Burris

BURRIS THERMAL RIFLESCOPE

BTS35 v2

USER MANUAL

OVERVIEW:
Congratulations on your purchase of a Burris Thermal Riflescope. Please review this manual prior to operation and save it for future reference. This guide explains the operation of the BTS35 v2.

CAUTION:
Do not point thermal imaging devices at high-intensity energy sources such as the sun or laser emitters as they can permanently damage the infrared detector!

ACCESSORIES:
Quick-Detach M1913 Picatinny Mount
18650 Battery
Battery Charger
USB-C To USB-A Cable
USB-C To RCA Cable

BURRIS THERMAL HANDHELD

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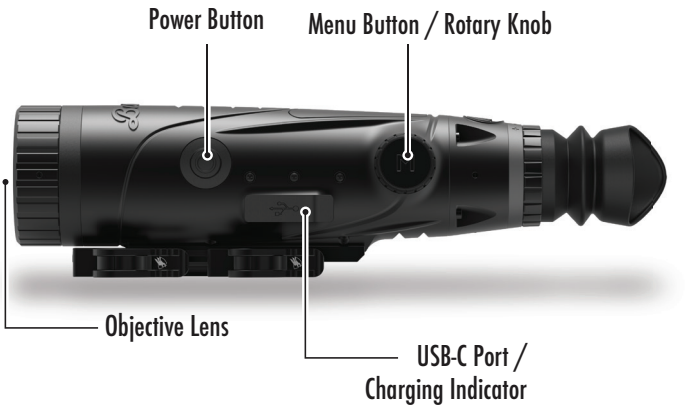
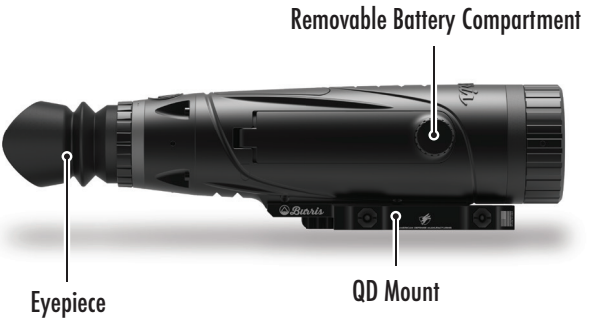
BURRIS THERMAL RIFLESCOPE
PRODUCT MAP





BURRIS THERMAL RIFLESCOPE
TECHNICAL SPECIFICATIONS

Model	BTS35 v2
Detector	
Detector Type	VOx
Resolution and Pitch	400 x 300 - 12 µm
Spectral Range	8 to14 µm
NETD	≤ 50 mk @ F1 25°C
Detection Distance (Deer)	1000 m | 1100 yd
Optical Properties	
Focal Length	35 mm F1.0
Focusing	Manual Focus
Field of View (DEG)	7.8 x 5.9°
Imaging	
Frame Rate	50 Hz
Optical Zoom	3.2X
Digital Zoom	1X to 4X
Display	
Display Type	OLED
Resolution	1024 x 768
Eyepiece	Eye Relief ≥ 48 mm, Exit pupil diameter ≥ 5.3 mm
Eyepiece Magnification	14X
Power	
Battery Type	1X 18650 (internal), 1X 18650 (removable)
Battery Life	≥ 5 hours @ 25 °C

TECHNICAL SPECIFCATIONS
CONTINUED

Model	BTS35 v2
Interface	
USB-C	Power/Charge | Video
Video Interface	Burris Connect App (live video streaming) Analog video (USB-C to RCA)
Mounting Interface	Quick-Detach M1913 Picatinny Mount w/ Adjustable Cantilever
Environmental	
Operating Temperature	14 °F to 122 °F -10 °C to 50 °C
Waterproof	IP67
Recoil	800 G/1ms
Physical Attributes	
Weight	≤ 890 g | ≤ 31.4 oz

BURRIS THERMAL RIFLESCOPE

PRODUCT FUNCTION

Model	BTS35 v2
Smooth Zoom	YES
WI-FI	YES
Photo	BurrisConnect
Video	BurrisConnect
Screen Brightness	Slider Scale
Thermal Intensity	Slider Scale
Image Contrast	Slider Scale
Image Enhancement	YES
Scene Mode	Enhanced/Highlight/Nature
Super Energy Saving Mode	YES
Color Palettes	White Hot/Black Hot/ Red Hot (1,2,3)/ Green Hot/Blue Hot
Hot Track	YES
Charging Indicator	Adjustable
Calibration Model	Manual
Stadiametric Rangefinder	YES
Auto Power-off	Off/15 min/30 min/60 min
Auto Stand-by	Off/15 min/30 min/60 min
Language Settings	English, Spanish, Italian, French, German, Russian, Finnish, Swedish, Danish, Polish
PIP	Upper Left, Upper Middle, Upper Right, OFF
Restore Default	Restores Factory Settings
Reticle Configurator	YES
Zeroing Profiles	6
Zeroing Process	YES

