

D-740 / 760

4x & 6x Night Vision Weapon Sights

Operator Manual

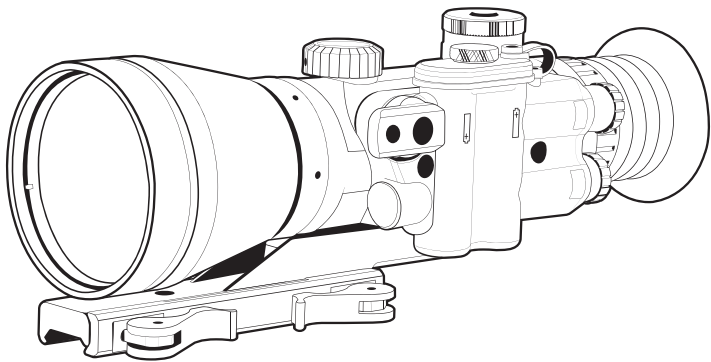


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DESCRIPTION

The D-740/760 night vision weapon sights are some of our most popular products and have garnered great respect among sportsman's/hunting and Law Enforcement and Military communities domestically and internationally. The multi-coated optics provide sharp, defined images while the illuminated two-color (red or amber) mil-dot reticle with brightness control ensures pinpoint accuracy. Other features include manual gain control ("M" models only); precise windage and elevation adjustments and a quick-release weapon mount developed specifically for the D-7xx Series line of night vision weapon sights.

WARNINGS | PLEASE READ THIS



Please read this manual thoroughly before operating this device.

Keep this manual in a safe place for future reference.

This Night Vision Device should only be used during night or low light conditions. It contains a light sensitive image intensifier tube that can be damaged if exposed to excessive light. To prolong tube life and avoid damage, do not turn the unit on in daylight without the protective cover.

All Image Intensified Devices require some light to operate such as moonlight or ambient starlight. Night vision devices will not penetrate smoke, fog, rain, or heavy snowfall. Cloud cover and tree shadows will reduce the effectiveness of this device. Do not operate this Night Vision Device in a potentially explosive environment, near gasoline fumes or other volatile materials. This is a high voltage electrical device.

Do not disassemble, puncture, recharge, or expose the battery to fire or high temperature. Doing so may result in an explosion and resulting chemical burns. When the device is not in operation for a prolonged period, remove the battery from the device and keep it separately in a cool and dry place.

PRODUCT OVERVIEW

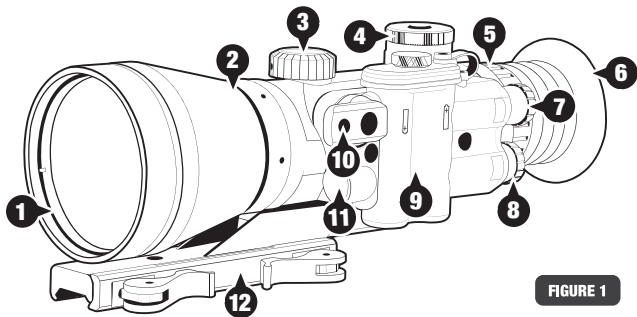


FIGURE 1

[1] Objective Lens	[7] Power Switch + Reticle Color
[2] Main Housing	[8] Reticle Brightness Control
[3] Focus Adjustment	[9] Battery Compartment
[4] Windage & Elevation Turrets	[10] IR Mount
[5] Eyepiece/Diopter	[11] Manual Gain Control (<i>If Applicable</i>)
[6] Rubber Eyepiece Guard	[12] Quick Release Mount

KIT COMPONENTS

D-740 or D-760 Night Vision Weapon Sight	IR Mount
Hard Case	Daylight filter/Lens Cap
Operator's Manual	AA Batteries (2)
Lens Tissue	Quick Release Mount

