

ATN BinoX 4K 4-16x

**DAY/NIGHT SMART HD BINOCULAR
WITH BUILT-IN LASER RANGEFINDER**



MANUAL

BINOX 4K USER'S GUIDE



**AMERICAN
TECHNOLOGIES
NETWORK
CORP.**



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CAUTION!

THIS PRODUCT CONTAINS NATURAL RUBBER LATEX WHICH MAY CAUSE ALLERGIC REACTIONS

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FEATURES

-  RECORD FULL HD VIDEO
-  WIFI DUAL STREAM VIDEO
-  BLUETOOTH
-  SMOOTH ZOOM
-  E-COMPASS
-  3D GYROSCOPE
-  DAY/NIGHT MODE
-  3D ACCELEROMETER
-  LASER RANGE FINDER
-  BUILT-IN MICROPHONE
-  OBSIDIAN USER INTERFACE
-  SHARE ON SOCIAL MEDIA THROUGH APP
-  ULTRA HI-RES OPTICS
-  ULTRA LOW POWER CONSUMPTION
-  DUAL CORE PROCESSOR
-  SIMPLE TOGGLE SWITCH OPERATION

APPLICATION

ATN's revolutionary SMART HD 4K Ultra HD Sensor and Dual Core Processor technology was introduced to our binocular line! Scanning and recovery efforts will be a breeze with the BinoX 4K 4-16x Day & Night Smart HD Binocular. This is the tool that will change your next outdoor adventure.

Integrating a laser rangefinder allows you have the convenience, speed, efficiency and valuable dual-purpose functionality of a high definition binocular, perfectly paired with an angle compensated rangefinder. The control keypad is simple to use and easily manipulated with a single hand, leaving your other hand free.

Using the built in E-Compass and laser range finder will help you to know the direction and distance you need to travel in the field.

The new internal battery provides up to 15+ hours of battery life, and the other included features will aid in your recovery efforts and keep you target ready! Plus, you can easily record video and take photos directly to your micro SD card to share with friends and family or on social media.

The BinoX 4K 4-16x Day & Night Smart HD Binocular is the revolutionary optic that will aid in your search and rescue efforts or game recovery.

SPECIFICATIONS

Item	Value
Sensor	ATN 4K M265 Sensor 3864 (H) x 2218 (V)
Magnification	4-16x
Field of view @ 1000 yards	220 ft
Objective lens	40 mm
Display Resolution	1280x720x2
Interpupillary adjustment range	60-70 mm
Eye relief	10-30 mm
Focus Range	10 ft - Infinity
Laser Range Finder	Yes
Video Record Resolution	1080p @ 30/60/120 fps**
IP rating	Weather Resistant
Charging	USB, type C
WiFi (Streaming, Gallery, & Controls)	iOS & Android
Bluetooth	Yes
3D Accelerometer	Yes
3D Gyroscope	Yes
3D Magnetometer	Yes
E-Barometer	Yes
E-Compass	Yes
Smooth Zoom	Yes
Night Vision Mode	Yes
Microphone	Yes
Micro SD Card	4 to 64 GB
Battery life (Li-ion)	15+ hrs
Dimensions	9.4" x 5" x 2.6" / 240 x 128 x 67 mm
Weight	2.5 lb / 1.12 kg
Warranty	2 years

* ATN reserves the right to change the above specifications at any time without notice.

**When choosing to use this option, the incorporation of your widgets are absent. Widgets would include reticle, time stamp, and logo that are added during video processing.

PREPARING THE DEVICE

The following steps must be performed before using the device.

UNPACKING

1. Open the BinoX 4K box packaging.
2. Verify your box has the following: soft carrying case, neck strap, USB-C charging cable, lens cover, and lens tissue.
3. Inspect the device for damage to optical surfaces, body, eyecups, operation buttons, etc.
4. Ensure that all optical surfaces are clean and ready for use.

CHARGING THE DEVICE

The device is equipped with a USB (type C) port. You will find it under the rubber cap on the right side of the device (caps are marked with appropriate icon).

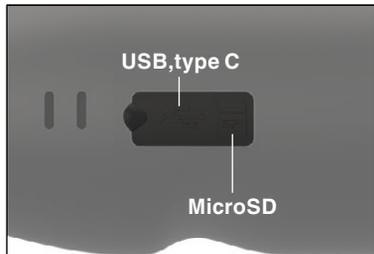
Use the included USB (type C) charging cable with your binocular. Plug the cable into a USB wall charger that has an output of 2 amps (Wall Charger not included).