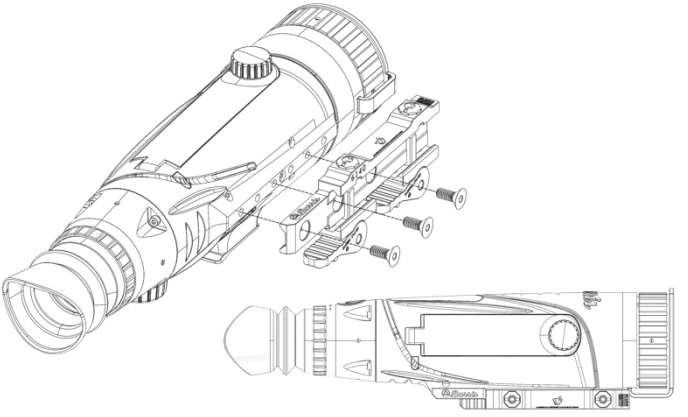
BURRIS THERMAL RIFLESCOPE
BUTTON FUNCTION

Model	BTS35 v2
Not In Menu Button Function SHORTCUT MENU	
Rotary Knob Clockwise	Decreases Zoom
Rotary Knob Counterclockwise	Increases Zoom
In Menu Button Function	
M Button	Press to display menu options/ make selections
Calibration	
Power Button	Execute Shutter Calibration

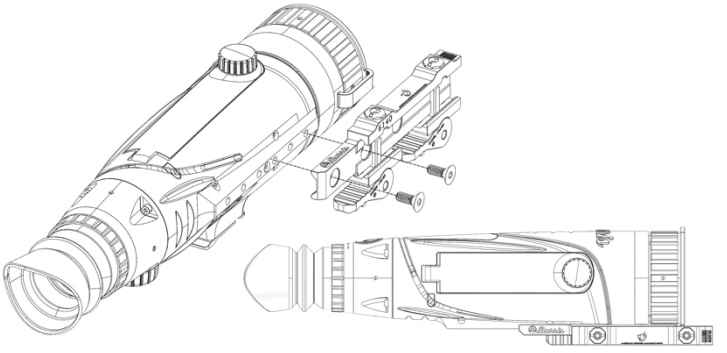
INSTALLING THE QUICK-DETACH MOUNT

A Quick-Detach M1913 Picatinny Mount is included in the box with the BTS along with three mounting screws. The base of the BTS has six mounting screw holes. The Mount can be installed on any of these holes using at least two screws. This allows the user to adjust the amount of cantilever required for optimal eye relief on various weapon systems. Torque bolts to 30 in-lb or 3.4 Nm.

For modern sporting rifle applications, the standard configuration is shown below.



For bolt action rifles or other systems that require maximum cantilever, the mount can be installed as shown below.

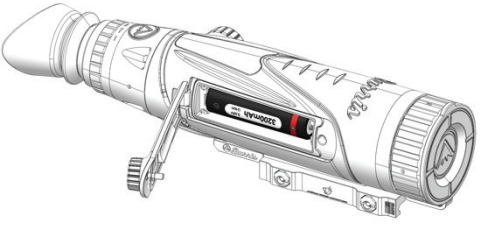


Note: For severe recoil or full-powered semi-automatic weapon systems, Burris recommends using all three mounting screws.

REMOVABLE BATTERY INSTALLATION

The thermal imager is equipped to use a removable 18650 battery. While the internal battery has sufficient charge, the removable 18650 battery can be swapped, and the imager will not lose power. The removable battery is installed into the battery compartment as shown.

Note: There are multiple lengths of 18650 batteries available. The BTS35 v2 is designed to use batteries that are 68-71 mm in length. These batteries generally include circuit protection and sometimes offer built-in Micro-USB charging. The BTS will not function reliably with shorter, unprotected 18650 cells. Do not use unprotected 18650 cells or cells shorter than 68 mm in your BTS35 v2.



USB-C TO USB-A

The charging cable provided is a USB-C to USB-A cord. Operating the device while plugged in will still allow the device to charge. This charging method will only charge the internal battery. Utilizing an external battery pack during operation will significantly increase working time.

CHARGING INFORMATION

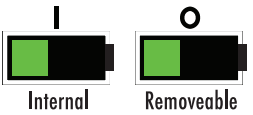
An LED will pulse red inside the USB-C Port while the device is charging (Charging Indicator). The LED will change to solid green when the device is fully charged. The Charging Indicator can be turned off in General Settings (see page 17).

The thermal imager must be fully charged prior to first use. Charge the imager for a minimum of 4 hours or until the Charging Indicator illuminates solid green.

Note: Charging specifications: 5V, 2A. Do not charge the battery in an environment over 40 °C or 104 °F.

BATTERY STATUS

Battery state of charge (SoC) icons are located at the bottom right corner of the screen.
(I) indicates the SoC for the internal battery and (O) indicates the SoC for the removable battery.



