

11. ACCEPTANCE CERTIFICATE
NIGHT VISION DEVICE

Serial Number _____
Model DN-140

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

Date of production - _____
Place for seal
Quality inspector _____
(signature)



OPERATION MANUAL



NIGHT VISION RIFLE SCOPE
DN-140M
(Camera/Video Adaptable)

In USA : 3310 Prospect Ave. Cleveland, OH 44115
In Canada : 1183 Finch Ave. W., Suite 302, Toronto, ON. M3J 2G2 Canada
Tel: (416) 663-6963 Fax: (416) 663-9065
Email: NEWCONSALES@NEWCON-OPTIK.COM
INTERNET: <http://WWW.NEWCON-OPTIK.COM>

DISCLAIMER

The use of this device might be restricted or forbidden in your area. Check with local authority. Newcon Optik will not accept any responsibility for improper usage of this scope.

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10. 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. Our operation 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: NFEWCONSALES@NEWCON-OPTIK.COM

Internet: [HTTP://WWW.NEWCON-OPTIK.COM](http://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

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.

9. 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 in 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 US\$7.50 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.

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.

- **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. (Note: 1st generation units will still remain active for a few minutes after switching the unit off). At daytime objective lens must be covered by caps. There is a tiny hole in the cap to provide enough light for day time operation. It is allowed to turn on the unit at daytime, but the lenses must be covered by caps.

- **NEVER** aim active unit at intense light sources (i.e. lights, headlamps, campfires, the moon, etc.)³
- **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

THANK YOU FOR PURCHASING THE NIGHT VISION RIFLE SCOPE DN-140. PLEASE DEMAND TO CHECK THE DEVICE FOR PROPER OPERATION WHEN BUYING IT. PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE USING.

2. OVERVIEW

The night vision rifle scope DN-140 is an observational optico-electronic monocular device intended for precise shooting, examining distant objects orientation at nighttime conditions. The unit utilizes an image intensifier which amplifies available moonlight,

8. TROUBLESHOOTING

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 eye-piece (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.

7. Next, focus the scope by turning the focus ring on the sight's ring. You may have to re-focus both lenses to achieve sharp focus.

NOTE: For best result, use a 50mm lens. Wide angle and/or zoom lenses typically cannot provide a full-screen image through the DN-200 unit. Camera lens aperture setting lower (wider) than f2.0 may result in lower image resolution.

FILM: Use a ISO 400 film or faster. Also, using a tripod is strongly recommended due to the low shutter speeds common in night vision photography. The following table shows approximate shutter speeds at various ISO values with the aperture set at f1.8.

ISO	50	100	200	400	800	1600	3200
Shutter Speed, s	1	1/2	1/4	1/8	1/15	1/30	1/60

7. b) Using DN-140 As a Rifle Scope

1. Attach the scope to the rifle using weaver weapon mount (8). The scope is supplied with a standard 7/8" weaver mount (or optional European Mount).
 2. Turn On the scope (make sure the lens cover is on if it is daylight).
 3. Unscrew the windage/elevation covers (9).
 4. Adjust the reticle by screwing the windage/elevation screws (up-down), (left-right). Each horizontal click is 21mm/100m (3/4" @ 100 yards); vertical click is 12mm/100m (3/8" @ 100 yards).
 5. Screw the windage/elevation covers back on when done.
- 12

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 DN-140 Night Vision Rifle Scope will be useful:

- law enforcement
- hunting
- search and rescue
- wildlife observation
- nighttime photography and video
- security
- boating

Features

- Water resistant;
- The DN-140 Rifle Scope is camera/video adaptable;
- The DN-140 comes with precision windage/elevation adjustments.
- A self-contained Infra Red illuminator is included. It allows observations in total darkness (i.e basement or cave);
- Long range of vision;
- Automatic brightness protection
- Soft rubberized eye piece makes the viewing more comfortable;
- Standard and commonly available 2AA batteries ensure nonstop operation of the device for no less than 50 hours.

Warning!

After transportation or keeping the device at temperature lower than -40°C (-40°F), the device must be warmed up to ambient temperature, from -10°C (14°F) to +40°C (104°F), relative humidity of 80% max. at 20°C (68°F).

Precautions

DN-140 is a sophisticated precision 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 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.;

6.3 Operation at night

AT INSUFFICIENT AMBIENT ILLUMINATION

At insufficient ambient illumination use the Infra/Red illuminator (5). Activated by rotating switch (10) clockwise.

