User's Manual

IA PRO Smart Thermal Rifle Scope

1. Package contents

· Thermal scope
· Battery 18500 × 1
· Cable × 1
· Lens Brush
· Lens cloth
· User Manual
· Carry bag
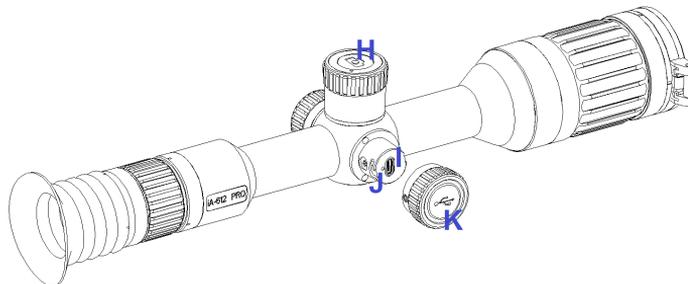
2. Product structure

A. Battery compartment cover
B. Battery 18500
C. Power 'select and scroll' dial
D. Eyeshade
E. Diopter adjustment ring
F. Lens focusing knob
G. Lens cover
H. Photo/Video Record button
I. USB Type-C port
J. Charging indicator
K. Interface protection cover
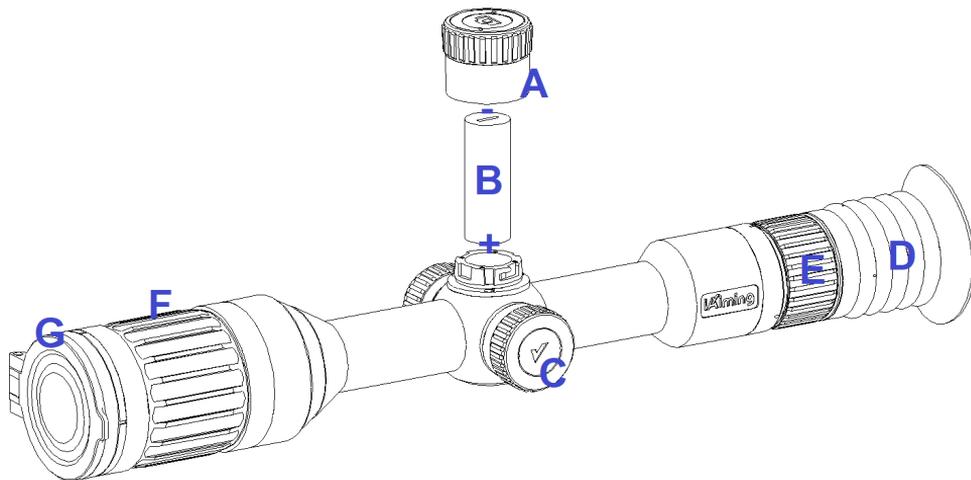
3. Getting Started

◆ External Battery Installation

Rotate the battery cover (A) counterclockwise and remove the cover. Insert one 18500 battery with its +ve terminal facing downwards as shown by the + and - indicators (B). While applying gentle pressure to battery cover (A), tighten the cover (A) clockwise.

◆ Power On/Off

Power On: Press and hold **Power 'select and scroll'** dial (C) for 3 seconds and then release it. Through eyeshade (D), you will see the screen light up and the scope start to work. After booting up, you will enter the aiming interface, and then open the lens cover (G).

Power Off: Press and hold **Power 'select and scroll'** dial (C) for 3 seconds to enter the 3-second countdown to shutdown. After the countdown is over, release the button (C), the screen goes out, and the scope is turned off. If the button (C) is released before the countdown ends, it will exit the shutdown state and return to the aiming interface.

◆ Diopter Adjustment Ring

With the scope 's display illuminated, rotate the Diopter Adjustment Ring (E) until the menu icons across the bottom of the display are in sharp focus.

◆ Lens Focusing

Rotate the lens focusing ring (F) until the observed thermal image is in sharp focus.

◆ Charging the battery

With the scope powered off, rotate Interface protection cover (K) counterclockwise and remove the cover. Use the USB Type-C cable to connect the power adapter with USB Type-C port (I)of scope, and plug the power adapter into socket. This charging method is only available to the built-in battery. The external 18500 battery can be charged only by the separately purchased charger.

When the battery is charging, the indicator light (J) is on; when the battery is fully charged, the indicator light (J) is off.

