ThOR-HD Series

THERMAL SMART HD RIFLESCOPE



MANUAL

THOR-HD USER'S GUIDE (REV. 1, MARCH, 2016)

AMERICAN
TECHNOLOGIES
NETWORK
CORP.



CAUTION!

THIS PRODUCT CONTAINS NATURAL RUBBER LATEX WHICH MAY CAUSE ALLERGIC REACTIONS.

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APPLICATION

The most technologically advanced line of thermal rifle scopes on the market bar none! The all new Obsidian “T” II Thermal core beats at the heart of our systems. More power, more features, smaller packaging, and lower cost have allowed ATN to make the biggest update to its award winning thermal product line.

Record videos and photos onto a microSD card. Never again forget to record that perfect shot with ATN’s patented RAV (Recoil Activated Video). Use ATN’s Smart Range Finder to quickly range in on your target and allow the ballistic calculator to make instantaneous corrections to your POI on the fly. Smooth Zoom, built in Wi-Fi, Bluetooth, 3D Gyroscope, 3D Accelerometer, 3D Magnetometer are but a few of the features and sensors packed into these incredible systems.

SPECIFICATIONS

	ThOR-HD 384 1.25 - 5x	ThOR-HD 384 2 - 8x	ThOR-HD 384 4.5 - 18x	ThOR-HD 384 9 - 36x	ThOR-HD 640 1 - 8x	ThOR-HD 640 1.5 - 15x	ThOR-HD 640 2.5 - 20x	ThOR-HD 640 5 - 40x
Item #	TIWSTH381A	TIWSTH382A	TIWSTH384A	TIWSTH389A	TIWSTH641A	TIWSTH642A	TIWSTH643A	TIWSTH645A
Sensor	384×288				640×480			
Magnification	1.25 - 5x	2 – 8×	4.5 – 18×	9 – 36×	1 – 10×	1.5 – 15×	2.5 – 25×	5 – 50×
Angle of view	16×12.5	12×9.5	6×4.7	3×2.4	32×25	24×19	12.5×9.7	6×4.7
Objective lens focal length	19 mm	25 mm	50 mm	100 mm	19 mm	25 mm	50 mm	100 mm
Micro Display	HD Display							
Core	ATN Obsidian “T” II							
Eye relief	65 mm							
Waterproof rating / IP rating	Weather resistant							
Video Record Resolution	1280×960 @ 30 fps							
Microphone	Yes							
MicroSD card	Up to 64 GB							
Micro USB	External Battery Pack							
Micro HDMI	Yes							
WiFi (Streaming, Gallery, & Controls)	iOS & Android							
Bluetooth	4.1							
GPS (Geotagging, Elevation, etc.)	Yes							

	ThOR-HD 384 1.25 - 5x	ThOR-HD 384 2 - 8x	ThOR-HD 384 4.5 - 18x	ThOR-HD 384 9 - 36x	ThOR-HD 640 1 - 8x	ThOR-HD 640 1.5 - 15x	ThOR-HD 640 2.5 - 20x	ThOR-HD 640 5 - 40x
3D Gyroscope	Yes, GS7							
3D Accelerometer	Yes							
3D Magnetometer	Yes							
Gyro Range Finder	Yes							
Smart Shooting Solution	Yes							
RAV (Recoil Activated Video)	Yes							
Electronic Compass	Yes							
Smooth Zoom	Yes							
Reticles	Multiple Patterns & Color Options							
Mount	Picatinny Quick Release Mount, Interchangeable							
Compatible mounts	A.R.M.S.® #17® (single lever), A.R.M.S.® #35® (double lever), LaRue LT270, American Defense (AD-170)							
Battery life (Li-ion)	8 hr							
Battery type	(4) AA (Lithium Recommended)							
Dimensions	6.85"×3.16"×3.14" 174×80.26×80 mm		8.81"×3.16"×3.14" 224×80.26×80 mm	10.67"×3.97"×3.47" 271×101×88 mm	6.85"×3.16"×3.14" 174×80.26×80 mm		8.81" x 3.16" x 3.14" 224×80.26×80 mm	10.67"×3.97"×3.47" 271×101×88 mm
Weight	1.55 lb / 0.68 kg		1.85 lb / 0.84 kg	2.75 lb / 1.24 kg	1.55 lb / 0.68 kg		1.85 lb / 0.84 kg	2.75 lb / 1.24 kg
Warranty	3 years							
Human Detection Range	625	800	1500	2500	625	800	1500	2500
Human Recognition Range	280	400	600	1100	280	400	600	1100
Human Identification Range	170	250	360	600	170	250	360	600

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

PREPARING THE DEVICE

UNPACKING

The following steps must be accomplished prior to each mission where the device is used:

1. Open packaging box, remove Thor-HD and check the content.
2. Make sure that nothing is missing.
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.

NOTE

If any accessories are missing or broken contact ATN's Customer Service.

INSTALLATION OF BATTERIES

The Thor-HD will operate on four AA-type batteries.

NOTE

We highly recommend using lithium AA batteries. They will provide much longer battery life.



Install batteries as follows:

1. Remove the battery cap by unscrewing it counter clockwise.
2. Insert batteries as shown.
3. Return the battery cap into the housing (screw clockwise until finger tight).

Do not over tighten as it will be difficult to remove the next time you replace batteries.

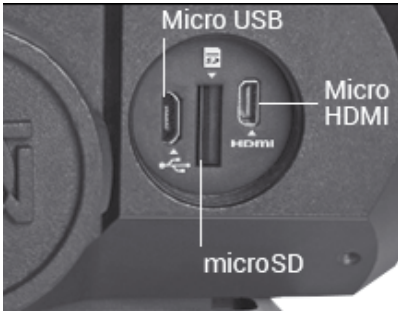
NOTE

Make sure that the device is turned off before changing source of energy (batteries or USB in power supply mode).

MicroSD, USB AND HDMI PORTS

The device is equipped with microSD Card, Micro USB and Micro HDMI ports. You can find them under the cap near the battery block (we marked the cap with appropriate icons).

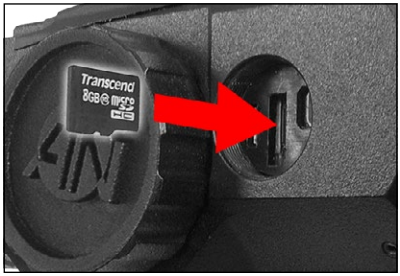
To open the cap you should unscrew it counterclockwise.

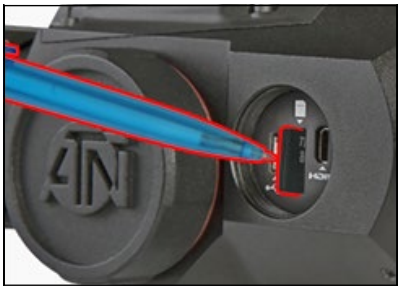


NOTE

Make sure that the device is turned off before inserting the card into the slot.

1. A new card should be formatted before using.





2. Insert microSD card as shown.

3. To lock when inserting card in the slot, push it with a thin object (a small coin, paper clip, toothpick, etc.).

4. Return the cap into the housing (screw clockwise until finger tight).

NOTE

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

Do not force the card into the slot as it may damage both the scope and the card itself.

