



OPERATION MANUAL



NIGHT VISION SCOPE
NZT1-M2
(Camera Adaptable)

NEWCON™ INC. 1996

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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.

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11. ACCEPTANCE CERTIFICATE

NIGHT VISION DEVICE

Serial Number _____

Model NZT-1M2

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

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

- **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.)
- **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 SCOPE NZT1-M2.

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 scope NZT1-M2 is an observational optico-electronic monocular device intended for examining distant objects and orientation at nighttime conditions. The unit utilizes an image intensifier which amplifies available moonlight, starlight or man-made light. The viewer was designed to be easy to use, and provide many years of operation.

Some of the typical activities where the NZT1-M2 Night Vision Telescope will be useful:

- wildlife observation
- nighttime photography
- security
- boating
- search and rescue

10. Customer Support

Should you experience any difficulties with your Newcon Optik product, please consult the enclosed manual. If the problem remains unresolved, contact our customer support department at (416) 663-6963 or Toll free at 1-877-368-6666.

Our operating hours are 9am-5pm, Monday - Friday, Eastern Standard 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: +1-416-663-6963 Fax: +1-416-663-9065

Email: newconsales@newcon-optik.com

Web site: <http://www.newcon-optik.com>

The defective products should be shipped to:

From USA: 2331 Superior Ave. Cleveland, OH 44114

From all other countries: 105 Sparks Ave., Toronto, ON M2H 2S5, CANADA

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 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.

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.

- law enforcement

Features

- The NZT1-M2 telescope is camera adaptable. It is attachable to Pentax screw type cameras or to other cameras through an optional adapter. It allows to use any lenses with working length of 45.5 mm and screw type thread;
- A self-contained AP-7 Infra Red illuminator with adjustable focus and angle is included. It allows observations in total darkness (i.e basement or cave);
- One stage image intensifier tube with multi alkaline photocathode ensures observation at 1/4 moon and better conditions;
- The eye piece allows Dioptic adjustment for the eyes of the viewer;
- Soft rubberized eye piece makes the viewing more comfortable;
- Standard and commonly available 9V battery ensure nonstop operation of the device for no less than 10 hours.

Warning!

After transportation or keeping the device at temperature lower than -15°C (5°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

NZT1-M2 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 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 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 to place the scene of observation in the center of the field of view.

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. 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

Photography

When using the NZT1-M2 for photography, you are not supposed to obtain the same quality of pictures as taken in the daytime. But you will have the possibility to get an image of the object that normally could not be seen in the dark by the naked eye.

The user has a wide range of possibilities for experiments in the photography field by selecting different photo materials and changing of optics. Quality of pictures taken with a new lens or eyepiece may be estimated approximately by the object's image when observing through the view-finder of your SLR cameral.

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 eye-piece (9) adjust to achieve the clearest image on the screen. Then obtain the most clear-cut image of the object focusing with ring,(5). 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.14

3. COMPONENTS

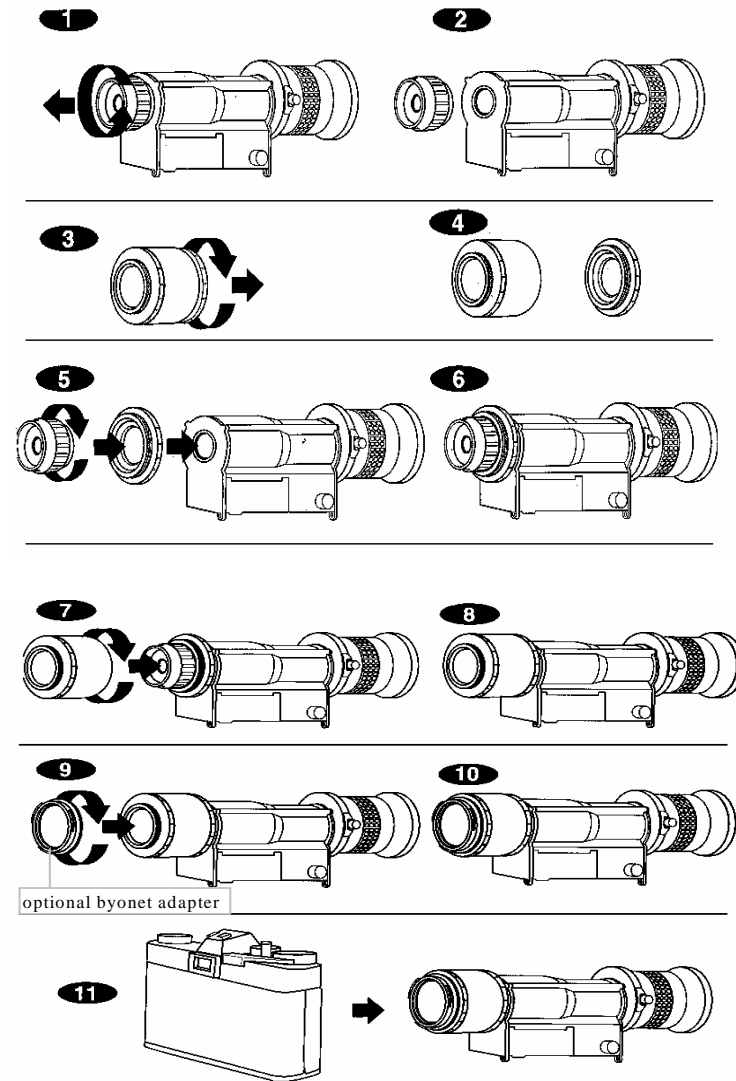
NZT1-M2 is supplied with the following components:

