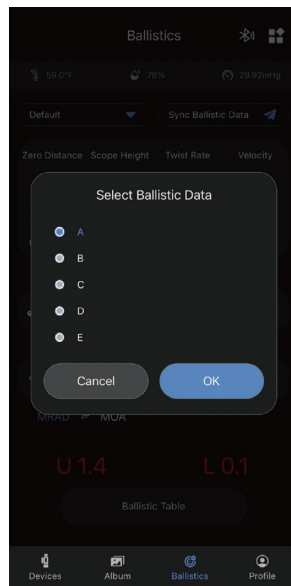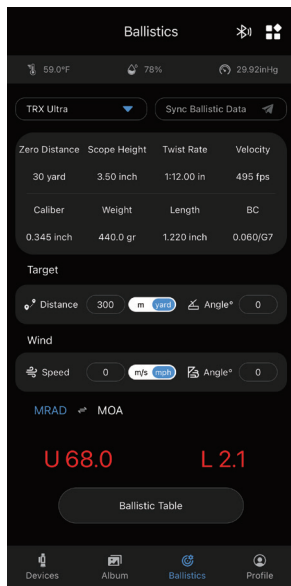

- Short press the **Record Button** (4) or short press the **Menu Button** (7) $\frac{\uparrow}{\clubsuit}$ to adjust the value.

- Short press the **PIP Button** (6) or short press **Day/Night Button** (5) to move the cursor to the left/right. Long press **PIP Button** (6) and **Day/Night Button** (5) to save and exit the screen.

Ballistic Calculation—APP WiFi Connection

You can upload ballistic data from the DNT app to the device once they have been paired via WiFi.

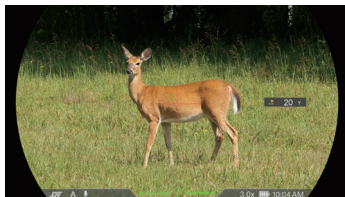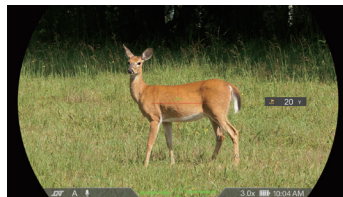Note: APP installation & connection instructions on page 24

Aiming Method - Holdover

Long press the **Menu Button** (7) ⚙↑ to enter Settings, and select "**Ballistic Calculator**" - "**Aiming Method**" - "**Holdover**".
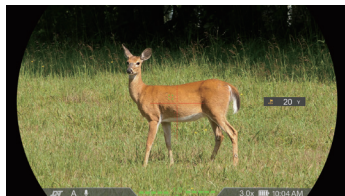
- ● Press the **Day/Night Button** (5) ◐ until you reach the main shooting screen.
- ● A short press of the **Ranging Button** (14) ⊕ will display the ranging icon and the measured distance.
- ● A second short press of the **Ranging Button** (14) ⊕ will display the holdover reticle for the correct point of impact.
- ● A third short press of the **Ranging Button** (14) ⊕ will clear the holdover reticle.
- ● Long press the **Ranging Button** (14) ⊕ for 1.5 seconds will turn off the ranging function. The ranging icon and distance will disappear.
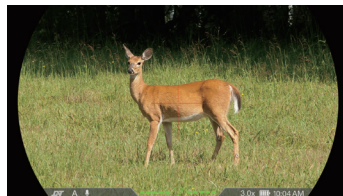

(First short press Ranging Button)

(Second short press Ranging Button)
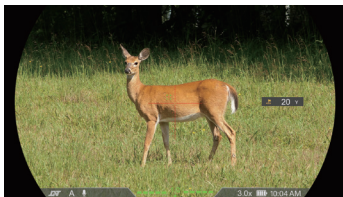

(Third short press Ranging Button)

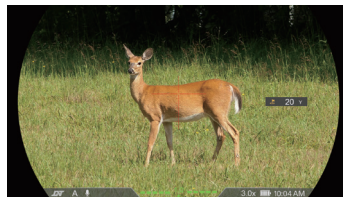(Long press Ranging Button for 1.5 seconds)

Aiming Method - Dial in

Long press the **Menu Button** ⑦ ⚙↑ to enter Settings, and select "**Ballistic Calculator**" - "**Aiming Method**" - "**Dial In**".

