



**Dedal-555**  
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[www.dedalnvoptics.com](http://www.dedalnvoptics.com)

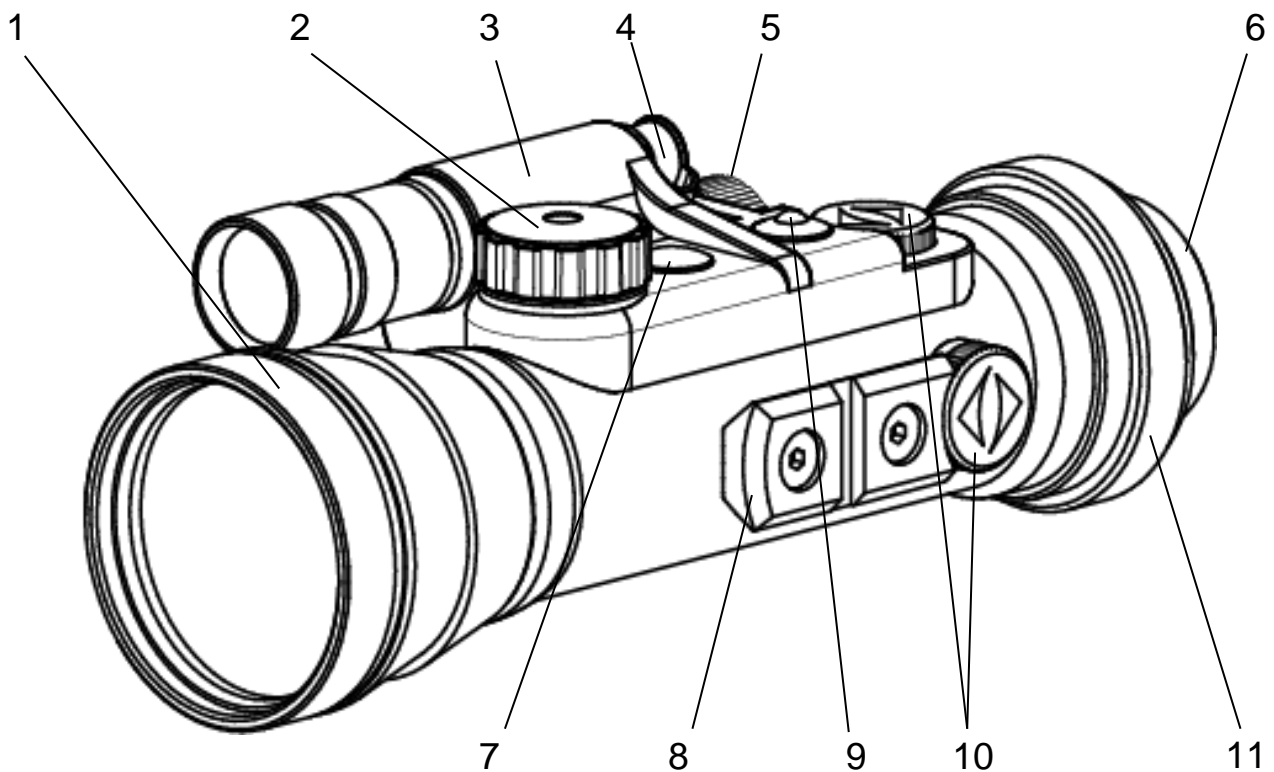
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## **Merkmale**

- *Die Montage des Dedal-555 vor einem Tageszielfernrohr auf einer Waffe hat keinen Einfluss auf dessen Nullung*
- *Alle taktischen Fähigkeiten des Zielfernrohrs bei Tag bleiben erhalten*
- *Spezielle, kontrastreiche und schnelle Optiken*
- *Große Austrittspupille*
- *Innenfokussierung des Objektivs (von 10 Metern bis unendlich)*
- *Hohe Bildqualität über das gesamte Sichtfeld*
- *Bildverstärkerröhre der Generationen 3 (russisches Fabrikat)*
- *Korrekturmechanismus des mittleren Auftreffpunkts (MIP)*
- *Eingebauter leistungsstarker augensicherer Infrarot-Strahler*
- *Hermetisch verschlossen*
- *Kompakt*
- *Leichtgewicht*

