



**PRODUCT MANUAL**

**VEIL™ 400**

**THERMAL MONOCULAR**

## SPECIFICATIONS

DISPLAY TYPE	OLED	
DISPLAY RESOLUTION	1024x768	
DETECTOR RESOLUTION	400x300	
DETECTOR PIXEL PITCH	12µm	
REFRESH RATE	50 hz	
BASE MAGNIFICATION	2.3x	
DIGITAL ZOOM	1x,2x ,4x	
FIELD OF VIEW	Linear @ 100 yds.	57.8'
	Angular	11.0°
DETECTION RANGE	1100 yds.	
COLOR PALETTES	Black Hot, White Hot, Red Hot, Multicolor	
BRIGHTNESS SETTINGS	5	
IP/WATERPROOF RATING	IP67	
OBJECTIVE LENS	25mm	
BATTERY TYPE	18650	
BATTERY LIFE	4.5 Hours/Battery	
BUILT-IN MEMORY	32 GB	
LENGTH	4.9"	
WEIGHT	13.3 oz.	

## VEIL™ 400 THERMAL MONOCULAR

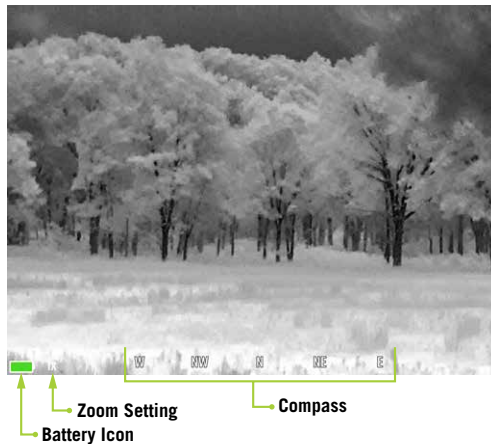
The Veil™ 400 makes the night work for you, helping you hunt longer and move with confidence from dusk to dawn. Whether predator and hog hunting or just navigating unfamiliar ground in the dark, it delivers sharp thermal imaging and perfect balance of magnification and field of view. Familiar, compact design with simple controls you can work without even looking. It's built to last and backed for life, raising the standard for what hunters should expect from thermal devices.









Images are for representation only.  
Product may vary slightly from what is shown.

## DISPLAY WALKAROUND



**Notes:** Compass will automatically hide after no significant change in direction is detected for a period of time.

## BUTTON NAVIGATION

	Main Screen	Menu Screen
<b>FRONT BUTTON</b> 	<ul style="list-style-type: none"> <li>Press: Adjust Brightness</li> <li>Press and Hold: Manual Non-Uniformity Correction (NUC)</li> </ul>	<ul style="list-style-type: none"> <li>Press: Up Option</li> <li>Press and Hold: Exits Menu</li> </ul>
<b>MIDDLE BUTTON</b> 	<ul style="list-style-type: none"> <li>Press: Adjust Digital Zoom</li> <li>Press and Hold: Enter Menu</li> </ul>	<ul style="list-style-type: none"> <li>Press: Toggle Options</li> <li>Press and Hold: Exits Menu</li> </ul>
<b>REAR BUTTON</b> 	<ul style="list-style-type: none"> <li>Press: Capture Picture</li> <li>Press and Hold: Record Video</li> </ul>	<ul style="list-style-type: none"> <li>Press: Down Option</li> <li>Press and Hold: Exits Menu</li> </ul>
	<b>Power On Status</b>	<b>Power Off Status</b>
<b>POWER BUTTON</b> 	<ul style="list-style-type: none"> <li>Press: Sleep Mode On/Off</li> <li>Press and Hold: Powers Off</li> </ul>	<ul style="list-style-type: none"> <li>Press: n/a</li> <li>Press and Hold: Powers On</li> </ul>

## BASIC OPERATION

### Battery Installation and Replacement

To insert a new battery, flip up the tab on the Battery Cap located on the front of the unit and unscrew, counterclockwise, to remove. Insert one new 18650 battery, positive (+) side pointing down. Reinstall Battery Cap and ensure it is tightly closed.