NOTE

Using a wall charger with lower amperage will increase charge time on your binocular.

1. **Recommended charger is 2A USB charger.**
2. **Battery charging time (from 0 to 100%) is 6 hours with 2 A USB charger.**
3. **Battery run time is 15 hours on a single charge.**

MICRO SD AND USB C PORTS



The device is equipped with a microSD Card port and USB (type C) port. You can find them under the rubber cap on the right side of the device (we marked the cap with appropriate icons).

To open the rubber port cover, gently lift the rubber cover and move it out of the way.

NOTE

Make sure that the device is turned off before inserting the formatted microSD Card into its assigned port.

1. Always format a new microSD card before using.
2. Insert microSD card as shown.
3. Use a thin object (small coin, paper clip) to lock the microSD card in place after inserting it into the slot.
4. Return the cover to its original position.

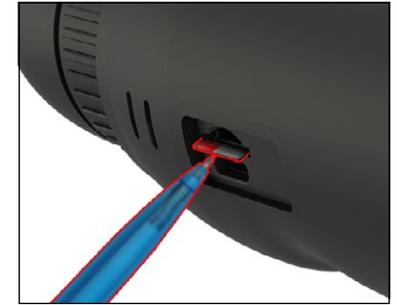


NOTE

There is only one correct direction to insert the microSD Card.

Do not force the microSD Card into the port doing so may cause damage to both the binocular and the card itself.

To remove the microSD Card from the port, push the card slightly in using the same thin object you did before. When the card pops up a few millimeters, pull the card out with your fingers or tweezers.



NOTE

ATN recommends a microSD Card should be a Class 10 (10 Mb/sec) or faster and have capacity from 4 to 64 Gb that is an HC type SD card.

FIRMWARE UPDATE

Before operating your device, update the firmware to the latest version.

To update the firmware you will need a microSD Card and fully charged internal battery.

To receive a notification concerning new firmware updates, please register your device on our website. An email notification will be sent when a new firmware update becomes available.

NOTE

In the event of a power failure during an update, the device may crash. This will corrupt the system files and the device will need to be sent back to the ATN factory for service.

Update the new firmware as follows:

1. Download the *****.bin** file and copy to your microSD Card — root directory.
2. Insert the card into the binocular.
3. Turn ON the binocular.
4. In the “Firmware Update” dialog box select “Yes” to start the update.
5. When the update counter reaches “100%” the device will automatically restart.
6. Once the device is powered up it will enter self configuration mode.
7. After completing it will automatically restart.
8. Motion Sensing platform will be configured when first turned on.
9. Once the Firmware update completes, please do a factory reset before using the product.



NOTE

If the device does not restart within 30 seconds, press and hold the power button for 15 seconds and the binocular will turn off.

ON/OFF



To TURN ON the device, press the POWER button.

To TURN OFF the device, press and hold the POWER button, until “Shut down the device?” appears in the dialog box. Choose “Yes” to turn off.

If the binocular freezes or stops responding to the control panel. Press and hold the

Power button for 15 seconds to reboot the binocular.

USING YOUR KEYPAD

The KEYPAD is programmed to be used in two different ways.



- Short and Quick Taps — used for most functions and to get around the menu.
- Press and Hold — designed to be used in the following situations — ON/OFF, SHORTCUT MENU.
- You can use the forward and rearward keys (zoom keys), while in the System Menu, as UP and DOWN buttons.

NOTE

Using LEFT or RIGHT buttons in the Menu. You can quickly choose Exit

Shortcut from any position. Use the down arrow button from any menu screen to exit to the Home Screen by pressing and holding down the rear-most down arrow for a few seconds.

FOCUSING

DIOPTRER ADJUSTMENT



By rotating the Diopter Adjustment Ring you will achieve optimal sharpness for your vision. Look through the eyepiece while focusing on the widgets on the screen.

NOTE

Once the Diopter Adjustment is set to your liking, adjustment will not need to be performed unless another user altered the focus for their needs.

DISTANCE FOCUS

Rotate the Adjustment Ring, as necessary, to achieve the proper focus at various distances.



