

<b>MODEL</b>	<b>24095</b>
Magnification, x	1
Objective lens, mm	14
Resolution, lines/mm	30
Angular field of view, degree	51
Max. viewing range, m/yds*	50 / 55
Eyepiece adjustment, diopter	-/+4
Exit pupil, mm	6
Eye relief, mm	12
Operating voltage, V	3 (1xCR123)
Min. operating time (IR off / on), hour	72 / 20
Operating temperature	-20 °C...+40 °C / -4 °F...+104 °F
Degree of protection, IP code	IP46
Tube generation / type	1 / EP33U
Dimensions, mm/inch:	
Length	175 / 6.9
Width	79 / 3.1
Height	57 / 2.3
Weight, kg/oz	0.24 / 8.4

\* Maximum distance at which the user can detect objects, and their details, being observed measuring 150 mm or more under the natural light of a quarter moon (0.05 lux) with no clouds or fog (outstretched human arm, head, etc. can be seen). The viewing distance increases as the size of the objects under observation and/or light intensity becomes greater.

#### PACKAGE CONTENTS

- Challenger unit
- Head mount with an adapter for Challenger
- Carrying case
- User manual
- Cleaning cloth
- Warranty card

*For improvement purposes, design of this product is subject to change.*



## OVERVIEW

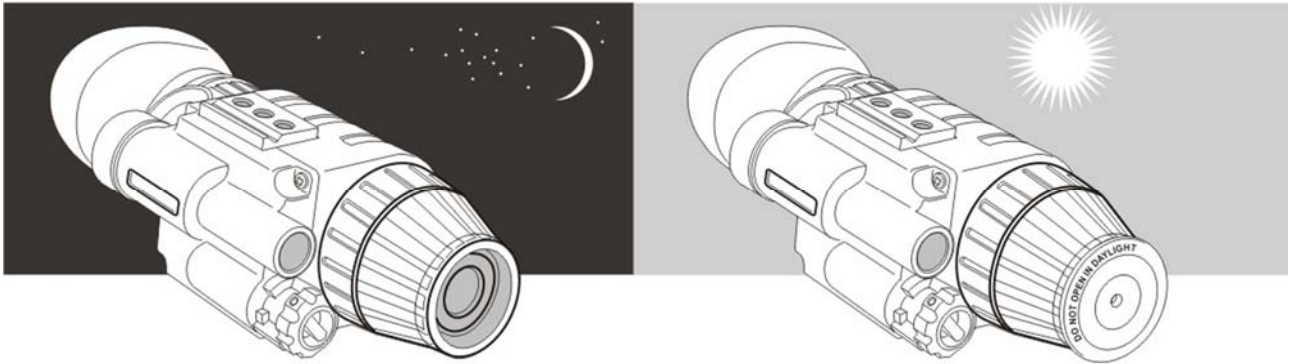
The Challenger Night Vision Device is a new tube Gen.1 based unit that has a state-of-the-art design and a wide angular field of view. The device is outfitted with a new five-lens eyepiece that minimizes distortion on the edges of the field of view and increases sharpness and contrast of the image. The soft rubber eyecup conceals the light emission from the tube thus permitting a user to stay unnoticed. The housing of metal and plastic ensures extra durability and reliability during usage. The Challenger has an IP46 degree of protection (IEC 60529), i.e. this device is protected against water and dust which increases the range of its usage.

The device is equipped with an IR illuminator necessary for normal observation in moonless cloudy conditions in total darkness.

The Challenger is equipped with two 1/4" sockets which allow it to be fixed on the head mount (included) and used as goggles. Additional accessories such as IR flashlight, directional microphone can also be mounted on the device. The device is fully self-contained and can work up to 72 hours on a single CR123A at temperatures varying from -20 °C to + 40 °C.

