

APPLIED BALLISTICS  
THE SCIENCE OF ACCURACY



**ECHO-R™**

THERMAL RIFLESCOPE  
OPERATOR'S MANUAL



**SIG SAUER®**



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## 1.0 INTRODUCTION

Congratulations on the purchase of an ECHO® thermal riflescope. Leveraging years of experience blending innovative electronic technologies with rugged optical systems, SIG SAUER's new ECHO thermal category provides a comprehensive spectrum of performance-driven optics to deliver the innovation and quality that has become synonymous with the SIG SAUER name.

The ECHO thermals are covered by the SIG SAUER® Infinite Guarantee.™

## UPDATE WARNING

For the best possible user experience, scan the appropriate QR below to download the BDX 2.0® mobile app and update the ECHO firmware. Always ensure app is updated to current version.





## 2.0 CONTENTS

- ECHO Thermal Riflescope
- (2) 18500 Lithium-ion Rechargeable Batteries
- Battery charger
- USB-C to USB-C Data Cable
- Flip-back lens cover
- Removable eyepiece
- 1.535" 30mm ALPHA6 rings
- Lens Cloth
- Thermal target
- Quick Reference Instructions



Scan the QR code to visit [sigsauer.com](https://www.sigsauer.com) where you will find additional information about SIG SAUER products, SIG SAUER Academy and the SIG Experience Center, Special Programs, and additional support.

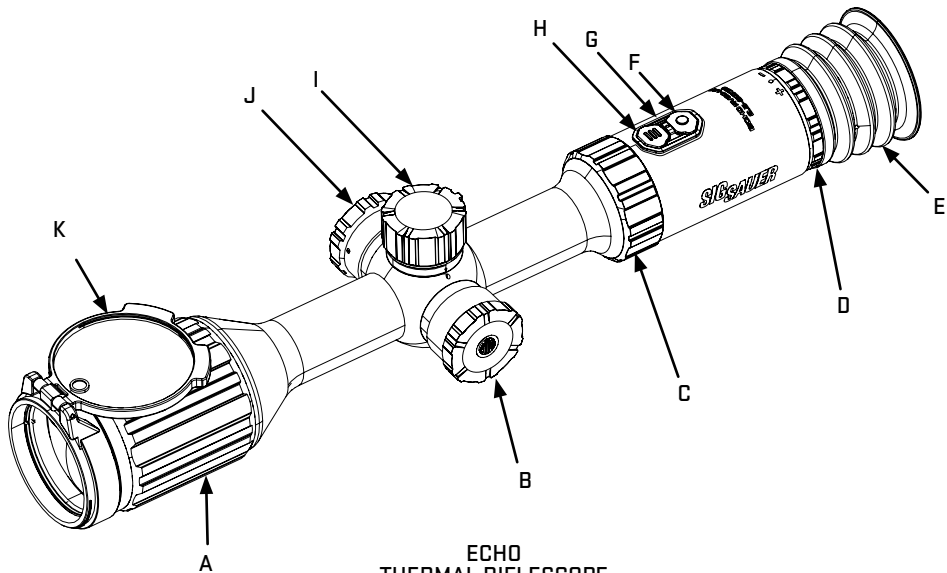
### 3.0 KEY FEATURES

- LWIR 640x512 12um 50Hz thermal core with  $\leq 20\text{mK}$  sensitivity
- Capture still photos and record video with audio
- Connect with the SIG SAUER BDX 2.0 app
- **LRF models** include an integrated 1000 yard laser rangefinder and Applied Ballistics Ultralight
- **Non-LRF models** can be paired with an ECHO MV50-LRF thermal monocular, which adds real-time disturbed ballistic reticle functionality and is comparable to LRF-equipped models
- Create customized Digital Ballistic Reticles with the BDX App. See 8.0 *Installing and Using the BDX App on page 35.*
- 12-hour runtime
- SIG SAUER® Infinite Guarantee™



## 4.0 PRODUCT IDENTIFICATION

- A. Target Focus
- B. Battery Compartment
- C. Magnification / Menu Select
- D. Screen Focus
- E. Eyecup
- F. Palette / Record
- G. Battery Charge Indicator
- H. Range (LRF) / Menu
- I. Power/Standby
- J. USB-C Connection
- K. Lens Cover



**ECHO  
THERMAL RIFLESCOPE**



## 5.0 SAFETY AND OPERATION PROCEDURES



### WARNING LASER



- THE ECHO RV50-LRF IS CLASSIFIED AS A CLASS 3R LASER.
- DO NOT PRESS THE RANGE BUTTON WHILE AIMING AT THE HUMAN EYE OR WHILE LOOKING INTO THE TRANSMITTING OPTICS ON THE OBJECTIVE SIDE.
- DO NOT TAKE THE PRODUCT APART OR MODIFY THE PRODUCT IN ANY WAY TO EXPOSE INTERNAL ELECTRONICS THAT MIGHT CAUSE DAMAGE OR ELECTRIC SHOCK.

### CAUTION

DO NOT POINT THE ECHO THERMAL RIFLESCOPE DIRECTLY AT THE SUN.

FAILURE TO COMPLY WILL DAMAGE THE THERMAL SENSOR.



WARNING: CANCER AND REPRODUCTIVE HARM—[www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

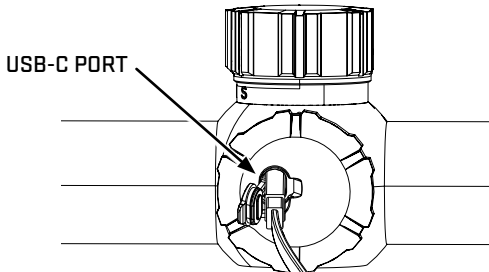
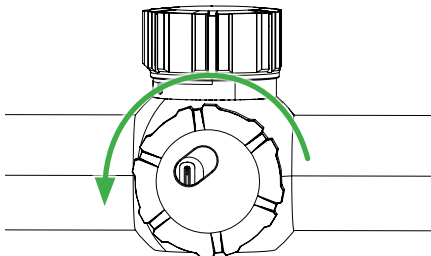
## 6.0 OPERATION

### 6.1 POWER

The ECHO Riflescope is powered by a rechargeable built-in battery and a removable, external 18500 battery. When both batteries are fully charged, the device draws power from the removable battery. The device will automatically switch to the internal battery when the external battery is depleted or removed. This will not affect the operation of the device.

