

**12. ACCEPTANCE CERTIFICATE**

**NIGHT VISION DEVICE**

Serial Number \_\_\_\_\_  
Model NS-156

Corresponds to technical conditions ADSH 3.807.020 TU and is admitted for use.

Date of production - \_\_\_\_\_  
Place for seal  
Quality inspector \_\_\_\_\_  
(Signature)



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**OPERATION MANUAL**



**NIGHT VISION WEAPON SIGHT**  
**NS-156**

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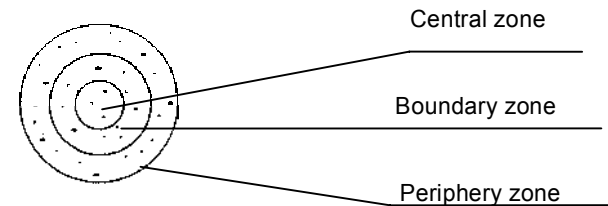
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## ATTENTION!

**Image quality of the object, which is being observed  
When an image intensifier is functioning, depends  
Mainly upon operating characters  
Of this image intensifier.**

**Due to this fact black spots, which are inherent in the image intensifier, may be seen in the field of view of a viewing device. Field of view is shown below.**



Permissible defects, which may be seen in the field of viewing device, are given in the table

Type of black spots	Zone	Size of black spots, mm	Number of spots
Immovable	Central (circle of diameter 5.5 mm)	Up to 0.073 From 0.073 to 0.150 From 0.150 to 0.294	Not limited 5 1
	Boundary (circle of diameter 5.5-9.0 mm)	From 0.073 to 0.150 From 0.150 to 0.294 From 0.294 to 0.400	10 3 1
	Periphery (circle of diameter 9.0-11.0 mm)	Not limited	Not limited
Moving	Entire field (circle of diameter 11.0 mm)	From 0.150 to 0.294	1

## 11. Customer Support

Should you experience any difficulties with your Newcon OPTIK product, consult the enclosed manual. If the problem remains unresolved, contact our customer support department at Toll free 1-877-368-6666 or (416) 663-6963. Our operating hours are 9am-5pm, Monday - Friday, standard East time.

At no time should equipment be sent back to Newcon without following the instructions of our technical support department. Newcon accepts no responsibility for unauthorized returns.

**To locate NEWCON Authorized Dealer near you call:**

**Tel: (416) 663-6963 Fax: (416) 663-9065**

**Email: NEWCONSALES@NEWCON-OPTIK.COM**

**Internet: WWW.NEWCON-OPTIK.COM**

The defective products should be shipped to:  
In USA: 3310 Prospect Ave. Cleveland, OH 44115  
In Canada: 1183 Finch Ave. W., Suite 302,  
Toronto, ON. M3J 2G2

**THANK YOU FOR PURCHASING THE NIGHT VISION  
WEAPON SIGHT NS-156. PLEASE DEMAND TO CHECK  
THE DEVICE FOR PROPER OPERATION WHEN BUYING  
IT. PLEASE READ ALL THE INSTRUCTIONS CAREFULLY  
BEFORE USING.**

## 1. IMPORTANT INFORMATION

### Read prior to activation

You have just purchased a complicated Electronic device. To operate it properly, please read this manual carefully. Here are some common precautions that must be noted.

**Possession of this device confirms with Federal Firearms Regulations, as of February 1993. However, use of this weapon sight for hunting may be limited or illegal in your state. Check with local authorities.**

- **NEVER** disassemble the unit. This device contains high voltage that may be hazardous to your health!
- **NEVER** expose the opened objective lens of an active unit in daylight. At daytime objective lens must be covered by caps. There is a tiny hole in the cap to provide enough light for daytime operation. It is allowed to turn on the unit at daytime, but caps must cover the lenses.
- **NEVER** aim active unit at intense light sources (i.e. lights, headlamps, campfires, the moon, etc.)
- **NEVER** use both barrels simultaneously when shooting. It can cause severe damage to your night vision device!
- **NEVER** reverse the polarity of a battery
- **NEVER** connect the unit to external power sources
- **ALWAYS** remove batteries when not in use for a long period
- **ALWAYS** keep the objective lenses covered when not in use
- **ALWAYS** store in a warm dry place when not in use

## 2. OVERVIEW

The Night Vision Weapon Sight NS-156 is an optico-electronic device intended for aimed shooting at night with the use of a hunting gun or a carbine. The unit utilizes an image intensifier that amplifies available moonlight, starlight or man-made light. The scope was designed to be easy to use, and provide many years of operation.