INTERPUPILLARY ADJUSTMENT

Each eyepiece moves laterally to adjust for interpupillary spacing.



MOUNTING ON A TRIPOD

The BinoX 4K is tripod mountable and can be mounted on tripods with a 1/4-20 thread mount.



COMPASS CALIBRATION

When the compass needs to be calibrated the word “CAL” appears instead of the Compass Scale. To calibrate you should rotate the device on three axis as pictured on the right.

NOTE

After calibrating the device please remember that the compass will work best when holding the BinoX 4K parallel to the ground.

Other possible abbreviations:

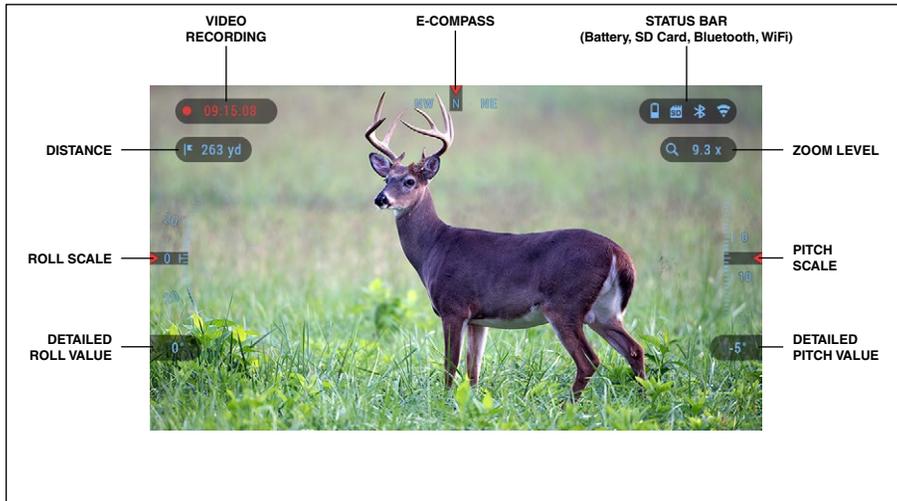
- ERR — an error was detected;
- SMF — your device is under Strong Magnetic Field;
- UPD — your firmware needs to be updated.



INTERFACE

HOMESCREEN

The first screen you'll see after turning on the device is the Homescreen. It consists of Scales, Status Bar icons and different Information Widgets.



SCALES

- E-Compass Scale shows yaw angle, based on e-Magnetometer data.
- Roll Scale shows cant, based on internal 3D Gyroscope.
- Pitch Scale shows rifle inclination, based on internal 3D Gyroscope.

STATUS BAR

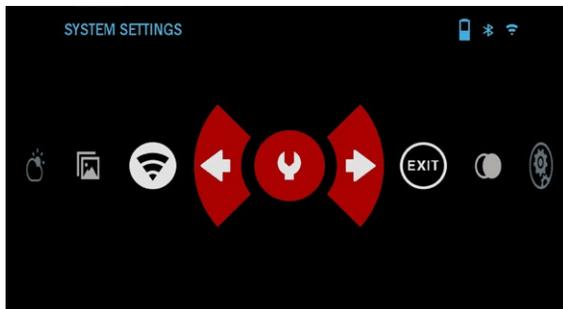
Displays information about the current state of the system. Icons that are inactive become invisible when not in use, and only the important information will appear.

- Battery — shows how much energy is left in the system.
- Micro SD Card — shows the presence or absence of memory card. If the SD card icon appears to be (Red) this means the SD Card is corrupt or has some sort of error.
- Bluetooth, and WiFi — shows when the function is enabled.

WIDGETS

Interface elements will appear as widgets that will provide access to useful information. There are several types of widgets:

- icons without value are used for mode displaying (Battery Scale, SD Card);
- only numerical value (Detailed Roll and Pitch Values);
- icons with a numerical value: Range, Zoom, Distance.



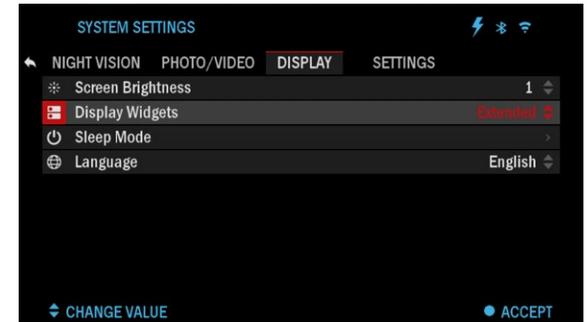
Display widgets can be disabled from the System Settings.