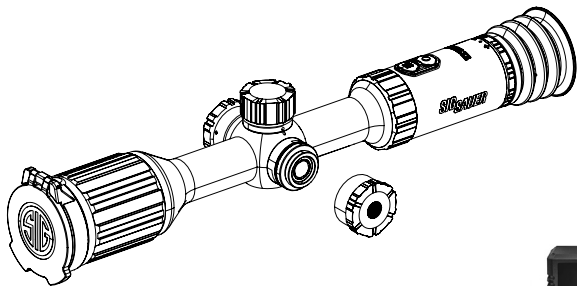
### 6.2 CHARGING

- Recharge the internal battery through the USB-C port on the side of the device
- Rotate cap 180° to expose USB-C port and plug in charger..





- Recharge the external battery by removing the battery from the battery compartment on the side of the device and inserting it into the included battery charger and applying power through the side USB-C port.



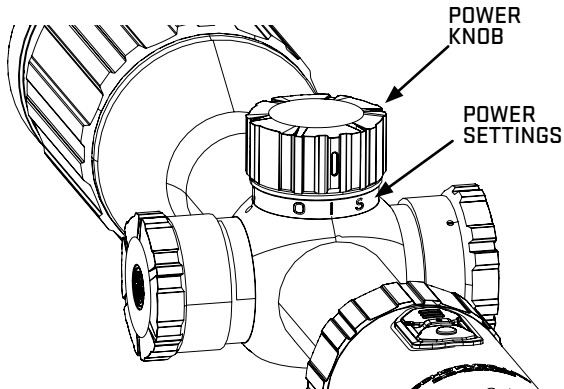
## EXTERNAL BATTERY REPLACEMENT

You can replace the external battery with another 18500 battery without turning off the device or effecting the internal battery. Make sure to install the new battery in the correct orientation: positive in, negative out.



### 6.3 POWER ON THE RIFLESCOPE

- Turn the top knob where the elevation turret would be on a traditional riflescope to the center position. The three positions are labeled (O) OFF – (I) ON – (S) Standby.
- Standby will turn the screen off to conserve battery power and eliminate light pollution. Returning the power switch to the on position will result in instant resumption of operation.





## 6.4 ATTACHING RINGS TO THE RIFLE



**WARNING UNLOAD/CLEAR**

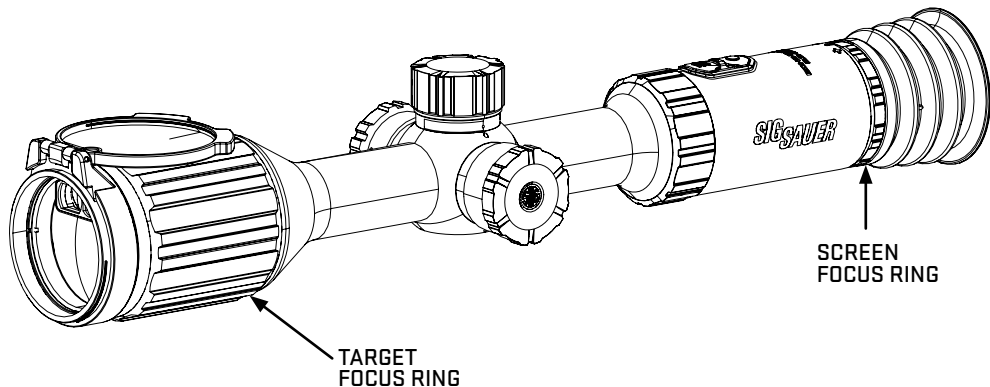


**ALWAYS UNLOAD AND CLEAR THE FIREARM AND ENSURE THE SAFETY IS ON BEFORE WORKING ON YOUR ECHO THERMAL RIFLESCOPE. FAILURE TO COMPLY CAN RESULT IN DEATH OR SERIOUS INJURY TO YOU OR A BYSTANDER.**

- Install your included ALPHA6 or equivalent 30mm rings to your rifle. Be sure to place the rings on your rail so that they are approximately equally spaced on the riflescope main tube between the objective/turret and turret/eyepiece when the riflescope is mounted for proper eye relief.
- Ensure to push the rings forward before tightening the mounting nuts. Failure to do this step could allow the scope to move under recoil and loosen.
- It is a good idea to orient the mounting nuts to the opposite side of the ejection port so there is no chance of them interfering with ejection. Tighten the ALPHA6 mounting nuts to 65 in-lb. or the manufacturer's recommended torque.
- Set the scope into the lower half of the rings. Attach the top ring caps then loosely tighten the screws allowing the scope to be moved forward or rearward in the rings to set proper eye relief. Once you have set your eye relief, tighten the ALPHA6 ring cap screws using a criss-cross pattern to 25in-lb or the manufacturer's recommended torque.

## 6.5 FOCUSING THE RIFLESCOPE

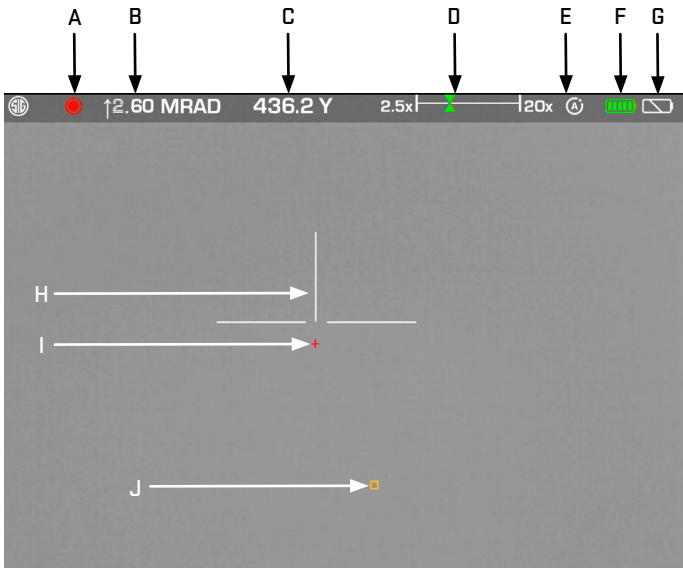
1. Adjust the Screen Focus Ring to focus the thermal display until it looks crisp and clear. This setting will be different for every user.
2. Adjust the Target Focus Ring to bring your target into focus. This adjustment will need to be made frequently as you use your device to observe different distances.





