

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. Our operating hours are 9am-5pm, Monday - Friday, standard Eastern Time.

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

To locate the NEWCON Authorized Dealer call:

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

Email: NEWCONSALES@NEWCON-OPTIK.COM.

The defective products should be shipped to:

In USA: 3310 Prospect Ave. Cleveland, OH 44115

In Canada: 105 Sparks Ave., Toronto, ON M2H 2S5

10. ACCEPTANCE CERTIFICATE

NIGHT VISION DEVICE

Serial Number _____

Model: BDN 7x50

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



DAY / NIGHT BINOCULAR

BDN 7x50

In USA : 3310 Prospect Ave. Cleveland, OH 44115
In Canada : 105 Sparks Ave., Toronto, ON M2H 2S5
Email: newconsales@newcon-optik.com
Internet: www.newcon-optik.com

CONTENTS

- 1- Important Information
- 2- Overview
 - i) Application and advantages of BDN 7x50
 - ii) Warning
 - iii) Precautions
- 3- Components
- 4- Specifications
- 5- Construction
- 6- Operating Instructions
 - 6.1 Pre-starting procedures
 - 6.2 Daytime operations
 - 6.3 Night channel testing
 - 6.4 Nighttime operations
- 7- Troubleshooting
- 8- Warranty
- 9- Customer support
- 10- Acceptance Certificate

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.

securely packaged in its original container or an equivalent, along with proof of the date of original purchase, to your NEWCON OPTIK dealer. NEWCON OPTIK will repair (or at its option replace) the product or part thereof, which, on inspection by NEWCON OPTIK, 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 US\$15.00 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, 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.

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 caps closed!)

Condensation accumulates on the parts.

It is O.K. to use the unit in cold. However, when the unit is brought from the cold into a warm environment, it has to warm up for up to 2 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 binocular away from the light source immediately. The image should restore in within 2 minutes.

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

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 proves to be defective during this period, please bring the product

- ◆ **NEVER** disassemble the unit. This device contains high voltage elements, which may be hazardous to your health!
- ◆ **NEVER** expose the opened objective lenses of the activated unit with a switch in the night ('N') position to daylight. (Note: 1st generation units remain active for a few minutes after switching the unit off). If you test the night channel during daytime, caps must cover the objective lenses. There is a tiny hole in the lens caps to provide enough light for such testing.
- ◆ **NEVER** aim active unit at intense light sources (i.e. lights, headlamp, campfires, the moon, etc.). You can harm your eyes in daytime and spoil the device in nighttime.
- ◆ **NEVER** reverse the batteries polarity.
- ◆ **NEVER** connect the unit to external power sources
- ◆ **ALWAYS** keep the objective lenses covered when not in use
- ◆ **ALWAYS** store in a warm dry place when not in use
- ◆ **ALWAYS** remove battery when not in use for a long period

**THANK YOU
FOR PURCHASING THE DAY / NIGHT BINOCULAR BDN 7x50.
PLEASE DEMAND TO CHECK THE DEVICE FOR PROPER
OPERATION WHEN BUYING IT. PLEASE READ ALL THE
INSTRUCTIONS CAREFULLY BEFORE USING.**

2. OVERVIEW

The day / night binocular BDN 7x50 is an observational optical-electronic device, intended for examining objects and orientation in both day and nighttime or under twilight conditions. The unit utilizes 2 (two) image intensifiers, which amplify available moonlight, starlight or synthetic light. The binocular was designed to be easy in use and provide many years of operation.

Some of the typical activities where the BDN 7x50 Day / Night Binocular can be useful:

- ◆ law enforcement
- ◆ wildlife observation
- ◆ security
- ◆ search and rescue
- ◆ hunting

Features

- ◆ Daytime channel provides clear observation through high quality glass optics;
- ◆ Nighttime channel comprises two image intensifiers, one for each eye, thus providing stereo vision;
- ◆ Built-in infrared illuminator allows observations in total darkness (i.e. basement, cave or dark room);
- ◆ Independently adjustable eyepieces;
- ◆ Inter-pupillary distance adjustment;
- ◆ Lightweight and comfortable;
- ◆ Soft rubberized foldable eyepieces make the viewing more comfortable for glass wearers;
- ◆ Water-resistant;
- ◆ Works with standard AA batteries.

Adjust the focus and interpupillary distance as was described in paragraph 6.2. In case of insufficient lighting when observing an object, which is located not far from you, turn on the infrared illuminator by pressing and holding the 'IR On' button (11). As soon as the 'I/R On' button is released the infrared illuminator turns off.

Note: The illuminator lights on only if the unit has been already switched on by the button (7).

Note: If you look directly at front of the binocular when I/R illuminator is on it appears as a red dot at a size of a lit cigarette. The illuminator can be also detected using night vision device. Therefore, if you need to remain undetected, use the illuminator with caution.

Note: The unit automatically turns off after few minutes. This feature can be used to economically utilize the batteries power by periodically switching on and off the device during operation.

If brightness of the screen decreases, replace the batteries. Put protective lens caps back on the lenses after operation. If you don't intend to use the device during long time remove the batteries from the battery compartments to avoid any damage of the device in case of occasional leakage of electrolyte from the batteries.

7. TROUBLESHOOTING

The binocular does not work.