To remove the microSD Card from the slot, push it in using the same thin object. When it pops up a few millimeters, it can be pulled with your fingers or tweezers.

NOTE

If you are going to record video then microSD Card should be of Class 10 (10 MB/sec) or faster and have capacity from 4 to 64 GB.

FIRMWARE UPDATE

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

To receive the notification of new firmware updates, please register your device on our website (you'll receive an email letting you when new firmware becomes available).

To update the new firmware you will need a microSD Card and batteries that are fully charged.

NOTE

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

It is important not to use additional source of power during firmware update!

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 scope
3. Turn ON the scope
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 and will be ready for use
8. Motion Sensing platform will be configured when first turned on.



NOTE

If the device does not restart within 30 seconds, remove and re-insert the batteries and power-up the device.

Once the device has been updated you will need to either format the card or delete the update file manually. In the event you do not, the system will ask you if you wish to update the device every time you turn it on.

ON/OFF



To TURN ON the device press and hold the POWER button until you see the ATN splash screen.

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

USING 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 on the following situations — ON/OFF, ZOOM, SHORTCUT MENU.

NOTE

Using LEFT or RIGHT buttons in menu you can quickly choose Exit Shortcut from any position.

FOCUSING

DIOPTER ADJUSTMENT



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

Do not take the rubber cap off the objective lens.

NOTE

You should not need to re-adjust the Diopter Adjustment unless another user with different vision then yourself will be using the scope.



FOCUS ADJUSTMENT

Remove the cap from the objective lens and rotate the focus adjustment ring as necessary to achieve the proper focus at various distances.

MOUNTING

Mount your Thor-HD as follows:



1. Slightly loosen the fixing screws on the 7/8″ weaver mount built into the scope.
2. Place the scope on the weaver rail of the firearm.
3. Tighten the fixing screws.

NOTE

Fixing screws may need to be retightened after continuous shooting.

We recommend using "Loctite" to make sure the screws will not loosen during shooting.

COMPASS CALIBRATION



When the compass need to be calibrated the word "CAL" appears instead of the Compass Scale. To calibrate you should rotate the device in three axis as pictured below.

NOTE

After calibrating the device please remember that the compass will work best when holding the Thor-HD parallel to the ground.

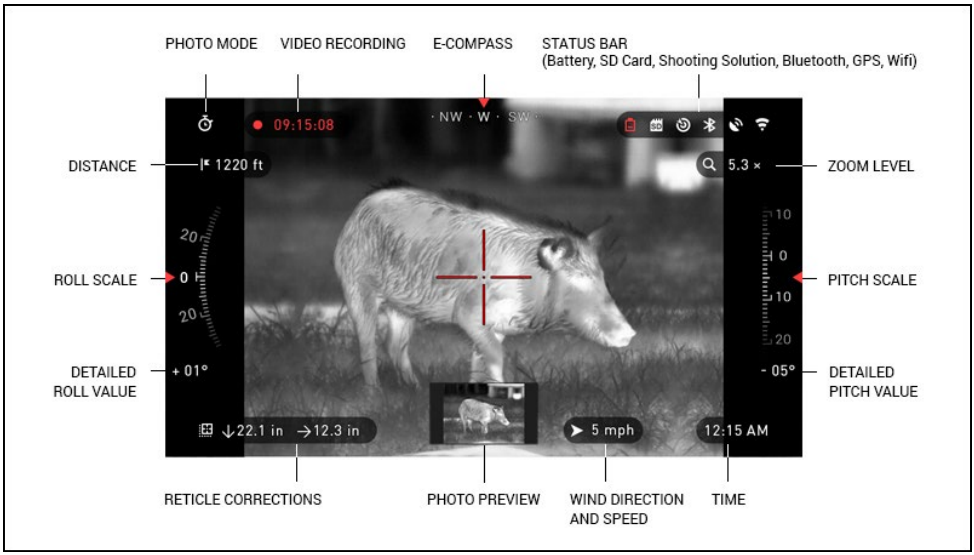
Another possible abbreviations:

- ERR — an error was detected (you may need to restart the device or recalibrate the compass);
- SMF — your device is under Strong Magnetic Field (please, move away from the Magnetic Field);
- UPD — your firmware needs to be updated.

INTERFACE

HOMESCREEN

First screen you'll see after switching on the device is Homescreen. It consist of Scales, Status Bar icons and different Information Widgets.



SCALES

E-Compass Scale shows yaw angle based on e-Magnetometer data.

Roll Scale shows rifle cant based on internal 3D Gyroscope.

Pitch Scale shows rifle inclination based on internal 3D Gyroscope.

STATUS BAR

Its job is to display information about the current state of the system.

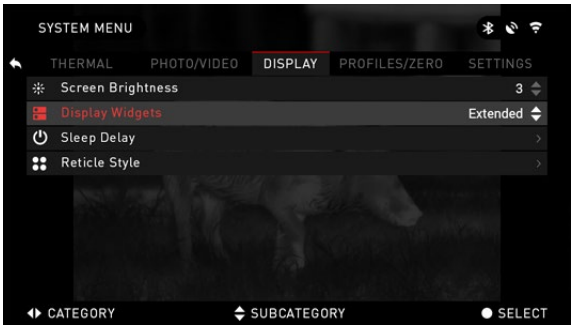
Currently inactive icons become invisible, so you may see only the important information at the moment:

- Battery — appears when energy level is low;
- SD Card — shows the presence or absence (red icon) of memory card;
- Shooting Solution, Bluetooth, GPS and WiFi — shows enable or disable the function.

WIDGETS

They are interface elements which provide quick access to useful information. There are several types of widgets:

- icons without value — is used for mode displaying (Photo and Video Modes);
- only numerical value (Detailed Roll and Pitch Values);
- icons with a numerical value;
- Photo Preview (appears in the bottom of the homescreen, after the photo was taken).





Display widgets can be disabled from the System Menu.

To get a System Menu you should click on the CENTER button from Homescreen and access the Shortcut Carousel.

Then select the wrench icon with RIGHT or LEFT buttons and push CENTER button to enter the menu.

Select Display tab with RIGHT button and choose subcategory Display Widgets with DOWN button.

MAIN OPERATIONS

ZOOM LEVEL

By pressing and holding the UP or DOWN button on keypad you will be able to Zoom IN and OUT.

Current Zoom Level is displayed at the Zoom widget on the Homescreen.

NOTE

When the device is launched for the first time you need to configure the lense option in the pop-up window before zooming.

While using Smart Shooting Solution your reticle can be displaced from the center point of the screen. Then during Zoom In action it will move to a center.

TAKING PHOTOS

Press the LEFT button to TAKE A PHOTO.

Depending on the selected mode you will make one or several photos. You can choose from various photo modes in the System Menu.

VIDEO RECORDING

By pressing the RIGHT button you will be able to RECORD VIDEO (if you use Normal Mode) or START RAV (if Recoil Activated Video mode is on).

You can switch the video recording modes in the System Menu.