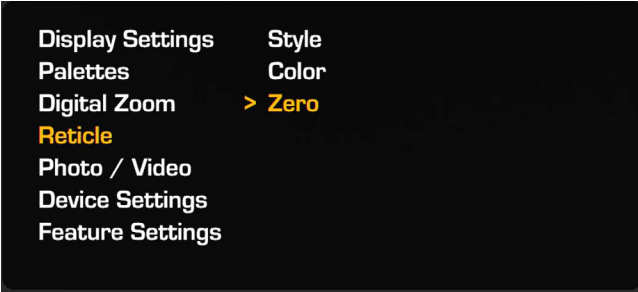
## 6.6 RIFLESCOPE DISPLAY INFORMATION

- A. Recording
- B. Holdover Solution
- C. Ranged Distance
- D. Digital Zoom Level
- E. NUC Mode
- F. Internal battery
- G. External Battery
- H. Rifle Reticle (fixed)
- I. Rifle Reticle (disturbed)
- J. LRF Aiming Reticle



## 6.7 ZEROING THE RIFLESCOPE

1. Enter the Menu by holding down the Menu Button.
2. Rotate the magnification ring clockwise to select “Reticle.”
3. Accept and enter the Reticle Menu by pressing the Menu Button.
4. Rotate the magnification ring again to select “Zero” and press Menu to accept.

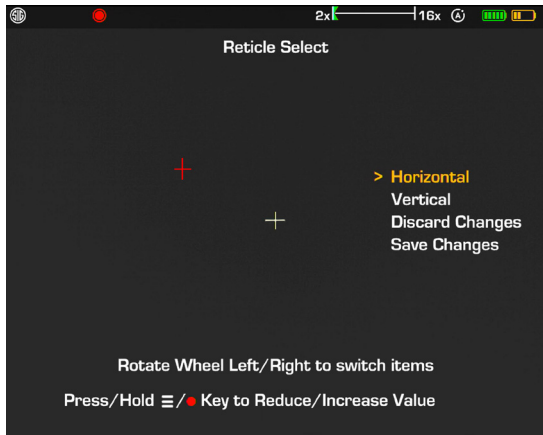


Display Settings      Style  
Palettes              Color  
Digital Zoom        > Zero  
Reticle  
Photo / Video  
Device Settings  
Feature Settings



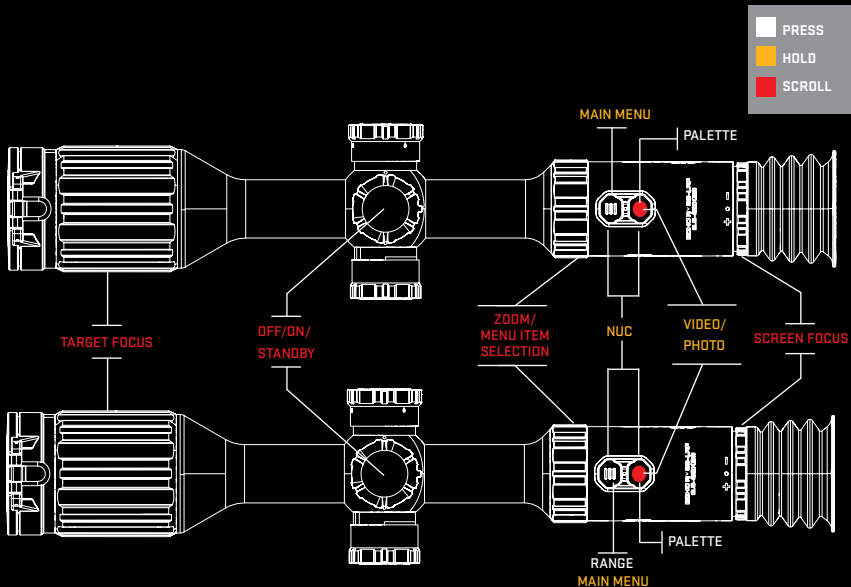
## ADJUSTING THE ZERO

- Use the Magnification Ring to select Horizontal or Vertical adjustments.
- With Horizontal selected, use the Menu and Record buttons to move the red aiming feature left and right. With Vertical selected, the Menu and Record buttons will move the red aiming feature up and down.
- Adjust the red aiming feature to coincide with your bullet impacts
- The white feature will remain still. Use it as a reference and keep it aligned with the point of aim for your group.
- Use the Magnification Ring to select Save Changes and press Menu to accept. Follow the on-screen prompts.
- In this example, our group was high left.



RV35/  
RQ35

RV50-LRF

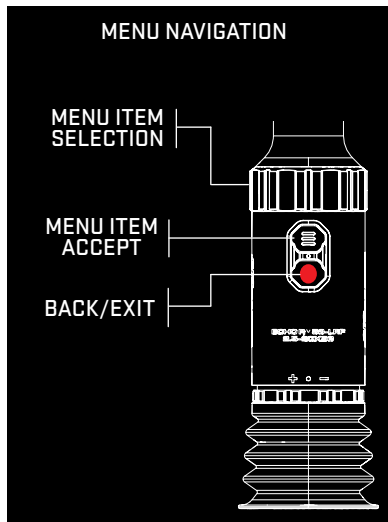




## 7.0 MENU OPTIONS

### MAIN MENU

- Display Settings
- Palettes
- Digital Zoom
- Reticle
- Photo/Video
- Device Settings
- Feature Settings
- About
- Button Description



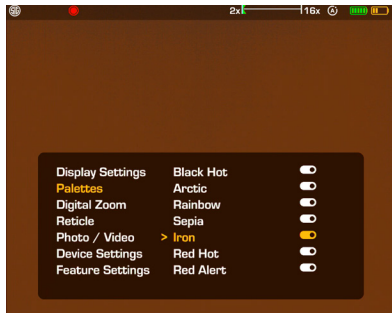
## DISPLAY SETTINGS

- **Display Brightness:** adjust OLED display light output
- **Image Contrast:** adjust the dynamic range of the image
- **Image Sharpness:** apply levels of image sharpening effect to the image.
- **Image Brightness:** adjust palette bias of the image.

## PALETTES

Select to enable or disable each palette for use with the Palette Quick Key Button.

