

United States Marine Corps

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Training Command
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AM1305
24 MAY 2004

MK 153 SMAW NIGHT VISION SIGHTS

STUDENT OUTLINE

TERMINAL LEARNING OBJECTIVES

1. Given a SL-3 complete MK153 SMAW, AN/PVS-17C night vision sight, an encased rocket, and a target from 150 to 250 meters, while wearing a fighting load, engage a target with a MK153 shoulder-launched multipurpose assault weapon (SMAW) using an AN/PVS-17C night vision sight by achieving a rocket hit on the target. (51TR.01.06)
2. Given an SL-3 complete AN/PVS-17C night vision sight and authorized cleaning gear, while wearing a fighting load, perform operator maintenance on an AN/PVS-17C night vision sight in accordance with TM 10796-12&P. (51TR.01.07)

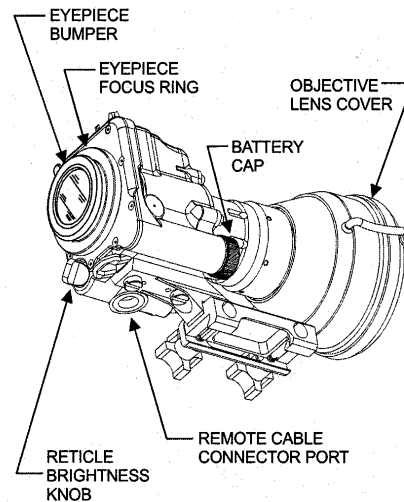
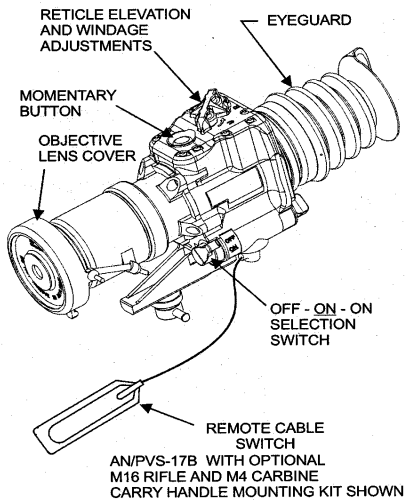
ENABLING LEARNING OBJECTIVES

1. Given a list of choices, identify the characteristics of an AN/PVS-17C night vision sight in accordance with TM 10796-12&P. (51TR.01.06a)
2. Given a list of choices and a diagram of an AN/PVS-17C night vision sight, identify the nomenclature of an AN/PVS-17C night vision sight in accordance with TM 10796-12&P. (51TR.01.06b)
3. Given a SL-3 complete MK153 SMAW and a SL-3 complete AN/PVS-17C night vision sight, mount an AN/PVS-17C night vision sight to an MK153 SMAW in accordance with TM 08673B-10/1. (51TR.01.06c)
4. Given an AN/PVS-17C night vision sight, operate an AN/PVS-17C night vision sight in accordance with TM 10796-12&P. (51TR.01.06d)

1. CHARACTERISTICS OF THE AN/PVS-17C NIGHT VISION SIGHT. The AN/PVS - 17C or Miniature Night Sight (MNS) is a portable, battery powered, electro-optical instrument that can be hand held or mounted on an individual weapon. It is made of a high strength hard plastic material and is powered by one (1) AA alkaline or Lithium battery. The system provides high performance observation, quick man sized target acquisition and aiming capabilities during night observation from close ranges to 300 meters. The sight amplifies reflected light from the

moon; stars and sky glow so that the view scene becomes clearly visible to the operator.

2. Mechanical/Optical Functions. The mechanical functions of the AN/PVS-17C allow for differences in the physical features of individual operators and provide for operating the system. These functions provided include the: Power OFF-ON-ON, RETICLE BRIGHTNESS, EYE PIECE FOCUS, RETICLE WINDAGE AND ELEVATION ADJUSTMENT KNOBS, REMOTE CABLE SWITCH, MOMENTARY BUTTON.



3. DESCRIPTION OF MAJOR COMPONENTS. Eye-guard and eye-piece: are suitable for a broad range of eye positions, ranging from 24mm to 40mm and beyond eye relief. It offers protection to the users eye during the weapons recoil and protection to the eyepiece if dropped.

(a) Elevation and windage adjusters: Elevation controls reticule up or down while the windage controls reticule right or left. A raised "U" identifies the elevation control while a raised "R" identifies the windage control.

Each click on the controls will move the point of impact 0.143 inches at 25 meters. So for 100meters it will move the POI .5 meters. Counter clockwise movement of the reticule adjustments move the POI up or right.

(b) Momentary button: allows the user to activate the image intensifier and reticule brightness only when the MNS is up to the

users eye. The momentary button enhances light security, conserves battery and will illuminate reticule LED.

(c) OFF ON ON SELECTION SWITCH: OFF means no power available, ON for momentary button or remote cable switch. ON is for continuously supplied power.

(d) OBJECTIVE LENS COVER: Protects the MNS from light during day operations & allows day light zeroing.