If you notice overheating, odors or discoloration, or deformation of the battery, discontinue use immediately.

USB-C TO RCA

The BTS is provided with a USB-C to RCA cable so the BTS display can be seen on a larger screen or captured on a DVR device.

POWER BUTTON FUNCTION

POWER OFF

To fully power off the thermal imager, hold the Power button down until you see the power off progress bar is complete and the unit is powered off.

To cancel the shutdown process, simply release the Power button before the progress bar is full. This operation will manually trigger Stand-by mode.

STAND-BY MODE

To place the thermal imager into Stand-by mode, press and hold the Power button, then release it before the power off progress bar completes. Stand-by mode deactivates the display and places the processor into a lower power consumption state. The thermal imager can be quickly turned back on with the press of the Power button. While in Stand-by, the unit stays connected to the app via WI-FI.

AUTO POWER OFF

The BTS includes an auto shutdown function if no activity has been detected. Inactivity duration can be changed in the power settings (see page 21). Pressing any button will restart the inactivity duration timer.

AUTO STAND-BY

The BTS includes an auto Stand-by function if no activity has been detected. Inactivity duration can be changed in the power settings (see page 21). Pressing any button will restart the inactivity duration timer.

Note: Quick press the Power button to hide menu screen.

FOCUSING THE BURRIS THERMAL RIFLESCOPE

ADJUSTING THE DIOPTER

The eyepiece can be focused so that the display appears sharp and clear. Follow this procedure to quickly adjust the focus:

1. Turn the imager on and open the Menu. If the Menu icons and text appear sharp and clear, no further adjustment is necessary.

2. If the Menu icons and text do not appear sharp and clear, rotate the silver diopter adjustment ring located close to the eyepiece until the Menu icons and text are sharp and clear.

ADJUSTING THE OBJECTIVE LENS

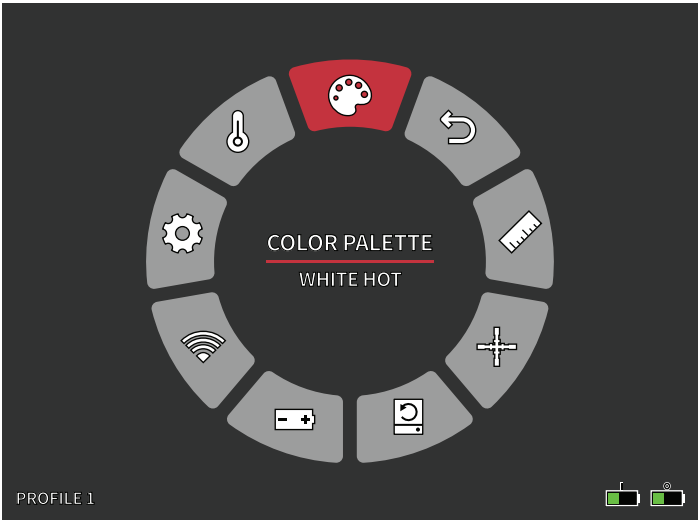
The Focusing Ring is located on the objective end of the BTS and is used to fine-tune focus. Frequent focusing on objects at different distances will ensure a crisp image.
Min Focus Distance: BTS35 v2 - 3 ft

LENS COVER

We suggest covering the Germanium lens with the provided lens cover to protect the lens when the product is not in use.

MAGNIFICATION, ZOOM

When the screen does not display menu settings, use the rotary knob to adjust the magnification. Magnification can be adjusted from 1x to 4x, in 0.2x increments.



COLOR PALETTE

THERMAL SETTINGS

GENERAL SETTINGS

WI-FI SETTINGS

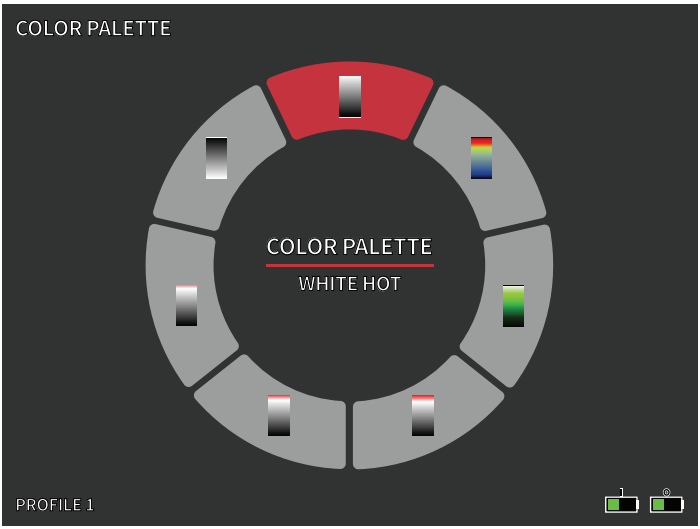
POWER SETTINGS

RESTORE FACTORY SETTINGS

RETICLE & ZEROING

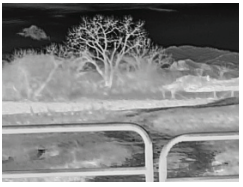
STADIAMETRIC RANGEFINDER

EXIT MAIN MENU



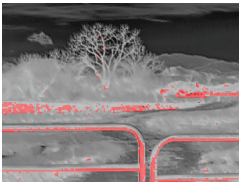
COLOR PALETTE

WHITE HOT – Objects with higher temperatures are shown in white or light gray.