Some of the typical activities where the NS-156 Night Vision Weapon Sight will be useful:

- Hunting
- Wildlife observation
- Security
- Law enforcement/P.I.
- Search and rescue
- Military

### *Features*

- One stage image intensifier tube with multi alkaline Photocathode ensures observation at 1/4 moon and better conditions;
- Automatic Brightness Control.
- High Light Protection
- The built-in fast lens with internal focusing ensures adjustment for sharpness for both near and remote objects;
- An optional Infra Red Illuminator AP-9 allows operation in complete darkness (i.e. basement or cave)
- The eyepiece allows Dioptric adjustment for the eyes of the viewer
- Interchangeable objective lens
- The illuminated reticles in the field of view enables reliable aiming at dark and light targets;

## 10. WARRANTY:

NEWCON OPTIK warrants this product against defects in material and workmanship for one year from the date of the original date of consumer's purchase, but no more than 18 months from the date of manufacturing. Should your NEWCON product prove defective during this period, please bring the product securely packaged in its original container or an equivalent, along with proof of the date of original purchase, to your NEWCON Dealer. NEWCON will, repair (or at its option replace), the product or part thereof, which, on inspection by NEWCON, is found to be defective in materials or workmanship.

### ***What This Warranty Does Not Cover:***

NEWCON is not responsible for warranty service should the product fail to be properly maintained or fail to function properly as a result of misuse, abuse, improper installation, neglect, damage caused by disasters such as fire, flood, lightning, improper electrical current, or service other than by a NEWCON Authorized Service. Postage, insurance, or shipping costs incurred in presenting your NEWCON product for warranty service are your responsibility. Please include a cheque or money order made out to NEWCON OPTIK for the amount of \$10.00 to cover shipping and handling.

**NEWCON OPTIK may replace any product that has been discontinued or is out of stock, by another current product of comparable value and function.**

**NEWCON OPTIK DISCLAIMS ANY WARRANTIES, EXPRESSED OR IMPLIED, WHETHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EXCEPT AS EXPRESSLY SET FORTH HEREIN. THE SOLE OBLIGATION OF NEWCON UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE THE COVERED PRODUCT, IN ACCORDANCE WITH THE TERMS SET FORTH HEREIN. NEWCON EXPRESSLY DISCLAIMS ANY LOST PROFITS, GENERAL, AND SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM BREACH OF ANY WARRANTY, OR ARISING OUT OF THE USE OR INABILITY TO USE ANY NEWCON PRODUCT.**

## 9. TROUBLESHOOTING

### ***No lit screen***

- Incorrectly installed Battery. Reinstall the battery observing the correct polarity
- Greasy contacts of the battery or the battery house contacts. Clean the contacts

### ***Dimly lit screen***

- Discharged battery. Charge or replace the battery
- Dirty contacts in the battery Compartment. Clean the contacts

### ***The illuminator does not work***

- Greasy contacts of the illuminator or of its attachment socket. Clean the contacts

### ***The scope does not work.***

- Check that the batteries are installed properly.
- Check the charge of the batteries. Replace if they are weak. Do not use old batteries with new ones.

### ***The image does not appear in focus.***

Bring the inspected object to the center of the image. Turning the objective lens ring (7), and/or the eyepiece (2) adjust to achieve the clearest image on the screen. Repeat the steps of focusing if necessary. If the view still does not seem in focus, clean the lenses; they could be foggy or dusty.

### ***Unit flashes***

It is normal for the unit to flash within the first 2 minutes of activation. If the flashing continues afterwards the following is a possible cause: bright environment (even with the cap closed!)

