

P/N 830-0058-0

OSR 12-S-1495

NIVISYSTM LLC

NIGHT VISION SYSTEMS

OPERATOR MANUAL

PVS-14A

Monocular Night Vision Device



Nivisys, LLC
1120 Alza Drive
El Paso, Texas 79907 USA

915-633-8354 (tel)
915-633-8529 (fax)
info@nivisys.com
www.nivisys.com

Export of the commodities described herein is strictly prohibited without a valid export license issued by the U.S. Department of State Office of Defense Trade Controls prescribed in the International Traffic in Arms Regulations (ITAR) Title 22, Code of Federal Regulation, Chapter 1, Subchapter M, Parts 120-130.

Inside cover intentionally left blank.

OPERATOR MANUAL

for

PVS-14A

Monocular Night Vision Device

ALL RIGHTS RESERVED

This document contains proprietary information developed by Nivisys, LLC. It has been prepared to instruct Nivisys customers in the proper care and operation of the equipment respective to this document. Neither receipt nor possession thereof confers any right to reproduce or use, or disclose, in whole or in part, any such information without written authorization from Nivisys, LLC.

© 2019 Nivisys.

This page intentionally left blank.

ADVISORY OVERVIEW

The following description categorizes the level of risk associated with each cautionary statement displayed throughout the manual.

WARNING

**HIGHLIGHTS AN OPERATION OR
PROCEDURE WHICH, IF NOT STRICTLY
OBSERVED, COULD RESULT IN INJURY TO OR
DEATH OF PERSONNEL.**

CAUTION

**HIGHLIGHTS AN OPERATION OR
PROCEDURE WHICH, IF NOT STRICTLY
OBSERVED, COULD RESULT IN DAMAGE TO
OR DESTRUCTION OF EQUIPMENT OR LOSS
OF MISSION EFFECTIVENESS.**

NOTE

**HIGHLIGHTS AN ESSENTIAL OPERATION,
PROCEDURE, CONDITION OR STATEMENT.**

This page intentionally left blank.

TABLE OF CONTENTS

Advisory Overview	iii
Table of Contents	v
List of Figures	vii
List of Tables	ix
CHAPTER 1: GENERAL INFORMATION	1-1
1.1 Introduction	1-1
1.2 Equipment Description	1-1
1.3 Standard Kit Parts List	1-2
1.4 Standard Kit Parts Illustration	1-3
1.5 Optional Items List	1-4
1.6 Optional Items Illustration	1-5
1.7 System Performance and Data	1-6
CHAPTER 2: PREPARATION FOR USE	2-1
2.1 Introduction	2-1
2.2 Battery Precautions	2-1
2.3 Battery Installation	2-3
2.4 Eyecup Installation	2-3
2.5 Demist Shield Installation	2-4
2.6 Sacrificial Window Installation	2-4
2.7 Headmount Adjustment and Installation	2-5
2.8 Head/Helmet Mount Installation	2-7
2.9 Installation of Weapon Mount (Optional)	2-9

TABLE OF CONTENTS (CONT.)

CHAPTER 3: OPERATING INSTRUCTIONS	3-1
3.1 Introduction	3-1
3.2 Controls and Indicators	3-1
3.3 Hand-held Operation	3-4
3.4 Head Mounted Operation	3-5
3.5 Operations with IR Source	3-8
3.6 Using the Gain Control	3-8
3.7 Operation in Conditions of Blowing Dust or Sand	3-9
3.8 Operation in Rainy or Humid Conditions	3-10
3.9 Operation in Salt Water Areas	3-10
3.10 Shutting Down the Unit	3-10
3.11 Preparation for Storage	3-10
 CHAPTER 4: MAINTENANCE INSTRUCTIONS	 4-1
4.1 Introduction	4-1
4.2 Deactivation	4-1
4.3 Battery Removal	4-1
4.4 Cleaning the PVS-14A	4-1
4.5 Cleaning the Optics	4-2
4.6 Checking for Damage and Corrosion	4-2
 CHAPTER 5: TROUBLESHOOTING	 5-1
5.1 Troubleshooting Procedures	5-1
 APPENDIX A: SPARE AND REPAIR PARTS LIST	 A-1
A.1 Introduction	A-1
A.2 Contact Information	A-1
A.3 Spare Parts List	A-1
 APPENDIX B: WARRANTY INFORMATION	 B-1

LIST OF FIGURES

1-1	Standard Kit Parts Illustration	1-3
1-2	Optional Parts Illustration	1-5
2-1	Standard Installations	2-3
2-2	Headmount Diagram	2-7
2-3	Head/Helmet Mount Adapter Installation	2-8
2-4	Weapon Mount Installation	2-10
3-1	Controls and Indicators	3-2
3-2	Head Mounted Operation	3-7
3-3	Gain Control	3-9

This page intentionally left blank.

