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3-24x DAY/NIGHT VISION
RIFLE SCOPE MANUAL

RESEARCH | DEVELOPMENT | PRECISION

#IAMWULF

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#IAMWULF

OVERVIEW

The WULF 4K 3-24x Day/Night Vision Rifle Scope provides the shooter with a stunning HD performance by offering superb colour reproduction & crystal-clear resolution in both day and night. The WULF 4K offers not only the function of 4K HD video recording and photography but gives the shooter the opportunity to record their hunts in 200 frames per second creating a truly immersive HD playback experience.



SPECIFICATION

Magnification Range	3 – 24x
Optical Magnification	3x
Digital Magnification	8x
Field of View at 1000yds	240 ft (6.1°)
Sensor	SONY 4K imx577 Sensor, 4056 (H) X 3040 (V)
Core	14nm 4-Cores
System Resolution	800 lp/mm
Micro Display	0.39 inch LCOS 1280x720 HD Display
Eye Relief	60 mm
Video Recording Resolution	4k @60 fps, 4k @30 fps, 1080p @ 200 fps, Video Recording Resolution 1080p @ 120 fps, 1080p @ 60 fps, 1080p @ 30/60/120 fps 1080p @ 30 fps, 720p@200fps
Digital Smooth Zoom	1x - 8x (Begins with 0.1x, each 0.1x higher zoom setting)

Ballistic Calculator	Yes
WiFi	iOS & Android
Bluetooth	Yes
3D Gyroscope	Yes
3D Accelerometer	Yes
E-Barometer	Yes
Smart Range Finder	Yes
RAV (Recoil Activated Video)	Yes
Electronic Compass	Yes
Smooth Zoom	Yes
Reticles	Multiple Patterns & Colour Options
Microphone	Yes
Micro SD Card	4GB to 128GB
USB Type C	Yes
Mount	30 mm Standard Rings (Included)
IR Illuminator	Included

Night Vision	Yes
Battery Life (Li-ion)	Up to 10 hrs
Battery type	Internal Lithium Ion Battery (2x18650 lithium-ion Batteries)
Waterproof Rating / IP Rating	Weather Resistant
Smart Mil Dot Value Range	1.0-13.0 MOA
Operating Temperature	-20°C to 50°C
Dimensions (Body Only)	L: 325mm x D: 126mm x H: 49mm
Weight	1.948lb / 883.8g
Warranty	3 Years

PREPARING THE DEVICE

Unpacking:

The following steps must be performed before using the device:

1. Open packaging box, remove the device.
2. Check that you have all of the items in your box (as shown on the list on page 7)

3. Inspect the device for damage to optical surface, body, eye-cups, operation buttons, etc.
4. Ensure that all optical surfaces are clean and ready for use.
5. Ensure the objective front shade cover disk is fitted or removed to suit light conditions.

Fit the disk in bright conditions or remove the disk in low light conditions.

What's in the Box:

- x1 WULF 4K Day/Night Scope
- x1 WULF IR Torch
- x1 Set of Two-Piece 30mm High Picatinny/Weaver Mounts
- x1 One-Piece 30mm High 2" Offset Picatinny/Weaver Mount incl. Picatinny Accessory Ring Top
- x1 USB to USB-C Data/Charging Cable
- x1 64GB Micro SD Card
- x1 Cleaning Cloth
- x2 Allen Keys
- x1 Rubber Eye Piece (Screw In)
- x3 18650 Pip Top Batteries
- x1 Remote
- x1 USB Stick - Micro SD Card reader
- x1 Pull Tie Scope Bag
- x1 ABS Tactical Carry Case.

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). We have included a USB (type C) charging cable with your scope. Plug the cable into a USB wall charger that has an output of 2 amps. You can charge your device while it is turned off or on (not in recording process), but it charges faster during off state. The USB cable only performs a power supply function instead of power charging during video recording.

Please Note: Using a wall charger with lower amperage will take longer to charge your scope.

1. Recommended charger is 2.0A USB charger.
2. Battery charging time (from 0 to 100%) is 2 hours with 2.0A USB charger.
3. Battery run time is 6 hours on a single charge.

Micro SD & USB-C Ports:

The device is equipped with a Micro SD Card and USB (type C) ports. You can find them under the rubber caps on the right side of the device (caps are marked with appropriate

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

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

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



There is only one correct direction to insert the Micro SD card. Do not force the Micro SD card into the port - doing so may cause damage to both the scope and the card itself.