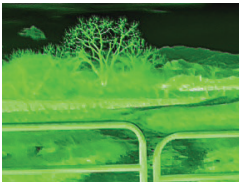


BLACK HOT – Objects with higher temperatures are shown in black or dark gray.

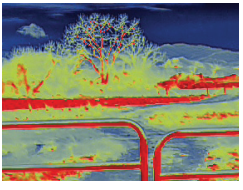
RED HOT – Objects with higher temperatures are shown in red. Users can adjust the intensity of the red in the color profile under the Thermal Settings drop-down, then Thermal Intensity.

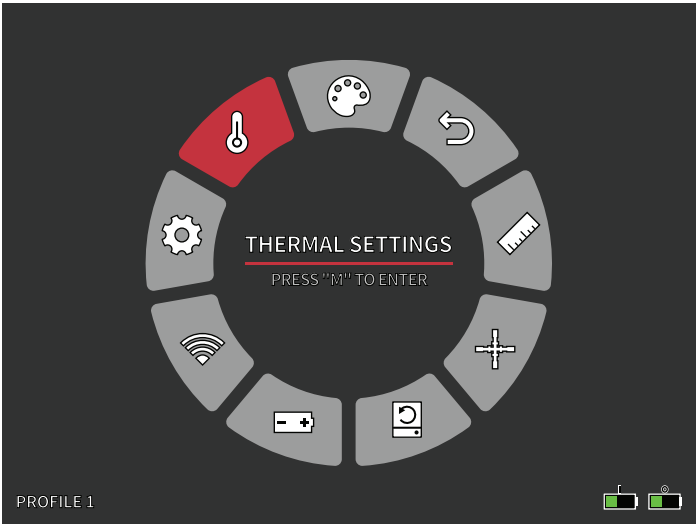


GREEN HOT – Objects with higher temperatures are shown in lighter green.



BLUE HOT – Objects with lower temperatures are shown in blue or dark blue and higher temperatures are shown in red and yellow.





THERMAL SETTINGS

IMAGE ENHANCEMENT

ON/OFF SETTING

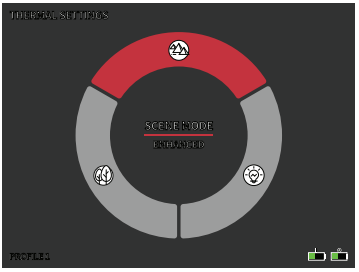
Image enhancement automatically adjusts the image output to best see all thermal details within the scene.

CONTRAST

Contrast of the image can be adjusted using the rotary knob. A slider bar will display on the right side of the screen.

SCENE MODES

Burris thermal devices can be programmed to operate using three different Scene Modes that use a built-in algorithm to improve image quality and thermal detection capabilities in various environments. Depending on your environmental conditions, choose which scene mode works best for you.

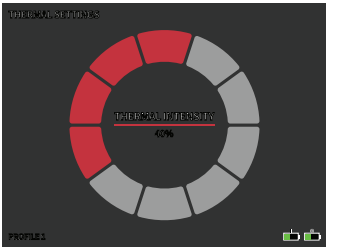


Nature Mode
Provides the highest amount of thermal differentiation on screen by employing the most color scales. This mode is most useful in environments where objects in the field of view are at similar temperatures.

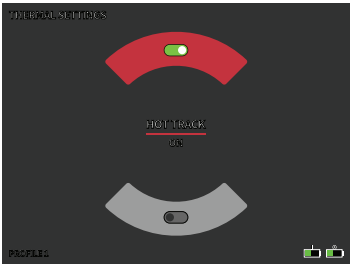
Enhanced Mode
Highlights the hottest objects in the field of view by significantly increasing their intensity.

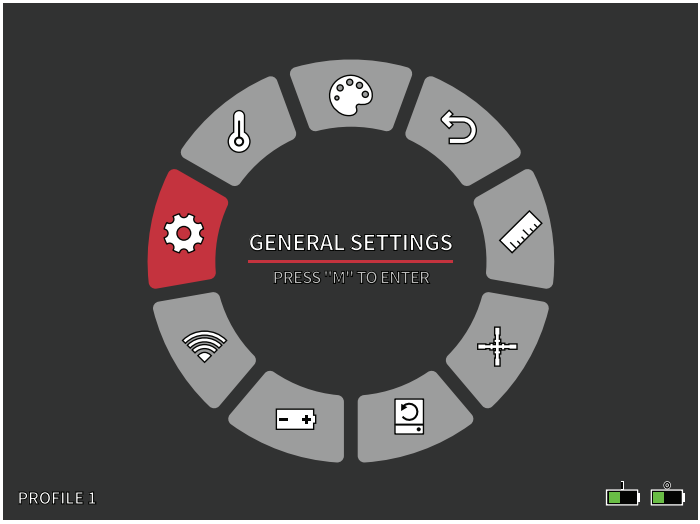
Highlight Mode
Creates significant contrast between the hottest and coldest objects in the field of view by increasing the intensity of the hottest objects and decreasing the intensity of the coldest objects.