**Display Settings** > **Display Brightness**  
 Palettes Image Contrast  
 Digital Zoom Image Sharpness  
 Reticle Image Brightness  
 Photo / Video  
 Device Settings  
 Feature Settings





## DIGITAL ZOOM

- Your Echo Riflescope has a fixed zoom objective lens. All zoom is performed digitally.
- Select to enable or disable each digital zoom level for use with the Magnification Ring.
- Zoom levels are designed to apply a consistent field of view adjustment between zoom settings

|                  |        |                                     |
|------------------|--------|-------------------------------------|
| Display Settings | 2.0x   | <input type="checkbox"/>            |
| Palettes         | > 2.3x | <input checked="" type="checkbox"/> |
| Digital Zoom     | 2.9x   | <input type="checkbox"/>            |
| Reticle          | 4.0x   | <input type="checkbox"/>            |
| Photo / Video    | 4.4x   | <input type="checkbox"/>            |
| Device Settings  | 5.3x   | <input type="checkbox"/>            |
| Feature Settings | 6.7x   | <input type="checkbox"/>            |

## RETICLE

### a. Reticle Style

#### 1. Static Reticles

- Static reticles act as a second focal plane reticle and provide a static aiming point.

#### 2. Digital Ballistic Reticle

- Digital Ballistic Reticles provide custom ballistic drop reference points and are configured with the help of the SIG BDX 2.0 App. The points are customizable to the distances you choose and are calculated with the help of a Ballistic Profile created for your firearm and ammo combination.

Display Settings > Style  
Palettes Color  
Digital Zoom Zero  
Reticle  
Photo / Video  
Device Settings  
Feature Settings

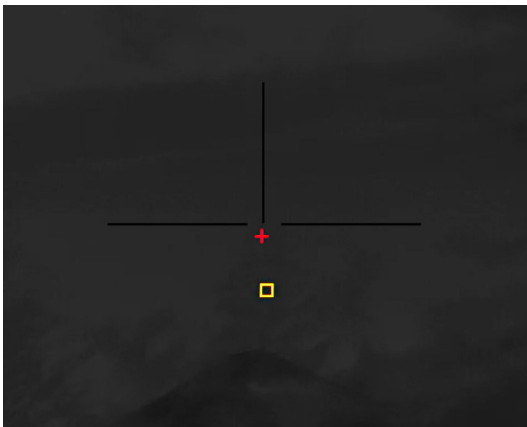




### 3. BDX Disturbed Reticle

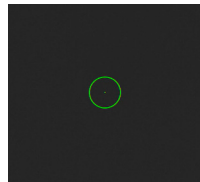
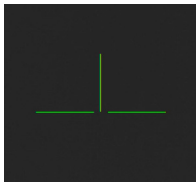
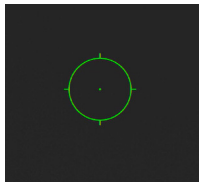
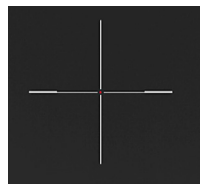
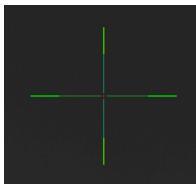
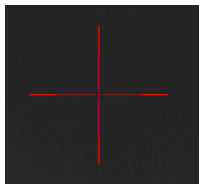
(LRF model or paired with MV50-LRF)

- BDX Disturbed Reticles draw the correct holdover for your ammunition to impact at the distance ranged by the internal laser rangefinder. Ballistic Profiles are created and loaded with the SIG BDX 2.0 App.



**b. Reticle Color**

- Rotating the Magnification Ring will cycle through the available color combinations for that reticle style.
- Press the Menu button to accept and exit.

**c. Reticle Color and Style Examples (models may vary)**



## PHOTO/VIDEO

### a. Recoil Record

- Recoil Recording will detect the recoil of your firearm and record a 20s video clip. Recording will be captured 10s before and 10s after the recoil event.

|                  |                 |  |
|------------------|-----------------|--|
| Palettes         | > Recoil Record |  |
| Digital Zoom     | Hotkey          |  |
| Reticle          | Memory Usage    |  |
| Photo / Video    | Erase All       |  |
| Device Settings  |                 |  |
| Feature Settings |                 |  |
| About            |                 |  |

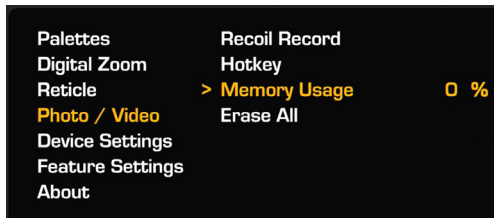
### b. Hotkey

- Select the assignment of the Video/Photo Quick Key from the Sighting Display.
- Video: A long press of the down button will start/stop recording a video.
- Photo: A long press will record a still image of the Sight Display.

|                  |               |       |
|------------------|---------------|-------|
| Palettes         | Recoil Record | Video |
| Digital Zoom     | > Hotkey      | Photo |
| Reticle          | Memory Usage  |       |
| Photo / Video    | Erase All     |       |
| Device Settings  |               |       |
| Feature Settings |               |       |
| About            |               |       |

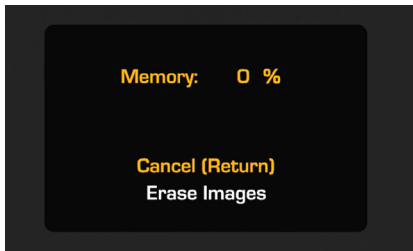
### c. Memory Usage

- Displays the percentage of the media memory used.



### d. Erase All

- Cancel will exit this menu and cease erase procedure.
- Erase images deletes all saved video and photo media stored on the device





## DEVICE SETTINGS

### a. PIXEL REPAIR

- Pixel Repair will fix any sensor pixels which may become “stuck.”
- Before initiating the repair, close your lens cap to provide a uniform temperature throughout the sensor.
- Press Menu to initiate the repair. The device will return to the Device Settings Menu when complete.

Digital Zoom      > Pixel Repair  
Reticle              NUC Mode  
Photo / Video  
Device Settings  
Feature Settings  
About  
Button Description

Close The Front Cap

Click ☰ Key to perform Pixel Repair

## DEVICE SETTINGS

### (LRF Model Only)

#### a. LRF Mode

- Single: User must press range button to acquire distance.
- Scan: Unit will continuously scan for ranges and update in real time`.