Check if the batteries are installed properly.
Check the charge of the battery. Replace if they are weak.

The image does not appear in focus.

Bring the inspected object to the center of the image. Turning the eyepieces (8) adjust the focus trying to achieve the clearest image on the screen. Repeat the steps of focusing if necessary

6. OPERATION INSTRUCTIONS

WARNING!

**NEVER TURN ON THE NIGHT VISION CHANNEL IN DAYLIGHT AREAS WITHOUT THE LENS COVERS ON!
NEVER DIRECT THE LENSES IN THE DIRECTION OF BRIGHT LIGHT!**

6.1. Pre-starting procedures. Unpack the device. In order to use the device at night, unscrew the battery house covers (4), and install the batteries. Observe the correct polarity indicated on the housing. Close the battery house cover.

6.2. Daytime operations. Move the switch (5) to the Day position (letter “D” is visible). Open the lens covers (1). Aim the device to any distant object and try to achieve the sharpest image by eyepieces rotating. Each eye adjusts independently. Adjust the interpupillary distance by folding and unfolding the device around the central hinge until two images merge into one. If you wear glasses fold the eyepiece rubber guards (9) to obtain closer focus distance.

6.3. Night channel testing. Check the functioning of the device by switching it on (press and hold button 7) and looking through the eyepieces (8). **(Make sure the lens caps are on in a daytime).** If the batteries are installed and function properly, you will see greenish-lit screen. If the screen is not lit, check the batteries. Replace the batteries if necessary. If everything works, now it is a great time to fill the warranty card.

Note: The unit will remain on for up to several minutes after releasing the power button. This is normal.

6.4. Nighttime operations. Take off the lens covers (1) from the lenses (2). Turn the device on by pressing and holding the ‘On’ button (7). Aim the device to an object placed within 8-15m from you.

Warning! After transportation or keeping the device at temperature lower than -25°C (-13°F), the device must be warmed up to ambient temperature for at least 2 hours.

Precautions

BDN 7x50 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.
- ◆ Cleaning of optical surfaces is possible only with professional camera lens cleaning supplies.
- ◆ Do not touch optical surface with fingers. Doing so may damage the anti-reflection coating.
- ◆ To clean the exterior of the device, use only a soft clean cloth.
- ◆ Do not take the covers off the lenses 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.
- ◆ Do not apply superfluous efforts at work with lens assembly, agile elements and thread connections.

Due to considerable optical magnification of the eyepieces some small structures inside the tube coating may be seen in the field of view in the form of dark and/or white points, which does not affect the serviceability of the device

At night, 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 intensifier tube type utilized in the device. We would recommend placing the scene of observation in the center of the field of view.

3. COMPONENTS

The BDN 7x50 set includes the following components:

BDN 7x50	1
Strap	1
Lens caps	2
Manual	1
Warranty registration card	1
AA batteries (optional)	2

4. SPECIFICATIONS OF BDN 7x50

	Day	Night
Magnification, X	7	2.1
Field of view, degrees, not less	6.5°	8.8°
Dioptric correction	± 4	
Interpupillary distance, mm	54-76	
Eye relief, mm	11.3	
Resolution	8"	1'40"
Operating Temperature (air humidity 80% at 20°C)	-	-30°C ...+35°C
Battery	-	2xAA
Battery life, hours	-	15
With I/R		40
Without I/R		
Dimensions, mm	176x204x68	
Weight, kg	1.33	

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

5. CONSTRUCTION

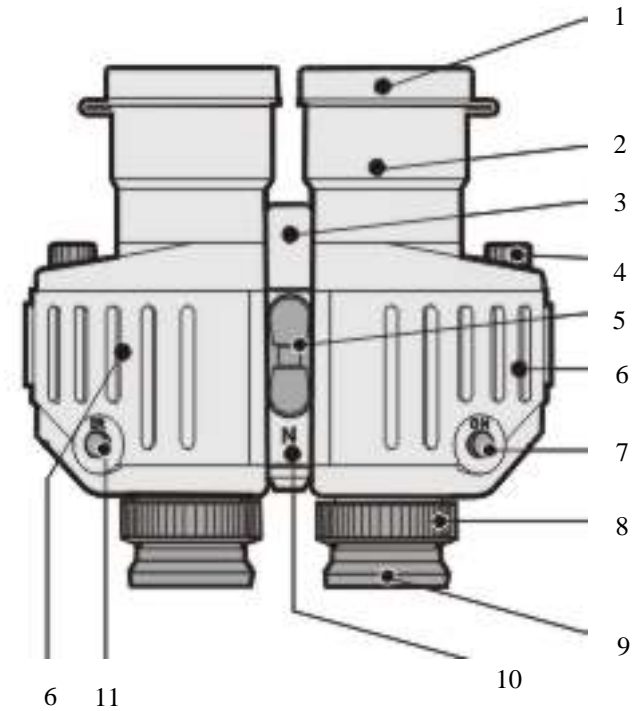


Figure 1

1. Objective lens covers
2. Objective lenses
3. I/R illuminator
4. Battery house covers
5. Day / Night switch
6. Rubberized body cover
7. Night channel 'Power On' button
8. Eyepiece
9. Foldable rubber eyepiece guard
10. Mode indicator (current mode is Night as drawn)
11. 'I/R illuminator On' button