



NIGHT VISION MONOCULAR
PYGMY 2M

2331 Superior Ave. Cleveland, OH 44114, USA
105 Sparks Ave., Toronto, ON M2H 2S5, Canada

IMPORTANT INFORMATION

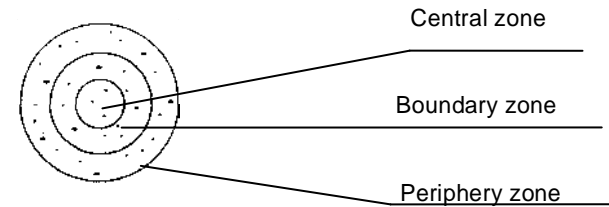
Read prior to activation

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.

- **NEVER** disassemble the unit. This device contains high voltage, which 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, headlamp, campfires, the moon, etc.)
- **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

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 view, are provided in the following 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

10. QUALITY CERTIFICATE

The PYGMY 2M is suited for usage.

Production date _____

Serial number _____

Quality Inspector signature _____

Purchase date _____

Salesman _____

Shop stamp

Features of the PYGMY 2M Night Vision Monocular

- ◆ Compact
- ◆ Lightweight
- ◆ Ergonomic
- ◆ Built-in I/R Illuminator
- ◆ High Quality Image Intensifier
- ◆ Near Focus adjustment

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BEFORE USE CAREFULLY READ ALL THE INSTRUCTIONS!

FAILURE TO OBEY THE INSTRUCTIONS WILL VOID THE WARRANTY!

1. BRIEF DESCRIPTION

PYGMY 2M Night Vision Monocular, named so for its small size - is feather light, compact, very durable. It has excellent resolution, and a high light gain capability.

PYGMY 2M is designed for a variety of general applications, such as observing remote objects and orientation in the field or at sea during nighttime with no artificial lighting.

Built-in I/R illuminator provides bright image even in absolute darkness.

Demonstration of the unit in a brightly lit room may be conducted for no longer than 3 minutes with lens cap closed. The device should never be aimed at bright light.

9. 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 (416) 663-6963 or Toll free at 1-877-398-6666. 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 call:
Tel: (416) 663-6963 Fax: (416) 663-9065
Email: NEWCONSALES@NEWCON-OPTIK.COM
INTERNET: <http://WWW.NEWCON-OPTIK.COM>
The defective products should be shipped to:
In USA: **2331 Superior Ave. Cleveland, OH 44114, USA**
In Canada: **105 Sparks Ave., Toronto, ON M2H 2S5, Canada**
From international:
105 Sparks Ave., Toronto, ON M2H 2S5, Canada

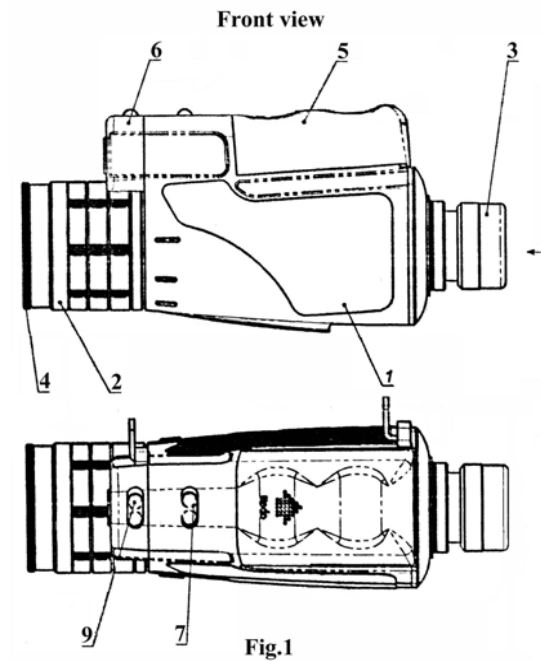
8. WARRANTY

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 check or money order made out to NEWCON OPTIK for the amount of \$15.00 to cover shipping and handling. This covers products shipped in USA or Canada only.

2. APPEARANCE OF THE DEVICE



1 – Body; 2 – Objective Lens; 3 – Eyepiece; 4 – Objective Lens Cap;
5 – Battery Compartment Cover; 6 – I/R illuminator;
7 – Power On/Off Switch; 9 – Illuminator On/Off Switch

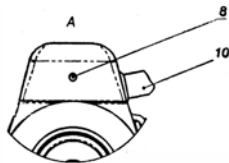
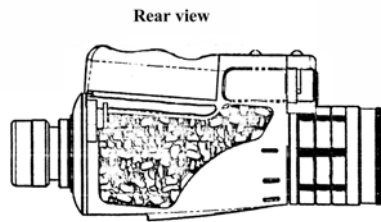


Fig.2

8 – I/R illuminator
ON-indicator;
10 – Hand strap

3. SUPPLIED ACCESSORIES

PYGMY 2M is supplied in the following assembly:

- Device	1 pc.
- Carrying Case	1 pc.
- Hand Strap	1 pc.
- User's manual	1 pc.
- Warranty card	1 pc.
- AA battery (optional)	2 pc.