- Press the **Day/Night Button** ⑤ ◗ until you reach the main shooting screen.
- A short press of the **Ranging Button** ⑭ ⊕ will turn on the ranging function, display the ranging icon and measured distance.
- A second short press of the **Ranging Button** ⑭ ⊕ will display the ranging distance and re-zero the main reticle to the correct point-of-aim or point-of-impact.
- A third short press of the **Ranging Button** ⑭ ⊕ will return the reticle to the shooter's initial zero.
- Long press the **Ranging Button** ⑭ ⊕ for 1.5 seconds will turn off the ranging function. The ranging icon and distance will disappear.
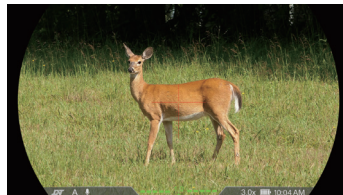

(First short press Ranging Button)

(Second short press Ranging Button)
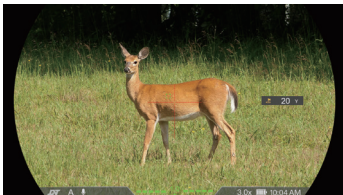
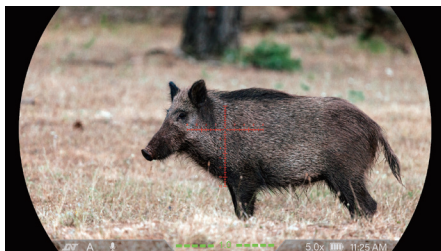(Third short press Ranging Button)

(Long press Ranging Button for 1.5 seconds)

Image Quality Enhancement Function

Choose between natural color images and enhanced color images.

Natural Mode: the image with natural color (similar to human eyes)

Color Enhanced Mode: the image with enhanced color

APP USER MENU

Search the **DNT OPTICS** App on **App Store (iOS System)** or **Google Play (Android System)** to download it, or scan the QR code below to download and install the app.

Android

iOS

APP Connection

- Long press the **Menu Button** ⑦ for 2 seconds to open Settings. Next, short press the **Record Button** ④ to move the cursor to "**Connection**" and short press the **PIP Button** ⑥ to confirm your selection. Finally, short press the **PIP Button** ⑥ to turn it on.

- Short press the **PIP Button** ⑥ to toggle Wi-Fi to "**On**". This will display the Wi-Fi name and password of the device as shown in figure (1).

- Go to your phone's "Settings" menu, find and tap on the Wi-Fi name of the device. Then enter the password (**12345678**), tap "Connect" and wait for the connection to be established.
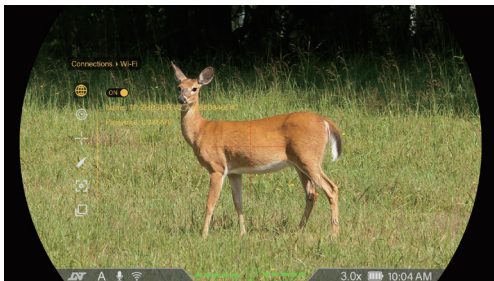
Figure (1)

- To add a device, open the DNT app and click "**Add Device**". Select "**TP-ZHD312R-V2**" , and click Add.
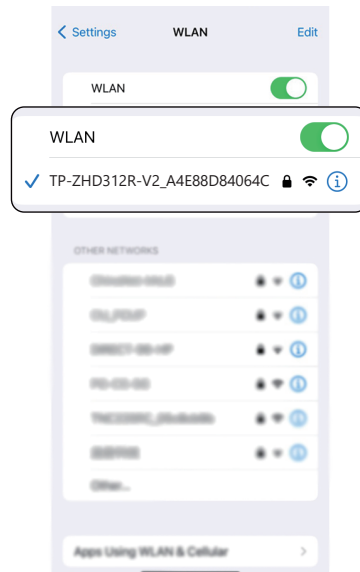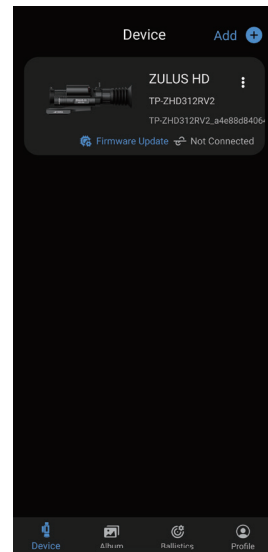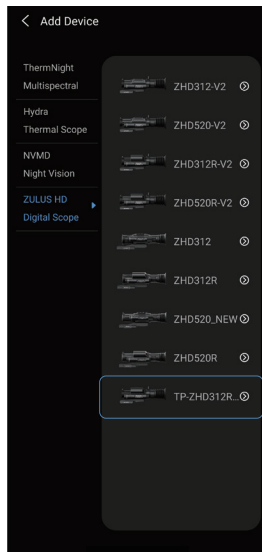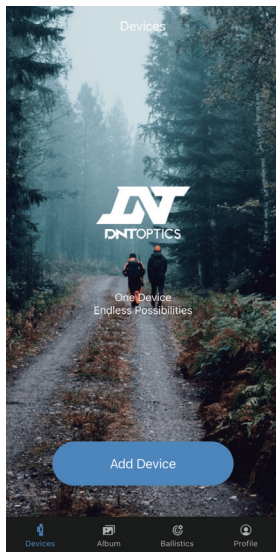
- After adding the device successfully, it is now connected.

Firmware Updates

Using the "**Firmware Update**" feature on the App to perform online OTA/Wireless Updates.

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 should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

CE FC RoHS UKCA

Scan to View FAQs

Scan to View Instructional Videos