LIST OF TABLES

1-1	Standard Kit Parts List	1-2
1-2	Optional Items List	1-4
1-3	System Performance and Data	1-6
3-1	Controls and Indicators	3-3
5-1	Troubleshooting	5-1
A-1	Spare and Repair Parts List	A-1

This page intentionally left blank.

CHAPTER 1:

GENERAL INFORMATION

1.1 Introduction:

This manual provides operation and field level maintenance instructions for the PVS-14A. It also provides specifications and data on the performance of the monocular. To ensure the safety of the operator and the correct operation of the monocular it is recommended that this manual is read carefully in its entirety before any deployment or field application.

1.2 Equipment Description:

The PVS-14A is a self-contained night vision device that enables improved night vision using ambient light from the night sky. Typically the moon, star and/or sky glow.

Optically, it is made up of an objective lens, image intensifier and eyepiece lens. The objective lens collects light reflected from the night scene by the moon, stars, or night sky, inverts the image and focuses that image on the image intensifier. The image intensifier converts the captured light into a visible image and reinverts the image which can then be viewed through the eyepiece lens.

In situations where there is no light at all the unit can be switched into the infrared (IR) mode. The PVS-14A is equipped with an IR flashlight enabling the unit to use this invisible light to operate.

The PVS-14A is designed for differences in the physical features of individuals. This allows for a wide range of operators to use the system safely and comfortably. Some of these design features are the power switch, eye relief

adjustment, diopter adjustment, gain control, and objective focus. Lightweight and versatile, the PVS-14A can be hand-held, head-mounted, helmet-mounted, camera/camcorder adapted or weapon mounted as a tactical night scope. The PVS-14A is the most widely fielded night vision system available.

1.3 **Standard Kit Parts List:**

The standard PVS-14A kit comes with the items listed in the following table.

Item	Part No.	Description	Qty.
1	PVS-3000	Monocular Assembly	1
2	580-0001-0	AA Alkaline Battery	2
3	A3256353	Demist Shield	1
4	A3144267	Shoulder Strap	1
5	A3144264	Sacrificial Lens	1
6	170-10	Lens Tissue (packet)	1
7	830-0058-0	Operator Manual	1
8	830-0059-0	Quick Reference Guide (QRG)	1
9	A3187392	Soft Carrying Case	1
10	A3256348	Weapon Mount	1
11	A3256347	Head/Helmet Mount Adapter	1
12	A3144268	Headmount Assembly w/ Brow Pads	1

Table 1-1 Standard Kit Parts List

1.4 Standard Kit Parts Illustration:

The illustration below is provided for quick identification of the standard parts of the PVS-14A kit.

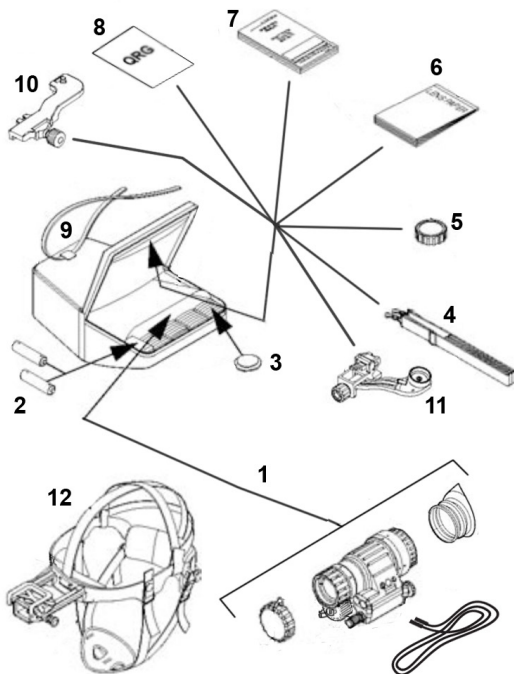


Figure 1-1 Standard Kit Parts Illustration

1.5 Optional Items List:

The PVS-14A is compatible with the following optional items and accessories listed in the following table.

Item	Part No.	Description
1	7B257-2F	Shipping/Storage Case
2	A3260933	Tethering Cord
3	A3256368	PASGT Helmet Mount, Flip-Up
4	A3187430	Magnetic Compass
5	AA-473000-04	5X Afocal Lens
6	A3256391	3X Afocal Lens
7	A3256345	Shuttered Eyeguard

Table 1-2 Optional Items List

1.6 Optional Items Illustration:

The illustration is provided as a visual key to optional items that can be used with the standard PVS-14A.