◆ Data export

Rotate Interface protection cover (K) counterclockwise and remove the cover. Use the USB Type-C cable to connect the computer with the USB Type-C port (I) of scope, and export the photo and video file saved in the scope.

◆ Photo/Video Record

Photo: shortly press the Photo/Video Record button (H) to capture a photo.

Video Record: long press the Photo/Video Record button (H) for 1-second to start video recording, then press again to stop the video recording.

4. Homepage

After power-on, the scope displays the homepage. The status bar is located at the bottom of the display and shows the scope's current operating status.
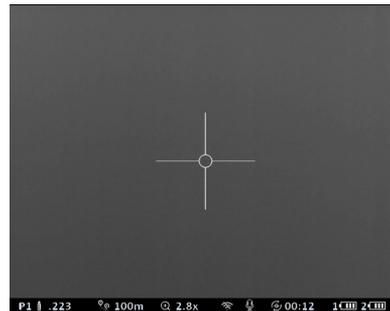
① Profile selected (P1 is current profile selection, totally 5 optional profiles; .223 is current Gun profile selected)

② Distance setting

③ Current zoom (default is magnification of scope itself)

④ WIFI connection status (default is off)

⑤ Microphone status

⑥ REFRESH interval. For auto refresh, count down the auto refresh time)

⑦ Battery status (if battery icon 1 is empty and starts to flash, charging the built-in battery; if battery icon 2 is empty and starts to flash, install a fully recharged external 18500 battery; if both battery icons are empty, turn off the device)

5. Button Description

Power 'select and scroll' dial	Homepage (Menu deactivated)	Set up interface (Menu activated)
Shortly press	Manual REFRESH	Select current option or confirm selection.
Rotate	Zoom in /out	Select among options
Long press for 1s	Call out menu	Hide menu or back to previous menu
Long press for 3s	Power off countdown.	Power off countdown.
Double click	Display off	/
Long press for 3s	Power off countdown.	Power off countdown.
Double click	Display off	/

Note: The screen can be activated by shortly pressing or double clicking of the button under display off status.

Photo/Video Record Button	No recording	Video record processing
Shortly press	Take a photo	Stop recording
Long press for 1s	Start video record	Stop recording

6. Set up Interface

· At homepage, enter the setting mode by a 1s long press of the control button.
· The main menu appears at the left of the screen.
· Auto exit takes place after 60s of inactivity. Any button operation recalls the menu status.

Menu page 1   Menu page 2

Distance
After estimating or using the distance measuring tool to get the target distance, set the corresponding shooting target distance.

Image mode
Select **Mode 1** or **Mode 2** for image mode.
Mode 1: High contrast, if you want target conspicuous, you can select this mode.
Mode 2: Average grey color distribution, more suitable for sky-land scene or high temperature difference scene.

Brightness
Adjust the level of brightness from 1 to 20.

Contrast
Adjust level of contrast from 1 to 20.

PiP
Users can set PiP (picture in picture) mode to magnify the 'sight picture' and display it is on the upper part of the screen.

WIFI

Select WIFI mode **ON/OFF**.

Rangefinder

Where the 'target height' is known, this function can be used to quickly estimate the range to the target.

Select this option and set the estimated height of the target. Align the upper line with the top of the target and the lower line with the bottom of the target. Click the control button to get the estimated target range.

Reticle

Select **Reticle Type** and **Reticle Color**. For the reticle scale, each scale represents 1mil.

Auto refresh

Select **OFF**, **1 min**, **3 min** or **5 min**.

Palette

Select either a **White, Black, Ironbow, Glowbow, Sepia, Red, Green** setting.
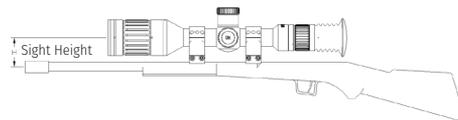
Zeroing profile

Enter the Zeroing profile's submenu.

Profile select

Select current profile number. There are 5 profiles P1~P5. Each profile corresponds to one zeroing data and gun profile.

Sight height

Set the height difference (cm) between optical axis and axis of the bore from 5.4cm to 9.4cm. The base height of scope is 4.4cm.

For example, the axis of bore is 2cm, user should input 6.4cm (2cm+4.4cm) for sight height.

Gun profile

Select matched gun profile from the list for loading the ballistic parameters. If user don't find the right gun profile in the list, user-defined can be selected and set.