NAME	QUANTITY
NZT1-M2 unit	1
Case	1
Carrying strap	1
Lens caps	1
AP-7 I/R illuminator	1
AP-7 lens cover	1
Tripod doubler	1
Lens cloth	1
Camera adapter	1
Byonet adapter (optional)	1
Manual	1
Warranty Registration Card	1

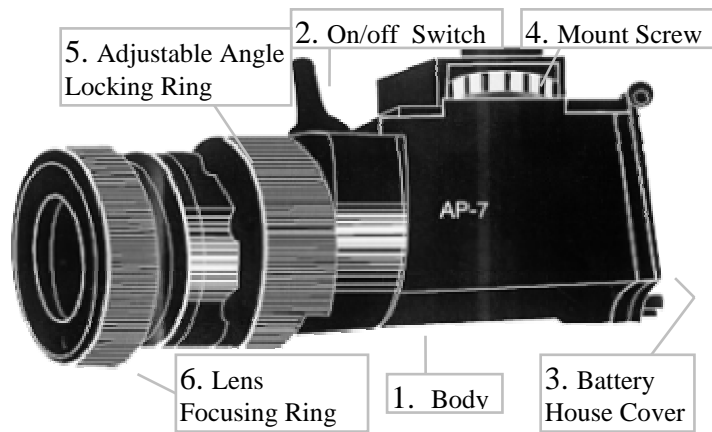
4. SPECIFICATIONS OF NZT1-M2

Magnification, X	2.4
Field of View, angl..., degrees, not less	15°
Lens aperture	1.5
Dyoptric correction	± 5
Operating illumination	from moon light to star's light
Power supply;	
Scope	9V
AP-7 I/R Illuminator	3V 2AA
Battery life, hours	10
Dimensions, mm	100×120×260
Weight, kg	1.1

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



Pic. 3



Pic. 2

1. Body
2. On/Off Switch
3. Battery House Cover
4. Mount Screw
5. Adjustable Angle Locking Ring
6. Lens Focusing Ring

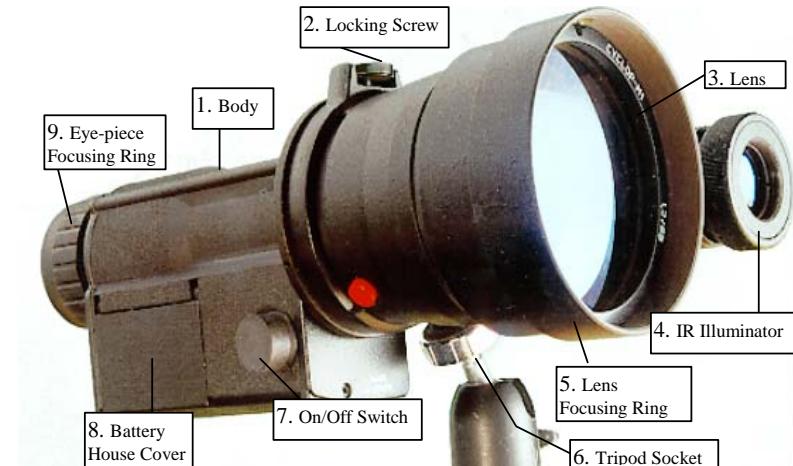
7. USING THE NZT1-M2 WITH CAMERA

To use a camera with the NZT1-M2, use a camera with Pentax Screw type thread. Adapters for most other cameras should be available in your local camera store.

A camera adapter is supplied with your night vision scope. See Pic. 3 for attachment instructions.

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5. CONSTRUCTION



Pic. 1

1. Body
2. Locking Screw
3. Lens
4. IR Illuminator
5. Lens Focusing Ring
6. Tripod Socket
7. On/Off Switch for the Scope
8. Battery House Cover
9. Eye-piece Focusing Ring

6. 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!

6.1 Pre-starting procedures.

1. Unpack the device. In order to install the battery, open battery house cover (8), and install the battery.

Check the functioning of the device by switching it on (click switch 7) and looking through eye-piece (9). 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 releasing the ON button. This is normal.

6.2 Testing of operation,

The scope can be switched on by short pushes on the button (7) during 1-2 seconds. The lens cap must be on the lens (3).

Direct the device on an object placed within 10-20 m from the viewer. Turning the eye-piece (9) and the lens (3) try to achieve the sharpest image on the screen of the image tube.

6.3 Operation at night

AT MOON LIGHT

Take off the lens cover from the lens (3). Turn on the device using switch (7). Turning the eye-piece (9) adjust to achieve the most clear image on the screen. Then obtain the most clear-cut image of the object focusing with ring (5). Repeat the steps of focusing if necessary.

As a battery saving measure, the unit has an automatic delayed shut off. When brightness of the image is being lowered, press the switch again.

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

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

AT INSUFFICIENT AMBIENT ILLUMINATION

At insufficient ambient illumination use the AP-7 Infra/Red illuminator. Attach AP-7 Infra/Red illuminator unit using the mount screw (4) to the tripod socket of the telescope lens NZT, then switch on AP-7 (2). Focusing of the beam is done by rotation of the lens ring (6). The angle of the beam can be adjusted as well (5).

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