TECHNICAL SPECIFICATIONS

	D-740	D-760
Magnification	4x	6x
Lens System	100mm f1.5	165mm f2.0
FOV	10°	8°
@1000 yds @1000 m	574' 175m	459' 140m
Range of Focus	33' to ∞ 10m to ∞	33' to ∞ 10m to ∞
Detection Range	1395' (G3) 425 m (G3)	1558' (G3) 475 m (G3)
Recognition Range	1148' (G3) 350 m (G3)	1312' (G3) 400 m (G3)
Reticle Type	Mil-Dot	Mil-Dot
Windage/Elevation Adj. @100 yds	¼ MOA per click ¼" per click	¼ MOA per click ¼" per click
Diopter	+3 to -4	+3 to -4
Weather Resistant	Waterproof	Waterproof
Camera Adaptable	Yes	Yes
IR Illuminator	Optional	Optional
Battery Type/Life	(x2) AA 60 hours	(x2) AA 60 hours
Dimensions	229mm x 89mm x 102mm	330mm x 91mm x 102mm
Weight	38 oz	46 oz
Operating Temperature	-40°C to +50°C	-40°C to +50°C
Warranty	2 years	2 years

Note:

The effective detection and recognition range of D-740/760 is dependent on the amount of ambient light, magnification of the scope, atmospheric transparency, and contrast between the target of observation and its background. In high ambient light (moonlight) with the target against a light background (sand or snow), the effective range is increased. In low ambient light (overcast) with the target against a dark background (trees, brush, etc.), the effective range is decreased.

FEATURES

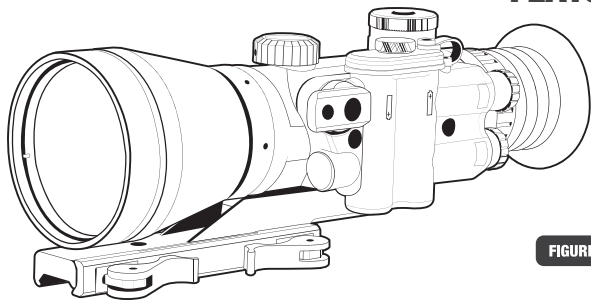


FIGURE 2

Long range observation under very low light levels.

High caliber recoil handling (including 50 BMG, .375 H&H, & .416 Rigby)

Illuminated red-on-green MIL-DOT reticle with brightness control

High resolution throughout field of view

Specially designed and fully coated optics with very high Light transmission.

Internal focusing system increases stability & precision

Manual gain

Bright source protection

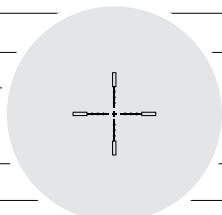
Automatic brightness control

Standard "Weaver" high-strength mounting system

Waterproof nitrogen purged construction

State-of-the-art impact resistant housing

Lightweight



MIL-DOT RETICLE

1. BATTERY INSTALLATION

!WARNING!



Prior to installing the battery make sure the day time protective cover is fitted over the lens. Excessive light can damage intensifier tube and void warranty

The D-740/760 uses (2) AA batteries. Open the battery compartment cover (fig 1-9) and install batteries according to the polarity chart on the housing.

2. USING THE D-740/760

Performance-readiness of the D-740/760 can be checked in the daytime using the Daytime Filter/Objective Lens Cover

!WARNING!



Removing cover during daylight, excessive use during daylight, or pointing towards exceptionally bright light sources e.g. sun, light bulbs, welding arc, etc. will void product warranty. (See page 12 for more information)

A yellow-green image should be seen through the eyepiece after switching on the device.

1. Remove the Objective Lens Cover.
2. Turn the power switch (fig. 1-7) to the R (red reticle) or G (green reticle) position. A green image with reticle should be seen through the eyepiece.
3. Rotate the eyepiece (fig. 1-5) to sharpen the focus on the reticle. Use the reticle brightness control to adjust reticle brightness (fig. 1-8).
4. Acquire a target and adjust the objective focus (fig. 1-3) to sharpen the image.
5. When the D-740/760 is no longer required, turn the power switch (fig. 1-7) to the OFF position and replace the Objective Cover.

Always remember to turn off the D-740/760 when it is no longer being used. If the device is not going to be used for more than 10 days, batteries should be removed to prevent leakage and corrosion. Always keep the Objective Lens Cover on when the device is not in use.

