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**Digital Night Vision Riflescope****User Manual****Model: PQ1A****【Contents】**

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## PRODUCT DESCRIPTION

**【Product Name】 Low-light Digital Night Vision Riflescope****【Model】 PQ1A****【Features】**

- The PQ1A digital night vision is used both in the day and at night. It is a multifunctional riflescope used for aiming, video recording, playback and etc. The optical magnification is 4.5X and the digital magnification is 3X.
- Daytime Observation: observation & video/sound recording.
- Night Observation: The target of 200m can be observe in low light at night;and the target of 400m can be observed with aid of infrared flashlight.The color of the display is optional, color, black & white (recommended), night green (recommended). It functions observing, video/sound recording and playback.

## PRODUCT DESCRIPTION

- USB interface,can be used to input with the computer
- Video/sound output Jack available
- Power Supply: Rechargeable lithium-Ion battery type 18650 (included)
- Battery duration : 2.5-3.5 hours.(depending on battery capacity)
- This product is an ideal tool to extend human vision.

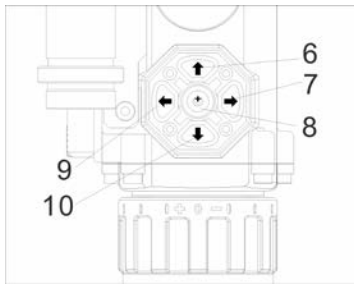
## USER GUIDE

### 【USER GUIDE】

● PQ1A digital night vision riflescope is a precision optical electronics equipment which is used to observe or aim at a target. It can be used in extremely low light environment.

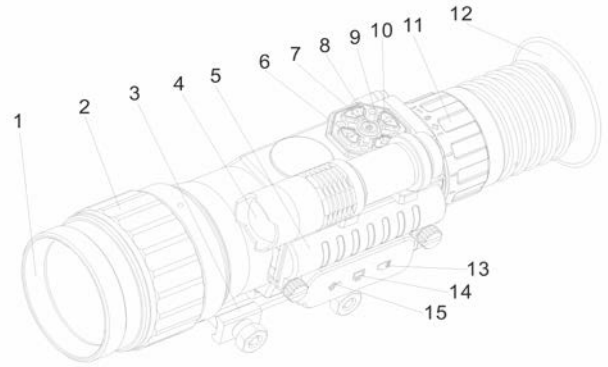
● Where it is completely dark an external infrared illuminator mounted to the riflescope assists you to view an object 400 meters away.

● In a pitch dark environment, please turn on the external IR illuminator (optional) and adjust its power level subject to the distance to the viewed object. It is equipped with an ultra-low light CMOS therefore the external IR illuminator is not necessary when starlight or street light is available.



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## KEY PARTS



1 – Objective Lens

2 – Objective Focus Wheel

3 –Card slot

4 –Auxiliary IR illuminator

5 –Battery Cover

6 – Adjustment Button

7 – Adjustment Button

8 – On/Off &amp; Confirm

9 – Adjustment Button

10 – Adjustment Button

11 – Eyepiece Focus Wheel

12 – Eyepieces

13 –TF Card Slot

14 –Audio/Video Output

15—USB interface

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## OPERATING INSTRUCTIONS

### 【Battery Installation】

- Unscrew the battery compartment cover off. Insert a piece of battery in the compartment with the negative end to the spring. Then screw the compartment cover tightly. Turn on the riflescope by pressing button #8

⏻ If the built-in screen is not lit up, please make sure that the battery compartment is closed properly and tightly, and the battery is in correct direction with minimum voltage required. Then boot test until the apparatus works normally.

### 【Precautions】

- Batteries should comply with relevant requirements;
- The battery should have sufficient power;
- Pay Notes to positive and negative poles and lay the battery correctly;
- Please send the instrument to be repaired when the battery is in good condition and the machine is still unable to work properly after sufficient power

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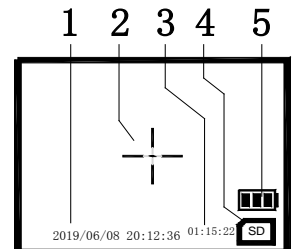
## OPERATING INSTRUCTIONS

### 【Power On】

- Take off the objective lens cap.
- Press Button #8 ⏻ and look through eyepieces #12. If the picture as shown here appears, the device is working properly.