**Note:** The Veil™ Thermal Monocular will not work with 18650 batteries with integrated USB charging ports due to the larger size.

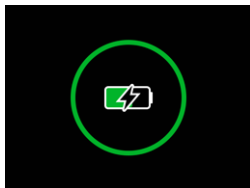
### Charging Your Battery

The included rechargeable 18650 batteries can be charged with the included battery charger or directly on the unit via the USB-C port.



When using the included battery charger, insert the batteries as directed on the charger. A red light will appear when batteries are charging. A green light signals that the battery is fully charged.

When charging directly on the unit, use the included USB-C cords to connect one end into the USB-C port on the Veil™ 400 Thermal Monocular and the other end into any USB charging port to start charging. A charging icon will appear on screen. Your unit is fully charged once the battery icon is fully green.



## Power Up / Down

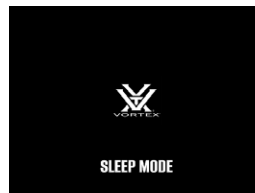
Once the battery is installed, press and hold the “Power” button to power on the Veil™. A Vortex® logo will appear on screen as the unit is powering up. To turn off the Veil™, press and hold the “Power Button” until the timer counts down and the screen turns black.



Power Button

## Sleep Mode

Sleep mode puts the thermal device into a low power state, allowing you to keep the unit ready for use, but preserving battery and reducing any light signature in the dark. To toggle on sleep mode, press the “Power” button. To exit sleep mode, press any button.



Sleep Mode Screen

## Focus Adjustment and Diopter Adjustment

For the best sight picture, follow this process to properly adjust the Focus Adjustment and Diopter Adjustment. Choose an object about 20 yards away and stay in the same spot until you have adjusted the unit to your eyes.

1. Power up the Veil™ and look through the device.
2. First, focus your eye on an object on the screen (such as the battery icon in the corner). Adjust the Diopter Adjustment until the display is sharp and clear. Leave the Diopter Adjustment in this position. From this point on, you will only need to use the Focus Adjustment.
3. Next, while viewing the object with your eye, focus your eye on the object and adjust the Focus Adjustment until the object is in focus. For objects at different distances, adjust the Focus Adjustment only until objects are sharp and clear.

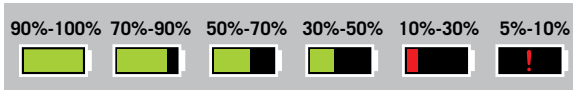
Diopter Adjustment



Focus Adjustment

## Battery Level Icon

The Battery Level Icon displays the level of power remaining. The icons will be displayed as follows for each battery charge level.



## Neck Lanyard

The Neck Lanyard provides a secure way to carry your thermal monocular. Loop the lanyard through the attachment socket.



Lanyard Attachment Socket

## Tripod Use

Using a tripod will help stabilize your image when scanning. If the Veil™ Thermal Monocular is used on a tripod, the image may appear tilted depending on tripod level.

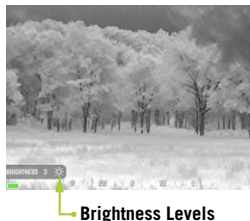


Tripod Adapter Socket

## MAIN SCREEN NAVIGATION

### Brightness Adjustment

Once on the main screen, press the “Front” button to toggle between 5 different brightness levels.



Brightness Levels

### Non-Uniformity Correction (NUC)

Thermal devices require Non-Uniformity Correction (NUC) to ensure consistent image quality. During this process you will notice a slight freeze in your image and hear a quiet click.

The Veil™ will NUC automatically when internal sensors determine it is required. You can also manually perform this by pressing and holding the “Front” Button. You will notice a slight freeze in your image and hear a quiet click.

### Digital Zoom Adjustment

Once on the main screen, press the “Middle” button to toggle between 3 different digital zoom levels (1x, 2x, 4x). The base magnification on the Veil™ 400 Thermal Monocular is 2.3x. As such, your digital zoom options correspond to: 1x = 2.3x, 2x = 4.6x, and 4x = 9.2x.