To remove the Micro SD 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.

Please ensure a high-quality memory card is used within the Wulf 4K. It is essential that at least a 64GB to 256GB memory card with a speed class of at least V30 is used within the unit to ensure it performs perfectly during recording. If an ultra high speed card is used, please use a card that has a speed level of U3. For example, the memory card shown will be the minimum card we would suggest using.



Firmware Update:

Please ensure the unit is fully charged before starting any firmware updates.

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

All Firmware updates can be found on at www.wulfoptics.com. To receive a notification for new Firmware updates, please sign up to our mailing list.

To update the firmware, you will need a memory card. Prior to starting the update, ensure the device is fully charged and you have saved files you wish to keep and you have noted down your zero coordinates and profiles. 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 WULF service center.

Once the firmware update completes, all data will be lost, so it is essential this data is backed up.

To complete a Firmware Update:

1. Download the latest Firmware file-RIFLE_SCOPE_FWUPDATE_Vx. Bin and copy to your memory card-root directory.
2. Make sure that the scope is off before inserting the card into the scope.
3. Turn on the scope. Rotate the scroll wheel to select Y and then press it for updating.
4. In the "Firmware Update" dialog box, select "Yes" to start the update.
5. The device takes about 50 seconds to automatically restart. The latest Firmware file in the memory card will be automatically deleted after completing the updating.

If the device does not restart within 60 seconds, press and hold the power button for 30 seconds. After forced shutdown, press the power button again to turn on the device. Or press the P.OFF button for 1 second and press the power button again to turn on the device. After turning on the

device, check the firmware version. If it's not the latest version, please repeat the above steps to upgrade.

Power Off:

"P.OFF" is the Power Off button, which means forced shut down.



Press the button, the power supply inside the device will be forcibly disconnected and the device will be forced to shut down. Press the button for more than 3 seconds to use the device normally.

Microphone:

Next to the marking  (as shown above) is the recording port of Microphone, which is relatively fragile. Always be mindful of protecting it.

On/Off:

To turn on the device, press and hold the ON/OFF button for 3 seconds. To turn off the device, press and hold the ON/OFF button for 3 seconds. If the device fails, please hold the ON/OFF button for more than 30 seconds or press the P.OFF button for 1 second. Then press the ON/OFF button again for 3 seconds to restart the device.

Day/Night Mode:

To quickly switch between Day and Night Mode, press ON/OFF button once.

Alternatively, you access this in the menu.



Taking Photo/Video Recording:

Press and hold the Photo/Video button for 1 second to switch between PHOTO mode and VIDEO mode. In PHOTO mode or VIDEO mode, click this button to take photos or activate video recording.

Exit/Rangefinder:

When operating in the Settings interface, you can press the BAL/RTN button to return to the previous menu until it returns to the HOMESCREEN. In the HOMESCREEN, press this button again, the function of RANGEFINDER and BALLISTIC CALCULATOR will be activated.

Then rotate the knob, you can measure the distance between the device and the target by using the ranging stadia in conjunction with the 4 animals on screen.



Scroll Wheel:

In the HOMESCREEN, the SCROLL WHEEL is used to ZOOM IN and OUT. Press the SCROLL WHEEL to enter the Setting interface and use the Scroll Wheel to change between different options. The values of some selections can be edited. Press down for 2 seconds, there will be a red line below the value, and you can enter the value editing mode. After the editing has completed, press and hold this button for 2 seconds once again, the red line will disappear and you exit this mode.



Optical Adjustment:

Diopter Adjustment:

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

Once the DIOPTER ADJUSTMENT is set to your liking, adjustment will not need to be

performed again unless another user altered the focus for their needs.

Distance Focus:

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



Mounting:

The device can be mounted using 30mm rings. Apply equal torque to all screws with the provided Allen wrench. Make sure your rings are tight on your rifles rail and will not come loose due to recoil.



For mounting the sight on the Picatinny rail:

1. Loosen the fixing screws on the sides of the mounting rings.
2. Place the rifle scope on the Picatinny rail so that the locking bar of the rail, which is in the base of the ring, enters the recess in the rail.
3. Tighten the fixing screws of the mounting rings.

Please Note: Be sure your weapon is not loaded.
Use safe weapon handling procedures at all times.

Please do not over tighten the fixing screws when attaching the rings to your rail, we recommend 30 in-lbs.

IR850 5W Infrared Illuminator:

Changing the Battery:

Hold the battery tube (not the head or neck) when tightening/loosening the tail-cap. The IR850 IR Illuminator uses 1x 18650 battery.