NOTE

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

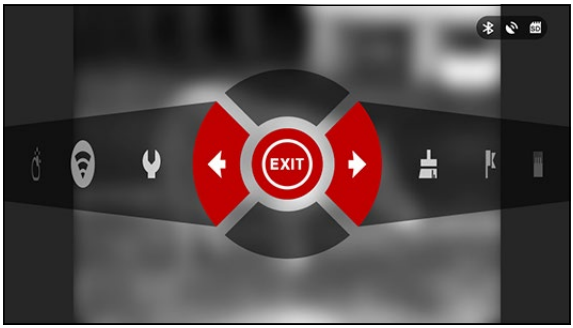


SHORTCUT CAROUSEL

The CENTER button opens the menu and close it down when pressed again.

SHORTCUT CAROUSEL

The Carousel is your access to a number of Shortcuts that allows you quick access to your scope's features. Just click on the CENTER button from Homescreen to access the Carousel.



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

Movement between the items is carried out using the LEFT & RIGHT buttons, except the group of ON/OFF switches (WiFi, GPS, Bluetooth, Shooting Solution, RAV).

You should use the UP & DOWN buttons between switches.

To turn ON or OFF a particular switch you should click the CENTER button while having the switch selected. Example — WiFi.



EXIT
Exit Carousel.



NUC
The shortcut allows to make non-uniformity compensation (NUC).



RANGEFINDER
Activates Smart Rangefinder feature. If the Smart Shooting Solution is ON then the range that is found using the Rangefinder will be automatically used to adjust your point of impact (shift reticle to adjust for drop).



DISTANCE ENTRY
Manually input or adjust the distance to the target to be used by the Smart Shooting Solution.



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

ENVIRONMENT
Allows for input of various environmental data to improve ballistic correction, such as wind speed and direction.

SYSTEM MENU
Allows for access to various system options and adjustments.

The grouped switches consist of the next items:

WiFi module | GPS module | Bluetooth module | Smart Shooting Solution | RAV (Recoil Activated Video)

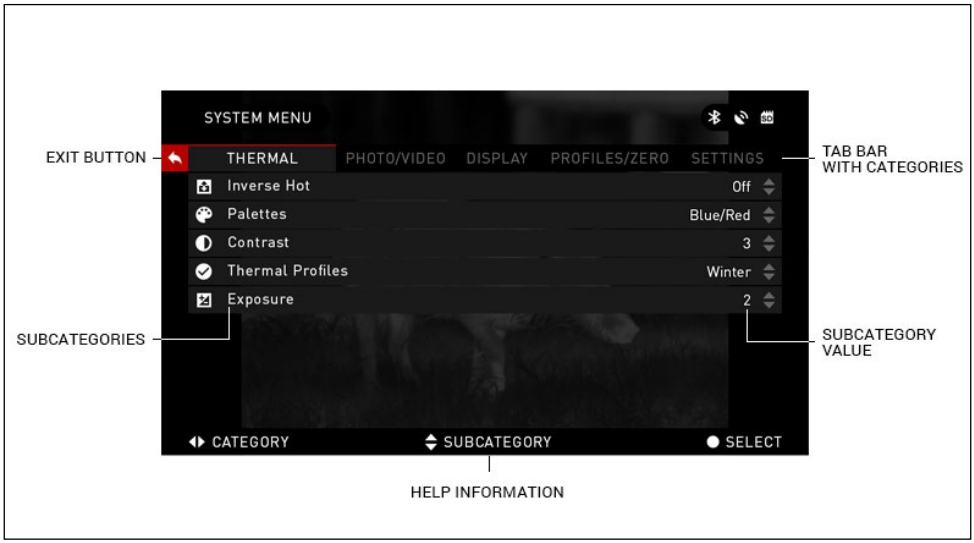
USING SYSTEM MENU



To enter the System Menu you should open Shortcut Carousel with CENTER button and select the wrench icon with RIGHT or LEFT buttons.

Then push CENTER button to enter the menu.

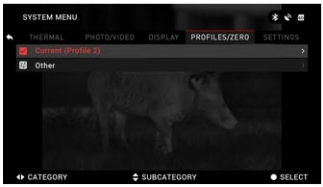
The System Menu consist of Tab Bar at the top of the screen, list of subcategories in the center and Help Information at the bottom.



On the left side of the Tab Bar you will find the Exit (with arrow icon). Pressing it with CENTER 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 the UP and DOWN buttons and press CENTER button.



FIRST LEVEL



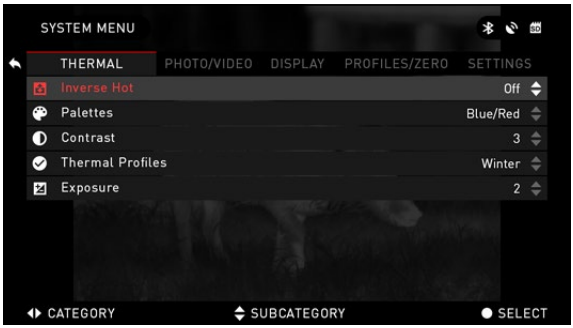
SECOND LEVEL



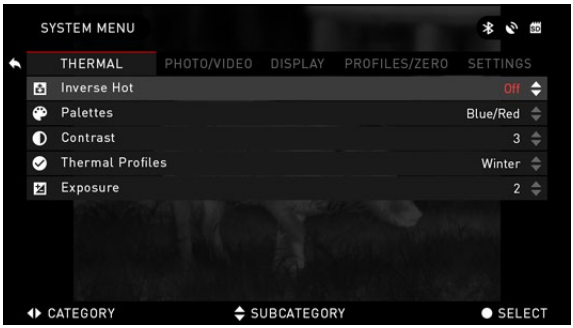
THIRD LEVEL

To change a particular value you should follow next few steps. Select the subcategory you needed with the UP or DOWN buttons.

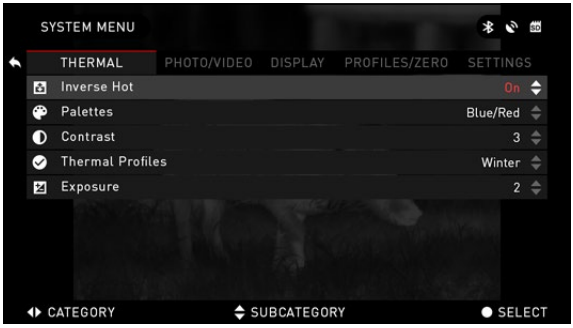
Press the Center button to select a particular value (once selected it will turns red).



Change the value with the UP and DOWN buttons.



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



FUNCTIONS

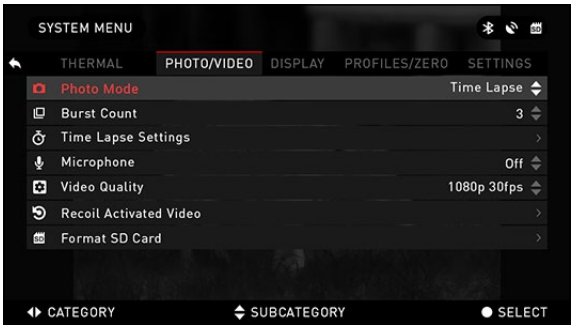
PHOTO MODES

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

You must have a microSD card inserted in the device for these features to work. All files will be stored on the microSD card.