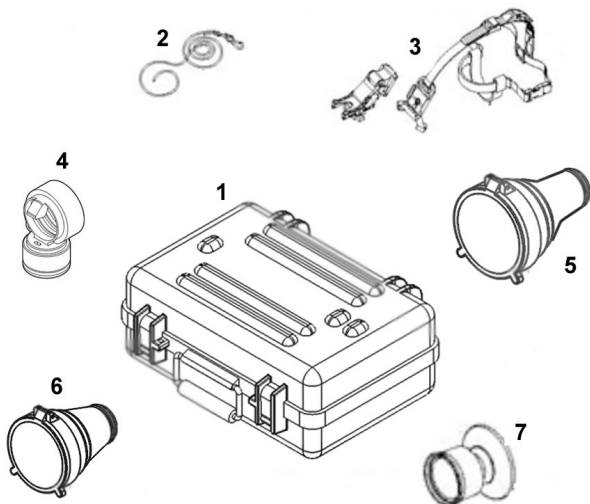


Figure 1-2 Optional Parts Illustration

1.7 System Performance and Data:

The chart below lists the technical specifications and data of the PVS-14A system. The data contained herein is subject to change without notice.

ITEM	LIMITS
Electrical Data	
Power Source	Battery (1.5V DC max.)
Battery Requirements	1 AA Alkaline or 1 AA Lithium L91
Battery Life (AA Alkaline)	45+ hrs @ 21°C (70°F)
Battery Life (Lithium)	75+ hrs @ 21°C (70°F)
Physical Data	
Soft Carrying Case Dimensions	Approx (8"W x 4"D x 14"H)
Monocular Dimensions	11.4cm x 5.1cm x 5.7cm (4.5" x 2" x 2.2")
Monocular Weight, with battery	346g
Optical Data	
Magnification	1.0X
Field of View	40° ± 2
Eyepiece of Focus	+2 to -6 diopters
Focus Range	25 cm (9.8") to infinity
Eye Relief	25 mm

Table 1-3 System Performance and Data

Objective Lens	f/1.2
Resolution	up to 1.3 cy/mR with 64 lp/mm tube
Environmental Data	
Operating Temperature	-51°C to 49°C
Storage Temperature	-51°C to 85°C
Illumination Required	Overcast starlight to moonlight
Immersion	1 meter for 30 minutes

Table 1-3 System Performance and Data, (cont.)

This page intentionally left blank.

CHAPTER 2: PREPARATION FOR USE

2.1 Introduction:

This section contains instructions for installing and attaching various components and accessories to the PVS-14A for operation under normal conditions.

2.2 Battery Precautions:

WARNING

INSPECT BATTERIES FOR BULGING PRIOR TO USE. IF THE BATTERY SHOWS SIGNS OF BULGING, DO NOT USE.

WARNING

DO NOT HEAT, PUNCTURE, DISASSEMBLE, SHORT CIRCUIT, INCINERATE, ATTEMPT TO RECHARGE OR OTHERWISE TAMPER WITH THE BATTERIES. TURN OFF THE PVS-14A IF THE BATTERY COMPARTMENT BECOMES UNDULY HOT.

**IF POSSIBLE, WAIT UNTIL THE BATTERIES
HAVE COOLED BEFORE REMOVING THEM.**

WARNING

**DO NOT REPLACE BATTERIES IN A
POTENTIALLY EXPLOSIVE ATMOSPHERE.
CONTACT SPARKING MAY OCCUR WHILE
INSTALLING OR REMOVING BATTERIES AND
CAUSE AN EXPLOSION. FAILURE TO FOLLOW
THESE INSTRUCTIONS COULD RESULT IN
DEATH, INJURY OR IMPOSITION OF LONG-
TERM HEALTH HAZARDS.**

CAUTION

**OBEY THE BATTERY MANUFACTURER'S
DIRECTIONS FOR BATTERY DISPOSAL.**

2.3 Battery Installation:

Install one (1) AA battery as follows.

1. Remove the battery cap by turning it counter-clockwise.
2. Check to ensure the o-ring is present. If not, replace it.
3. Observe polarity as indicated on the outside of the battery compartment.
4. Insert battery into the battery compartment, plus (+) end first.
5. Replace battery cap by pushing and turning it clockwise. Tighten it firmly to ensure a watertight seal.