THERMAL INTENSITY
Changes the range of color towards either end of the temperature scale for the active color palette. Hotter objects can be made to appear hotter or colder using this setting.



HOT TRACK
ON/OFF SETTING
When Hot Track is turned on, the active red crosshairs track the point with the highest temperature in the scene.



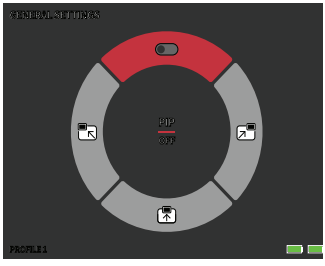


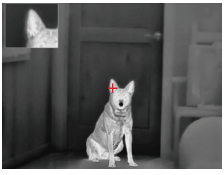
GENERAL SETTINGS

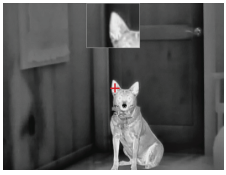
SCREEN BRIGHTNESS
Brightness levels can be adjusted using the rotary knob. A slider bar will display on the right side of the screen.

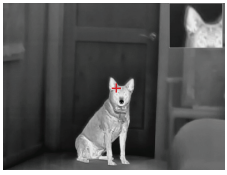
PIP - (PICTURE IN PICTURE)
When the PIP window image is on a 2x magnification of the main image is in the display.

The user has the option to place the PIP window in the upper left/middle/right area of the display.




LEFT


MIDDLE

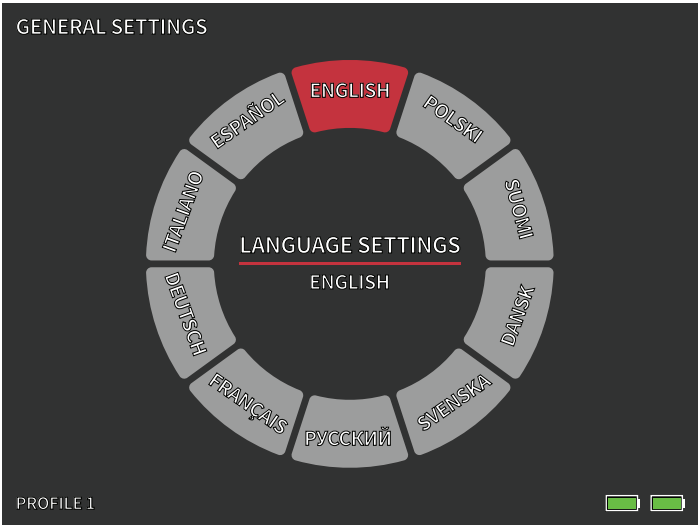

RIGHT

UNITS

The thermal imager can display in standard or metric units.

LANGUAGE SETTINGS

Users can select between 10 languages: English, Spanish, Italian, French, German, Russian, Finnish, Swedish, Danish, Polish



CHARGING INDICATOR

ON / OFF

The Charging Indicator LED can be turned off. The indicator is located in the USB-C port.

WI-FI SETTINGS

The thermal imager can be connected to the mobile phone app via WI-FI and the thermal imager can be operated remotely.

When WI-FI is turned on, but not connected, the WI-FI icon will flash.

When the WI-FI is connected, the WI-FI icon is always on.

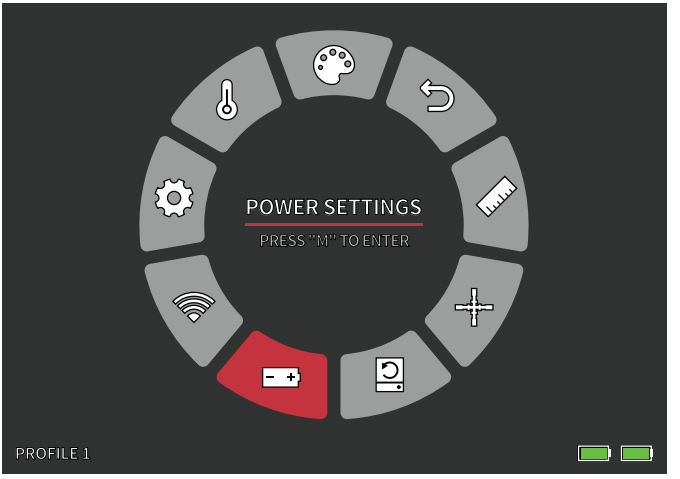
On a mobile device, search and download 'BurrisConnect' in the mobile phone app market.