Depending on the the selected mode you will make one or several photos. You can choose from various photo modes in the System Menu.

To enter the System Menu you should open Shortcut Carousel with CENTER button and select the wrench icon with RIGHT or LEFT buttons.



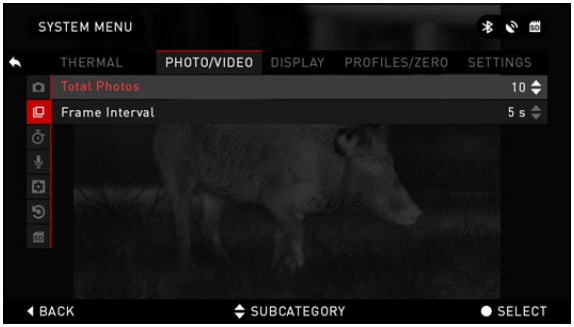
Then push CENTER button to enter the menu.

There are three photo modes to choose from. Switching between modes is done in the System Menu from Photo/Video tab, subcategory Photo Mode.

Use UP or DOWN buttons to switch between modes. Press the Center button to select a particular value (once selected it will turns red).

NORMAL

This default mode allows you to take one photo at a time.



TIME LAPSE

Time-lapse is where the device takes a sequence of images of a subject with an interval of time between each image.

The interval and the number of photos taken can be changed in the System Menu.

To make changes choose a Photo/Video Tab in System Menu, then use UP or DOWN buttons to select Time Lapse Settings.

Press the Center button to enter the mode settings. While you are in this mode, the Time Lapse widget appears.



BURST

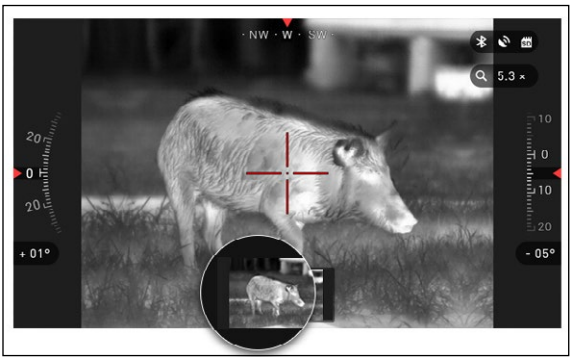
Burst mode captures a series of photos.

You can select the best image of the group or arrange them in a sequence to study the transitions in detail.

The number of the photos taken can be changed in the System Menu. While you are in this mode, the Burst widget appears.



Regardless of which mode you are using the preview appears after a photograph is taken on the bottom of the screen for several seconds.



RECOIL ACTIVATED VIDEO

Recoil Activated Video (patent pending) offers a unique approach to taking videos with your Smart Sight. RAV offers you an ability to take a video of before, during and after your shot has been fired.

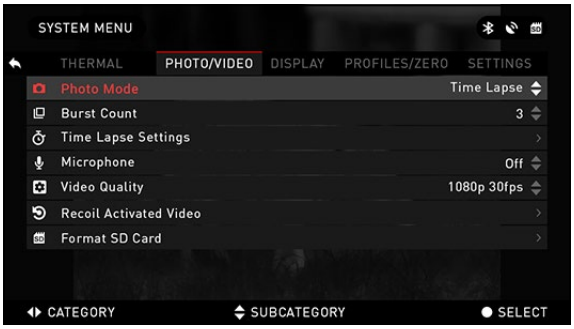
Perfect for those hunting moments when getting your target far outweighs the importance of remembering to turn on your video record. Simply set your RAV to ON, set your parameters and anytime your Pull the Trigger (RAV is activated from the recoil of your weapon) the sight will record a number of seconds before your shot, and a number of seconds after.

All conveniently organized as one continuous video.

Press the RIGHT button to Start Video recording. Press RIGHT button again to stop Video recording.

NOTE

It may best to turn OFF the Microphone in conditions of extreme wind.



You can turn on the microphone and switch the quality of the video in the System Settings (Photo/Video tab).

To enter the System Menu you should open Shortcut Carousel with CENTER button and select the wrench icon with RIGHT or LEFT buttons.

Then push CENTER button to enter the menu.

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 you can find in the Gallery on your device.

The scope allows you to record videos in two modes.



NORMAL

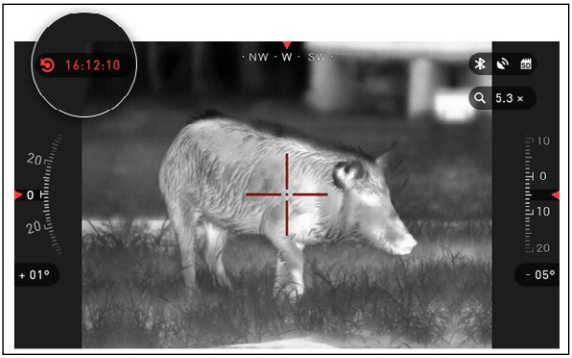
The default mode. While recording the Counter widget and Time Stamp appear.



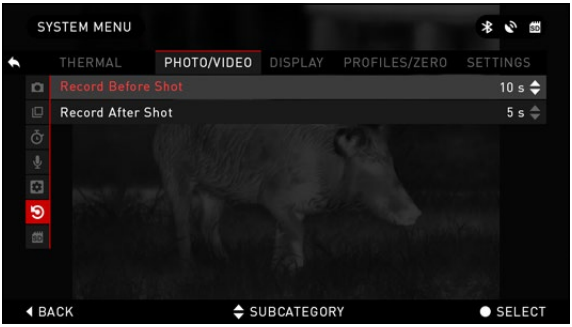
RECOIL ACTIVATED VIDEO (RAV)

When you set your video record to RAV mode (from Shortcut Menu), the system buffers everything your scope sees.

While you are in this mode, the RAV widget appears and then after starting record the Time Counter appears.



When a shot is fired and your scope experiences recoil (some airguns may not provide enough recoil for RAV to be activated) the scope will record video prior to the shot being taken, the moment of, and a some time after. Exact settings may be adjusted in the System Menu.

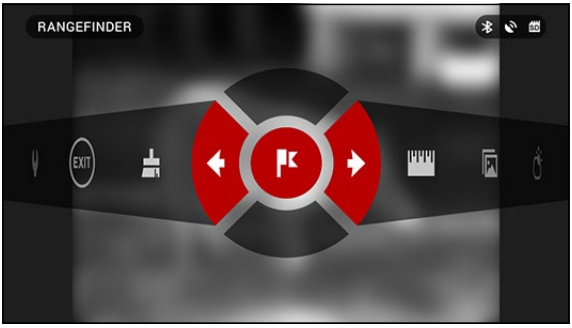


RANGEFINDER

Using the Smart Range Finder you will quickly be able to estimate the distance to your target as long as you have reasonable knowledge of the size of your target.

NOTE

Once the distance is measured the value will be automatically integrated into your Smart Shooting Solution.