Your Challenger is ideal for professional and amateur use, including:

- Night observation in natural environment
- Boating
- Repair and maintenance of equipment.
- Air-soft shooting



## PECULIARITIES OF USE

Your night vision device Challenger is designed to provide many years of reliable service. To ensure high performance you should adhere to the following rules:

- Do not direct a unit in the “on” position at intense sources of light, such as car's headlights or burning fire. This may disable the unit for an unknown length of time or cause a dark spot in the center of the field of view. Do not turn the unit on in daylight without the protective cap firmly secured over the objective lens, as this may damage the unit.
- Any such damage may void the warranty.
- Never leave the unit in the “on” position over an extended length of time in an area with a light level exceeding 1-10 lux (twilight - 10 lux, deep twilight - 1 lux). Please keep the protective cap on the objective under greater light level.
- Your Challenger was designed to be self-contained. Do not open the body of the scope or otherwise attempt to service this device. If such need arises return the unit for replacement or repair.
- Protect the device from exposure to direct sunlight and extreme temperatures.
- Avoid dropping or otherwise shocking the unit. The device incorporates a sophisticated optical system which could be damaged in extreme cases of misuse.
- Clean optical parts (lenses) with professional lens cleaning supplies designed for use with multicoated optics.
- Clean the exterior of your with petroleum jelly applied by a soft, clean cloth.

***Damage to this device from failure to observe these warnings may void the device's warranty!***

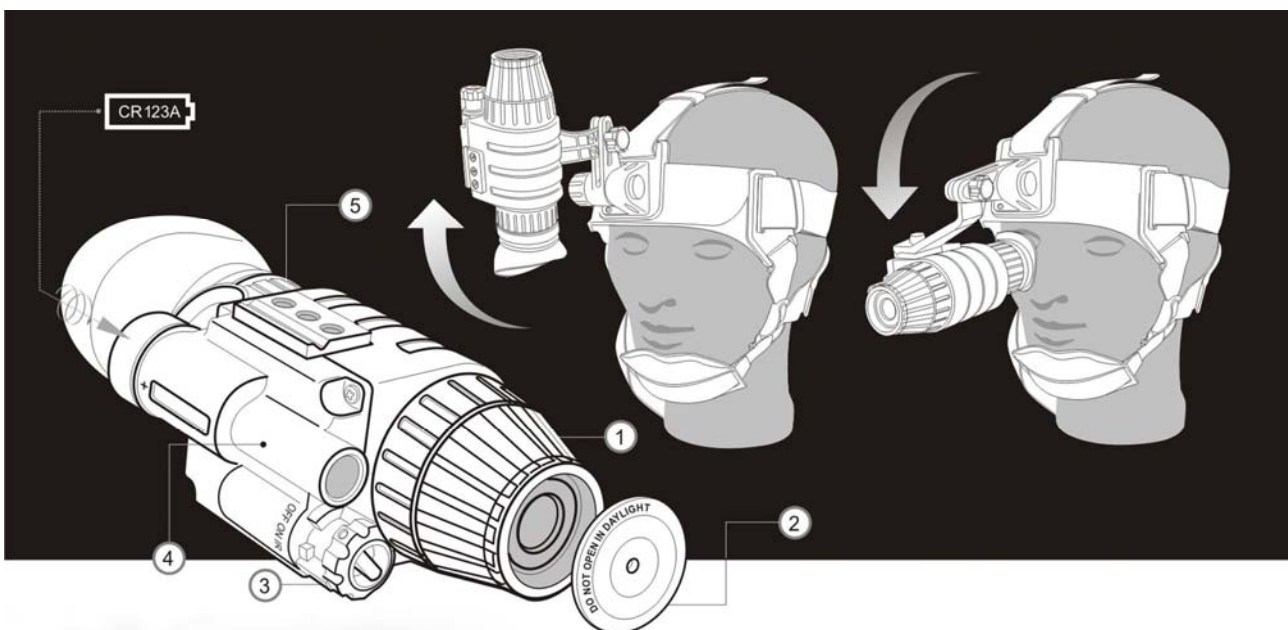
## BATTERY INSTALLATION

Your Challenger runs on a single CR123A battery. To install it, unscrew the battery compartment cover, insert the battery into the battery compartment so that the positive (+) and negative (-) terminals of the battery match the markings on the compartment, replace the battery cover carefully. Do not overtighten.