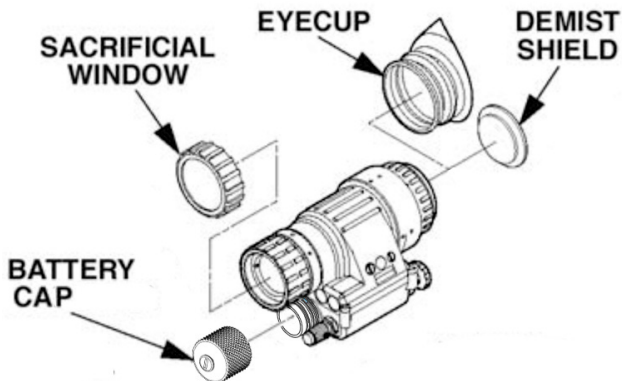


Figure 2-1 Standard Installations

2.4 Eyecup Installation:

Perform the following procedure to install eyecup onto the monocular.

1. Carefully press the eyecup over the end of the eyepiece lens.

2. Rotate the eyecup into proper viewing position. Adjust for best fit. The eyecup must seal around your eye and prevent the green glow from escaping.

2.5 Demist Shield Installation:

Perform the following procedures to install the demist shield on the eyepiece lens.

1. Carefully remove the eyecup.
2. Carefully press the demist shield onto the eyepiece. Be careful not to smudge the eyepiece lens or demist shield.
3. Replace the eyecup.

CAUTION

IF THE DEMIST SHIELD IS WIPED WHILE WET OR WITH WET LENS TISSUE, YOU WILL DAMAGE THE COATING.

NOTE

IF INCLEMENT OPERATING CONDITIONS ARE EXPECTED TO EXIST (E.G. SIGNIFICANT TEMPERATURE CHANGE AND HIGH HUMIDITY), INSTALL DEMIST SHIELD TO MINIMIZE EYEPiece LENS FOG PRIOR TO EXECUTION OF MISSION.

2.6 Sacrificial Window Installation:

Perform the following procedure to install the sacrificial window onto the objective lens assembly.

CAUTION

IF ADVERSE OPERATING CONDITIONS (BLOWING DUST OR SAND) ARE EXPECTED TO EXIST, ATTACH THE SACRIFICIAL

WINDOW TO PROTECT THE OBJECTIVE LENS FROM SCRATCHES OR OTHER DAMAGE.

1. If the objective lens cap is in place, remove it.
2. Carefully push the sacrificial window onto the objective lens until it stops. Turn the sacrificial window clockwise until it snaps into place.

2.7 Headmount Adjustment and Installation (Optional):

Perform the following procedure to adjust and install the headmount assembly.

CAUTION

**DO NOT PUT ON THE HEADMOUNT WHILE
THE MONOCULAR IS ATTACHED.**

1. Prior to donning the headmount, loosen the four ends of the chinstrap approximately two inches from the sliding bar buckles.
2. Firmly press the front and rear snaps in place.

NOTE

**IF THE HEADMOUNT IS TOO LOOSE,
REMOVE THE ATTACHED THIN BROWPAD
AND REPLACE WITH EITHER THE MEDIUM
OR THICK BROWPAD SUPPLIED WITH THE
HEADMOUNT.**

3. With both hands, grasp the neck pad and pull the harness over your head and the neck pad down to the back of your neck.

4. Holding the chin cup in position on chin, adjust both sides of the chinstrap until you feel light pressure against your chin. (DO NOT TIGHTEN.)
5. Maintain the position of the chin cup and remove any slack from the chinstrap. (DO NOT TIGHTEN.)
6. Ensure that the cross-strap is not twisted and remove slack by adjusting the vertical adjustment at the neck pad.
7. Adjust chinstrap and vertical adjustment until the chin cup and headband are in a comfortable but firm position.