Icon legend:

- 1 Video recording mode
- 2 System date/time
- 3 Reticle
- 4 Video duration available
- 5 TF card status
- 6 Battery level



- As long as the device is turned on, it is ready for observing and video recording.

### 【Power Off】

- The riflescope will go off when you press button #8 ⏻ for 3 seconds regardless what mode it is in.

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## OPERATING INSTRUCTIONS

## 【Observing】





- Take off the objective lens cap and turn on the riflescope, aim at the target and look through the eyepieces (#12).
- 1. Adjust the diopter ring (#11) until the icon is clear.
- 2. Adjust the focus wheel (#2) until the scene is clear.
- Auxiliary infrared illumination is not needed under low light conditions.
- When the ambient light is too low to achieve a clear view of the object, please turn on the external auxiliary infrared illuminator to obtain a clear view of the object.

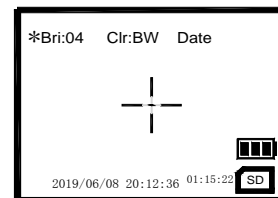
## 【Notes】

Always make sure that the ray path of the auxiliary IR illuminator is not blocked by anything.

## OPERATING INSTRUCTIONS

## 【Adjusting Brightness of the Screen】

- The brightness of the display is determined by the average brightness level of the central area of the observed scene and is adjusted automatically.
- Meanwhile you can change it manually this way: Press button #6  for seconds to enter the SET mode, then press #6  to move “\*” to the front of “Bri”.
- Press +(#7)  /-(#9)  to adjust the screen brightness between 1 and 20, 20 being the brightest.




## 【Notes】

Current settings will be saved automatically if no operation was performed for 5 seconds, then it will return to the observation mode or video recording mode.

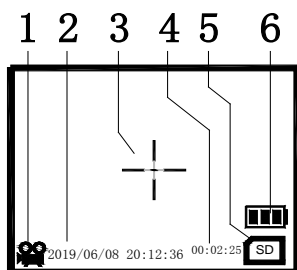
## OPERATING INSTRUCTIONS


## 【Video Recording】

- In observation mode, press (#8)  once to start video recording. A video will be saved as individual files of 3-minute length and will be overwritten sequentially when the storage card is full. The resolution of video is 640x480 pixels.

Icon legend:





- 1 Video recording mode
- 2 System date/time
- 3 Reticle
- 4 Duration of the video being recorded
- 5 TF card status
- 6 Battery level



- When recording is started, time counter (4#) goes red and starts to count the time collapsed.
- Video is saved to the TF card simultaneously while recording.
- Press (#8)  to start or pause recording.

## OPERATING INSTRUCTIONS

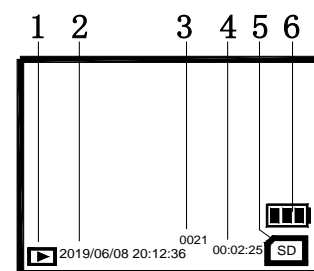
## 【Video Playback】



- In observation mode, press (#6)  to enter or quit video playback mode.
- Press (#8)  to start play, press it once again to stop the play.
- Press (#7)  /press (#9)  to select the previous or the next file.

- Video playback screen menu:

Icon legend:






- 1 Video playback mode
- 2 System date/time
- 3 The file name
- 4 Duration of the video selected
- 5 TF card status
- 6 Battery level

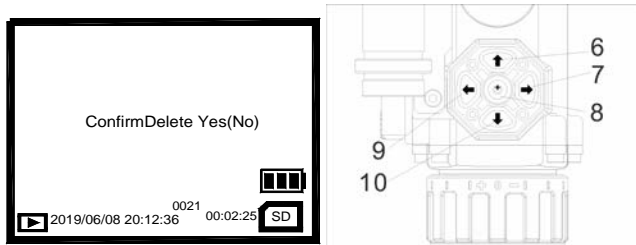


- If you want to fast-forward when playing back a video, you can press (#7)  for seconds.
- Press (#6)  to return to observation mode.