3. MOUNTING ON THE RIFLE

NOTE:

Mounting procedure may vary depending on the type of mount used.

1. Loosen the mounting clamp(s) (fig. 1-12)
2. Mount the D-740/760 on the rail of the rifle so that the rubber eyecup is touching shooter's eye (add 1"-2" for higher caliber weapons). The position of the device should be such that the shooter is in the natural shooting position when using the scope, without needing to lean too far forward or back.
3. Tighten the mounting clamps.

NOTE:

If necessary loosen/tighten the tension bolts with a wrench so that the mount is securely fastened to the rail.

4. The D-740/760 is now mounted and ready to be sighted-in.

4. THE RETICLE

Reticle Brightness can be adjusted by the reticle brightness control knob (fig. 1-8). Measurements are in meters at a distance of 100 meters using 4x (D-740).

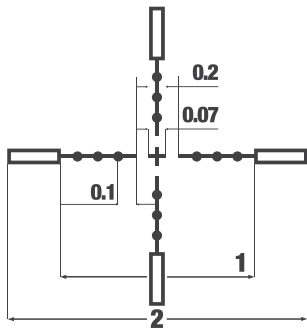


FIGURE 3

1 cm = 0.3937 in
1 meter = 100 cm
1 meter = 3.281 ft
100 meters = 109.4 yds

5. SIGHTING-IN THE D-740/760

D-740/760 can be sighted-in during the daytime by using the Daytime Filter/Objective Lens Cover or during nighttime. The process is identical to any standard day scope and is achieved by adjusting windage and elevation target turrets (fig. 1-4) located underneath protective dust caps. The target turrets feature positive click adjustments and each click is equal to ¼ MOA (i.e. ¼" at 100 yards, ½" at 200 yards, etc.)

NIGHT VISION CHARACTERISTICS

MONOCHROMATIC IMAGE

Night Vision Devices produce a monochromatic image. You will not be able to see any differentiation between colors. In particular, red and green lights will both appear green. Take care to verify color differences with unaided vision. Exercise extreme caution when operating aircraft, ground vehicles, or marine vessels while using night vision equipment.

COLOR SENSITIVITY

Night Vision Devices are more responsive to red and white lights than green and blue lights. Because of this, distant red and white lights may appear closer than green or blue lights. Exercise extreme caution when using these lights for navigation. Periodically verify the distances to these lights with your unaided eyes.

EXTREME DARKNESS

Night Vision Devices are effective under most dark conditions including overcast starlight. They are not practical in an extremely dark environment such as in a tunnel where there is no natural ambient light. Without sufficient ambient light, the operator may notice pinpoint - size sparkles (scintillation or noise) in the image area. These sparkles are small amounts of energy generated inside the image intensifier that strike the phosphor screen and are an indication that the device is working.

NIGHT VISION CHARACTERISTICS

CONTRAST REVERSAL

Night Vision Devices detect light that cannot be seen by the human eye. This light is often referred to as being in the near-infrared light spectrum. The existence of this light and the manner in which it reflects is not normally visible to the naked eye. For this reason, objects that normally appear lighter than their surroundings may appear dark against a light background. In addition, the output image of the Night Vision Device is dependent on the reflective quality of the objects the operator sees in the viewing area. Objects that appear light during the day but have a dull surface may appear duller when viewed through a Night Vision Device. All of these factors must be taken into account when utilizing a Night Vision Device for observation or navigation purposes.

DEPTH PERCEPTION

Night Vision does not present normal depth perception. Use extreme caution when using a Night Vision Device where reliance upon depth perception is important.

FOG AND RAIN

Night Vision Devices are very responsive to reflected ambient light; therefore, fog or heavy rain can reflect too much light toward the Night Vision Device and may seriously degrade its performance.

HONEYCOMB

This is a faint hexagonal pattern throughout the image area. This effect is more noticeable under high light conditions. Do not be concerned - the honeycomb effect is an inherent characteristic of all high-amplification night vision systems that incorporate a microchannel plate in the intensifier.