NOTE

**AFTER INSTALLING THE MONOCULAR,
MINOR STRAP ADJUSTMENTS MAY BE
NECESSARY TO ACHIEVE COMFORT.**

8. Install the head/helmet mount adapter.

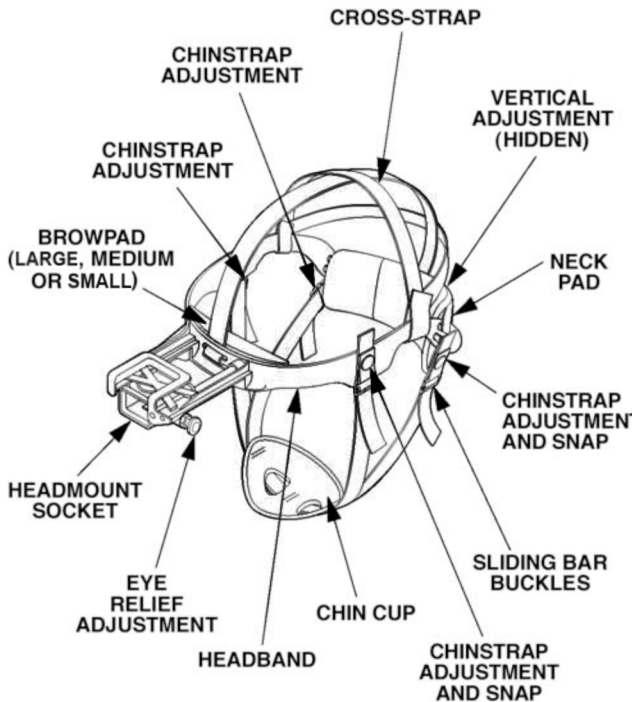


Figure 2-2 Headmount Diagram

2.8 Head/ Helmet Mount Installation:

Install the head/helmet mount adapter into the monocular by

following the procedure.

1. Align the thumbscrew with the threaded hole and tighten as shown in Figure 2-3.
2. Locate the alignment boss on the headmount/helmet mount adapter that fits into a groove on the monocular.
3. Make sure the boss on the adapter fits into the groove on the monocular.
4. Loosen the clamp knob and pivot the arm to the other side for PVS-14A use with the right eye.

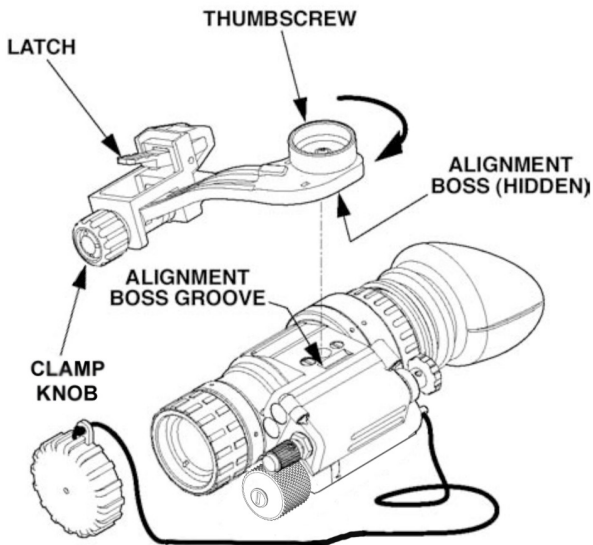


Figure 2-3 Head/Helmet Mount Adapter Installation

2-9 Installation of Weapon Mount:

Perform the following procedure to install the weapon mount.

CAUTION

**THE PVS-14A IS NOT A WEAPON
SIGHT, HOWEVER, IT CAN BE USED IN
CONJUNCTION WITH A COLLIMATED DOT
SIGHT OR LASER AIMING DEVICE.**

NOTE

**IT IS RECOMMENDED THAT THE EYECUP
BE REPLACED WITH THE SHUTTERED
EYEGUARD DURING WEAPON MOUNTED
USE.**

1. Orient the monocular and weapon mount as shown in Figure 2-4. Be sure to align the alignment boss on the weapon mount with the alignment groove in the monocular.
2. Screw in the thumbscrew to secure the monocular to the weapon mount.
3. Loosen the clamping knob on the weapon mount. Position the weapon mount with the monocular onto the weapon's mounting rail. Tighten by turning the clamping knob.

NOTE

**A RATCHET IN THE WEAPON MOUNT
PREVENTS OVER TIGHTENING OF THE
CLAMP. TURN UNTIL THE KNOB CLICKS.**

4. Check the position of the monocular by holding the weapon in the normal firing position. Adjust the fore/aft position of the monocular as necessary by loosening the clamping knob and repositioning the weapon mount on the weapon's mounting rail.