1. Remove the tail cap unscrewing it until it is free of the body.
2. Install the battery in the body, observing battery polarity.
3. Install the tail cap back on the body.



WARNING:

Avoid looking directly into device when switched on.

Modes:

The IR850 IR Illuminator is very powerful. Please make sure the user does not look at the IR beam directly/or point at anyone.

Operation:

Press the button on the tail to turn it on. To turn off the illuminator, press the button on

the tail again to turn it off.

Supplementary Spot to Flood Adjustment:

Turn on the light and shine it on the 8m-10m wall. To focus the beam, hold the head with one hand and rotate the neck clockwise or counterclockwise with the other.

Installation:

Install the infrared illuminator flashlight on the adjustable base as follows:

1. Unscrew four screws.
2. Put the equipment in the installation seat.



In order to make the spot area of the infrared illuminator coincide with the observation range of the digital sight, it is assembled into the mounting seat. Place it on the side accessory slide rail of the digital sight or the Picatinny slide rail of the rifle accessory. After securely installing, loosen the two screws at the top of the mounting ring slightly. Turn on the flashlight and the scope, and set the sight in night mode to make sure you can see the beam. Move the infrared illuminator in the installation seat, until the whole spot of the

infrared illuminator is seen in the display screen, and adjust, so that the spot and the display screen are aligned. Use the Allen wrench to gently tighten the two screws at the top of the mounting ring to secure the flashlight.

Please Note: To prevent wear and maintain water resistance, it is best to lubricate threads and O-rings when dry.

Troubleshooting:

Low brightness:

There may be something wrong with the battery. Try using another fully charged battery.

Technical parameters of 850nm LED infrared illuminator:

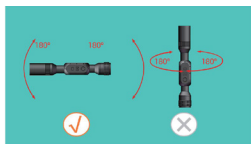
Length: 127.5mm
Mode: ON/OFF
Material: Aluminium alloy
Power: 5W
Body Diameter: 22mm
Focusing: Zoomable
Focus Beam
Waveband: 850nm

Net Weight: 165g
Head Diameter: 43.5mm
Waterproof Rate: IPx7
Wick Type: LED
Battery Model: ICR 18650

Compass Calibration:

In different areas, the compass needs to be calibrated in time. Please go to the settings menu and follow the steps to calibrate. The calibration of compass can be divided into AZIMUTH CALIBRATION and INCLINE CALIBRATION. To adjust AZIMUTH CALIBRATION, firstly enter into the settings menu, choose MORE and follow the operation instructions.

Follow the operation instructions shown on the fourth interface. Select COMPASS ADJUST and choose COMPASS and press the wheel once. Then calibrate the scope per the image shown below. Rotate 3-4 times in each direction, and place the equipment to rest parallel on the ground. Then wait for about 30 seconds, and a success screen will appear. If the calibration fails, repeat the calibration procedure again.



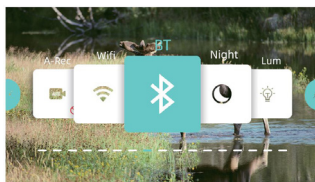
In COMPASS ADJUST, you can also calibrate by choosing INCLINE option. When the pitch angle is calibrated, the equipment will be placed parallel to the ground within a specified period of time,

and the equipment will get a good reference in the horizontal direction and can be used normally after waiting for 30 seconds. If the calibration fails, repeat the calibration.

Bluetooth Remote Control:

TAKING PHOTO, VIDEO and ZOOM LEVEL can be achieved by using the BLUETOOTH REMOTE CONTROL.

1. Turn on your scope, enter the setting interface and choose BT as shown below. Press the wheel to display BLUETOOTH function, and it will show BLUETOOTH PAIRING...



2. Pressing arbitrary key on the remote control, and if the indicator lamp shows blue, the matching is done. If it shows red, the matching is failed. Now you should continue the step again until it shows blue.
3. 10 seconds later, you can use the function of PHOTO VIDEO and ZOOM LEVEL.

Press PHOTO/VIDEO button to take photo if this mode is on.
Press PHOTO/VIDEO button to record video if this mode is on.
Switching between PHOTO and VIDEO should be done by pressing the button on the scope. Press the button with PLUS marking to ZOOM IN. Press the button with MINUS marking to ZOOM OUT.