## OPERATING INSTRUCTIONS





### 【Files Deleting】

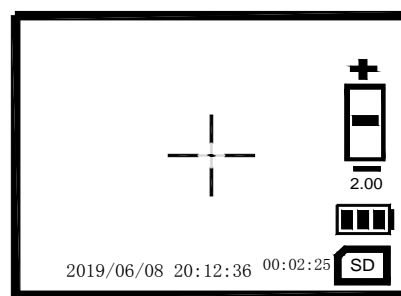
Press (#6)  for seconds in playback mode, a deletion confirmation will prompt as shown in the picture. Press (#9)  and (#7)  to switch between Yes and No, press (#8)  to confirm the operation. Press (#6)  again to quit.



## OPERATING INSTRUCTIONS

### 【Digital Magnification】





- When the instrument is in observation mode, the digital loop magnification operation of the picture can be carried out.
- (9#)  and (7#)  have the same function for digital loop amplification.
- You can zoom in by pressing (9#)  and (7#) , digital amplifications are converted in increasing order between three levels 1.00/2.00/3.00, in the order of 1.00 > 2.00 > 3.00



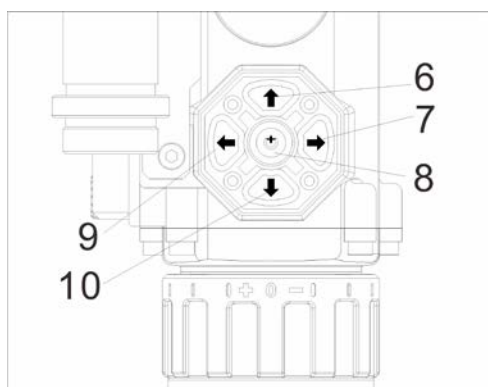
## OPERATING INSTRUCTIONS

### 【Mil Adjustment】

Mil is adjusted by means of electronic way.








Press (#6)  to move the reticle upward and (#10)  downward; press (#7)  to move it rightward and (#9)  leftward.

Each time the button is pressed, the Mil adjustment amount is 1/8



## OPERATING INSTRUCTIONS

### 【Mil Adjustment】

- In observation mode, press (#10)  for 3 seconds to enter the adjustment mode with figure of X axis and Y axis shown on the screen. Displacement of each step of both X and Y is 1/8 mil.
- Press (7#)  and (9#)  to make horizontal adjustment ---press (9#) to decrease the X value and move the reticle leftward, press (7#) to increase the X value and move the reticle rightward, X value ranging from -100 to 100.
- Press (6#)  and (10#)  to make vertical adjustment --- press (10#) to decrease the Y value and move the reticle downward, press (6#) to increase the Y value and move the reticle upward, Y value ranging from -100 to 100.
- Up completion, a confirmation "UDZ: No" prompts whether current position be set as User Defined Zero (UDZ: No). If no, just ignore the prompt and the system will save current settings 3 seconds later and exit adjustment mode; press (9#)  or (7#)  to switch "UDZ: No" to "UDZ: Yes" and it will be saved automatically.

## OPERATING INSTRUCTIONS

## 【Mil Adjustment】

- If UDZ needs to be restored to factory setting, enter Mil setting mode and press (#7) ➡ for seconds until “Reset” appears, which implies that the system has been restored to factory setting.

## 【Notes】

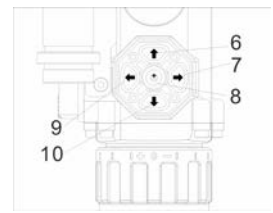
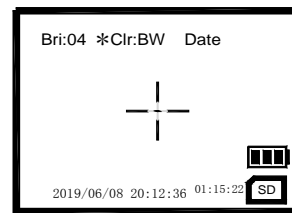
Please perform Mil adjustment at 1X digital magnification so as to secure aiming accuracy. Mil adjustment performed at magnification of 2X or 3X should be intended for aiming at the corresponding magnification only so that aiming accuracy is secured. It recommended that Mil adjustment is done at 1X magnification.

When the gun track is badly worn or deviation is too large, the adjustment amount of Mil has a value exceeding 55 in the X-axis or Y-axis. When the 3X digital changes, in theory, the line of sight will exceed the display range, so when the adjustment amount is exceeded, the position of the line of sight will not change accordingly when the 3X digital changes. In case of excessive adjustment, please correct the gun track.