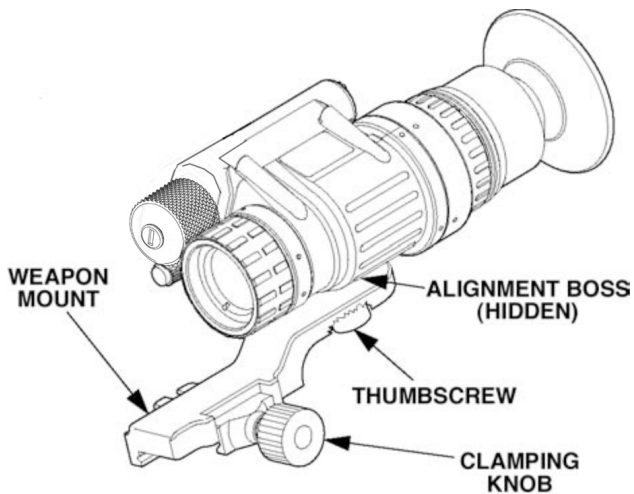


Figure 2-4 Weapon Mount Installation

CHAPTER 3:

OPERATING INSTRUCTIONS

3.1 Introduction:

This chapter contains instructions for the safe operation of the PVS-14A under normal circumstances and environments.

3.2 Controls and Indicators:

The PVS-14A is designed to adjust for different users and corrects for most differences in eyesight. The controls and indicators for the PVS-14A are shown in Figure 3-1 and are described in Table 3-1.

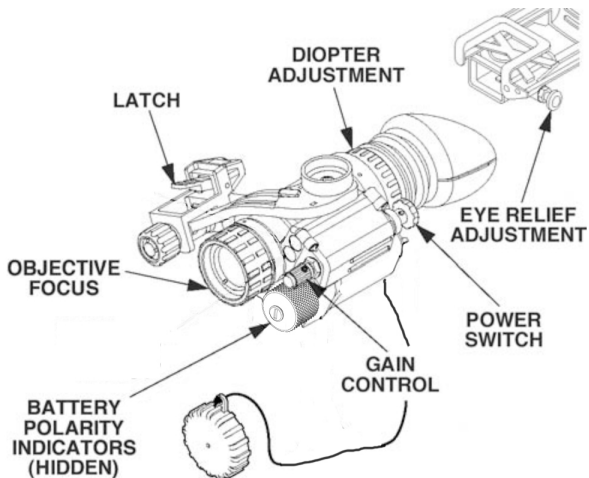
CAUTION

THE PVS-14A REQUIRES SOME AMBIENT (MOONLIGHT, STARLIGHT, OR ARTIFICIAL LIGHT, ETC.) TO OPERATE. THE LEVEL OF PERFORMANCE DEPENDS ON THE LEVEL OF LIGHT.

NIGHT LIGHT IS REDUCED BY PASSING CLOUD COVER, WHILE OPERATING UNDER TREES, IN BUILDING SHADOWS, ETC.

THE PVS-14A IS LESS EFFECTIVE VIEWING INTO SHADOWS AND OTHER DARKENED AREAS.

THE PVS-14A IS LESS EFFECTIVE THROUGH RAIN, FOG, SLEET, SNOW, SMOKE, AND OTHER REFLECTIVE MATERIAL.



NOTE - LOW BATTERY INDICATOR AND IR SOURCE "ON" INDICATOR ARE VISIBLE IN EYEPIECE LENS

Figure 3-1 Controls and Indicators

Control and Indicators	Functions
Power Switch	<p>Controls monocular and IR source, ON or OFF.</p> <p>RESET/OFF Same as system OFF.</p> <p>OFF also resets monocular after high light cut-off.</p> <p>ON activates the monocular.</p> <p>IR/PULL momentarily activates the IR source when the knob is turned clockwise. Pull and turn the knob clockwise from the ON position to continuously activate the IR source.</p> <p style="text-align: center;"><u>CAUTION</u></p> <p style="text-align: center;">DO NOT USE EXCESSIVE FORCE TO PLACE THE POWER SWITCH INTO THE MOMENTARY IR POSITION.</p>
Low Battery Indicator	A blinking yellow light indicates a low battery with less than 30 minutes of battery life remaining. It is visible through the eyepiece just outside the intensified field-of-view.
IR Source On Indicator	A steady red light indicates that the IR source is ON. It is visible through the eyepiece just outside the intensified field-of-view.
Gain Control	Adjusts the system gain from a minimum value of approximately 25 to a maximum value greater than 3,000.

Table 3-1 Controls and Indicators

Objective Focus	Focuses objective lens. Adjusts for sharpest image of viewed object.
Diopter Adjustment	Focuses eyepiece lens to users eye. Adjust for sharpest image of intensifier screen.
Eye Relief Adjustment	Adjusts the distance between your eye and the monocular.
Latch	Latch used for separation of monocular from headmount/helmet mount adapter.
Battery Polarity Indicator	This feature, molded into the battery cartridge, shows the proper orientation of the batteries.
High Light Cut-off	The monocular will automatically cut off after 70 ± 30 seconds of operation in daylight or bright room light. Individual bright lights (headlights, flashlights, or other concentrated light sources) will not actuate the high light detector located on the front of the monocular. To turn the monocular back ON, turn the power switch to RESET/OFF position and then to ON again.