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

It is O.K. to use the scope in cold. However, when the unit is brought from the cold into a warm environment, it has to warm up for up to 5 hours (not minutes!). Only then it is allowed to turn it ON again.

### ***Visibility decreases and / or disappears.***

Bright light sources (moon, projectors or headlights) may cause visibility to degrade or even completely disappear. Move the scope away from the light source immediately.

- NS-156 is a safe product. However, normal safety procedures must be utilized like with regular daytime riflescope.
- The reticles is always in one plane with the image of the target which makes surveillance and aiming even more comfortable;
- Smooth adjustment of lighting brightness on the reticles enables aimed fire at targets differently illuminated and also provides the possibility to adjust the optimum level of reticles lighting that is most comfortable for the viewer.
- A small-sized adjustment mechanism which is built-in the lens allows vertical and horizontal adjustments of the reticule;
- The size of the battery compartment allows the use of optional rechargeable batteries as well as standard AA batteries commonly available;
- Weaver type mount on the sight;
- Soft rubberized eyepiece makes the viewing more comfortable.

### **Warning!**

Having been exposed to low temperature, NS-156 should be kept in a warm place during no less than 2 hours prior to switching on in a warm room. NS-156 is intended for use within the range of illumination from  $5 \times 10^{-3}$  lux to 1 lux at ambient temperature from  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) to  $+40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) and relative humidity no more than 80% at  $20^{\circ}\text{C}$  ( $68^{\circ}\text{F}$ ).

### Precautions

NS-156 is a sophisticated precise optical instrument equipped with electronics. Therefore, it should be handled with due care.

- Keep your device away from direct sunlight, impacts, dust, moisture, and sudden changes of temperatures.
- Do not touch the optical surfaces with fingers. Doing so may damage the anti-reflection coating.
- Cleaning of optical surfaces is possible only with professional camera lens cleaning supplies.
- To clean the exterior of the device, use only a soft clean cloth.
- Do not take the cover off the lens if not necessary.
- Keep away from heating appliances and central heating.
- Make sure to switch off the unit during periods of non-operation and when storing the device for long period of time.
- Do not apply superfluous efforts at work with lens assembly, agile elements and thread connections.
- Due to considerable optical magnification of the eyepiece some small structures inside the tube coating in the form of dark and/or white points may be seen in the field of view, which does not affect the serviceability of the device.

### 3. COMPONENTS

NS-156 is supplied with the following components:

NAME	QUANTITY
NS-156 unit	1
Soft case	1
AA Battery (optional)	2
Weaver weapon mount assembly	1
Lens cap	1
AP-9 I/R Illuminator	1
Manual	1
Warranty Registration Card	1

### 8. CARE AND MAINTENANCE

- Maintenance includes only replacing the batteries and cleaning of parts if necessary.
- The batteries are to be replaced after their discharge; if there is no lit screen after switching on the device or it is very dim; or if a leakage of batteries has been discovered.
- The dirty parts are to be cleaned with a soft cloth or cotton wool.
- In case of electrolyte leakage the battery compartment must be carefully cleaned. Alkaline batteries are therefore recommended
- When cleaning optical parts of the lens and eyepiece please to remove solid dust particles with a jet of air first. Then after giving a sigh out on the surface clean it with a soft cloth making circle moves in the direction from the center to the rim.

### 7.2 Testing of operation,

Mount NS-156 on your weapon as follows:

- Put your night sight “weaver” slide into the mating part of the mount assembly so that at least one of the fixing screws fits into the hole on the slide. Tighten the fixing screws; - install your NS-156 with mount assembly on the weapon mount. Turn on your NS-156 by rotating switch (9) clockwise. A click will be heard. Normal operation will show a greenish screen. After turning the unit “on”, rotate the same switch to illuminate the reticule on the screen. In the dark take off protective lens cover. Operation without the lens cover on is admissible only at the illumination level of no more than 1 lux (late twilight and darker). Turning eyepiece (3) obtain the most clear-cut image of the screen (the reticule).