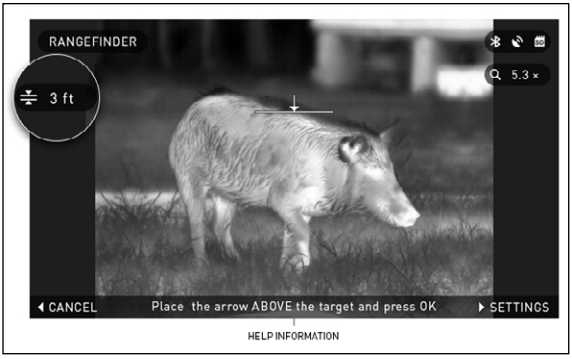
RANGEFINDER

To use select the Flag Icon from the Shortcut Carousel.

Pressing the CENTER button will take you to the Main Screen of Rangefinder feature.

To measure the distance, follow the next steps:

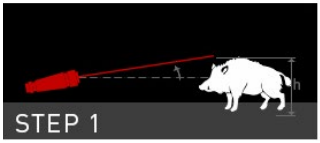
1. put the arrow-mark on the top of the target and press the

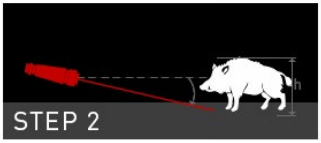


CENTER button, wait for the scope to take the readings (it will take a number of readings so try to keep your weapon steady);

2. put the arrow-mark under the target and press the CENTER button;

3. if satisfied with the value press the LEFT button to go back to the Homescreen or repeat steps 1 and 2 if necessary.







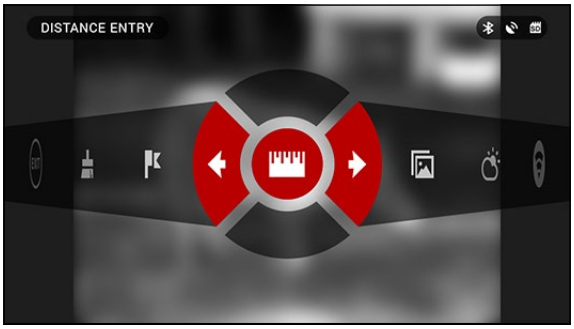


NOTE

During the measurement process, you can zoom in and out using standard buttons (UP and DOWN).

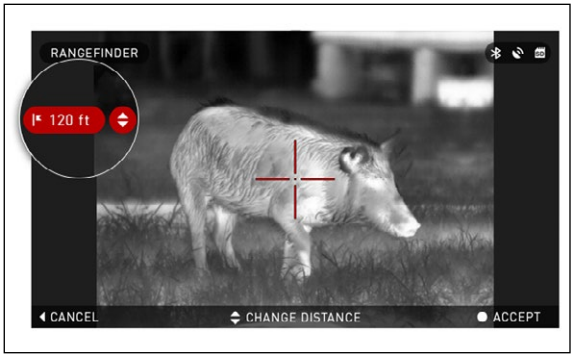
If the Target Height is incorrect you can change it:

- press the RIGHT button to enter the Menu;
- choose one of the presets or input the height manually;
- accept the height with CENTER button and go back to the Main Screen.



DISTANCE ENTRY

Allows you to input or correct the distance manually. To launch you should choose it in the Shortcuts.



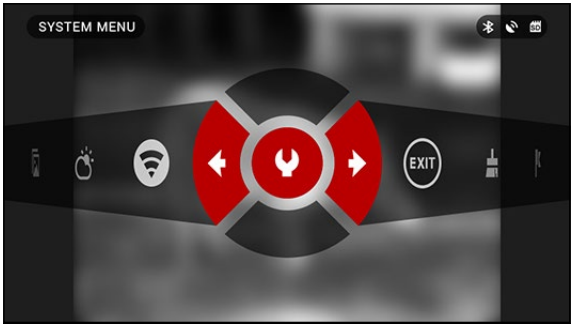
Change distance value using UP and DOWN buttons. To accept the new distance press CENTER button.

ZEROING

To Zero in your scope you will need to go to the Profile/Zero section of the System Menu.

To enter the System Menu you should open Shortcut Carousel with CENTER button and select the wrench icon with RIGHT or LEFT buttons.

Then push CENTER button to enter the menu.

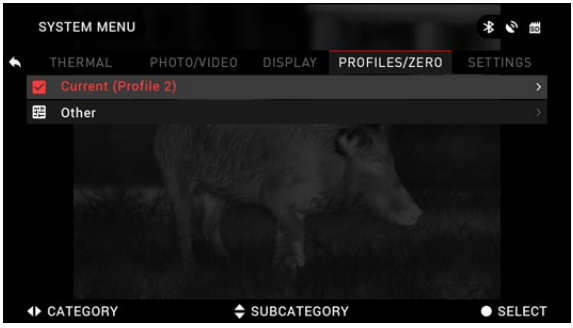


Before you begin Zeroing process you will need to either create a new Profile or utilize an existing one. We recommend to create a new one to start understand the process better.

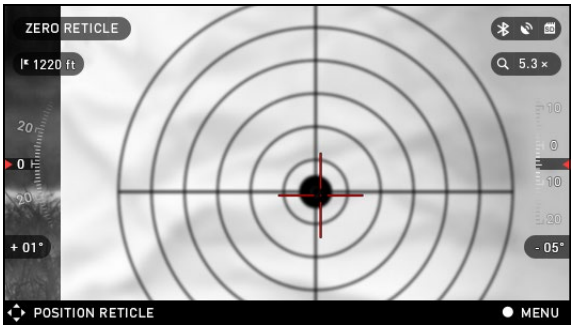


Profiles are primarily used in order to utilize your scope on various weapons. This way when moving your scope from one gun to the next you can simply select the Profile that you have already created for this gun. Another reason to use multiple profiles is to be able to zero in the scope on the same gun but at different ranges. For example one Profile may be called AR 50 yards and another AR 200 yards. Allowing you to create two separate profiles to better fine tune your shooting solutions for both shorter and longer range shooting.

To zero your rifle with the ATN device you should follow few next steps.







Find Profiles/Zero tab in the System Menu with RIGHT or LEFT buttons. Select Zero Reticle item and hit CENTER button.

Aim and fire at the target (preferably bullseye) while keeping the reticle on the bullseye. If possible keep the weapon from moving as much as possible. After the shot has penetrated the target, move your reticle to the point of impact and press the CENTER button.



NOTE

Although you may not need more then one shot to Zero in your scope we do recommend that you repeat the process several times to make sure that you truly Zeroed in. As you gain experience in Zeroing in your scope it should take you no time at all to Zero it in the future.

NOTE

It may be helpful to Zoom in while Zeroing in your scope. This will not effect your results.

When finished Select Save & Exit in the menu. Congrats, you have Zeroed in your scope

NOTE

Before zeroing scope you must choose correct lens type for your scope. This lets the system know which Scope you are actually using.

SMART SHOOTING SOLUTION

Smart Shooting Solution is a fully integrated Ballistics Calculator that enables your scope to seamlessly adjust its point of impact. The first step in utilizing this function requires you to enter all relevant information into the Profile that is being used.