If brightness of the screen is decreasing, replace the batteries.

Take out the batteries during long periods of non-operation.

7. a) USING THE DN-140 WITH A CAMERA OR A VIDEO CAMCORDER

1. Pull out the rubber eye-guard (3) out from the eye-piece (2).
2. Thread the camera adapter (optional) onto the filter threads of your camera's lens.
The camera adapter uses a 52mm thread size; a common filter thread size for many Nikon, Canon and Minolta lenses. You may purchase a step-up/step-down ring from your local camera store if your lens does not use 52mm filters.
3. Fit the other end of the Camera adapter onto the eyepiece socket of the scope. Lock the adapter in place by using the three screws.
4. Connect the lens to the camera.
5. Make sure that you are in a dark area and that the lens cap is attached, switch the unit ON.
6. Focus the camera lens until the image is sharp.

6. OPERATION INSTRUCTIONS

WARNING!

NEVER DIRECT THE LENS IN THE DIRECTION OF BRIGHT LIGHT!

6.1 Pre-starting procedures.

1. Unpack the device. In order to install the batteries, open battery house cover (4), and install the batteries.

Check the functioning of the device by switching it on (click switch 10) and looking through eye-piece (2). If power supply and the batteries are O.K., you will see greenish lit screen. If the screen is not lit, check the batteries. Replace the batteries if necessary. If everything works, now is a great time to fill the warranty card.

Note: The scope will remain On for up to several minutes after the unit is shut Off. This is normal.

6.2 Testing of operation,

Direct the device on an object placed within 10-20 m from the viewer. Turning the focus ring (7), eye-piece (2) try to achieve the sharpest image on the screen of the image tube.

3. COMPONENTS

DN-140 is supplied with the following components:

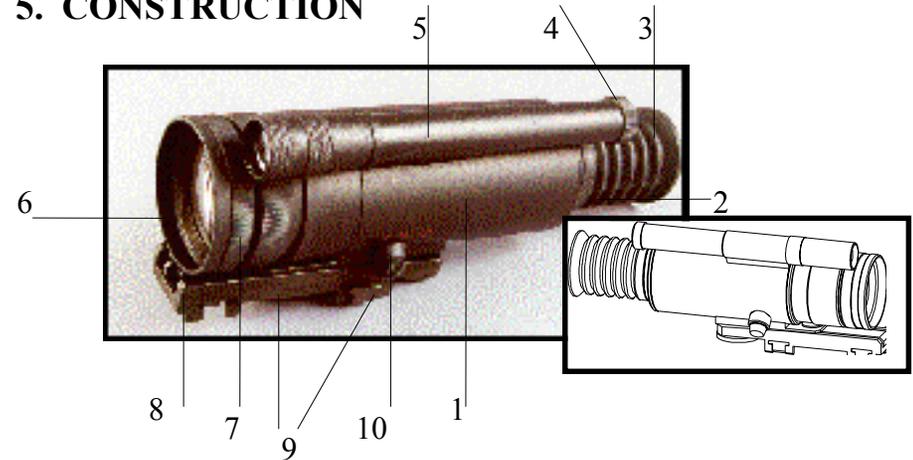
NAME	QUANTITY
DN-140 unit	1
Case	1
Lens cap	1
I/R illuminator	1
Weaver weapon mount (or European)	1
Rubber eye guard	1
Warranty Card	1
User's Manual	1
OPTIONAL ACCESSORIES	
Camera adapter ring	1
Video adapter ring	1

4. SPECIFICATIONS OF DN-140

Image intensifier	Gen. 1
Resolution ln/mm	32ln/mm
Magnification, X	2.8
Field of View, angl..., degrees, not less	12°
Lens	85mm, F/2
Dioptric correction	+3, -4
Focus Range, m	0.6-∞
Eyepiece focal length	15mm
Eyepiece relief distance	45mm
Power supply	3V, 2AA
Battery life, hours	30 (at 20°C)
Dimensions, mm	6.5x2.6x3.5
Weight, kg (complete set)	1.9

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

5. CONSTRUCTION



Pic. 1

1. Body
2. Eye-piece
3. Rubber Eye-piece Guard
4. Battery House Cover
5. IR Illuminator
6. Objective Lens
7. Objective Focus Ring
8. Weaver Weapon Mount and Tripod Mount
9. Windage/elevation Adjustments
10. On/Off Switch for the Unit and IR Illuminator