Table 3-1 Controls and Indicators, (cont.)

3.3 Hand-held Operation:

CAUTION

**OPERATE THE MONOCULAR ONLY
UNDER DARKENED CONDITIONS OR USE
THE OBJECTIVE LENS CAP TO COVER
THE OBJECTIVE LENS FOR DAYLIGHT
CONDITIONS.**

NOTE

WHEN USING THE MONOCULAR WITHOUT A MOUNTING DEVICE, MAKE SURE TO PLACE THE NECK CORD AROUND YOUR NECK.

1. Ensure that the battery is installed correctly.
2. Turn the power switch to ON.

NOTE

THE SHARPEST IMAGE WILL BE OBSERVED ONLY WHEN THE OBJECTIVE LENS AND EYEPIECE LENS ARE PROPERLY FOCUSED.

3. Rotate the diopter adjustment for the clearest view of the image intensifier screen.
4. Focus the objective lens while observing an object until the sharpest image is obtained.

3.4 Head Mounted Operation:

CAUTION

OPERATE THE MONOCULAR ONLY UNDER DARKENED CONDITIONS OR USE THE LENS CAP TO COVER THE OBJECTIVE LENS FOR DAYLIGHT CONDITIONS.

1. Ensure that battery is installed correctly.
2. Put on the headmount following the instructions found in paragraph 2.7.

NOTE

TO MAKE IT EASIER TO ALIGN THE MONOCULAR, EYECUP, AND EYEPiece LENS TO THE EYE, DEPRESS THE EYE RELIEF ADJUSTMENT AND SLIDE THE HEADMOUNT SOCKET ALL THE WAY FORWARD BEFORE ATTACHING THE MONOCULAR.

3. Align the headmount/helmet mount adapter's latch to the headmount socket. Press and hold down the latch lever while installing the monocular into the headmount socket. Release the latch when the monocular fully engages the socket.
4. Set your eye relief by depressing the eye relief adjustment and move the monocular back toward your non-dominate eye until the eyecup comfortably seals around the eye. Pull the monocular outward to ensure it is securely attached.
5. Turn the monocular ON.
6. Loosen the clamp knob and adjust monocular until it is properly aligned with your eye. Tighten the clamp knob to secure the monocular.

NOTE

THE SHARPEST IMAGE WILL BE OBSERVED ONLY WHEN THE OBJECTIVE LENS AND EYEPiece LENS ARE PROPERLY FOCUSED.

7. Rotate the diopter adjustment for the clearest view of the image intensifier screen.

NOTE

ANY READJUSTMENT OF EYE RELIEF MAY REQUIRE READJUSTMENT OF THE DIOPTER.

8. Adjust the eye relief distance by pressing the eye relief adjustment and sliding the monocular fore or aft to obtain a full field-of-view of the image. Reset the diopter adjustment for best image.
9. Adjust the objective lens focus (Figure 3-1) while observing an object until the sharpest image is obtained.
10. If the monocular is removed from the headmount while operating, the monocular will be powered OFF. To return to normal operation, cycle the power switch knob from ON to OFF/RESET and back to ON.

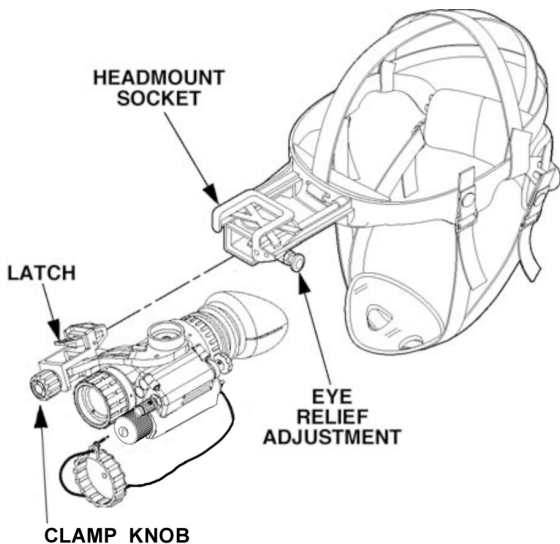


Figure 3-2 Head Mounted Operation

3.5 Operations with IR Source:

WARNING

THE IR SOURCE IS A LIGHT THAT IS INVISIBLE TO THE UNAIDED EYE FOR USE DURING CONDITIONS OF EXTREME DARKNESS. HOWEVER, THE LIGHT FROM THE IR SOURCE CAN BE DETECTED BY THE ENEMY USING NIGHT VISION DEVICES.