To enter System Settings you should hold the OK button  from Homescreen to access the Shortcut Carousel.

Select the wrench icon with RIGHT or LEFT buttons  and push the OK button  to enter the System Settings menu.

Select the Display tab with RIGHT button  and choose subcategory Display Widgets with Keypad buttons .

Press the OK button  to select the Display Widgets. Use Keypad buttons  to change from Extended to Minimal. To save the selection press the OK button. Press the left arrow button to exit the submenu.



MAIN OPERATIONS



Use Keypad buttons  to Zoom IN and OUT. Zoom Level is displayed in the Zoom widget on the Homescreen.



Press the LEFT button  to TAKE A PHOTO. You can take one or several photos.



By pressing the RIGHT button  you will be able to RECORD VIDEO. Press the Right Arrow again to stop video recording.

NOTE

Recording will automatically stop when the memory card is full or the battery is out of power.



Pressing and holding down on the OK button  opens and closes the Shortcut menu.

MODES

The BinoX 4K Pro has 2 modes of operation: basic and advanced.

Basic Mode has the following feature options:

1. System Settings

2. Night Mode
3. Advanced Shortcut

Advanced Mode has the following feature options:

1. Exit
2. System Settings
3. Night Mode
4. Advanced Shortcut
5. WiFi
6. Gallery

SHORTCUT CAROUSEL



The Carousel is your access to a number of shortcuts that will allow you to quickly access your binocular's features. Hold the OK button  from Home-screen to access the Carousel.

Buttons highlighted in Red are the only ones that activate a particular shortcut.

Use the LEFT & RIGHT buttons  to move between functions.

To turn a particular function ON or OFF, you should click the OK button  while that function is selected. Example — WiFi.



EXIT
Exit Carousel.



NIGHT MODE
Switch between Day and Night Mode.



GALLERY
Gives you access to the library of Images and Videos that are stored on your binocular's micro SD card.



SYSTEM SETTINGS
Allows access to various system options and adjustments.



WIFI
Allows you to connect to your smart phone or tablet; password is **atnsmarhd**.



BLUETOOTH
Allows you to connect to ATN Smart accessories and other ATN devices, ie X-Sight 4K and Thor 4.

USING SYSTEM SETTINGS

To access the System Settings, enter the Shortcut Carousel by holding the OK button . Select the wrench icon with RIGHT or LEFT buttons .

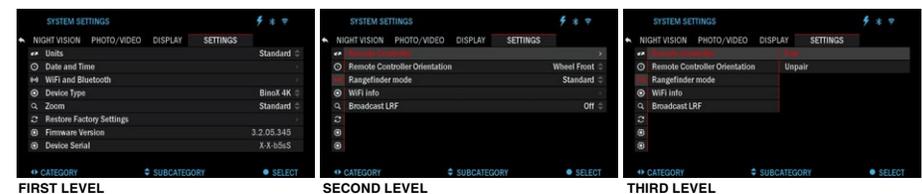
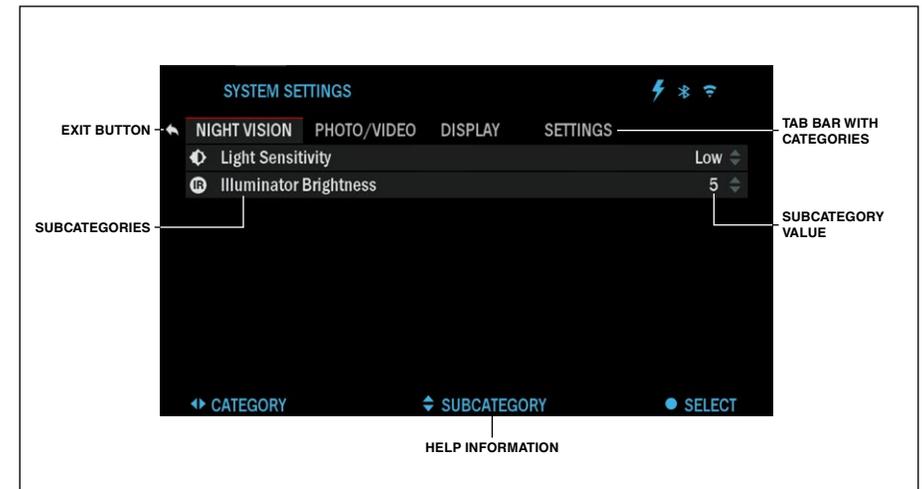
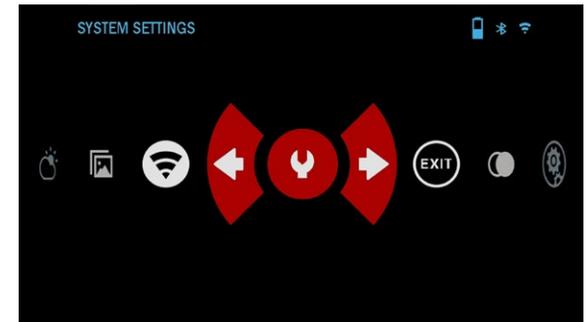
Push the OK button  to enter the menu.