Digital Zoom Adjustment

### Photo Capture and Video Recording

Once on the main screen, press the “Rear” button to capture an on-screen image.

Press and hold the “Rear” button to begin video recording. Once released, the video recording will stop. The Rear button must



Take Picture



Recording

be held down throughout the entire video recording.

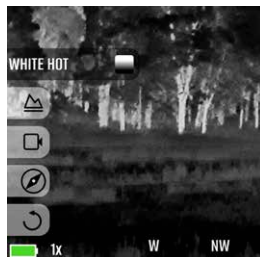
Photos and videos can be viewed via the menu screen under the “Media Viewer” option.

## MENU SCREEN NAVIGATION

Press and hold the “Middle” button to enter the menu. Use the “Front” and “Rear” buttons to toggle between menu options. Use the “Middle” button to toggle between selected menu options.



- Color Palette**
- Viewing Mode**
- Media Viewer**
- Compass Calibration**
- Reset Options**



## Color Palette Adjustment

Choose between optional color palettes based on preference and different situations. Once in the menu screen and toggled to the color palette option, press the “Middle” button to toggle between four different color palette options (White Hot, Black Hot, Red Hot, Multicolor).



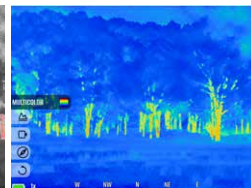
Color Palette - White Hot



Color Palette - Black Hot



Color Palette - Red Hot



Color Palette - Multicolor

## Viewing Mode

Choose between viewing modes to improve image and impurities in different situations such as variations in grass, wooded areas, or being indoors. Once in the menu screen and toggled to the viewing mode option, press the “Middle” button to toggle between three different Viewing Mode options (Balanced, Contrast, and Brush).

### Balanced Mode:

Best for fair weather, balanced backgrounds, open ground.

### Contrast Mode:

Best for backlit conditions, targets in shadows, or behind foliage.

### Brush Mode:

Best for dense cover, humid nights, subtle heat signatures hidden in brush.



Balanced Mode



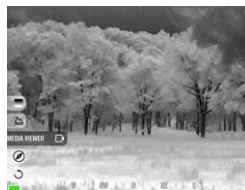
Contrast Mode



Brush Mode

## Media Viewer

View your saved photos and video recordings on your device. Once in the menu screen and toggled to the Media Viewer option, press the “Middle” button. Use the “Front” and “Rear” buttons to cycle through your saved photos and videos and the “Middle” button to delete unwanted photos and videos.



Media Mode



Media Mode - Entered

## Compass Calibration

Once in the menu screen and toggled to the Compass Calibration mode option, press the “Middle” button to enter the Compass Calibration process.

Press the “Front” button to begin the calibration process and follow the steps on the screen when prompted.

1. Press the “Middle” button to start Horizontal Calibration. Rotate the unit horizontally for 10 seconds.
2. Press the “Middle” button to start Vertical Calibration. Rotate the unit vertically for 10 seconds.
3. Once complete, press and hold any button to exit Compass Calibration Process.

If the screen reads “Calibration Failed”, press the “Front” button to restart the calibration process until the Veil™ is successfully calibrated.



## Reset Options

Once in the menu screen and toggled to Reset Options, press the “Middle” button to restore all settings to the default settings. After pressing the Middle button you can reset settings, delete media, or exit without any resetting occurring.



Reset Settings

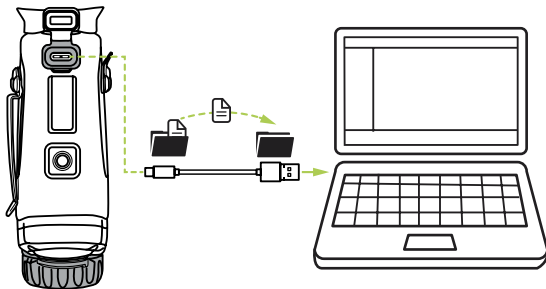


Reset Options

## PHOTO AND VIDEO DATA TRANSFER

Photos and Video recordings can be easily transferred from your Veil™ Thermal Monocular to other devices via the USB-C port.