NOTE

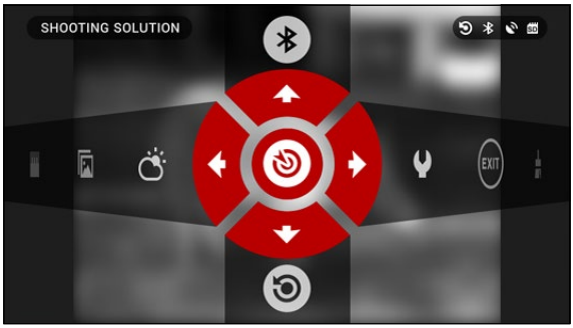
If you do not know all or part this info (example: Initial Velocity) we recommend that you contact the manufacturer

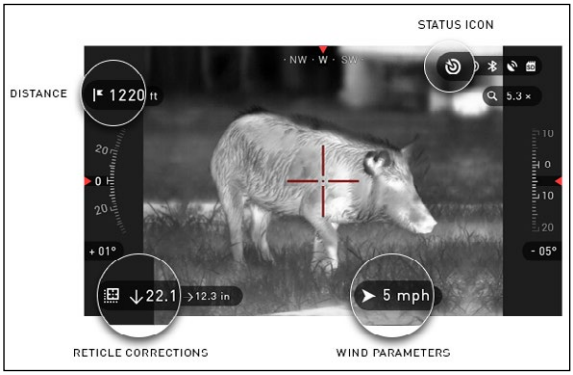
of the ammunition or/and the weapon that you are using. Generally this info should be found on the manufacturer's website.

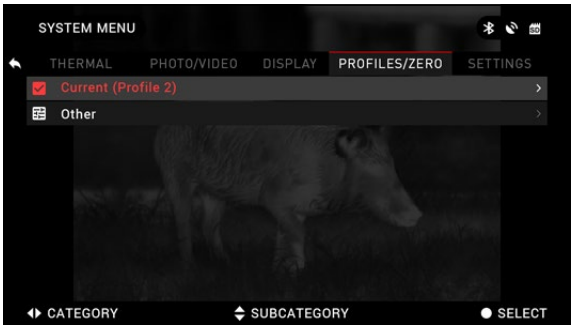
Once your profile has been setup you are ready to activate the Shooting Solution on your sight. Open the Carousel and locate the following set of Icons.

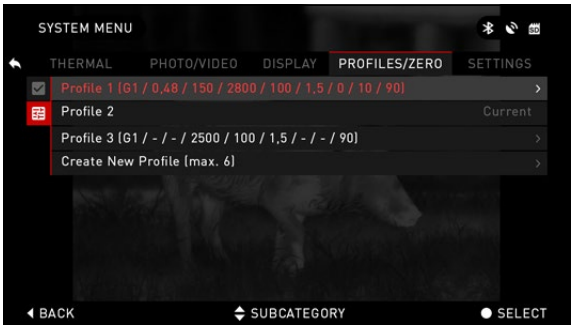
You will need to scroll with UP and DOWN buttons to find the Shooting Solution bullseye icon and if it is off (indicated by a diagonal line running through the icon), you will need to turn it on by hitting CENTER button while having the icon selected. You will see the diagonal line disappear and a Smart Shooting Solution icon will appear in the top right corner of the screen.

Profiles which are not in use are situated in the Other section. You can use an existing profile or create up to 6 new user profiles.



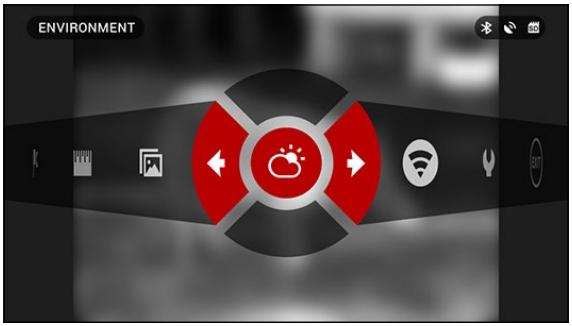








To edit a Profile you should select it (highlighted in red), press CENTER button and choose the action you want to be done: Load, Copy (Duplicate) or Delete the selected profile.





ENVIRONMENT

There are a number of Environmentals that may be entered to increase the precision of your shots.

Wind:

Generally speaking Wind strengths and direction are by far the most important of the group, especially during medium to heavy winds. We highly recommend that if you plan to shoot at ranges of over 300 yards you take wind readings and enter the information into your sight. Both wind speed and wind direction are needed if you plan to make accurate shots. You can enter the information through the Environment short cut or you can utilize your mobile device (running the Obsidian App with a Wifi connection to your scope) whichever you find easier.

Humidity & Temperature:

Humidity and Temperature must also be entered through the Environment short cut or by utilizing your mobile device.

Barometer Pressure & Altitude:

Both Pressure and Altitude will be set automatically using your sight's internal sensors.

Other Data Collected:

The angle of your scope as in relations to your target is also noted and the Smart Shooting Solution takes the information into its calculations.

RANGING IN ON YOUR TARGET

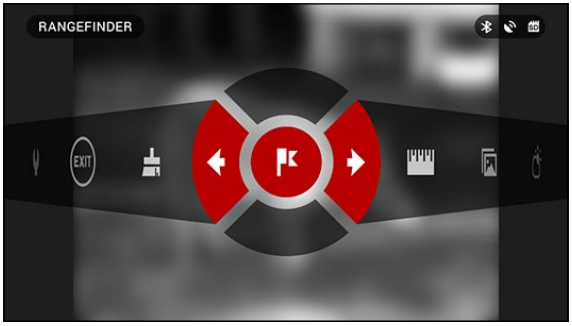
Clearly the number one priority to achieve accuracy in long range shooting is to know the range to your target.

The Smart Shooting Solution will make your adjustments for you but only after you have entered the range to your target.

Your sight offers several ways to accomplish this task.

RANGEFINDER

Select the Flag Icon from the Shortcut Carousel.



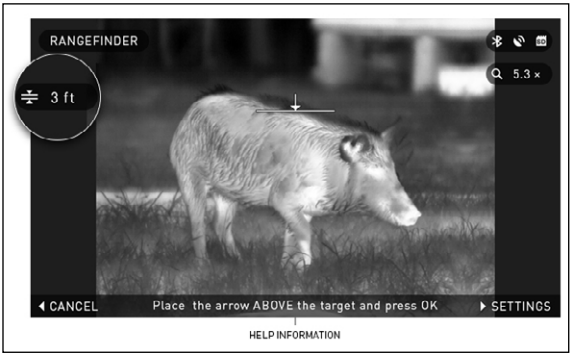
Pressing the CENTER button will take you to the Main Screen of Rangefinder feature.