#### b. Range Unit

- Toggles between yards and meters for distance shown on the sight display.

|                    |               |          |
|--------------------|---------------|----------|
| Digital Zoom       | Pixel Repair  | > Single |
| Reticle            | NUC Mode      | Scan     |
| Photo / Video      | LRF Mode      |          |
| Device Settings    | Range Unit    |          |
| Feature Settings   | Holdover Unit |          |
| About              |               |          |
| Button Description |               |          |

|                    |               |        |
|--------------------|---------------|--------|
| Digital Zoom       | Pixel Repair  | Yards  |
| Reticle            | NUC Mode      | Meters |
| Photo / Video      | LRF Mode      |        |
| Device Settings    | > Range Unit  |        |
| Feature Settings   | Holdover Unit |        |
| About              |               |        |
| Button Description |               |        |

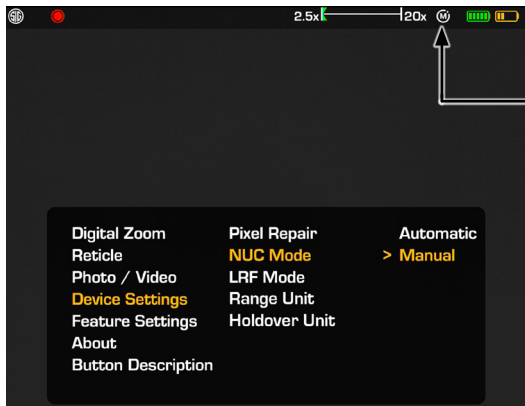


### c. NUC Mode (Non-Uniformity Correction)

- Thermal sensors require normalization or training to produce a clear thermal image. Thermal detectors are influenced by their own heat and normalization can drift over time. NUC is the renormalizing of the thermal sensor pixels.
- NUC is performed with an internal shutter, which you will hear as a click during the operation.
- The NUC operation will interrupt your video momentarily while it completes.
- Automatic NUC will occur approximately once every 1 minute.
- A countdown warning will appear near the center of the screen 5 seconds before the NUC occurs.
- A manual NUC performed by a long press of both buttons will perform a NUC immediately and restart the 1 minute timer.
- Manual NUC will never automatically perform the operation and relies on the user to initiate a NUC. This gives the operator complete control of their image quality and NUC timing.

#### d. NUC Screens

NUC mode will be displayed in the status bar at the top of the sight display.



COUNTDOWN  
TO AUTOMATIC  
NUC

AUTOMATIC  
NUC

MANUAL  
NUC



## FEATURE SETTINGS

### e. MOTAC (STANDBY AUTO-SHUTDOWN)

In order to extend battery life, MOTAC senses device activity and will power down the unit when not in use.

- Option 5/30 will turn off the display after 5 minutes of no activity and will turn off the entire unit after 30 minutes of no activity.
- Options 10/60 and 60/60 adjust the timed automatic shutdown and function the same as above.
- OFF turns MOTAC off. The unit will not shut itself off due to inactivity.
- If the display has turned off, press any button to wake the system.

|                    |               |       |
|--------------------|---------------|-------|
| Reticle            | > MOTAC       | 5/30  |
| Photo / Video      | Zoom Shortcut | 10/60 |
| Device Settings    | PIP           | 60/60 |
| Feature Settings   |               | OFF   |
| About              |               |       |
| Button Description |               |       |
| Exit               |               |       |

**f. ZOOM SHORTCUT**

- Configures the behavior of the Magnification Ring when zooming out, (counterclockwise).
- Zoom Out will zoom out the display the same as zooming in, one zoom step per detent.
- Zoom 1x will instantly zoom out all the way back to the device's native zoom.

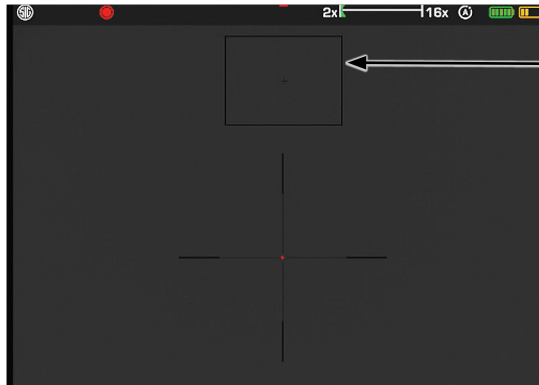
|                    |               |           |
|--------------------|---------------|-----------|
| Reticle            | MOTAC         | Zoom Out  |
| Photo / Video      | Zoom Shortcut | > Zoom 1x |
| Device Settings    | PIP           |           |
| Feature Settings   |               |           |
| About              |               |           |
| Button Description |               |           |
| Exit               |               |           |



## g. PIP

- Enables a zoomed window overlaid on the video image.

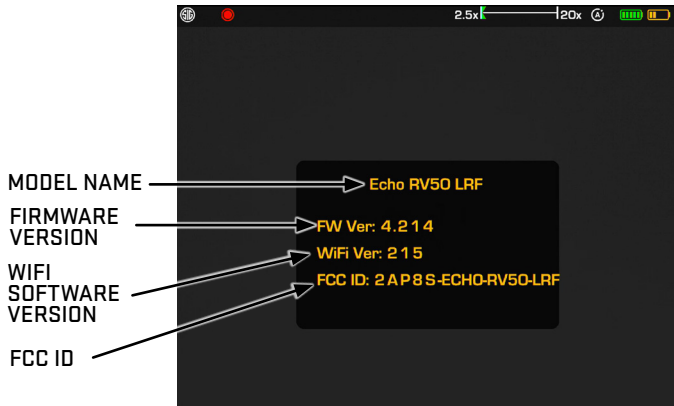
|                    |               |       |
|--------------------|---------------|-------|
| Reticle            | MOTAC         | > OFF |
| Photo / Video      | Zoom Shortcut | ON    |
| Device Settings    | PIP           |       |
| Feature Settings   |               |       |
| About              |               |       |
| Button Description |               |       |
| Exit               |               |       |



ZOOMED WINDOW

## ABOUT

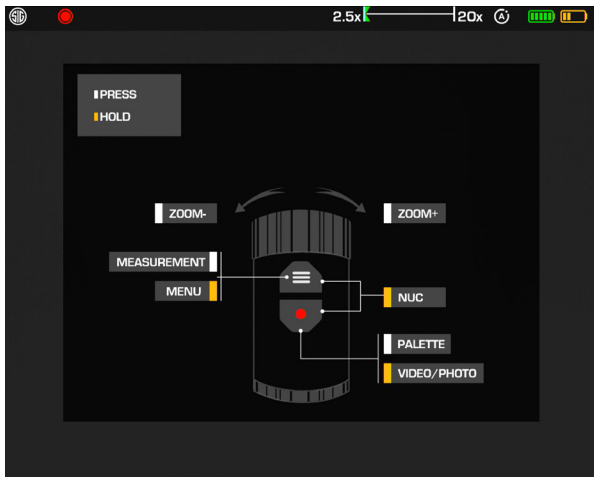
- Displays device information.