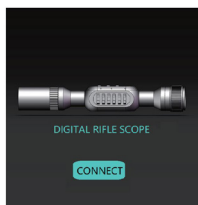
App:



The APP of our product supports the phones and tablets with Android and iOS systems.

Connection Steps:

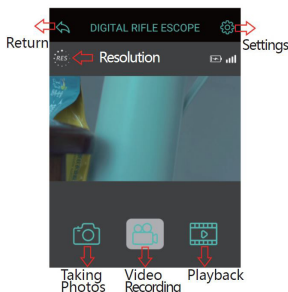
1. Turn on the WIFI setting of your phone and select the rifle-scope-xxxxx WIFI option, the initial password is 88888888. After connection, you can change the password on your phone. If you forget your password, you can reset 88888888 as password in your scope.
2. Accomplishing the connection to WIFI, click the APP icon and you will see two interfaces in turn.



3. Click CONNECT to enter. Restart the scope and follow the steps above to connect the WIFI if you fail.
4. When you enter the main interface of the APP, you can watch real-time-video.

If the scope was in recording mode before you enter the APP, you can not watch real-time-video. Stopping the recording, the real-time-video can be shown normally.

5. The main interface of APP is as shown in below image.



App Not Connecting?

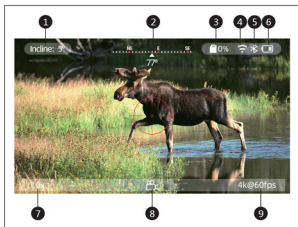
1.If you try to connect the scope but there is no network and your phone screen shows 'The current network is not available, use this network?' Then click 'Yes'.

2. If this message doesn't pop up, your phone has ignored the scopes WiFi. You need to turn off your mobile data and your phone can only select the WiFi of the scope. If this still fails, close the App and restart your scope. Once your App is under normal use, you don't have to turn off the mobile data manually.

DISPLAY FEATURES:

Main Screen:

When you turn on the device, the first screen you will see is the HOMESCREEN. It consists of a video image, a status bar icon at the bottom and each information icon at the top.



Icons along the top of the screen:

1. Pitch Angle
2. Electronic Compass
3. Memory Card Status
4. WiFi Switch Status
5. Bluetooth Switch Status
6. Battery Information

Icons along the bottom:

7. Electronic Magnification Value
8. Photo/Video/Vibration Video Status
9. Set Resolution

Switching Between PHOTO / VIDEO / VIBRATION VIDEO RECORDING:

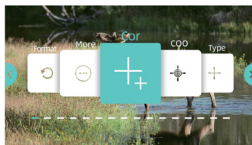
If you press and hold the Photo/Video Camera button, you can switch between Photo/Video Recording. When you switch to the recording mode, click the Photo/Video button to record the video, and when you switch to the photo mode, click the Photo/Video button to take pictures.

Settings Menu:

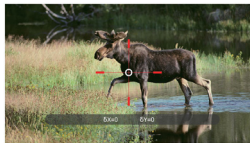
COR (Crosshair Calibration):

Step 1: Aim the crosshairs at the target and shoot.

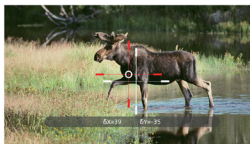
Step 2: Re-aim the crosshair at the target, enter the settings menu, and select the COR option as shown in image.



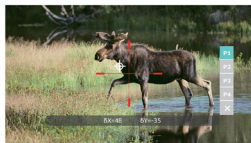
Step 3: Click the wheel, and rotate it, choosing COR. As shown in the right image, you can see a fixed white crosshair which refers to the center of the screen. If you enter this selection for the first time, you can also see the red crosshair in the center of the screen, which overlaps with the white crosshair. $\delta X=0$ $\delta Y=0$ shown on the screen are the coordinate values at present.



Step 4: Rotate the wheel, and you can see a white crosshair as right image shows. Move the center point of the white crosshair to the point of impact. You can push the wheel to switch between the moving directions of X-axis and Y-axis.

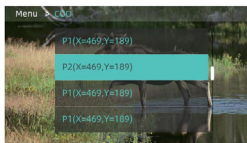
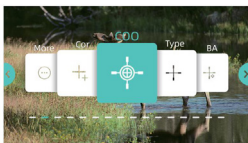


Step 5: After you have moved the center of the white crosshair to the point of impact, click BAL/RTN button to save your crosshair. Then rotate the wheel and select the number you will save and click button again to accept the selection and you will go back to previous menu. As shown in the right image, you can also save to X icon, which means the present new axes are discarded, and previous axes will be continued to use.