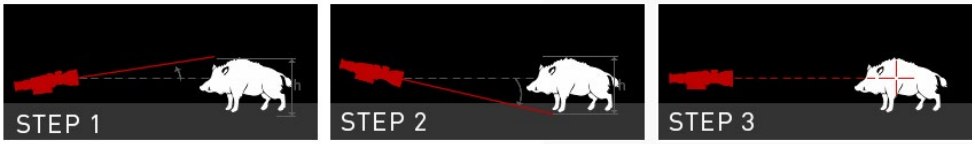
To measure the distance, follow the next steps:

1. put the arrow-mark on the top of the target and press the CENTER button, wait for the scope to take the readings (it will take a number of readings so try to keep your weapon steady);

2. put the arrow-mark under the target and press the CENTER button;

3. if satisfied with the value press the LEFT button to go back to the Homescreen or repeat steps 1 and 2 if necessary.





NOTE

During the measurement process, you can zoom in and out using standard buttons (UP and DOWN).

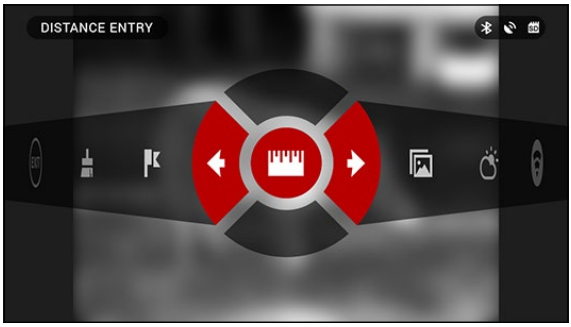
While using Smart Shooting Solution your reticle can be displaced from the center point of the screen. Then during Zoom In action it will move to a center.

If the Target Height is incorrect you can change it:

- press the RIGHT button to enter the Menu;



- choose one of the presets or input the height manually;
- accept the height with CENTER button and go back to the Main Screen.



DISTANCE ENTRY

If you are using other means such as Laser Range Finder you may enter the distance manually using the Distance Entry shortcut.

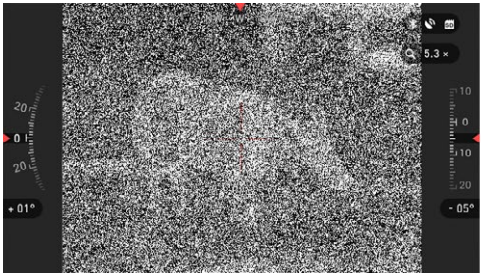
Change distance value using UP and DOWN buttons. To accept the new distance press CENTER button.

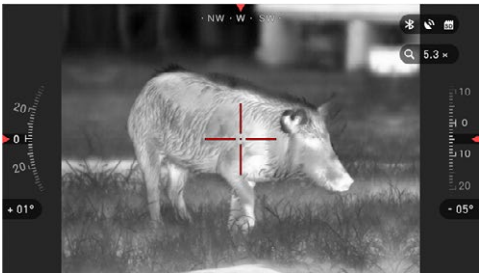
NUC

Nucking is required to improve image quality when the image is degraded by various environmental events.

There are multiple NUC tables to span the full operating temperature range, and the camera automatically selects the optimum table based on its temperature.

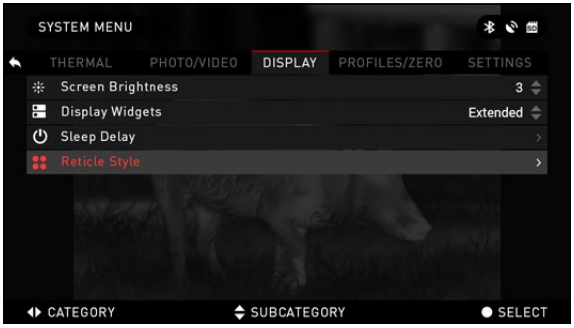
Example: Change of temperature, continues viewing of a particular warm object, movement from one environment to another all may cause image degradation.





To clean up the image you will need to press the NUC from the Shortcut Carousel while closing the objective lens with a solid object (lens cap, hand, book, etc..)

RETICLE STYLE ADJUSTMENT



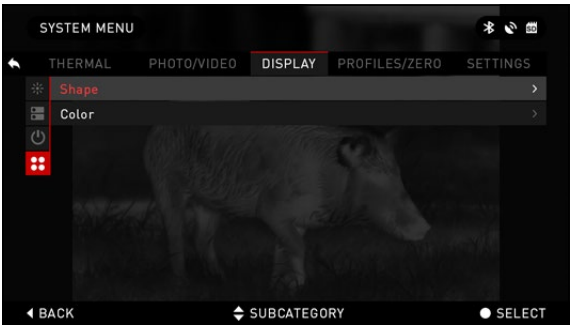
You can manage reticle style in the System Menu (Display section).

To enter the System Menu you should open Shortcut Carousel with CENTER button and select the wrench icon with RIGHT or LEFT buttons.

Then push CENTER button to enter the menu.

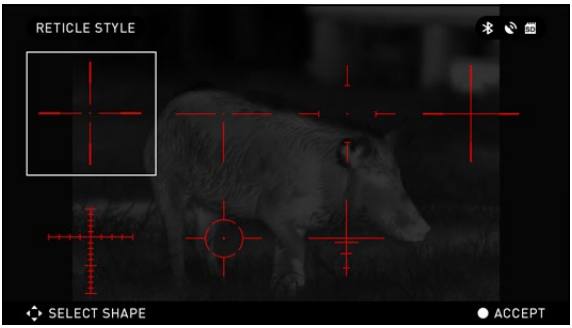
Choose a Display in Tab Menu. Movement between the tabs is carried out using the LEFT and RIGHT buttons.

To change the Reticle Shape press the CENTER button.

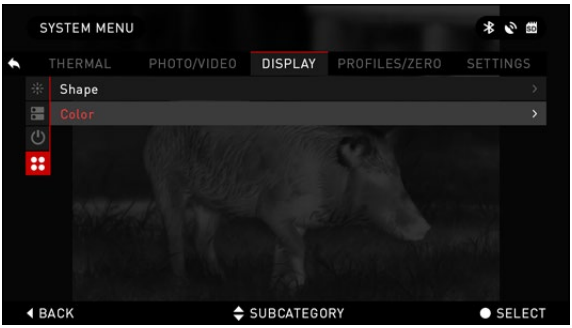


You can choose prefered shape depends on your purpose. Use keyboard arrows to switch between shapes.

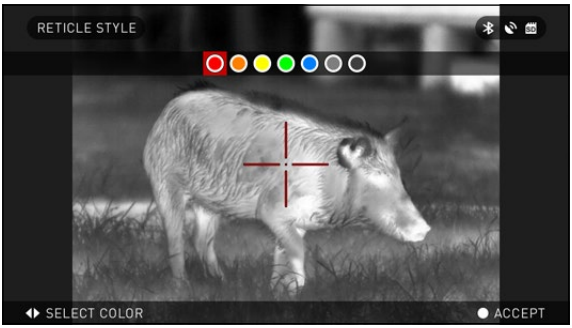
To accept appropriate shape of the reticle press the CENTER button.