7. TROUBLE SHOOTING

The monocular does not work.

Check that the batteries are installed properly.

Check the charge of the batteries.

Replace if it is weak.

The image does not appear in focus.

Bring the inspected object to the center of the image. Turning the eyepiece (3) adjust to achieve the clearest image on the screen. Then obtain the most clear-cut image of the object by rotating the objective lens (2). Repeat if necessary. If the image 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 monocular 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. The image should be restored in within 2 minutes.

Poor atmospheric conditions such as fog, haze or extremely dark environments, will decrease the visibility distance of the unit.

- Keep your device away from direct sunlight, impacts, dust, moisture, and sudden changes of temperatures.
- Do not keep the device at temperatures higher than 50°C (122°F).
- Do not touch the optical surfaces with fingers. Doing so may damage the anti-reflection coating.
- Do not take the cover off the lens if not necessary.
- Avoid shocks and sharp jolts.
- Make sure to switch off the unit during periods of non-operation and when storing the device for long period of time.
- Due to considerable optical magnification of the eye-piece 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;
- The resolving power (resolution) may change in the direction from the center towards the perimeter of the field of view. This is an inherent feature of the image tube type utilized in the device. We would recommend placing the scene of observation in the center of the field of view.
- Cleaning of optical surfaces is only allowed with professional camera lens cleaning supplies.
- To clean the exterior of the device, use a soft clean cloth.
- Keep away from heating appliances and central heating.
- Remove the batteries when storing the device for long period of time.
- Do not apply superfluous efforts at work with lens assembly, agile elements and thread connections.
- Repair works can only be made by the manufacturer.

4. TECHNICAL CHARACTERISTICS

1. Optics	
Magnification, x	2.2 ± 0.34
Objective Lens, mm	41.67
Field of View, not less	12°
Diopter Adjustment	± 4
Focusing Range, m	5 - ∞
Focal length:	
- Objective lens, mm	50 / F1.2
- Eyepiece, mm	12
Resolving Power at ambient illumination of 0,2 Lux (center) angular seconds	175
Type of Coating	Fully multi-coated optics
4. Misc.	
Batteries (optional)	2 (AA)
Allowed illumination, lx	5x10 ⁻³ ÷ 1
Operational Temperature Range	-25 ÷ +40°C (-13 ÷ +104°F)
Storage Temperature Range	-45 ÷ +85°C (-49 ÷ +185°F)
R.H. at 20°C (no more than)	80%
Weight, g (not more than)	440
Dimensions, mm (not more than)	172 x 80 x 60

5. 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!**

5.1. Preparing the Device for Operation.

- Unpack the device.
- Switch (9) and (7) (Fig.1) must be in the OFF- position.
- Attach the hand strap if necessary.
- Remove battery compartment cover (5) by sliding it out;
- Insert 2 AA batteries (sold separately) in the battery compartment observing correct polarity as shown at the bottom of the battery compartment;
- Close the battery compartment cover (5).
- PYGMY 2M is ready for operation

5.2. Testing of operation

Turn on the device-using switch (7). Lens cap (4) must be on. Direct the device to an object placed within 10 – 20 m from the viewer. Image will appear in green. Achieve the sharpest image on the screen by rotating the eyepiece (3). For close focusing rotate the front lens (2)

5.3.Operation at night

AT MOON LIGHT: Take off the lens cap (4). Turn on the device-using switch (7). Rotating the eyepiece (3) try to achieve the clearest image on the screen. Then obtain the most clear-cut image of the object focusing with ring,(2). Repeat the steps of focusing if necessary.

AT INSUFFICIENT AMBIENT ILLUMINATION

Activate switch (7) for switching on the device. Turn switch (9) into ON position. The I/R illuminator ON-indicator (8) should glow. Aim the device at the objects to be viewed.

When finishing the observation, turn slide switch (9) into OFF position. The indicator (8) should not glow. If so, the I/R illuminator has been switched off. Turn the power supply switch (7) into OFF position. Close the objective lens with lens cap (4). When the device is not in use for a long time remove batteries from the battery compartment. This will prevent leakage of the batteries and subsequent damage of contacts in the battery compartment.

6. STORAGE AND MAINTENANCE INSTRUCTIONS.

Warning! After transportation or keeping the device at temperature lower than -25°C (-13°F), the device must be warmed up to ambient temperature, from -20°C (-4°F) to +40°C (104°F) during 2-3 hours.

Precautions: PYGMY 2M is a sophisticated precision optical instrument equipped with electronics. Therefore, it should be handled with due care.