Open BurrisConnect and find the WI-FI name "BTS-XXXX" in your mobile phone's WI-FI settings.

DEVICE NAME: BTS-XXXX
PASSWORD: 12345678

After the connection is successful, the user can operate remotely.

- Android – Download in Google Play
- IOS – Download in the Apple App Store



POWER SETTINGS

AUTO STAND-BY
If there is no operation in the setting time, it enters Stand-by mode. If the work indicator is on before entering Stand-by mode, the work indicator will flash in Stand-by mode.

- Auto Stand-by Timeout Options

OFF | 5 MIN | 10 MIN | 15 MIN

AUTO POWER
If there is no operation in the setting time, the thermal imager will power off automatically.

- Auto Power Timeout Options

OFF | 5 MIN | 30 MIN | 60 MIN

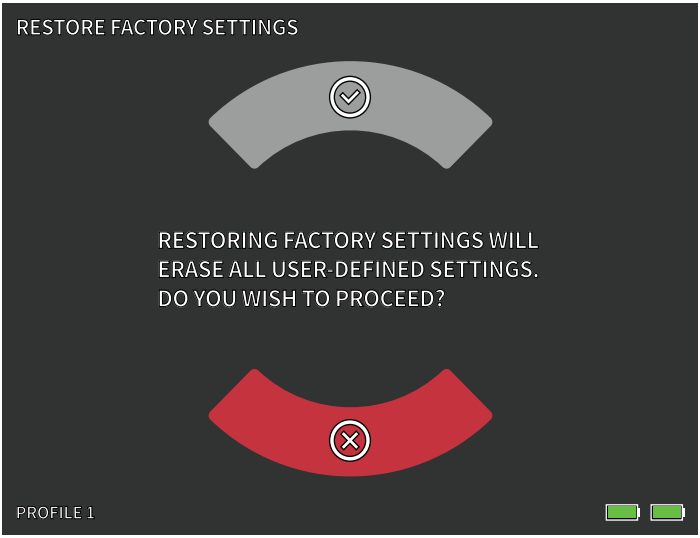
SUPER ENERGY SAVING MODE

- Super Energy Saving Mode

OFF /ON

The Super Energy Saving Mode icon will display in the bottom left-hand corner, next to the battery indicator, when the mode is turned on. While the mode is activated, WI-FI and Screen Brightness settings are disabled.

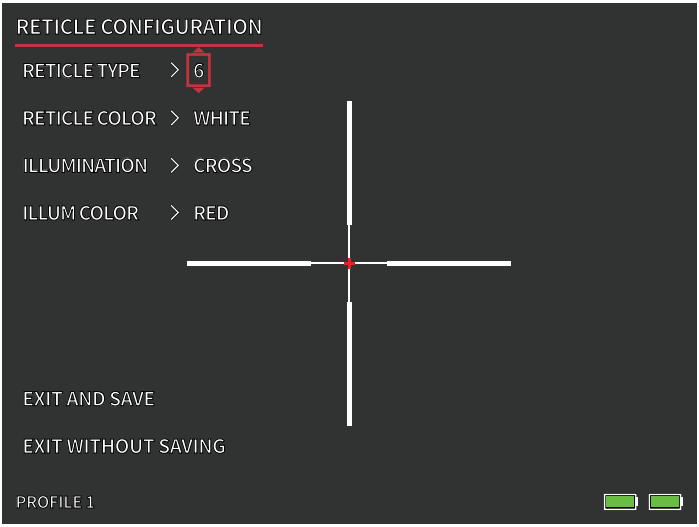
Note: Auto Stand-by and Auto Power-off cannot be performed while WI-FI is connected.



RESTORE FACTORY SETTINGS

This function restores the factory settings.

Note: Restore Factory Settings will delete all Reticle and Zeroing data. The BTS will have to be re-zeroed.



RETICLE CONFIGURATION

RETICLE CONFIGURATION

The BTS includes a Reticle Configuration tool that allows the user to select between 10 reticle types, adjust reticle color, and adjust reticle illumination. This tool allows users to customize a reticle that best fits their application and thermal color palette.

RETICLE TYPE

The BTS is equipped with a selection of 10 reticles. Reticle number 1 is shown by default. Reticles 2 – 10 can be selected within the Reticle Configuration window. For complete reticle maps, visit www.burrisoptics.com.

RETICLE COLOR

Users can change the base color of the reticle to be Red, Green, Blue, Black, White, and Yellow. Red is default.

ILLUMINATION

Users select between a center Dot and a center Cross illumination point that is separate from the base reticle. Illumination can be set to OFF if desired.

ILLUMINATION COLOR

The color of the Dot and/or Cross can be changed to Red, Green, Blue, Black, White, or Yellow.

EXIT AND SAVE

To save changes made within the Reticle Configuration window, make sure you select EXIT AND SAVE. This will save changes to the active PROFILE.