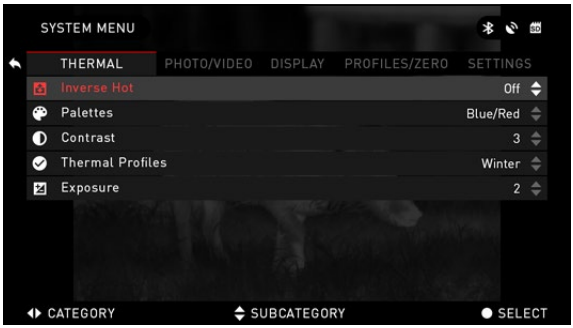
You can change Reticle Color depending on circumstances.



Movement between the colors is carried out using the LEFT and RIGHT buttons. Then press CENTER button to accept color you need.



SYSTEM MENU



THERMAL

INVERSE HOT — swap the appearance of coldest and hottest color.

PALETTES — the range of colors used in displaying.

CONTRAST — the difference in luminance and color that makes an object more distinguishable.

PHOTO/VIDEO

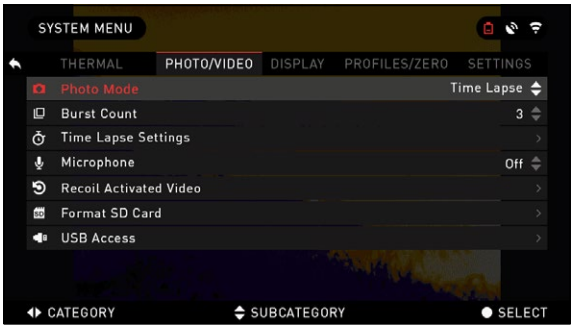


PHOTO MODE — includes Single (capture a single photo), Time Lapse (series of photos at timed intervals) and Burst (up to 10 photos in one second) modes.

BURST COUNT — ammount of photos in one second (2 – 10).

TIME LAPSE SETTINGS

- Total Photos — ammount of photos in series (2 – 10).
- Frame Interval — length of the interval (2 – 15 sec).

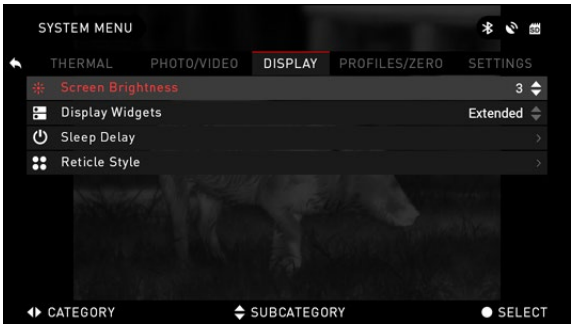
MICROPHONE — sound recording (ON/OFF).

VIDEO QUALITY — can be 1280x960, 30 fps.

RECOIL ACTIVATED VIDEO

- Record Before Shot — the time before pulling a trigger (5 – 30 sec).
- Record After Shot — the time after pulling a trigger (5 – 30 sec).

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



DISPLAY

SCREEN BRIGHTNESS — 1-5 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).

SLEEP MODES

Sleep mode is activated when your scope is not in use for a set period of time (example: 1 – 60 min). During sleep mode the display and some of the sensors will be inactive. To get out of Sleep mode and get back to normal operations just physically move the device or press any of the buttons.

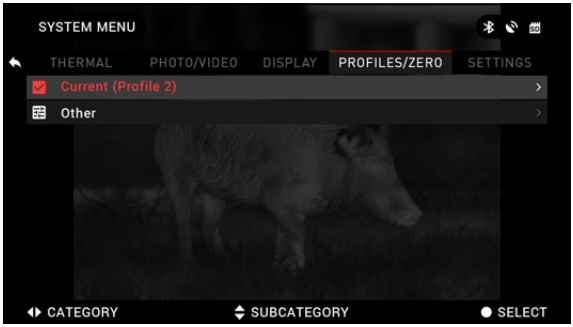
- Mode — allows you to switch the mode (ON/OFF)
- Hibernation Time — can be 1 – 60 min

RETICLE STYLE

- Shape — you can choose the shape of your Reticle.
- Color — the color of your Reticle.

PROFILES/ZERO

CURRENT



- Zero Reticle — allows to enter zeroing mode.
- Drag Function — the flight path and characteristics of bullets devided into types (G1 – G8, GL)
- Ballistic Coefficient — measure of bullet's ability to overcome air resistance in flight.
- Bullet Weight — influences the kinetic energy of the bullet downrange.
- Initial Velocity — is the velocity of the projectile as soon as it leaves the barrel.
- Zero Range — is the range that a firearm is sighted at.
- Sight Height — is referring to the distance between the center of the optics and the center of the barrel.

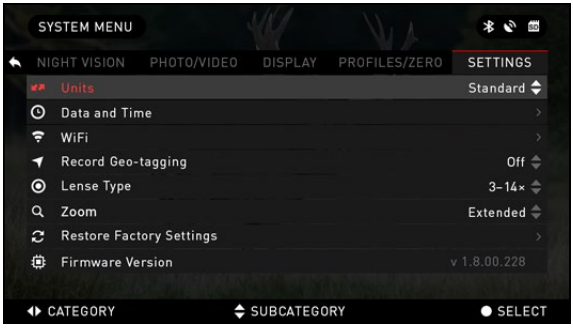
OTHER

- Profile Name — list of existing profiles.
- Create New Profile —allows to create up to 6 profiles.

SETTINGS

UNITS — can be Metric or Standard system.

DATA AND TIME



- Clock Source — allows you to choose different types of source to improve the accuracy (Manual, WiFi or GPS).
- 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).
- Data — enter the date.

- Time — enter the time.
- Time Zone — allows you to choose a geographical region with standard time.

WIFI — values are not changeable.

- SSID
- Password
- MAC Address

RECORD GEO-TAGGING — adding geographical identification to your videos (ON/OFF).

DEVICE TYPE — to make all features work correctly you need to choose the type of your lense.

ZOOM — allows you to choose different types of zoom (Standard, Extended). Extended Zoom will give an electronic zoom of 10x your optical Zoom.

Example: 3–14x in Extended mode becomes 3–30x . However, we would like to caution you that you will begin to see considerable pixelation at such a zoom.

RESTORE FACTORY SETTINGS — allows to reset all the settings to default.

FIRMWARE VERSION — allows you to learn on the firmware version currently running on your sight.

We recommend that you register your product on our home page (www.atncorp.com) in order to make sure 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.

SERVICING

WARNINGS AND CAUTIONS

- Always remember to turn off the device when it is not in use. If you do not plan on using it for a period of more than 10 days, you should remove the batteries.
- Do not disassemble, drop, open, crush, bend, deform, puncture, shred, microwave, incinerate, paint or insert foreign objects: it will void your warranty.
- Keep Lens Cap on when not in use.
- Avoid contact with dust, steam, and gas.
- This product contains natural rubber latex which may cause allergic reactions.
- The scope 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

By utilizing the  ATN Obsidian app, you can control your device and view live streaming. Connect a phone or tablet and view everything simultaneously.

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



iOS Application



Android Application



For customer service and technical support, please contact

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phone: 800-910-2862, 650-989-5100; fax: 650-875-0129

www.atncorp.com

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