## ***Erscheinungsbild des Gerätes***



- 1 - Objektive Linse
- 2 - Objektivfokus-Einstellknopf
- 3 - Eingebaute IR-Beleuchtung ( nicht im deutschen modell)
- 4 - Anschluss für Fernschalter
- 5 - Deckel des Batteriefachs
- 6 - Okular mit Kappe
- 7 – IR-Beleuchtung Leistungseinstellung
- 8 - Zusätzliche Picatinny-Schiene
- 9 - ON/OFF- und IR ON-Schalter
- 10 - Korrekturmechanismus des mittleren Auftreffpunkts (MIP)
- 11 - Fixieringsring

## ***Brief Description***

Dedal-555 is an afocal night vision device designed to be mounted in front of a daytime optical device (weapon scope or surveillance optical device) for purposes such as:

- night hunting;***
- night surveillance;***
- night patrolling and objects protection***
- law enforcement.***

Dedal-555 incorporates Image Intensifier Tube that belongs to generation 2+, 3 or XR-5, which provides multiple times of light amplification in visible and close infrared zones of light spectrum.

### ***RECOMMENDATION:***

***Dedal-555 belongs to Night Vision Riflescopes class of night vision devices. Use of night vision riflescopes may be restricted or prohibited by national or local regulations. Please consult with local authorities as to whether you are allowed using the Night Vision clip-on sight on your weapon legally in your area.***

## **Technical Parameters**

<b>“Dedal-555”</b>	
<b>General</b>	
Magnification, x	1.0
Field of view, degrees	8.8
Objective lens	78mm-HC-F/1.5, T/1.6
Focus range	From 10 m to infinity
Magnification of the daytime scope or monocular	acceptable - 1-24
	optimal - 3-16
Exit pupil diameter, mm	34
Power supply	1x CR123A lithium battery
Magnification of the daytime scope or monocular	acceptable - 1-24 optimal - 3-16
Time of continuous operation, hours	>60
Built-in infrared illuminator (805 nm), mW	75 (two power modes)
Dimensions, mm	215x66x80
Weight (without mount), kg	0.65
<b>Image Intensifier Tube (IIT)</b>	
IIT type (photocathode sensitivity ( $\mu\text{A}/\text{lm}$ ), resolution (lp/mm), screen colour)	
<b>Modification:</b> Dedal-555-DEP_0	Gen. 2+ (-, typical 64)
<b>Modification:</b> Dedal-555-DEP_XR-5	XR-5 (minimal 700, minimal 64)
<b>Modification:</b> Dedal-555-DK2	Gen. 3 (minimal 1800, minimal 57)
Dedal-555-DK3	Gen. 3 (minimal 1800, minimal 64)
Dedal-555-DK3/bw	Gen. 3 (minimal 1800, minimal 64, black&white)
<b>Environmental conditions</b>	
Operating temperature range	From -40 °C to +50 °C
Relative humidity, %	98

1. *Small black dots or groups of dots, which are allowed by technical conditions of the IIT manufacturers, may be present on the screen.*
2. *Technical parameters of the device can be improved without prior notice.*
3. *The logo marking of the device may appear as Dedal-555 or D-555.*

## ***Delivery Set***

### **Standard Delivery Set:**

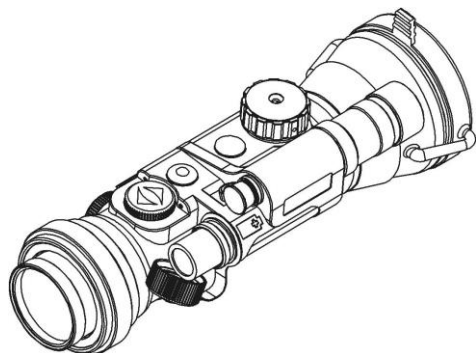
- Dedal-555 Night Vision clip-on sight (with objective and eyepiece caps) - 1 pc.
- Cleaning Cloth - 1 pc.
- Operation Manual - 1 pc.
- Warranty Card - 1 pc.
- Soft Bag - 1 pc.