1. Ensure your Veil™ Thermal Monocular is powered on.
2. Using the included USB cords, connect one end into the USB-C port on the Veil™ Thermal Monocular and the other end into a compatible device.



3. Access the data stored in the device via your compatible device. The Veil™ 400 Thermal Monocular may be recognized as “Imager” or “Camera” depending on your device and settings. All media will be stored in the Digital Camera Images (DCIM) folder. Media can then be viewed or downloaded to your compatible device.

## MAINTENANCE

### Cleaning

Your Veil™ requires very little routine maintenance. The exterior may be cleaned by wiping with a soft cloth. When cleaning the lenses, be sure to use products that are specifically designed for use on coated optical lenses.

- Be sure to blow away any dust or grit on the lenses prior to wiping the surfaces.
- Using your breath, or a very small amount of water or pure alcohol, can help remove stubborn dried water spots.

### Storage

- If possible, avoid storing your thermal monocular extreme temperatures or direct sunlight for long periods of time.
- For long periods of inactivity, it is recommended to store your thermal monocular with the batteries removed and at 50-80% charged.

## TROUBLESHOOTING

### My Device Won't Turn On

Replace the battery and ensure the battery/device is properly charged.

Ensure the battery is installed with the positive (+) side pointing down.

### The Images are Blurry

Adjust the focus adjustment and ensure that the diopter adjustment is set for your eye.

### My Compass Will Not Calibrate

If the compass will not calibrate, ensure you are calibrating the compass outside and away from buildings, cell towers, or other structures.

## WARNINGS

- Do not directly aim the equipment at high-intensity thermal radiation sources, such as the sun, lasers, spot welding machines, etc.
  - Please charge the battery with the method described in this manual and follow the charging procedure and precautions. Improper battery charging will cause heating, damage and even physical injury.
  - Do not try to open or disassemble the battery at any time.
  - When using the device, please try to keep it stable and avoid violent shaking.
  - Do not use or store the equipment in an environment that exceeds the allowable operating temperature or storage temperature (-30C to 60C)
  - Do not disassemble the machine by yourself as it may cause inadvertent product damage.
  - Do not place the battery in a high temperature or near a high-temperature object.
- Do not short circuit the positive and negative poles of the battery.
  - Do not expose the battery to moisture or water.
  - Do not use non-original cords or chargers.
  - Do not attempt to mount to a weapon. This device is not designed to withstand recoil or be viewed through an optic.

## COMPLIANCE

### Regulatory Compliance

- **CE Declaration:** This product complies with EMC Directive 2014/30/EU and RoHS Directive 2011/65/EU.
- **UKCA Declaration:** Compliant with UK EMC and RoHS Regulations.
- **WEEE Directive:** Do not dispose of this product in household waste. Follow local electronic waste disposal laws.
- **RCM Declaration:** This device complies with applicable EMC and electrical safety requirements in Australia and New Zealand.
- **CAN ICES-003(B) / NMB-003(B)**  
This Class B digital apparatus complies with Canadian ICES-003.



## FCC REQUIREMENTS

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**NOTICE****Virtual Patent Marking Notice by Vortex Optics**

This product may be protected by patents in the U.S. and elsewhere for Vortex Optics. <http://vtx.legal> website is provided to satisfy the virtual patent marking provisions of various jurisdictions including the virtual patent marking provisions of the America Invents Act and provide notice under 35 U.S.C. §287(a). Please visit <http://vtx.legal> to view list of products that may be covered by one or more U.S./Foreign patents or published patent applications.

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**Note:** *The VIP® Warranty does not cover loss, theft, deliberate damage, or cosmetic damage not affecting product performance.*

For the most up to date manual visit **[VortexOptics.com](http://VortexOptics.com)**





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