## OPERATING INSTRUCTIONS

## 【Display Color Set】

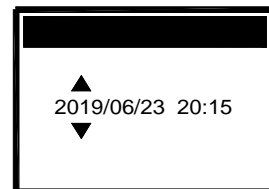
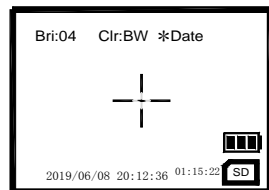
- This riflescope has three display modes - Color, Black & White, and Green.
- Press (#6) ⬆ for seconds to enter the system setting mode. Press (#6) ⬆ to move “\*” in front of Clr. BW as shown below.
- Press (#7) ➡ and (#9) ⬅ to shift “\*” to the front of “Clr: C”, “Clr: BW” and “Clr: GN” respectively.
- Clr: C stands for Color, Due to the reason of the working band of the detector, the color will be distorted, which is a normal situation, when the digital zoom, the picture is shown as brown
- Clr: BW stands for Black & White
- Clr: GN stands for Green



## OPERATING INSTRUCTIONS

## 【Date/Time Set】

- Press (#6) ⬆ for seconds to enter the system setting mode.  
Press (#6) ⬆ to move “\*” to the front of Date as shown in the picture.
- Press (#7) ➡ or (#9) ⬅ to enter the Date/Time setting mode.
- Press (#7) ➡ or (#9) ⬅ to alter the figure between the two arrows
- Press (#8) ⏻ to shift the arrow pair to position of Year, Month, Date, Hour, Minute; item between the two arrows becomes adjustable.
- The date format is “YYYY/MM/DD HH: MM”
- Press (#8) ⏻ to quit the setting mode when arrows are at the position of minute.



## OPERATING INSTRUCTIONS

## 【External Monitor】

- Connect the riflescope to an external monitor via the AV interface #15.
- The built-in screen and external monitor may work simultaneously.

## 【Computer Connection】

- The riflescope is equipped with USB2.0 interface. You may connect it to a computer with an USB cable.
- When connected to a computer, the riflescope is identified as a storage device and files stored in the TF card maybe accessed.
- When connected to a computer, battery in the riflescope will be charged.

## 【Notes】

When connected a computer, battery should be installed or external power source should be connected, otherwise data transfer may malfunction.

## POWER MANAGEMENT

## 【Battery】

- Please use lithium-ion rechargeable battery type 18650, 3.7V, 2200mAh.
- Battery should be charged for 10 hours prior to the first use to achieve its best performance.

## 【External Power Source】

- External power adaptor is included, which may supply power to the riflescope via an USB cable.
- When external power source is connected, the riflescope shall not power off automatically until you turn it off.
- When the external power is connected, the instrument can work for a long time and will not shut down automatically

## 【Notes】

Do not use mobile phone charger

## PRIMARY PARAMETERS

## 【Technical Specifications】

Category	Item	Parameter
OPTICS	Magnification	4.5
	Diameter of objective lens	φ 50mm
	Field of View	4.6° x 3.7°
	Range of eye relief	±5 diopter
	Visual distance in low light environment	5m~∞
	Visual distance	250~300m
	Anti-impact force	600G
POWER SUPPLY	Operating voltage	3.7V DC
	Battery	Rechargeable lithium battery
	Charging adaptor	5V/2A Adaptor
OTHER	Dimension (L*W*H)	220x80x75mm
	Weight	1102g

## STANDARD CONFIGURATION

## 【Accessories】

ITEM	QTY
AV cable	1
USB cable	1
External power adaptor	1
Battery charger	1
Manual	1
Hand strap	1
Battery 18650	1
Cleaning cloth	1
Infrared illuminator	1
TF card 8GB	1

## MAINTENANCE &amp; INSTRUCTION

## 【Maintenance/Safety Instruction】

- Ambient conditions for working: temperature -30°C and +55°C and humidity not exceeding 80%.
- Store the riflescope in a cool, dry and clean place. Prevent it against dampness, mildew, pressing, mechanical impact and long time exposure to sun light.
- Please try to avoid contact with rain or fog, to prevent the instrument to fall and bump.
- If image flicking occurs, or the device cannot be powered on, it implies that the battery voltage is too low and should be charged.
- Blow away any dust or debris on the lens (or use a soft lens brush) before cleaning with the cleaning cloth.
- The battery should be charged occasionally even though the riflescope is not in use for a long period.

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