The System Settings consists of a Tab Bar at the top of the screen, list of subcategories in the center and Help Information at the bottom.

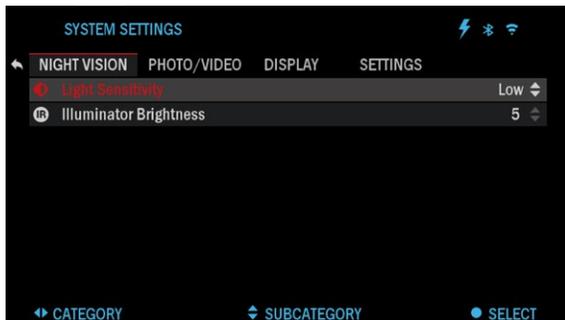
On the left side of the Tab Bar you will find the Exit (with arrow icon). Selecting Exit and pressing the OK button  will bring you back to the Homescreen.

Movement between the tabs is carried out using the LEFT and RIGHT buttons .

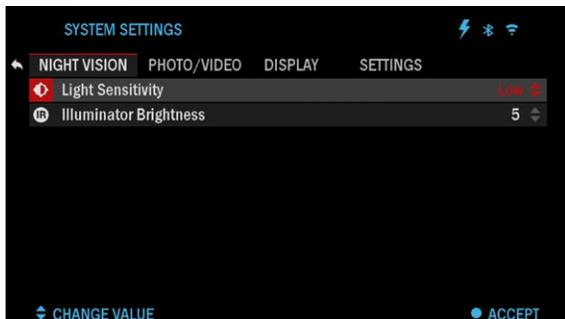
Each tab includes subcategories. To select a particular subcategory you should use Keypad buttons  and press the OK button  to select it.



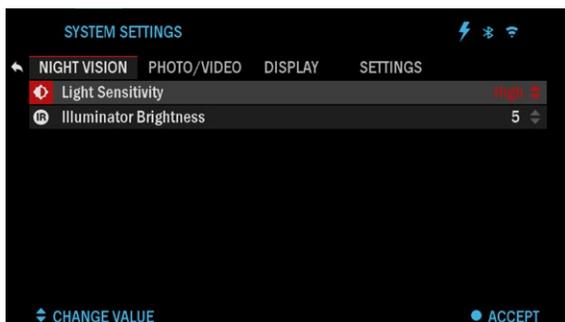
To change a particular value, follow the next few steps. Select the subcategory you need with Keypad buttons .



Press the OK button  to select a particular value (once selected it will turn red).

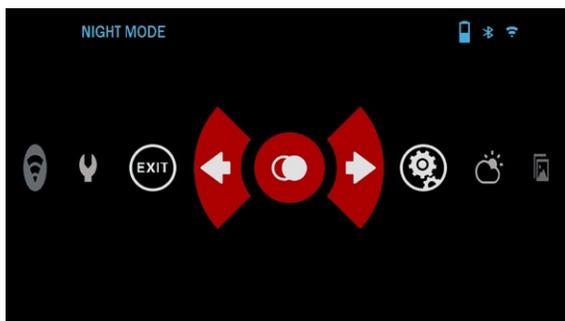


Change the value with Keypad buttons .



To select a new value, press OK button  to confirm the change.