COO (Coordination):

The shooter can save up to 4 ballistic/zero profiles with the WULF 4K. Please ensure you choose the correct ballistic/zero profile for your current weapon that WULF 4K Rifle Scope is mounted to. The image below shows the selection of COO. See the images for what the screen will show when you press the wheel. Rotate the wheel to choose your preferred axis. Then press the wheel again to accept and go back to the previous menu.



TYPE (Reticle Style Adjustment):

This unit gives the choice of 8 reticles in 4 colourways allowing the shooter to find the perfect combination for their needs. To select a reticle, enter the system settings and select Type. Click the wheel on the device to enter the menu. To find the desired reticle use the wheel to cycle through the choices and click the wheel to select the reticle style you would like. Once you have chosen the reticle style you will then be prompted to choose the reticle colour, again by cycling the wheel. To select the reticle colour, you will need to click the wheel again. Finally press the BAL/RTN button to modify your changes successfully, then return directly to the previous menu.

BA (Ballistic Calculator):

Entering the system settings and Select BA. Modify the value according to your situation. The distance value is automatically calculated by the WULF 4K, the remaining the values can all be modified excluding the default settings.

For example, if you need to modify the TEMP value, please turn the wheel and choose TEMP. Start by pressing the wheel for a few seconds, it will then appear as a red line. By doing this you will enter the value edit interface and now rotate the wheel to increase or decrease the temperature values. Pressing

and holding the wheel again will exit the setup menu and the entered values will be saved.

REF (Ranging Reference Settings):

To enter the ranging settings menu, rotate the wheel & move to REF option as show below (enter image). To enter the RF settings menu, click the wheel and choose the target you wish to range. To accept your choice, press the wheel again. If you wish to modify the height of the animal, press the wheel for a few second after choosing it and a red line will appear under the initial range value. Rotate the wheel to increase or decrease this value. Click the wheel to accept & click the Arrow and Ruler button to exit the RF menu.

A-REC (Automatic Recording):

Rotate the wheel and move to A-REC and click into it and you can set the recording time. Press and hold the wheel to enter the value revision mode, and rotate it to zoom in and out. Pressing and holding the wheel again will exit setup, and it means the values are modified successfully. BEFORE FIRE is before pulling the trigger, and AFTER FIRE is after pulling the trigger.

WIFI:

Rotate the scroll wheel and select WiFi option and click it to turn WiFi on and off.

BT (Bluetooth):

Rotate the scroll wheel and select BT option. Click the wheel to turn it on and off.

Day & Night (Day & Night Mode Switches):

When entering Day Mode, the WULF 4K will automatically shut off near infrared light so the image produced by the 4K is colourful and real. When the shooter moves the WULF 4K to night mode, the device switches to a monochrome colour palette and allows the unit to receive Infrared light which is emitted by an IR torch this then provides a superb night-time performance to the shooter.

In Night Mode, the near infrared light can be observed and you can see monochrome images. At this time, you can use the IR850 Infrared Illuminator to increase viewing distance and clarity.

LUM (Luminance):

Rotate the wheel and select LUM option, then press and rotate the wheel to change the luminance value.

CON (Image Contrast):

Rotate the wheel and select CON option, then press and rotate the wheel to set contrast value.

ZOOM (Zoom Level):

Rotate the wheel and select ZOOM option, then press and rotate the wheel to set the zoom value.

RESO (Video Resolution):

Rotate the wheel and select RESO option, then press and rotate the wheel to set resolution value.

PB (Playback):

Rotate the wheel and select PB option. You will see the default is video preview. You can switch to photo preview or Memory Card format option by rotating the wheel. In the video browsing interface or photo

browsing interface, you can press the wheel to enter the list of the videos or photos, and then select your preferred videos or photos by rotating it. When browsing the videos, you can make it speed up or slow down by rotating.

T-SET (Time Setting):

Rotate and select T-set option to set time value and to switch and modify the values.

FORMAT (Memory Card Format):

Rotate the wheel and select FORMAT option. The equipment will prompt whether to format or not. The default is NO. If you need to format, select YES by pressing the wheel, the equipment will prompt again that formatting will delete all data.

MORE (More Options):

Rotate the wheel and select MORE option, then press and rotate the wheel, you can see that less common specifications from the first to the fifth interface can be modified. The first interface is the VIDEO specification setting; the second is the PHOTO specification setting; the third is the FUNCTION setting; the fourth and fifth are other settings.



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