Turning lens (2) obtain a sharp image of the objects to be viewed. After operation switch off NS-156. Secure the lens with the protective lens cover.

### 7.3 Operation at insufficient ambient light

At insufficient ambient light use the infrared illuminator. Slide it into socket (8). Sliding it all the way in creates contact and turns it on.

### 7.4 Adjusting the reticule.

Rotate the adjustment knobs (11) to move the reticule Up (U), Down (D), Right (R) or Left (L). Each click corresponds to 3mm at 100m; or 0.12” at 100 yards. Full rotation of the knob corresponds to 0.93m at 100m; or 33.48” at 100 yards.

## 4. SPECIFICATIONS OF NS-156

Magnification, X	3.0±0.5
Field of View. Degrees, not less	10°
Resolution (center), angl. second, not more	100
Dioptic Compensation, Dptr., not less	± 4
Focusing range, m	2-∞
Eye Relief, mm	50
Focal length of lens, mm	F 85/1.5
Lens connection thread, mm	42x1
Focal Length of Eye-piece, mm	16.8
Power supply	3V, 2 AA
Battery life, hours	10
Dimensions, mm	290×91×73
Weight, kg	1.1

NOTE: As the design is being continuously improved some descriptions may differ from those given above.

## 5. SAFETY INSTRUCTIONS

- NS-156 is a safe product. However, normal safety procedures must be utilized like with regular daytime riflescope.

## 6. CONSTRUCTION

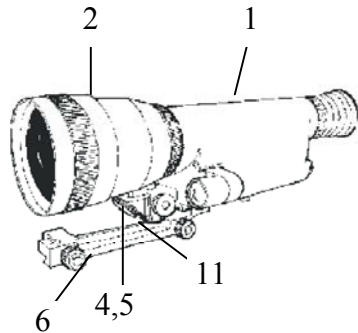


Figure 1

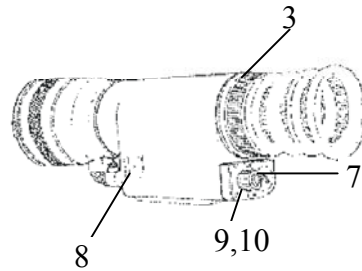


Figure 2

1. - Housing
2. - Objective Lens
3. - Eye-piece
4. - Projection Gear
5. - Reticule Module
6. - Weaver Mount
7. - Battery Compartment Cover
8. - I/R illuminator installation socket
9. - ON/OFF Switch
- 10.- Reticule illumination adjustment knob
- 11.- Reticule Adjustment Screws

The night sight NS-156 (figure 1,2) consists of Objective Lens (2), Housing of the Image Intensifier Unit (1) and eyepiece (3). Objective lens (2) can be focused on different distances to the observed objects. The lens has integral projection gear (4) having a reticule module (5). The required electric current is supplied from the main batteries through a wire. Switching on the reticule illumination and brightness control is made with wheel (10). Objective lens (2) is secured with lens cover to protect against highlight and physical impacts. Eyepiece (3) provides dioptrically compensation of the viewer's sight. Inside housing (1) there is a battery compartment covered with a cover (7). Inside the battery compartment there is compact strip. Main switch (9) is located on the housing of the device. The housing has "weaver" type mount for attaching to a weapon. Adjustment of the reticule within the field of view can be done with the help of knobs (11).

## 7. OPERATION INSTRUCTIONS:

### WARNING!

**NEVER OPERATE YOUR NIGHT VISION DEVICE IN DAYLIGHT AREAS WITHOUT THE LENS COVER ON! NEVER DIRECT THE LENS IN THE DIRECTION OF BRIGHT LIGHT!**

### 7.1 Pre-starting procedures.

Take the device out of the case. Insert the battery as follows:

- Unscrew the battery compartment cover (7)
- Install the battery observing correct polarity
- Close cover (7)

**NOTE:** Replacement of the batteries or installing of the charged ones is performed the same way.

After installing the batteries the NS-156 is ready for use. If everything works, now it is a great time to fill the warranty card.