EXIT WITHOUT SAVING

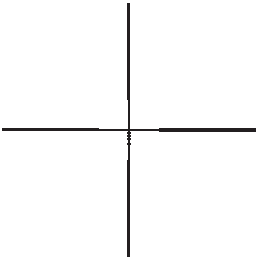
This gives users the option to exit the Reticle Configuration window without making any changes to the active PROFILE. A quick press of the Power button will also exit the Reticle Configuration window without saving.

RETICLE 1

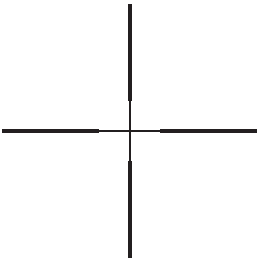
RETICLE 2

RETICLE 3

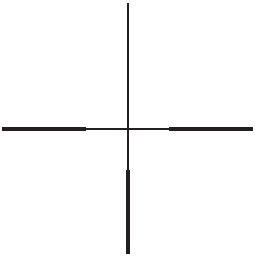
RETICLE 4



RETICLE 5

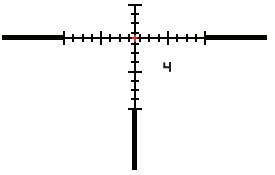


RETICLE 6

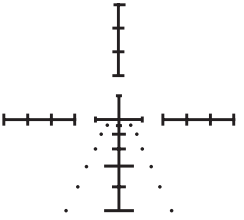


RETICLE 7

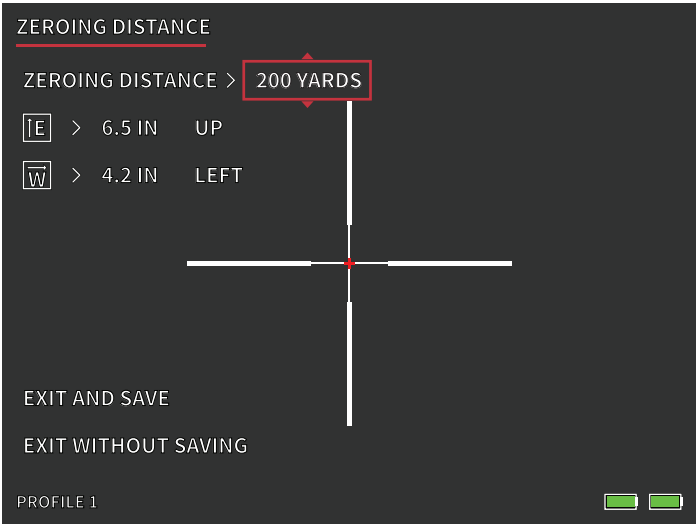
RETICLE 8



RETICLE 9



RETICLE 10



ZEROING

The BTS is equipped with an improved Zeroing tool that makes zeroing your thermal riflescope simple. Follow this process to zero the BTS:

1. Zeroing Distance. Select Zeroing Distance in the on-screen menu. Use the Rotary Knob to cycle through the zeroing distances. Select the distance at which the sight-in target is located. 50 meters/yards is a good starting point.

2. Aim directly at the center of the target and fire two to three shots. Measure and record the vertical and horizontal distance between the group center and target center.

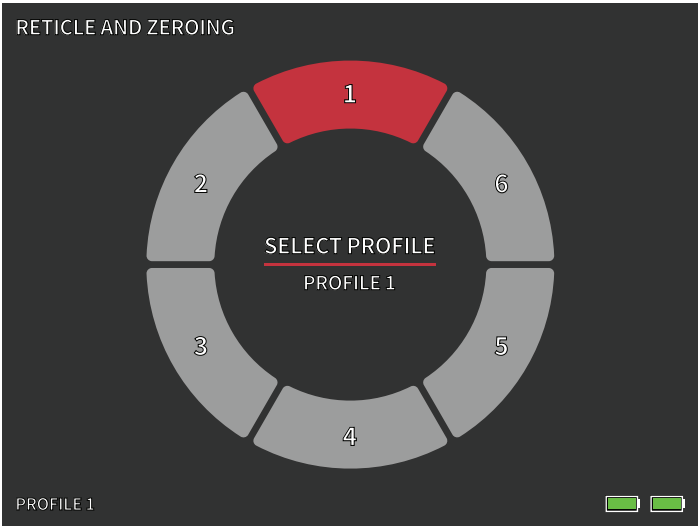
3. Elevation Adjustment. Use the Rotary Knob to adjust the Point of Aim (POA) UP or DOWN from the center of the screen. The amount of POA adjustment and direction are displayed on screen. The amount of "E" adjustment should be equal to the vertical distance measured in step 2. The amount of adjustment per click (mm/in) will change with the Zeroing Distance value.

4. Windage Adjustment. Use the Rotary Knob to adjust the Point of Aim (POA) LEFT or RIGHT from the center of the screen. The amount of POA adjustment and direction are displayed on screen. The amount of "W" adjustment should be equal to the horizontal distance measured in Step 2.