## BUTTON DESCRIPTION

- Easily accessible on screen reference guide to the quick key actions.



## **8.0 INSTALLING AND USING THE BDX APP**

ECHO Riflescopes were designed for long range shooters and hunters with an embedded ballistics calculator for greater precision at long distances. To get the most out of your thermal sight, download the SIG Ballistic App (SIG BDX) and synchronize your smartphone with your ECHO. In this section you will download the SIG Ballistic App (SIG BDX), set up a Ballistic Profile, configure your thermal sight by selecting one profile and then downloading to your thermal sight.

The ECHO MV50-LRF is equipped with a laser rangefinder and can generate and transmit a ballistic solution. Once synced, the system provides precise shooting solutions based on the measured range. When paired with the ECHO riflescope, it displays a disturbed aiming point, automatically adjusting for the correct holdover based on the selected cartridge.

### **8.1 BALLISTICS DATA XCHANGE**

This section details how to download the BDX app, pair the app with an ECHO, and create a custom bullet profile.

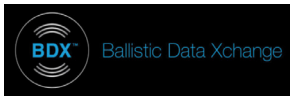
#### **1. Turn Bluetooth on**

Go to your phone's settings on an Android or iOS device and make sure that Bluetooth is turned on.



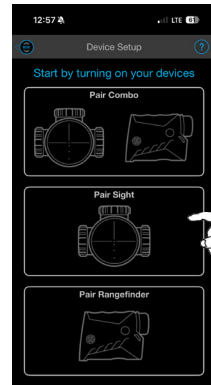
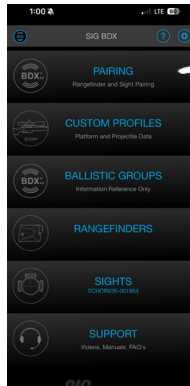
## 2. Download the BDX app from the App Store/Google Play Store

Go to the App Store or the Google Play store and download the SIG SAUER BDX app. Search for the word SIG SAUER or BDX, or use the QR codes below.



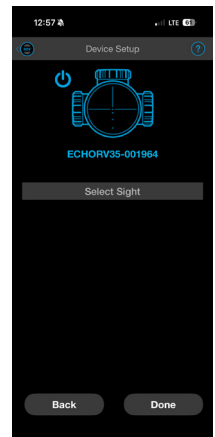
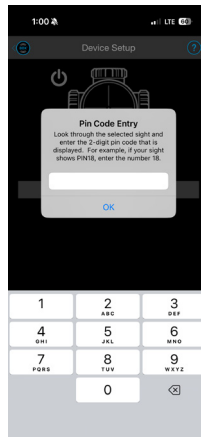
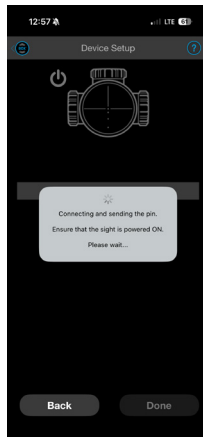
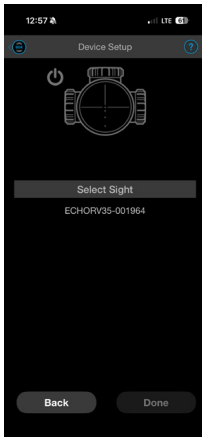
### 3. Pair SIG SAUER BDX App with the ECHO

- a. On a smartphone, launch the BDX App.
- b. Click on "PAIRING." Ensure the ECHO is on. If off, power on by holding the power button.
- c. The ECHO should be listed in the "Sights" column (LRF models will appear as LRF) and below "Select Device." The ECHO's serial number will be listed in white letters.
- d. Select the correct serial number.





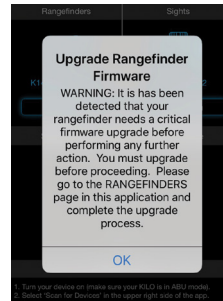
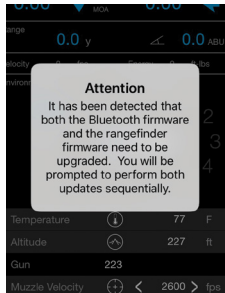
- e. A prompt to enter a pin number will appear on your app. The corresponding pin number will be displayed on the screen of the ECHO.
- f. Enter the pin and press “OK” to complete pairing. The ECHO’s ID will be shown in blue listed below the “Sights” column. If the incorrect PIN code is entered, the process can be restarted.



## NOTE

Updating the ECHO to the latest software during pairing. Prompts may appear after connecting through the sights or rangefinder page to update the software on the ECHO. These software updates are mandatory and allow SIG SAUER to ensure that the BDX App and ECHO perform optimally.

- Most updates take less than 5 minutes.
- Ensure that the ECHO is turned on and that the smartphone has at least 25% battery life remaining before installing any software updates.
- For best operation, be sure to keep the smartphone awake during the entire installation process.

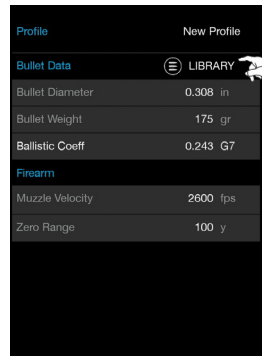
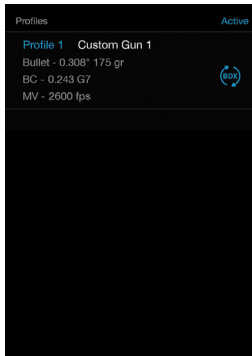
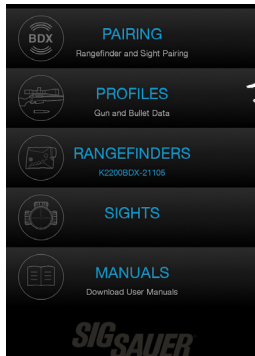




The BDX app allows operators to create and modify up to 25 profiles. Only one profile can be active at any time. The profile that is active will have a blue BDX icon to the right of the profile. The BDX app comes with one default .308 Winchester profile.

### To edit an existing profile:

- From the home screen of the app, select “PROFILES.”
- Select profile that the operator wishes to edit.
- Select “LIBRARY.”