### **Optional Accessories:**

(not included into the standard delivery set)

- AD540-D56 - Mounting Adapter for Daytime Riflescope with 56 mm objective diameter - 1 pc.
- AD540-D50 - Mounting Adapter for Daytime Riflescope with 50 mm objective diameter - 1 pc.
- AD540- - Mounting Adapter for Daytime Riflescope with 24 mm objective diameter - 1 pc.
- AD540-XX - Mounting Adapter for Daytime Riflescope produced by "Rusan" Company (Croatia) - 1 pc.
- SMW542 - Mounting Adapter for the Side Weaver Rail - 1 pc.
- WP542(BHxx) - Mounting Adapter for the Top Weaver Rail with the height of the optical axis of "Dedal-555" above the rail equal to xx=34 mm / xx=38 mm / xx=52 mm - 1 pc.
- D-542 Rubber Eyepiece (Light Suppressor) - 1pc.
- RC-01 - Wired Remote Control Switch - 1 pc.
- M542-2x/M37 - Optical Monocular with 2x magnification to convert "Dedal-555" into 2x scope together with M52/37 Camera/Video Adapter - 1 pc.

## **Battery Installation**



Dedal-555 Night Vision clip-on sight is powered by one battery CR123A. Make sure that the battery is in good condition and installed in accordance with the drawing on the battery compartment (Fig. 2).

To replace the battery unscrew the battery compartment cap and install new battery, observing correct polarity.

Figure 2

## **Testing in the Daytime**

You can test the device with the objective lens cap closed during daylight. The objective lens cap has a pinhole that is sufficient to test device workability. A yellowish-green image will appear on the screen after you turn it on with the switch (4) (Fig. 1).

## **Installation in Front of a Daytime Riflescope with the Throw-on Mounting Adapter AD540**

The most advisable way of Night Vision Attachment mounting in front of a daytime riflescope is to use the throw-on adapter AD540 that is fixed on the riflescope objective part.

This type adapter is available in four variations:

<b>Adapter</b>	<b>Riflescope Objective Lens Diameter</b>	<b>Set of Inserts (qty x thickness)</b>
AD540-D56	56 mm	Plastic: 1 pc. x 1 mm, 1 pc. x 2 mm Resin: 1 pc. x 1 mm, 1 pc. x 2 mm
AD540-D50	50 mm	
AD540-D42	42 mm	
AD540-D24	24 mm	



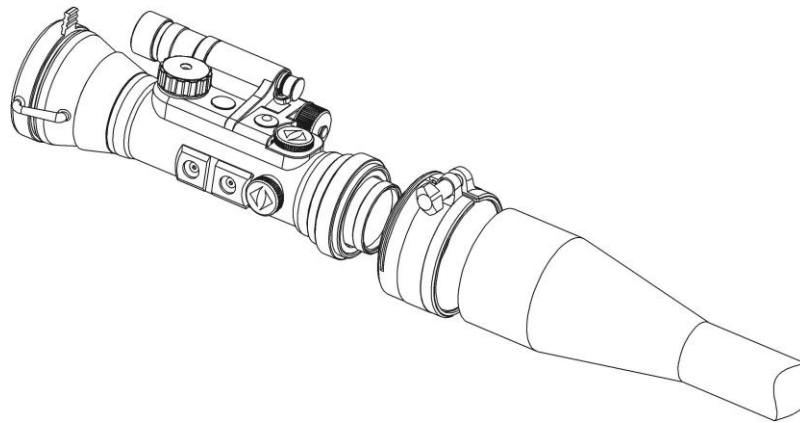


Figure 3

- 1- Night Vision Attachment "Dedal-555"
- 2- Fixation Ring
- 3- Retention Screw
- 4- Adapter AD540-D56 (AD540-D50, AD540-D42, AD540-D24)
- 5- Adapter Screw
- 6- Plastic Inserts
- 7- Objective of the Daytime Scope

Assemble the adapter and mount the Night Vision clip-on sight as follows (refer to the Fig. 3):

- Choose the required adapter, for example, AD540-D50. The adapter diameter must correspond to your riflescope objective lens diameter.

**NOTE:**

***The last two digits of the adapter name point to the objective lens diameter of the daytime riflescope.***

**NOTE:**

***The lens of the daytime scope must be positioned at least 15 mm behind the front edge of the scope body. This excludes mechanical contact of the Night Vision clip-on sight and daytime scope objective lens.***

**NOTE:**

***You can also use an adapter produced by the Rusan Company (Croatia) after selecting the correct adapter size according to recommendations placed on the manufacturer's website [www.rusan.hr](http://www.rusan.hr)***

- Depending on the external diameter of your daytime riflescope, use a 1 mm or 2 mm plastic insert so that the adapter with the insert fits loose, but without drift on the riflescope objective (1), when the adapter screw (11) is not tightened.