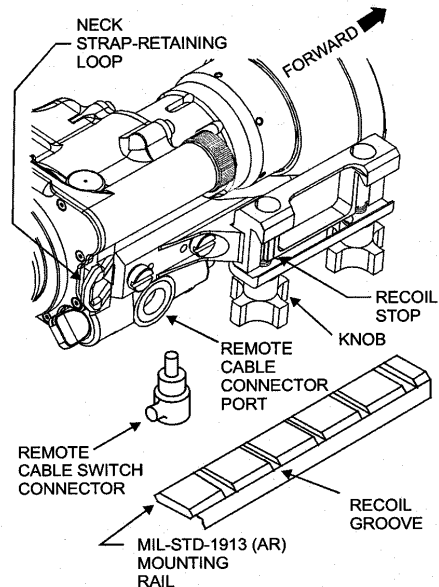
(e) EYE PIECE FOCUS RING: focuses the eyepiece lens to the users eye, and adjusts the reticule not the image.

(f) RETICLE BRIGHTNESS KNOB: adjusts the brightness of the reticule by providing five (5) levels in addition to the OFF button.

(g) REMOTE CABLE SWITCH & CONNECTOR PORT: operates the same as the Momentary Button. It connects through the remote cable connector and permits the user to quickly activate the MNS as the weapon is shouldered.

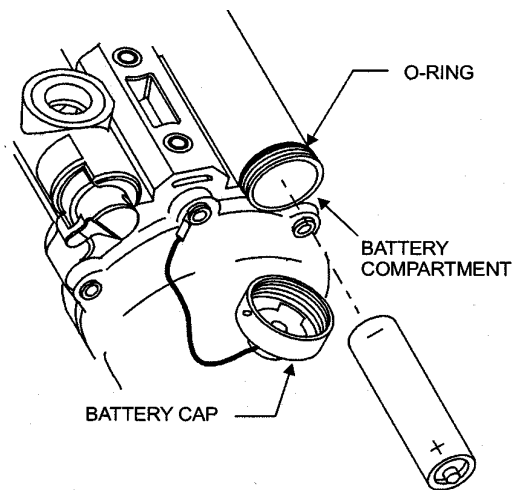
4. MOUNTING THE AN/PVS-17C:

1. Loosen 2 mounting screws and place MNS mount assembly onto mounting rail ensuring the mount assembly falls into a recoil groove on the mounting rail.
2. Push MNS forward so that the front edge of the MNS mount recoil stop is against a recoil groove.
3. Hand tighten 2 mounting screws on mount assembly.
4. Check eye relief. If an adjustment is needed loosen 2 mounting screws, lift MNS off mounting rail, move it back or forth, and repeat steps (1) through (3).
5. Once the weapon has been zeroed, the same recoil groove must be used to reduce loss of



5. BATTERY INSTALLATION:

- (a) Install objective lens cover.
- (b) Ensure OFF-ON-ON selection switch is in the OFF position.
- (c) Open battery compartment by rotating battery cap counter clockwise.
- (d) Inspect battery compartment for dirt, cracks, corrosion, foreign matter, and damage to battery contacts.
- (e) Ensure the O-ring is correctly installed onto threaded end of battery compartment. If battery cap or O-ring is damaged replace them.
- (f) Inspect plastic threads of battery compartment as well as metal halo around the top of the battery compartment. Halo should be secured.
- (g) Clean all components as necessary.
- (h) Install battery as indicated inside the battery compartment
- (i) Place battery cap on battery compartment and rotate clockwise until the O-ring is compressed. DO NOT CROSS THREAD BATTERY CAP.
- (j) **LOW BATTERY WARNING LED:** The low battery warning LED is yellow & located in the upper right viewing area of the eyepiece. It will illuminate to indicate a maximum of 30 minutes of battery life remaining.



6. WEAPON MOUNTED START-UP OPERATIONS:

(a) Install objective lens cover if using during daylight.
Install battery into MNS.

(b) Position OFF-ON-ON switch to ON.

(c) Shoulder the weapon & press eye-to-eye guard.

(d) Squeeze and hold remote cable switch.

(e) Rotate reticule brightness knob until reticule is clearly visible.

(f) Adjust eyepiece focus ring until a sharp image of the reticule is obtained

(g) Release remote cable switch.

7. WEAPON MOUNTED NORMAL OPERATIONS:

(a) Remove objective lens cover for night operations.

(b) Shoulder weapon and press eye-to-eye guard.

(c) Squeeze and hold remote cable switch.

(d) Acquire target and place reticule on target.

(e) Fire spotting rounds and rocket.

(f) Release remote cable switch

(g) Lower S.M.A.W

8. CLEAN AND MAINTAIN THE AN/PVS-17C

(a) Like any other piece of gear, the AN/PVS-17C needs to be cleaned and maintained to keep it in proper working order.

(1) Remove the eye guard

(2) Remove dirt with lens brush

(3) If required rinse optical surfaces with clean water to remove dirt before wiping with lens paper. Wiping extremely dirty or sandy surfaces will cause scratches.

(4) Wipe optical surfaces in a circular motion starting in the middle and work outward using lens paper dampened with water wipe surfaces dry with a lint- free cloth.

(5) Clean the Housing Assembly Surface:

(a) Clean all exposed metal surfaces with a lint free cloth

(b) Allow surfaces to dry

(6) Clean the Eye Guard:

(a) Remove the eye guard

(b) Clean the eye guard with a wet cloth

(c) Dry the eye guard with a clean, lint free cloth

(d) Reinstall the eye guard

(7) Clean the Carrying Bag and Storage Case:

(a) Shake out loose dirt and foreign matter

(b) Wipe the inside and the outside of the bag with a damp cloth.

(c) Allow the bag to dry