- d. Choose a caliber and bullet manufacturer.
- e. Select the bullet intended for use. Once selected, your bullet data will be populated from the database.
- f. Continue to complete the firearm and scope data sections.
- g. Press “Save” in the top right to save the profile.
- h. From the “Profiles” page, click the BDX profile button to activate this profile. The BDX icon will turn blue to indicate the profile is active.

|                                    |
|------------------------------------|
| 3 Bullets                          |
| <b>0.204</b>                       |
| 5 Bullets                          |
| <b>0.224 (0.22, 0.223, 5.56mm)</b> |
| 84 Bullets                         |
| <b>0.243 (6mm)</b>                 |
| 76 Bullets                         |
| <b>0.257 (0.25 cal)</b>            |
| 18 Bullets                         |
| <b>0.264 (6.5mm)</b>               |
| 90 Bullets                         |
| <b>0.277 (0.270 cal, 6.8mm)</b>    |
| 46 Bullets                         |
| <b>0.284 (0.280 cal, 7mm)</b>      |
| 87 Bullets                         |



|                                |
|--------------------------------|
| 0.224 52gr                     |
| <b>Sierra MatchKing</b>        |
| 0.224 53gr                     |
| <b>Sierra BlitzKing</b>        |
| 0.224 55gr                     |
| <b>Sierra FMJ</b>              |
| 0.224 55gr                     |
| <b>Sierra GameKing</b>         |
| 0.224 65gr                     |
| <b>Sierra MatchKing</b>        |
| 0.224 69gr                     |
| <b>Sierra Tipped MatchKing</b> |
| 0.224 69gr                     |
| <b>Sierra MatchKing</b>        |
| 0.224 77gr                     |



**ACTIVE PROFILE  
INDICATION  
ICON**




## To rename a profile:

- Select profile that the operator wishes to edit.
- From the “Profile Editor,” select current name.
- Type a new name.

## To create a new profile:

- From the home screen of the app, select “PROFILES.”
- Select “New profile” in the upper right corner of the App.
- Follow the same sequence of the above steps, “**To edit an existing profile,**” for selection of caliber, manufacturer, and all other information required.
- Return to the “Gun Profile” page.
- Click on the BDX icon to the right to activate this profile.



|                 |             |
|-----------------|-------------|
| Profile         | New Profile |
| Bullet Data     | LIBRARY     |
| Bullet Diameter | 0.308 in    |
| Bullet Weight   | 175 gr      |
| Ballistic Coeff | 0.243 G7    |
| Firearm         |             |
| Muzzle Velocity | 2600 fps    |
| Zero Range      | 100 y       |

## LOADING A BALLISTIC PROFILE (LRF MODEL ONLY)

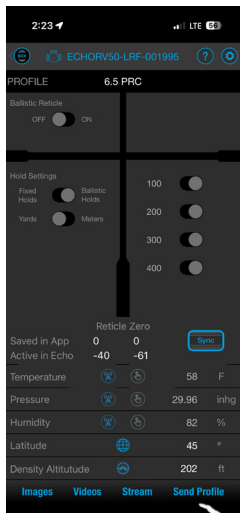
1. After pairing with your ECHO, navigate to the “Sights” screen
2. Select “Send Profile”.
3. The active profile will be shown at the top. Tap a profile to change the currently selected active profile. Current environmental data is populated for your location and will be stored with your profile on the device.
4. Press Send to sync the profile with your ECHO.

### NOTE

Non-LRF models require a MV50-LRF to provide a disturbed reticle.

## 8.2 DISTURBED RETICLE

- A disturbed reticle will only appear on the ECHO riflescope when the operator chooses the disturbed reticle in the Reticle Style menu.
- See *Reticle Style* on page 21 to choose disturbed reticle.





## 8.3 DIGITAL BALLISTIC RETICLE

- With the DBR (Digital Ballistic Reticle) chosen from the Reticle Style menu, you can configure the reticle inside the BDX App. Upon connection your selected ballistic profile and DBR will be sent to your ECHO.
- The active profile is displayed at the top of the Sights Screen. The same name will be displayed in the BDX
- Modifications to the DBR will be synchronized with your ECHO in real-time.
- You have the option of using fixed holds or ballistic holds. If you choose fixed holds, you can enter in your desired hold overs in either MILS or MOA.
- You have the ability to illuminate up to 4 hold over dots. If you choose ballistic holds you can choose up to 4 different distances to illuminate.
- These distances can be in either meters or yards. The default is 100 yard increments. To change these increments, tap on the yardage you would like to change and enter your new value. You are able to toggle each hold over on and off. The ballistics for these hold overs correspond to the gun profile that you have chosen as active.

## 8.4 SAVING ZERO

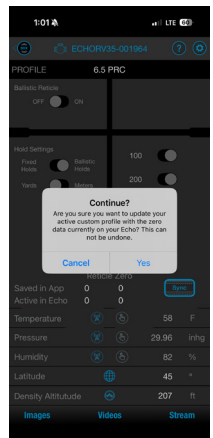
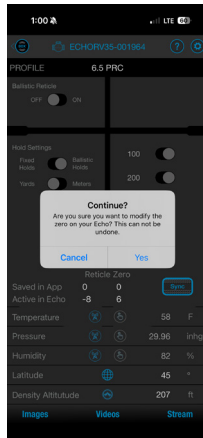
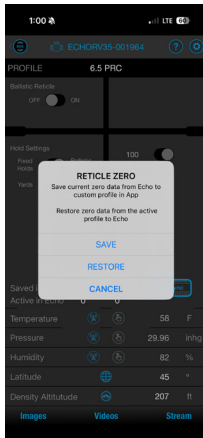
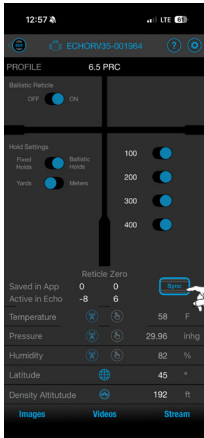
- The reticle zero saved on your Echo Riflescope can be stored to a ballistic profile. This allows for quickly changing zeros for different ammunition, or if the thermal is shared between rifles, to instantly return to zero.
- In the middle of the sight's screen, there are two readouts under "Reticle Zero," "Saved in App," and "Active in Echo". These show you the respective zero coordinates in each. Stored in the BDX app are the coordinates saved in the active profile shown at the top of the screen.
- "Active in Echo" shows the zero coordinates currently used in the connected Echo device. If these numbers match, then your zero used and zero saved are confirmed to be the same.

### NOTE

To ensure consistency and accuracy, use a repeatable QR mount or torque the mount crossbolt nuts to a consistent torque value.