FUNCTIONS



NIGHT VISION

To switch between Day and Night Mode, choose NIGHT MODE in Shortcuts.

Shortcuts allow you quick access to the commonly used options. These shortcuts are within the Carousel menu, just hold the OK button  to access the Carousel.

Movement between the icons is carried out using the LEFT & RIGHT buttons .

NOTE

Remember that turning on Night Mode during daylight will not harm your device; however, you may not be able to see anything due to the image being too bright.

To enter the System Settings, open the Shortcut Carousel by holding the OK button . Select the wrench icon with RIGHT or LEFT buttons .

Push the OK button  to enter the menu.

Choose Night Vision in the Tab Menu. Movement between the tabs is carried

out using the RIGHT or LEFT buttons . In this menu you can select the brightness of the IR illuminator and the Light Sensitivity of your binoculars.

NOTE

For the best video quality while recording in Night Vision mode. We suggest having your Light Sensitivity settings on Low.

PHOTO

Press the LEFT button  while staying on the Homescreen to TAKE A PHOTO.

You must have a microSD card inserted in the device for this feature to work. All files will be stored on the microSD card. Each press of the left button will take one photograph. Captured photos can be found in the Gallery on your device.

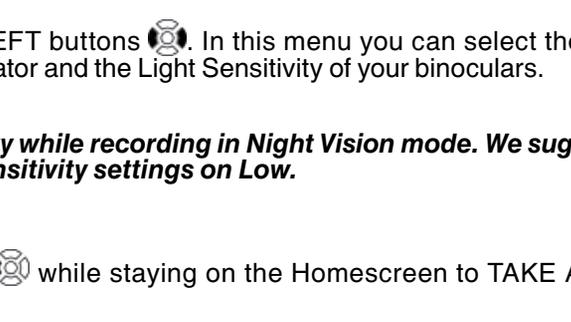
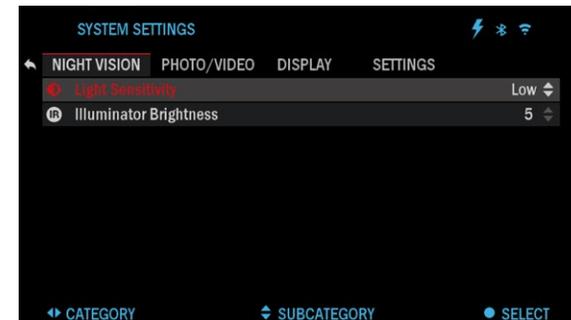
VIDEO RECORDING

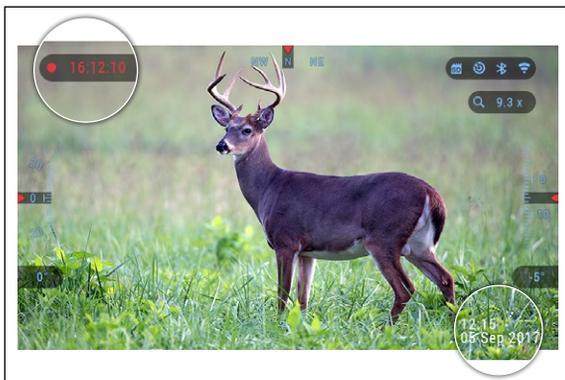
NOTE

You must have a microSD card inserted in the device for these features to work.

All files will be stored on the microSD card. Recorded videos can be found in the Gallery on your device.

The binocular allows you to record videos.





While recording the Counter widget appears. In order to Start recording video, while on the Home screen, press the RIGHT button  to activate video recording. Press the RIGHT button  once more to Stop recording video.

LASER RANGEFINDER



The new 4K Sensor was incorporated for better visibility and crisper images, but we didn't stop there. We integrated a Laser Rangefinder, so you now have the ultimate binocular package that has everything you want. Not only do you have the ability to see both day and night at your fingertips, but you now have the ability to range your target with absolute accuracy for dope hold over or know how far you need to trek to your next waypoint.



To measure the distance to a target using the laser rangefinder short press the POWER button. The rangefinder will take several measurements and will

show the distance in the upper left corner. The device will exit measurement mode automatically.

Unit of measurement can be selected for the device in System Settings → Settings → Units. Your laser rangefinder also has two operation modes, Standard mode and Fog mode, for adverse environmental conditions, which can be selected in System Settings → Settings → WiFi and Bluetooth → Rangefinder Mode.