## USE AND TESTING

- Make sure the CR123 battery has been installed according to the instructions found in the battery installation section of this manual.
- Enter a dark area before turning on the device.
- Remove the objective cap (2).
- Activate the device by moving the rotary switch (3) to the “ON” position.
- You can test your device in a light area without removing the protective cap. This will not damage your unit.

- If the subject to be viewed is in a completely dark area, including lowlight shadow areas; activate the infrared illuminator (4) by raising and turning the switch (3) to the “IR” position.
- Direct the turned on unit at an object at a distance of around 30m. Rotating the eyepiece, focus on the tube's screen - rough surface or tiny dark dots are visible. Rotate the objective lens (1) until the image quality is optimal. Re-focus the eyepiece, if necessary. After this adjustment you may not rotate the eyepiece irrespective of the distance and objective lens.
- Direct your Challenger at an object to be viewed and adjust the final focus by rotating the objective lens focusing ring until the image is optimal. When screwing the objective lens into the housing, it focuses on farther objects, when screwing out - on closer ones.
- The Challenger night vision device is also intended for joint use with the head mount included in the package. To do this, affix the Challenger to the head mount by means of the screw of the adapter (see picture) and adjust the device as described above. You can view through the device with the left or the right eye - to do this you only need to choose the appropriate 1/4” socket and orientate the adapter on the required side. Additional information on the operation of the head mount is enclosed with its user manual.
- When you are finished using your Challenger put the cap back on the objective lens and turn off the unit by turning the switch (3) to the “OFF” position. Put the device to the carrying case.



## CAUTION!

Your Challenger can be used in extreme cold. However, when the unit is brought back into a warm environment, you **MUST** wait approximately 2-3 hours before using the unit again. Failure to do so may result in damage as a result of condensation accumulating on the internal circuitry of the unit.

## MAINTENANCE

- Clean the lens with professional lens cleaning supplies intended for use with multicoated optics.
- Blow any dust or dirt off the lenses using dry, compressed air.
- Clean the Challenger housing with a soft, clean cloth.

## STORAGE

Always store the Challenger and the Head Mount (in its case) in a dry well-ventilated and well-heated room away from heating/air conditioning vents. Remove the battery if the device is to be stored longer than 2 months.

## TROUBLESHOOTING

- **The scope will not turn on.**

Check that the battery is installed properly. Install the battery according to the (+) and (-) polarity, ensuring that the markings on the battery and battery compartment correspond with one another. Check the battery contact to ensure it is clean and free of corrosion; if necessary, clean the contact. Make sure that the external contact lug is not broken. Also check that the cap of the battery department is fully closed, if not - variable contact may happen which may cause tube pulsation. If necessary, replace the battery as it may be depleted. Also be sure that the switch has been turned to the “ON” position.

- **Distinct black dots appear on the screen.**

These dots are cosmetic blemishes resulting from tube production processes and do not interfere with the reliability or performance of the scope and are not a defect.

- **The scope flickers, flashes or “snows”.**

The scope may flicker or flash when used in a bright environment; to correct this, place the cap over the objective lens and enter a dark environment. The scope will restore itself to a natural functioning state in several minutes or hours, depending on how long the scope had been exposed to the light.

The scope may flicker for the first several seconds of use, even when in a dark environment, before the scope corrects itself and functions properly.

The scope may “snow” for several minutes after being exposed to a bright light source (daylight, a car's headlights, fire, etc.) even if being operated in complete darkness.

- **The image is not focused.**

Adjust the focus of the eyepiece and the objective (see “Use and Testing” section). Check that the lenses are not foggy or dusty; if they are, carefully clean the external surfaces of lenses with a soft cotton fabric. Replace the battery if the total battery charge is less than 2.2V.

When the unit is brought into a warm environment from a cold one, condensation may appear on the internal lenses; you must wait two hours before using the unit.

- **Visibility decreases or disappears.**

Bright light sources, such as headlights, may cause visibility to decrease or disappear and the image to flicker. Turn the power off and turn the scope away from the light source; visibility will restore itself in several minutes.