BLACK SPOTS

These are cosmetic blemishes in the image intensifier. They do not affect the performance or reliability of a night vision device and a number of sizes are inherent in the manufacturing process.

NIGHT VISION CHARACTERISTICS

IMAGE INTENSIFIER LIFE

Night Vision Devices are designed to be robust. The image intensifier tube, however, does not have an unlimited lifetime. The life of the image intensifier is dependent upon the amount of use. Under normal operating conditions, it will provide reliable performance for an extended period of time.

MAINTENANCE

OPTICS

Always clean the optics with a suitable optical cleaning cloth. Do not use detergents or excessive moisture to clean any part of the Night Vision Device.

BATTERY/BATTERY COMPARTMENT

Any Night Vision Device that is to be stored for a long or undetermined amount of time must have the batteries removed.

MOISTURE

The Night Vision Device is water resistant. No warranties or guarantees apply to a Night Vision Device that has been submerged in water. Take great care when using any night vision in a wet environment as the image intensifier tube is sensitive to moisture.

SALT WATER

If the Night Vision Device is exposed to a salt water environment, wipe it off with a clean cloth slightly dampened with fresh water and dry it thoroughly. Take special care of the optics as noted above.

SUNLIGHT

Night Vision is sensitive to light and must be stored away from direct contact with bright light sources of any kind.

!WARNING!

Improper care or unauthorized maintenance can damage device and may result in warranty nullification.

TROUBLESHOOTING

SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION
No visible Image	<ul style="list-style-type: none">a. Objective lens cap not been removed.b. Battery cover is loose.c. Incorrect battery polarityd. Weak battery	<ul style="list-style-type: none">a. Remove capb. Tighten coverc. Reinsert batteryd. Replace battery
Image flickers, flashes, or clicking is heard	<ul style="list-style-type: none">a. Normal for new battery to cause this for first five minutes.	<ul style="list-style-type: none">a. If condition continues contact manufacturer for service instructions
Dark spots on screen	<ul style="list-style-type: none">a. Cosmetic blemishes. Normal for this technology.	<ul style="list-style-type: none">a. Acceptable as long as it does not interfere with operation of the device
Image not clear	<ul style="list-style-type: none">a. Focus is not adjusted.b. Too close to object	<ul style="list-style-type: none">a. Adjust focusb. Increase viewing distance.
Fixed pattern noise. (honeycomb)	<ul style="list-style-type: none">a. Cosmetic blemishes caused by too much illumination.	<ul style="list-style-type: none">a. Acceptable as long as target resolution can be resolved.
Pattern of dark thin lines (chicken wire)	<ul style="list-style-type: none">a. Normal under worst conditions. These lines will form hexagonal or square wave-shaved lines.	<ul style="list-style-type: none">a. Acceptable as long as it does not interfere with operation of the device
Image dimmer than usual.	<ul style="list-style-type: none">a. Weak batteriesb. Low natural illumination level.	<ul style="list-style-type: none">a. Replace the batteries.b. Turn on IR illuminator.

WARRANTY

The D-740/760 is covered by a limited 2 year warranty from time of sale. The warranty is valid only for the original purchaser. The manufacturer warrants its products to be free from defects in material and workmanship during the warranty period. If the product proves to be defective during this period, the manufacturer will repair the original product or replace it with a like product at the sole discretion of the manufacturer.

This limited warranty does not cover:

1. Any product on which the serial number has been defaced, modified, or removed.
2. Any product that has experienced deterioration or a malfunction from: accidents, misuse, neglect, fire, water, lighting or other acts of nature, unauthorized product modification or failure to follow instructions supplied with the product, repair or attempted repair by anyone not authorized to do so, use of supplies or parts not meeting manufacturer's specifications, normal wear and tear, and/or extreme wear and tear caused by battlefield conditions or other extreme environments.

No other warranties, expressed or implied, are valid without an agreement in writing provided by the manufacturer. All shipping involved in warranty work / replacement is the sole responsibility of the purchaser.

LIMITATIONS OF LIABILITY

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