When user select **User defined** option, scope will enter the menu below :

Up is positive value and Down is negative value.

50m drop
For zero elevation (horizontal barrel), input the bullet drop at 50m.

100m drop
For zero elevation, input the bullet drop at 100m.

150m drop
For zero elevation, input the bullet drop at 150m.

200m drop
For zero elevation, input the bullet drop at 200m.

250m drop
For zero elevation, input the bullet drop at 250m.

300m drop
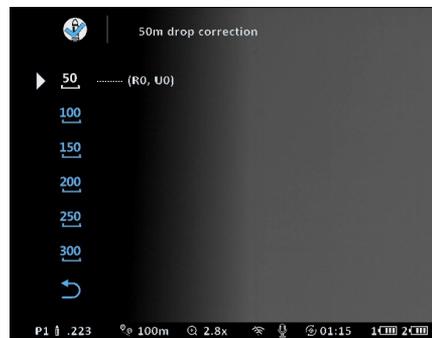For zero elevation, input the bullet drop at 300m.

Return
Return to the previous menu.

Profile correction
When user find the vertical deviation between aiming point and impact point,
It means the selected Gun profile unmatched; User can use this option to correct the loaded Gun profile.

Default value is 0, no correction to the reticle. Select distance, it will enter into the menu below. The message on the left corner tells the value in cm/inch for each one click.
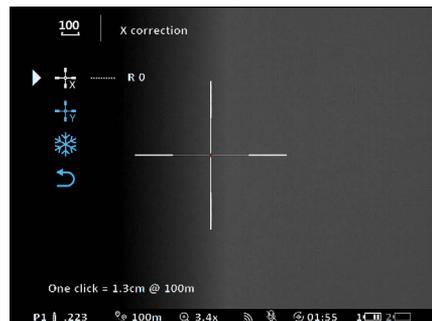
X Correction (Windage adjustment)
Adjust the Windage by changing the reticle X-axis value.

Y Correction (Elevation adjustment)
Adjust the Elevation by changing the reticle Y-axis value.

Image freeze
Freeze/unfreeze the image. Move the reticle to the aiming point and freeze the image, then move the reticle to the impact point.

Return
Return to the previous menu.

Zeroing
When the thermal scope is first mounted on the firearm, or when there is a large deviation between the 'point of aim' and 'point of impact', sight-in the scope by selecting the **Zero** function. Click to enter the **Zero** submenu. Operation details can be referred to the **Zero instruction**.

Auto zero
Enter into **Auto zero** mode.

Manual zero
Enter into **Manual zero** mode.

Return
Return to the previous menu.

General settings
Enter General settings submenu.

Units of measure
Select **Meters** or **Yards** for the measurement unit.

Microphone
Set Microphone **On/Off**. When select **On**, scope will automatically record the voice under video recording. When select **Off**, the voice will not be recorded.

Trigger footage
Set Trigger footage **On/Off.** When select **On**, scope will automatically detect shooting action. When shooting triggered, the auto recording will be activated. It will record the video 15s before the shooting and 15s after the shooting.

WIFI password
Set the WIFI password. Default password is **87654321.**

Time
Set system time.

Defective pixel repair
Enter into Defective pixel repair's submenu, repair the defective pixels.

X (Windage adjustment)
Adjust the Windage by changing the reticle X-axis value.

Y (Elevation adjustment)
Adjust the Elevation by changing the reticle Y-axis value.

Pixel repair
Repair current reticle pointed pixel.

Pixel restore
Revoke the repair to current point.

Magnification
Select **On/Off** for the magnification of the reticle to have a clear view of defective pixel.

Return
Return to the previous menu.

Restore zero reticle
Revert to factory zero reticle setting.

Restore default settings
Revert factory settings.

Return
Return to the previous menu.

Device information
View the device information.

7. Zero Instruction (sighting in)

⚠️ To start first shot auto zero, user need to place the target for sighting in *25 meters* away to ensure the bullet is on target. After following the zero steps as instructed, user can aim at the objective or target at *50m or 100m* away to verify the accuracy of first shot auto zero.

⊕ Auto Zero

Step 1: Enter **Auto Zero** mode. The zero range confirmation box appears at the center of the display screen. The zoom and auto REFRESH functions will be disabled automatically.