- Pressing the sync button will prompt the user whether to save or restore a zero. Save will move coordinates from the Echo to the Profile, updating the profile and saving your zero. Restore will move coordinates from the Profile to the Echo, this will change the zero on the Echo.



## 8.5 DOWNLOAD MEDIA

### App

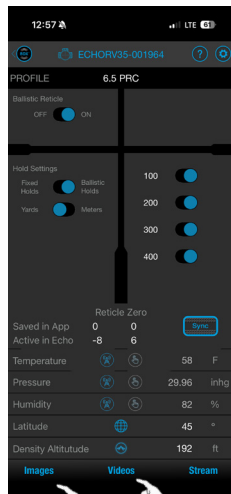
Media can be downloaded to a smartphone through the SIG BDX 2.0 APP. Access the files through the sights page while connected to the ECHO.

### Cable

Plug into a computer using the external USB-C port. The ECHO will enumerate as an external drive. Photos and Videos will be organized in two respective folders.

### NOTE

The recording of media functionality is disabled while connected as a computer drive.





## 9.0 MAINTENANCE

### CLEANING

#### CAUTION

ALWAYS BLOW DUST OR DEBRIS FROM LENSES PRIOR TO USING ANY CLOTH OR LENS PEN. FAILURE TO DO THIS MAY RESULT IN SCRATCHING OF THE LENSES.

- Keep lenses clear by using a soft cloth or provided lens cloth.
- The best way to maintain image quality is by keeping lenses clear of dirt and dust that cause scratches.
- Always use the provided flip-back lens covers to ensure that the sight optics remain protected.

### TROUBLESHOOTING

| POI Changes Between Groups                           | Product Will Not Power On                |
|--|--|
| Check that the mount is affixed tightly to the rail. | Tighten the battery cap.                 |
| Inspect and clean the firearm.                       | Check orientation of 18500 battery.      |
| Check for variations in ammunition.                  | Ensure internal battery is fully charged |
|  | Install new 18500 battery.               |

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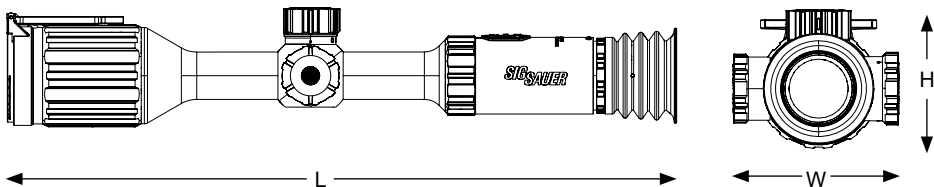


## SPECIFICATIONS

| Model                  | ECHO-RQ35                               | ECHO-RV35 | ECHO-RV50-LRF |
|------------------------|---|-----------|---------------|
| SKU#                   | SOEC31200                               | OEC32200  | SOEC32310     |
| Magnification          | 3.5-28                                  | 2-16      | 2.5-20        |
| Field of View          | 7.6                                     | 12.5      | 8.8           |
| Resolution             | 384X288                                 | 640x512   | 640x512       |
| Frame Rate             | 50 Hz                                   |           |               |
| Color Palettes         | 8                                       |           |               |
| Video Recording        | Yes                                     |           |               |
| BDX Enabled            | Yes                                     |           |               |
| Runtime                | 12 hours                                |           |               |
| Battery                | Internal and 18500 Replaceable External |           |               |
| Waterproof             | IPX67                                   |           |               |
| OLED Screen Resolution | 1024 x 768                              |           |               |
| Pixel Pitch            | 12 $\mu$ m                              |           |               |
| Communications         | Wi-Fi/Bluetooth                         |           |               |
| Media Storage          | 32 GB                                   |           |               |

### MEASUREMENTS

| Model            | ECHO-RQ35        | ECHO-RV35 | ECHO-RV50-LRF    |
|------------------|------------------|-----------|------------------|
| Overall Length   | 14.8 in (375 mm) |           | 15.0 in (380 mm) |
| Overall Height   | 3.5 in (89 mm)   |           |                  |
| Overall Width    | 2.8 in (72 mm)   |           |                  |
| Weight W/Battery | 31.7 oz (900 g)  |           | 34.9 oz (990 g)  |





## WARNING LASER



**CLASS 3R LASER PRODUCT. INVISIBLE LASER RADIATION. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS (BINOCULARS OR TELESCOPES)**

This product complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed.3, as described in Laser Notice No. 56, dated May 8, 2019.

FCC ID: 2AP8S IC: FG6223ASRD-W4  
 $P_o < 10W$ ,  $\lambda = 905 \text{ nm}$ ,  $t = 28 \text{ ns}$



This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause interference to radio or television reception the user is encouraged to try to correct the interference by one or more of the following:

- Reorient or relocate the receiving antenna;
- Increase the separation between this product and the receiver;
- Connect the equipment to an alternative outlet or receiver;
- Consult a technician

## CAUTION

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.





## **FCC STATEMENT:**

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void 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.

Shielded interference cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Specifications and designs are subject to change without any notice or obligation on the part of the manufacturer.

## CAUTION

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.



## **INDUSTRY CANADA:**

This device complies with Industry Canada licence RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference, and
- This device must accept any interference, including interference that may cause undesired operation of the device.

Le present appareil est conforme aux CNR d'Industrie Canada applicable aux appareil radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- l'appareil ne doit pas produire de brouillage, et
- l'utilisateur de l'appareil doit accepter tout brouillage radio électrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

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SIG SAUER® has a history of quality and reliability that dates back more than 250 years. We understand the importance of true dependability whether it be in the line of duty, at the shooting range or on your next hunt and we continually strive to deliver products that meet and exceed the expectations of even the most demanding customers. That's why SIG SAUER is proud to offer our INFINITE GUARANTEE\* on all our firearms, optics, and suppressors.

Our promise: We warrant that your new SIG SAUER firearm, optic, or suppressor was originally manufactured free of defects in material, workmanship, electrical, optical, and mechanical function. We will repair your SIG SAUER product in the event it becomes damaged or is defective in any way, at no charge to you. If we cannot repair your product, we will replace it or, if we cannot replace it, we will provide you with a replacement of equal value. All with no questions asked, forever.

### SIG SAUER® Infinite Guarantee

- Fully Transferable
- No Warranty Card Required
- No Receipt Required
- No Time Limit Applies
- No Charge

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Customers seeking warranty coverage must first obtain a Return Merchandise Authorization (RMA) by contacting SIG SAUER Customer Service and return the product unloaded and freight prepaid.

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