5. Aim directly at the center of the target and fire two to three additional shots. Repeat steps 2, 3, and 4 until you are satisfied with your zero.

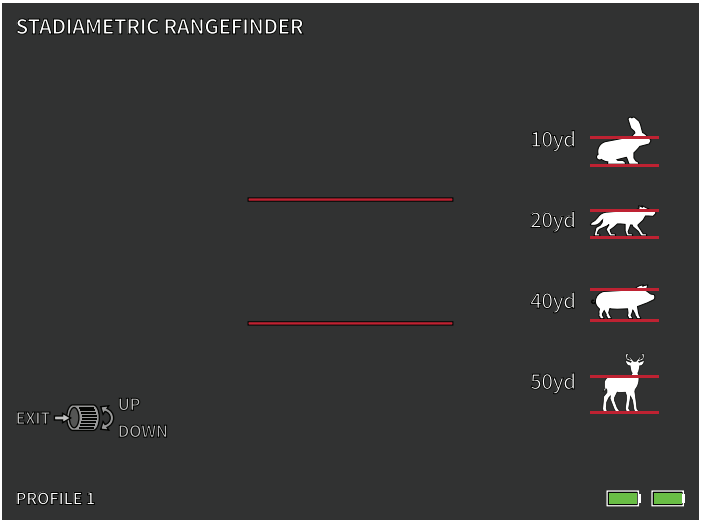
6. Repeat this process at further distances to fine tune your zero and to best fit your application.

Note: Zeroing can theoretically be achieved using only one shot, but, Burris recommends shooting multiple groups to give you the highest level of confidence for your hunt.



SELECT PROFILE

The BTS allows users to store up to six Reticle Configuration/Zeroing profiles. All Reticle Configuration and Zeroing data will be saved to the active Profile. Restore Factory Settings will delete all Profile data.



STADIAMETRIC RANGEFINDER

BUTTON FUNCTION

The Rotary Knob is used to increase or decrease the spacing between the stadia lines.

The stadiametric rangefinder lets you estimate the distance of a target. There are four stadia available on the device:

Rabbit (20 cm/7.8 in.), Coyote (52 cm/20.4 in.)
Hog (80 cm/31.4 in.), Deer (100 cm/39.3 in.).

HOW TO USE THE STADIA

- Align the lower horizontal line with the bottom of the target image. Use the rotary knob to change the width between the upper and lower horizontal lines until the upper horizontal line is aligned with the top of the target icon.

- The distance can now be calculated and displayed automatically.

- By comparing the target size with the four reference animal sizes, the user can roughly calculate the distance of the target.

STORAGE AND MAINTENANCE

When the thermal imager will be not used for a long time, store it in a dry, well-ventilated environment. Charge the thermal imager at least 4 hours every two months during the storage. Neglecting to follow the charging procedure during storage will reduce the battery's lifespan.

The infrared lens of the thermal imager is coated with an anti-reflection film. Clean the lens only when dirt or smudges are present. Frequent scrubbing may damage the lens coating. To clean non-optical surfaces of the thermal imager, do not scrub with chemical solvents or cleaners. On exterior surfaces, wipe with a soft and dry microfiber cloth.

Coarse dirt/debris must be removed from the lens surface. The most convenient way to clean a lens surface is to use a Lens Pen. Position the scope so particles will fall away from the lens, and then use the Lens Pen or soft brush to gently whisk away the debris while blowing on the lens to dislodge the particles. Canned air or an air compressor will help clear off any dust particles. For heavy dirt, like dried mud, use a spray of clean water or lens cleaning fluid to remove the dirt.

COMMON FAULT ANALYSIS AND TROUBLESHOOTING

If your thermal riflescope has performance issues, the troubleshooting chart on the next page will solve most problems. If these suggestions do not solve the problem, contact Burris Company for service or repair.

BURRIS THERMAL HANDHELD
TROUBLESHOOTING

IMAGE CALIBRATION COMPLETE

WI-FI IS ON AND DEVICE IS CONNECTED

WI-FI IS ON AND DEVICE IS NOT CONNECTED

WI-FI DISABLED
SUPER ENERGY SAVING MODE ACTIVATED

SCREEN BRIGHTNESS ADJUSTMENT DISABLED
SUPER ENERGY SAVING MODE ACTIVATED

EXTREMELY LOW BATTERY WARNING
SHUTDOWN IMMINENT

BATTERY CHARGING

WARRANTY

The Burris Thermal Handheld products are covered by Limited Warranty. Burris will repair or replace your product if it is defective. Do not disassemble the thermal imager as this will void the warranty. Contact your nearest Burris dealer for assistance.

For detailed warranty information scan the QR codes below.

US WARRANTY
3 YEAR

INT WARRANTY
2 YEAR

TRANSLATIONS

This manual is available in English, Spanish, Italian, French, German, Russian, Finnish, Swedish, Danish, and Polish; scan the QR code or visit www.burrisoptics.com/customer-service/manuals to see translations.

SCAN FOR TRANSLATIONS

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