After confirmation for the 25m zero range, the upper right corner prompts the user to enter the 15-second preparation countdown. During this period, the user can make their firearm ready to shoot (live round chambered).
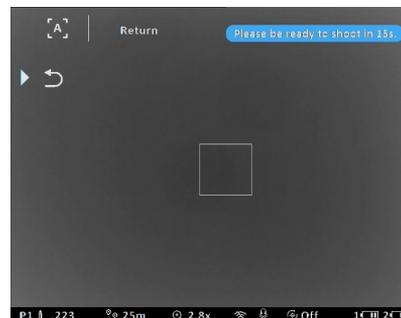
Step 2: The 15s countdown finishes, the prompt at the top right corner changes to **"Aim at the target and shoot"**.

Step 3: Aim at the objective or target that is used for zeroing at 25 meters around. Ensure that the 'square reticle' is approximately centered on the target face and then take the shot. The onboard computer will look for the heat signature of the projectile impact on the target face.

Step 4: Keep the firearm stable to hold the square on the target, until the message **"Data processing. NO OPERATION, please"** pops up. If the user wishes to do so, they can then put the firearm down and wait for the data processing to be completed.

Step 5: When message **"Confirm the current options?"** pops up, user can see a small white cross in the square. If the cross overlaps the heat signature of the projectile impact on the target face, it tells a successful auto zeroing. Click Yes. This confirms that the computer has correctly identified your projectile impact and that the Auto zero process is now complete.

If the message **"No bullet holes detected, shoot again"** appears, or the small white cross is deviated with the heat signature of projectile impact, it means that the auto zero process has failed, so please follow steps 1 to 5 again.

⊕ **Manual Zero**

Users can choose this mode to manually sight-in the thermal scope. The user inputs the target distance (m/yds) as well as the deviation of the point of impact to the point of aim (cm/in). The scope then processes this information and automatically adjusts the reticle position to match with the observed point of impact.


8.WIFI Application

The iAiming App [iAiming] can be downloaded free of charge from **Google Play** or the **App Store.**

The Android device users can also download it by scanning the QR code.

Users can then link their iAiming scope to their mobile device (smartphone or tablet) via WIFI. This not only allows users to view the thermal sight picture on their mobile device in real time, but they can also remotely control the thermal scope through their mobile device. The detailed user guide is available at www.iaiming.com.
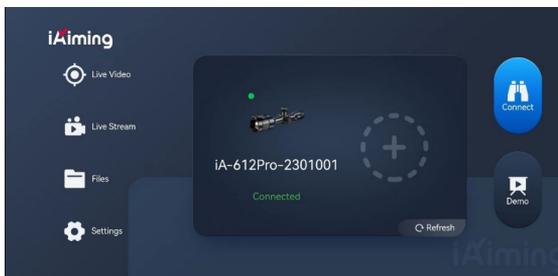
iAiming App Functions
  · Live video recording and still photo capture, adjust image settings;
  · View the device information;
  · Local files and storage files operation;
  · Ballistic parameter settings
  · Information about the scope, firmware updates and Language selections.
  · Firmware upgrade

9.Specifications

Model Number	iA-312 PRO	iA-612 PRO
Sensor		
Sensor Type	VOx Uncooled	
Sensor Resolution	384 × 288	640 × 512
Pixel Pitch	12 μ m	12 μ m
NETD	≤ 40mk	≤ 30mk
Frame Frequency	50Hz	
Optics		
Objective Lens	35mm	50mm
Angle of View	7.5° × 5.6°	8.8° × 7.0°
Continuous Digital Zoom	3.4X~13.6X	2.8X~22.4X
Eye Relief	48mm	
Diopter of Eyepiece	± 4	
Display		
Display type	AMOLED	
Resolution	1024*768	
Palette	White Hot/Black Hot/Ironbow/Glowbow/ Sepia/Red Hot/Green Hot	
Detection Range		
Detection Distance (Human, 1.8m)	1800m	2600m
Reticle		
Adjust Accuracy	0.12mil	0.15mil
Adjust Range	62.5 × 46.6mil	73.2 × 58.6mil
Reticle Type	10 types	
Video Recorder		
Video Resolution	1024*768	
Video Format	mp4/jpg	
Built-in Memory	32GB	