**NOTE:**

***You can also use additional resin inserts. Find a resin stripe of appropriate thickness and width, cut the needed length and glue inside the adapter.***

- Screw the adapter on the Night Vision clip-on sight thread 4-5 mm deep. Stop in a comfortable position (the screw points upwards or sideways) and fix with the ring. Retention screws in the ring must be loosened beforehand, and tightened afterwards. Later, when the adapter is taken off and screwed on again into the ring, it will appear in the same position.
- Then the Night Vision clip-on sight with the fixed adapter should be put on the riflescope objective and fixed by the screw. The device is now ready for operation.

## ***Another variants of Installation in Front of a Daytime Riflescope***

In the case that the hunting weapon has a top or side Weaver rail in front of the day riflescope, it is possible to install the clip-on sight using a WP542 (H34) (or H38 or H51) mount for a top rail or SMW542 for a side rail.

To ensure the geometric coincidence of the axes of the day riflescope and the clip-on sight we advise you to apply in JSC Dedal-NV.

## ***Operation at Night with Daytime Riflescope***

Before you start:

- Check the daytime riflescope adjustment (diopter setting, parallax, zeroing, etc.)
- Install the battery into Dedal-555 and mount it in front of the daytime riflescope.

**NOTE:**

***Being mounted in front of a daytime riflescope, the Night Vision clip-on sight practically does not influence its zeroing and keeps all tactical features of the daytime riflescope (zoom level, adjustment step, etc.) intact.***

- Open the objective lens cap and switch on the button (9) (Fig.1). You should see a yellowish-green light through the eyepiece of the daytime riflescope (the device works in passive mode).
- Use focusing knob (2) to achieve sharp image with the 3x-5x optical magnification of the daytime riflescope.

- If you want to bring the observed object closer, increase magnification of the daytime riflescope by 7x-16x.

**NOTE:**

***Under high magnification the image may seem blurry or to not have enough contrast. Do not try to achieve a better focus with the focusing knob (2), because it will not provide sharpness in this case.***

- Achieve maximum sharpness by using the parallax adjustment knob of the daytime riflescope (if such knob is present on your scope). Most often, it is better to find the optimal position of the parallax adjustment knob by achieving the best view of the IIT screen structure (small dots, noise, hive lines).
- Set magnification of the daytime riflescope to the position that suits the most comfortable observation configuration for you.

**NOTE:**

***Lower magnification of the daytime scope provides wider field of view and more visual contrast.***

***Higher magnification of the daytime riflescope, even when the image is not sharp, can provide better shooting results due to larger size of the target.***

**NOTE:**

***Detection and recognition ranges provided by the device depend on ambient light illumination, quality of daytime riflescope, transparency of the atmosphere and contrast ratio between target and background. When natural illumination is high, i.e. under a full moon or with external illumination, and if the target is located against a bright background (sand, snow), detection range increases. When natural illumination is low, the air is not transparent, and if the target is located against dark background (plough-land, trees, grass, etc.), detection range decreases.***

- If you need to highlight the object additionally, switch on built-in IR-illuminator (3) pressing the button (7) in the minimal power mode. The next pressing of the button (7) will turn on the illuminator in the maximal power mode (75 mW). Divergence of IR beam can be changed from 5 to 20 degrees by rotating the IR lens.
- Zeroing of combination of daytime riflescope and Night Vision Attachment should be performed in accordance with the instructions of the daytime riflescope zeroing.

**NOTE:**

***While shooting with the Night Vision clip-on sight installed through the adapter, it can shift forward along the daytime riflescope. This shift depends on strength, with which the screw is tightened, weapon recoil and may be up to 1 mm per each shot. Such a shift is allowed and does not influence the mean impact point.***

***Please control the adapter position during shooting to avoid its complete slipping down the riflescope.***

**NOTE:**

***Being mounted in front of the daytime riflescope, the Night Vision clip-on sight can change zeroing within 3 cm at a 100 m range. This is connected with changes in the weapon balance, light distortions in the image intensifier tube, technological limits of the Night Vision clip-on sight assembly. This imprecision usually appears as fixed value and can be easily compensated by the adjustment mechanism of the daytime riflescope.***

**RECOMMENDATION:**

***Due to peculiarities of production technology and IIT design, the quality assurance of the IIT supplier cannot exclude hidden defects that may appear as a consequence of recoil during shooting. Therefore, it is recommended to make 10-15 shots with the mounted Night Vision clip-on sight before use in field conditions. This will work as the additional test of the night sight reliability before its real use.***

## ***Clip-on sight alignment on a weapon***

When installing the clip-on in front of the day riflescope, a small shift of the impact point may occur due to a change in the balance of the weapon, distortion of the image in the twister of inverter image intensifier tube, technical tolerance for adjusting the clip-on sight.