BIX TECHNOLOGY

If you have an ATN Smart HD scope and would like to use your ATN BinoX 4K to transmit the range data to your ATN Smart HD scope via Bluetooth. Please follow the next few steps in order to accomplish this.

Make sure you have activated the advanced settings in your BinoX 4K.

- Open the shortcut Carousel → System Settings → Settings → WiFi & Bluetooth → Broadcast LRF.
- Select Broadcast LRF and switch it “ON”.

Turn on your ATN Smart HD scope. Make sure you have activated the advanced settings in the shortcut Carousel.

- Open the shortcut Carousel → System Settings → Settings → WiFi & Bluetooth → BinoX LRF.
- Select BinoX LRF and switch it “ON”.

Now take your ATN BinoX 4K and Short Press the power button. You should see the Rangefinding reticle appear. Once the BinoX 4K ranges the target, the range data will automatically be transferred to your ATN Smart HD scope. If you have the Ballistic Calculator turned on and the Ballistic profile has been setup, your POA will change based on the reading the ATN Smart HD scope receives from the ATN BinoX 4K.

LRF PREVIEW

If you would like to have a reference point of where the Laser Range Finder is collimated too. You can turn on the LRF Preview. This will turn on a red square box in your BinoX 4T FOV as a reference point. In order to turn the LRF preview on, go to the Shortcut Carousel → System Settings → Display → LRF Preview and turn it ON.

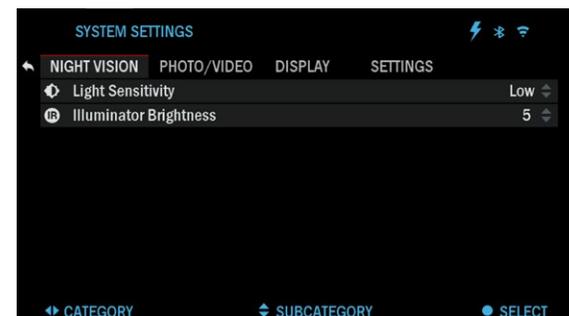
Once it is turned on, you will see a red box on your Homescreen, providing you with a LRF reference point. This does not turn the LRF on or Range the target continuously. In order to turn the LRF function on with preview activated, you still need to press the Power button once.

SYSTEM SETTINGS

NIGHT VISION

LIGHT SENSITIVITY

There are two options for Light Sensitivity; Low or High. On the Low setting, you will get 30 fps. On the High setting, you will get 15 fps. Your selection will depend on the amount of ambient light needed for optimal performance.

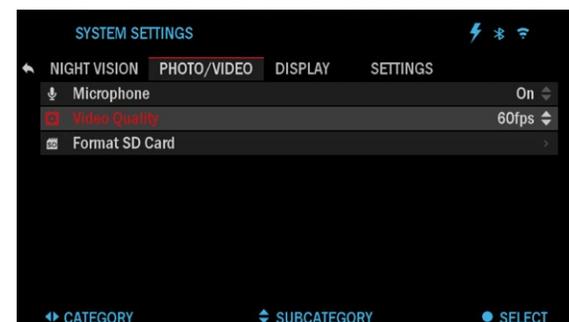


PHOTO/VIDEO

MICROPHONE — sound recording (ON/OFF).

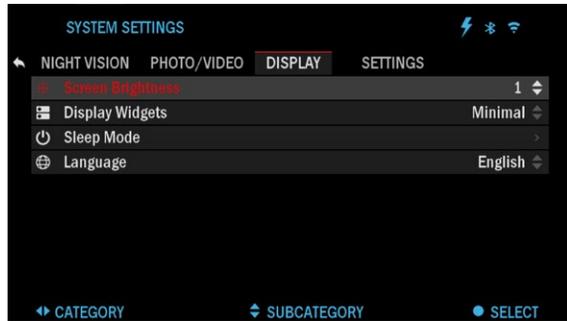
VIDEO QUALITY — can be 1080p @ 30/60/120 fps. The ATN BinoX 4K is capable of recording in day mode at 120 fps. This feature allows for post production editing for slow motion purposes.

Please note that the 120 fps mode is available in daytime setting only and it does not improve your image quality. It should only be used if you plan on doing post production video editing.