WIFI	
Wireless Protocol	Wi-Fi
Wireless Standard	802.11b/g/n
Frequency	2.4GHz
Connection range	≤ 10m
Power Supply	
Output Voltage	3~4.2V
Battery Type	Built-in 18650 Battery × 2 External 18500 Battery × 1
Capacity	6400mAh (Built-in) + 2000mAh (External)
Operating time	≥ 13hrs. ≥ 13hrs.
External power voltage	5V
Charging hours	Approx. 5hrs
Build-in Battery charging temperature	0~45 ℃
Connections and Compatibilities	
Max. Recoil power on rifles	6000J
Shock resistance on the smooth-bore rifles	900G
Mounting type	30mm scope ring
Physical Characteristics	
Body Material	Aluminum alloy
Weight (Mount & Eyeshade excluded)	950g 960g
Length (Mount & Eyeshade excluded)	360mm 365mm
Environmental Characteristics	
Degree of Protection, IP code	IP66
Operating Temperature	-25°C～ +50°C
Storage Temperature	-50°C～ +60°C

10.Trouble Shooting

Listed below are some potential problems that may occur when using the thermal scope. Carry out the recommended checks and solution steps in the table. If the problem experienced with the scope is not listed, or if the suggested solution does not match your problems, please contact the retail outlet or manufacturer.

Problem	Problem cause	Solution
Scope cannot be powered on.	External battery has been incorrectly installed (wrong polarity).	Reinstall the battery by following the correct polarity indication.
	Built-in batteries are flat.	Charge the built-in charged batteries fully.
The battery compartment cover cannot be locked.	The lock nut of battery compartment is broken.	Contact after-sale service center for maintenance.
	The battery cover screw is loose.	Contact after-sale service center for maintenance.
The control knob does not work.	The scrolling control knob is loose.	Contact after-sale service center for maintenance.
The menu is blurred.	Poorly adjusted diopter.	Adjust diopter according to instructions.
The image is blurred.	Not focused.	Rotate lens focusing ring until the image is clear.
	Not calibrated.	Activate the REFRESH function to calibrate the image quality.
Impact point does not match the aiming point.	Connection base is loose.	Reinstall the scope on rails.
	Not sighted in.	Perform the auto zero exactly as instructed.
	Select unmatched profile settings.	Select matched profiles.
	Not profile correction	Make the profile correction for the unmatched profile settings.
Auto zero failures.	The operation steps are not followed by guidance.	Perform the auto zero according to steps guided.
WIFI connection fails.	WIFI is not turned on.	Turn on the WIFI.
	Wrong WIFI password input	General setting-WIFI password, check current WIFI password.
System time lost	Internal battery is dead due to no using of scope for long time.	Charge the battery, and restart the scope, enter general setting-time setting option, and reset it

11.Maintenance and Storage

· Do not aim at high-intensity energy sources, including the sun, laser emitting scopes and reflections of the above-mentioned objects;
 When not using the product for a long time, it is recommended to remove the batteries and store the thermal scope in a dry and cool place;

· If liquids come in contact with the silver mirrored lens surface, immediately wipe it off with the lens cloth provided. Do not use corrosive or abrasive cleaning agents as these are likely to damage the lens coating and degrade its performance.

· If the scope appears faulty, please contact after-sales service for further technical support. Do not attempt to disassemble the scope, otherwise the warranty may be voided.

12.Warranty and Service

Dear customer,

Congratulations on your purchase of our innovating iAiming products, to protect your purchase and rights, please read carefully the content following:

iAiming strive to make the best thermal products in the market and hold ourselves to the highest standards of engineering, quality, and product performance. iAiming products are warranted for 3 years in country of purchase, from date of purchase to be free of manufacturing defects in workmanship or materials under normal use conditions, battery's and battery chargers are covered by a 1-year warranty, iAiming at its discretion will repair or replace product free of charge.

Note: Thermal technology is highly sensitive equipment, environmental factors such as extreme temperatures both ambient and target temperature will affect devices ability to function the same in every situation. Environmental factors and the way you use this product needs to be considered before purchasing any thermal product, poor image quality, resolution, or inability to identify target due to environmental factors are not warranty please purchase wisely.Congratulations on your purchase of our innovating iAiming products, to protect your purchase and rights,

Warranty is void if:

· Damage occurs from misuse.

· Unauthorized repair.

· Physical damage.

· Modification or alteration.

· Recoil over 6000j.

Should you feel your iAiming product is not performing as intended please return product to the original place of purchase with a receipt of Australian purchase, should no proof of purchase be provided iAiming at its discretion will choose to repair, replace or not. Please contact our local exclusive distributor or contact iAiming should you have any questions or concerns regarding your iAiming product warranty.

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