The clip-on sight must be adapted in accordance with clause 8 installed and fixed on the seat of the weapon.

Before using the clip-on sight on a hunting weapon for the first time, it must be aligned at a distance of 100 m.

This requires:

- ***open the lens cover and switch on the clip-on sight by pressing the button (9). Observing through the day sight, a yellow-green glow should appear on the clip-on screen (the clip-on is in passive mode);***

- use the lens focusing knob (2) to sharpen the night picture at 3-5x magnification of the day riflescope;
- select the aiming point;
- execute three or four single shots, carefully and uniformly aiming at the aiming point;
- determine the accuracy of the battle and the position of the middle impact point (hereinafter - MIP) for the corresponding weapon;
- if required, enter the MIP correction with hand wheels (10), in accordance with the direction indicated on them;
- carry out a control shot and make sure that the aiming point coincides with the bullet hit point (if necessary, make the adjustment again);

**RECOMMENDATION:**

***Due to the features of the production technology and design of vacuum equipment, the quality control department of the manufacturer of the image intensifier does not always have the ability to exclude all hidden defects that may appear when exposed to shock loads during firing. In this regard, we recommend making 10-15 shots during the first (after purchase) zeroing in, which will serve as an additional check of the reliability of the clip-on sight before starting its actual operation.***

- Press the button (9) after work is over.
- Close the objective lens cover.

***DO NOT FORGET TO TURN OFF THE DEVICE AFTER USE!***

## ***Use as a Device for Night Observation***

Dedal-555 can be used as a fully functional device for observation in the night.

Transformation into Night Vision Scope is performed with optional M542-2x/M37 optical monocular that is mounted behind the Night Vision Attachment.

Operation sequence:

- Screw the M52/37 adapter ring in the thread of the Night Vision Attachment ocular.
- Screw the optical monocular M542-2x in the thread of the M52/37 ring.

The resulting device will be night sight with 2x optical magnification.

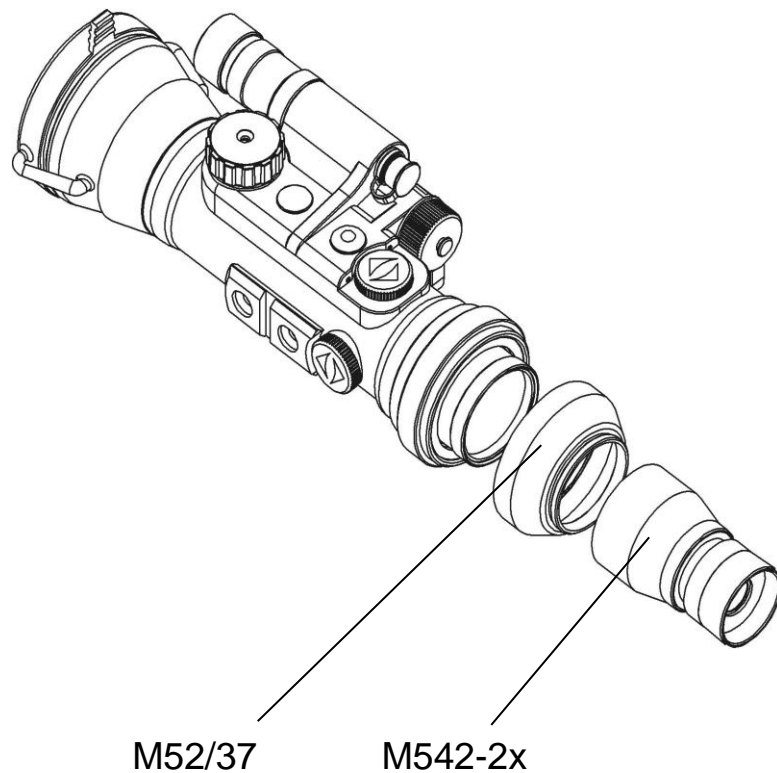


Figure 6

- Open the objective lens cap
- Switch on the button (9) (Fig.1). You should see a yellowish-green light (the device works in passive mode).
- Choose an object of observation.
- If necessary, turn on the IR-illuminator (7) as described above (the device works in active mode).
- Press the button (9) after work is over.
- Close the objective lens cap.