When choosing to use this option, the incorporation of your widgets are absent. Widgets would include time stamp, and logo that are added during video processing.

FORMAT SD CARD — after you choose this subcategory, you'll see a pop-up window asking you about formatting.



DISPLAY

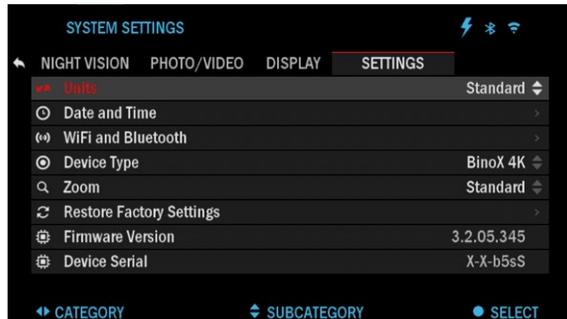
SCREEN BRIGHTNESS — gives you a 1 to 5 numerical selection, with 1 being the dimmest and 5 the brightest. It is recommended that you use the brightest setting during the day for optimal performance.

DISPLAY WIDGETS — allows you to disable several widgets (Minimal/Extended).

several widgets (Minimal/Extended).

SLEEP MODE

- Sleep Mode — allows you to switch the mode (ON/OFF).
- Hibernation Time — can be 1 – 60 min. This is the amount of time the unit will wait, while remaining idle, before sleep.
- SETTINGS mode is initiated.



SETTINGS

UNITS — can be Metric or Standard system.

DATE AND TIME

- Clock Source — allows you to choose different types of sources to improve the accuracy (Manual, WiFi).
- Date Format — can be YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY.

- Time Format — form of stating the time (24-hour or 12-hour).
- Date — enter the date.
- Time — enter the time.

WiFi AND BLUETOOTH — WiFi values are not changeable.

- Remote Controller — Allows for pairing of X-Trac remote.
- Remote Controller Orientation — Allows you to choose the orientation of the remote, changing the direction of Keypad buttons.
- Rangefinder mode.
- WiFi info.
- Broadcast LRF.

ZOOM — allows you to choose different types of zoom (Standard, Extended). Extended Zoom will give an electronic zoom of 10x your optical Zoom. Example: 4-16 in Extended mode becomes 4-40x. However, we would like to caution you that you will begin to see considerable pixelation at such a zoom.

RESTORE FACTORY SETTINGS — Allows you to reset all the settings to default.

FIRMWARE VERSION — States firmware version currently running on your binocular. In order to ensure that you are getting emails when new firmware versions become available. We are constantly working on new features, functions, and improvements that we provide to you free of charge via firmware upgrades.

WARNINGS AND CAUTIONS

- Always remember to turn off the device when it is not in use.
- Do not disassemble, drop, open, crush, bend, deform, puncture, shred, microwave, incinerate, paint or insert foreign objects: it will void your warranty.
- Keep the binocular in the provided protective cover when not in use.
- Avoid contact with dust, steam, and gas.
- This product contains natural rubber latex which may cause allergic reactions.
- The binocular is a precision electro-optical instrument and must be handled carefully.
- Do not scratch the external lens surfaces or touch them with your fingers.

CAUTION

Failure to follow these safety instructions could result in damage to the device!

MOBILE APPLICATIONS



Control your device and view a live streaming feed with our ATN Obsidian 4 app. After connecting your phone or tablet via WiFi to your ATN device, you can see on your phone/tablet screen what is shown in your optic's viewfinder.



Want to see what you've recorded so far? No problem open up the Gallery and playback your latest adventures. All your photos and videos are right at your fingertips.

In order to download the latest version of the ATN Obsidian 4 app. Please visit the iOS store or Google Play store. Search for "ATN Obsidian 4" install the application.

To connect your ATN device to your smart phone or tablet, you must first enable WiFi on your ATN device via the shortcut carousel. Once enabled, you can access your WiFi settings on your phone or tablet and select the

respective SSID (DeviceName_XXXX) to establish the connection. The default password is “atnsmarhd”.

Once the connection has been successfully established, open your ATN Obsidian 4 app and your respective device should be shown on the home screen. Tap the button with your devices name to control your device, access live streaming as well as the gallery from your phone or tablet.



[iOS Application](#)



[Android Application](#)