***DO NOT FORGET TO TURN OFF THE DEVICE AFTER USE!***

## ***Connection with Cameras / Camcorders, Daytime Binoculars or Spotting Scopes***

Dedal-555 can be used for taking pictures and videos in the night.  
Operation sequence:

- Screw the M52/37 adapter ring into the thread of the Night Vision Attachment ocular.
- Screw the M52/37 adapter ring into the camera or camcorder objective thread that is used for the light filter.

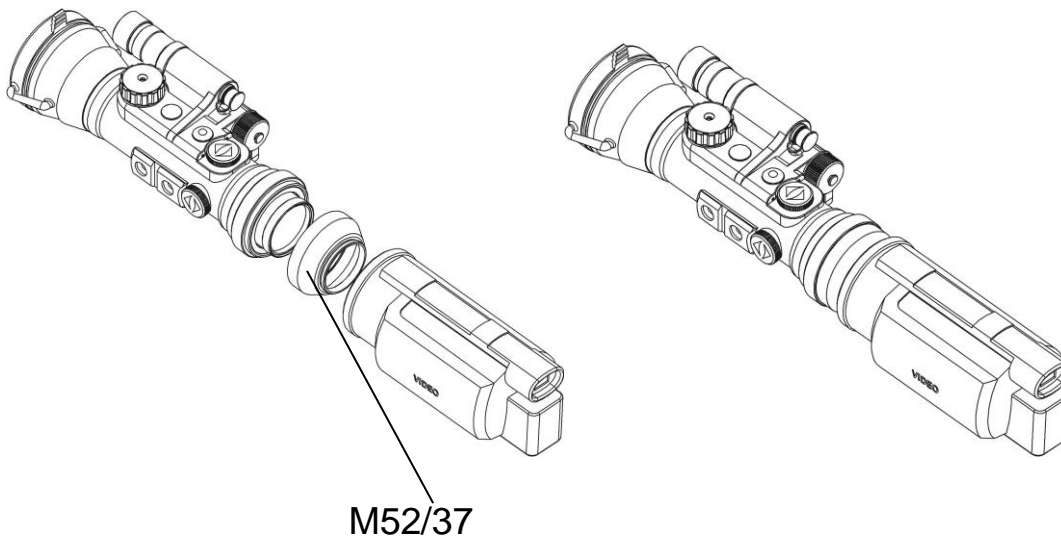


Figure 7 (

**NOTE:**

***If the objective lens of your camera has another thread size (for example, 49 mm or 58 mm), you should purchase an appropriate step-up / step-down photographic ring in a camera store or order this ring at Dedal-NV Company.***

To attach Dedal-555 with a daytime binocular or a spotting scope, screw the ocular of the Night Vision Attachment in the internal thread of your optical device directly or through an appropriate thread adapter.

- Open the objective lens cap.
- Press the button (9) of the device. You should see a yellowish-green light (the device works in passive mode).
- Choose an object of observation and recording.
- If necessary, turn on the IR-illuminator (7) as described above (the device works in active mode).
- Press the button (9) after work is over.
- Close the objective lens cap.

***DO NOT FORGET TO TURN OFF THE DEVICE AFTER USE!***

## ***Operation with Remote Control***

Dedal-555 Night Vision clip-on sight has the capability of operation with the external remote control (RC-01) that turns the device itself and its IR illuminator on and off.

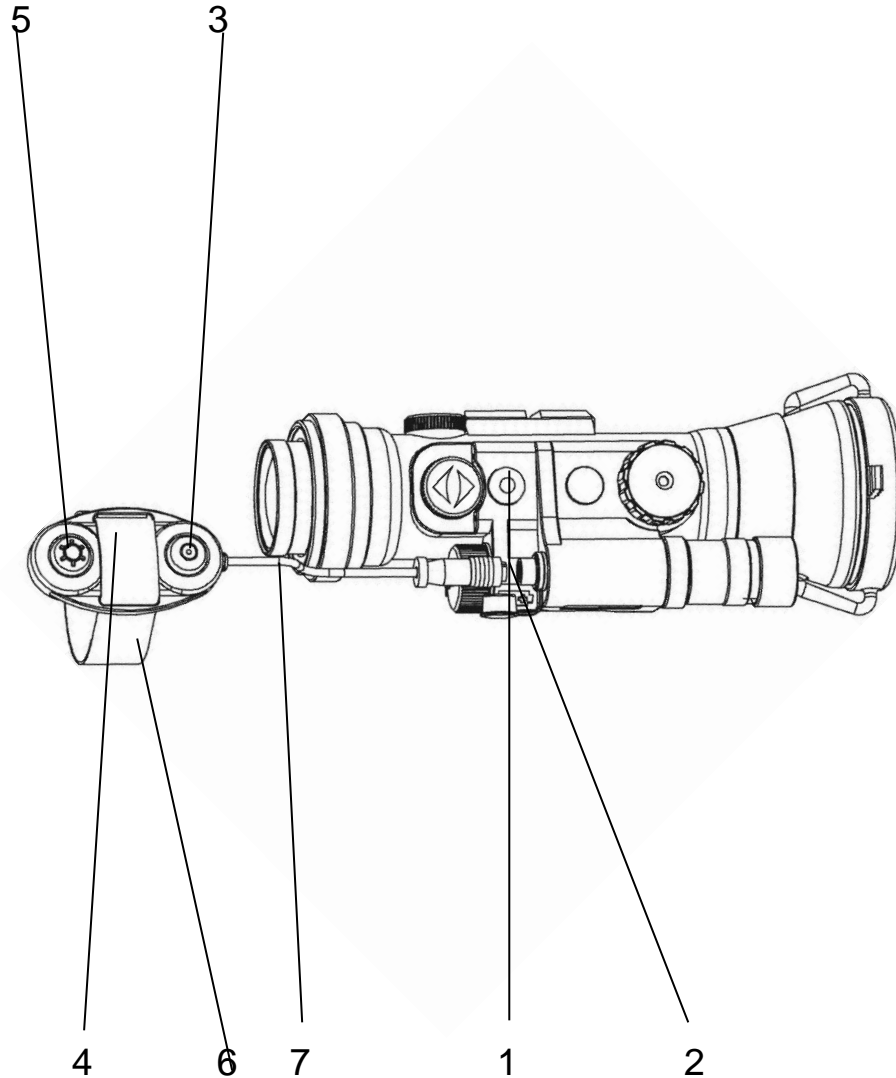


Figure 8

- 1 – On/Off and IR-On Switch
- 2 – Female Connector for the Remote Control
- 3 – Start Button of the Remote Control
- 4 – RC-01 Remote Control Body
- 5 – Start Button of the IR Illuminator
- 6 – Fixating Band with Velcro
- 7 – Remote Control Cable



Operation procedure:

- Insert the jack of the remote control into the Female Connector (2) (Fig.6).
- Fix the Remote Control (4) on the weapon with the Fixating Band (6) in a comfortable position.
- Press and release the button (3) to turn the device on.
- Press and release the button (5) to turn the IR Illuminator on.
- Next press and release of the buttons (3) and (5) toggle the controlled functions.

### ***Storage and Transportation Rules***

- Store and carry the Night Vision clip-on sight in the closed bag with the protective objective lens cap on.
- Avoid impacts, moisture and sharp changes of temperature. The optics should be protected against dust, snow, rain and direct sun rays.
- Store the device in dry conditioned premises without battery away from sources of heat, such as heating appliances or central heating.
- Do not store the Night Vision clip-on sight at temperatures lower than 10°C (50°F) or higher than 60°C (140°F).
- Remove the battery from the Night Vision clip-on sight during extended periods of non-operation to avoid battery leakage.
- The Night Vision clip-on sight does not require special technical service.
- Clean optical surfaces with the optical cloths that are included in the delivery set only.

## ***Troubleshooting***

### ***Dedal-555 does not turn on***

Check whether the battery is installed properly. Check the charge of the battery. Replace it if it is weak.

### ***The target does not appear in focus***

If the image cannot be focused by the knob (3) (Fig. 1) and parallax adjustment of the daytime scope, clean the lenses. They could be foggy or dusty.

### ***Low-contrast or dark image***

Bright light source can be a reason for losing image quality or complete IIT shutdown. This mechanism is known as automatic brightness protection. When the device is placed under normal low-light illumination condition, the image will be restored.

### ***Condensation accumulates on the parts***

In order to avoid misting of the eyepiece lens in cold conditions use a special protective cover (like the one for eyeglasses).

### ***Black dots on the screen***

Some blemishes in the IIT, which do not affect the performance or reliability of a night vision device, are allowed by IIT manufacturers. Most of them can be observed in daytime only and become practically invisible during night.



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