NOTE

THE PURPOSE OF THE IR SOURCE IS FOR VIEWING AT CLOSE DISTANCES UP TO 3 METERS WHEN ADDITIONAL ILLUMINATION IS NEEDED.

1. Pull the power switch knob out and turn clockwise to the IR position. With the monocular held to the eye, observe that a red light appears in the eyepiece. This indicates that the IR source is operating.
2. For momentary IR use, turn the power switch knob clockwise (without pulling) past the ON position. Observe that a red light appears in the eyepiece. When the switch knob is released, the knob will return to the ON position and the IR source will be powered OFF.

3.6 Using the Gain Control:

Turn the gain control to provide the optimum illumination input to the eye.

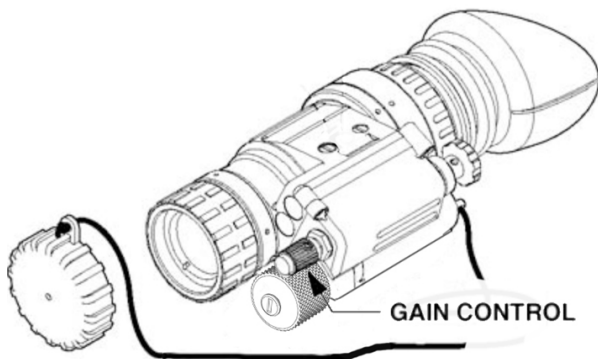


Figure 3-3 Gain Control

3.7 Operation in Conditions of Blowing Dust or Sand:

CAUTION

OPERATION IN CONDITIONS OF BLOWING DUST OR SAND CAN PIT AND SCRATCH THE OPTICAL ELEMENTS AND DAMAGE THE MECHANICAL COMPONENTS UNLESS THE PRECAUTIONS GIVEN BELOW ARE OBSERVED.

1. Ensure that the sacrificial window is in place.
2. Avoid pointing the monocular into the wind unless necessary for operation.
3. Keep the carrying case closed unless removing or replacing items.

4. Ensure that all dust and sand is removed from the PVS-14A and carrying case after operation.

3.8 Operation in Rainy or Humid Conditions:

CAUTION

OPERATION IN RAINY OR HUMID CONDITIONS CAN CAUSE CORROSION AND DETERIORATION OF THE PVS-14A UNLESS THE PRECAUTIONS GIVEN BELOW ARE OBSERVED

1. Install the demist shield as instructed in this manual.
2. Keep the carrying case closed unless removing or replacing items.
3. Dry the monocular, mounts, and accessories after exposure to rain or high humidity and before storage.
4. Do not store monocular in a wet carrying case.

3.9 Operation in Salt Water Areas:

After exposure to salt water, clean the unit as instructed in this manual, after rinsing with fresh water.

3.10 Shutting Down the Unit:

Perform the following procedures to shut down the monocular.

1. Turn the monocular power switch to the OFF position.
2. Remove the monocular from the headmount, helmet mount or weapon and remove the weapon mount from the monocular.

3.11 Preparation for Storage:

1. Remove battery from the monocular.
2. Inspect the battery housing for corrosion or moisture. Clean

- and dry if necessary.
3. Replace the battery cap.
 4. Remove the demist shield or sacrificial window if installed.
Install objective lens cap.

NOTE

PRIOR TO PLACING PVS-14A INTO CARRYING CASE, ENSURE PVS-14A AND CASE ARE FREE OF DIRT, DUST, AND MOISTURE.

5. Place the monocular, accessories and cleaning supplies back into their storage/carrying case. It is best to place the items in their original locations to prevent any possible damage to the unit and/or accessories.
6. Return to storage area.

This page intentionally left blank.

CHAPTER 4:

MAINTENANCE INSTRUCTIONS

4.1 Introduction:

The PVS-14A is designed to be used in diverse environments and rugged conditions. It is recommended that regular and simple maintenance be preformed for optimal system performance.

CAUTION

**THE MONOCULAR IS A PRECISION
ELECTRO-OPTICAL INSTRUMENT AND
MUST BE HANDLED CAREFULLY.**

**DO NOT SCRATCH THE EXTERNAL LENS
SURFACES OR TOUCH THEM WITH YOUR
FINGERS.**

**WIPING DEMIST SHIELD WITH LENS TISSUE
WHILE WET OR WITH WET LENS TISSUE CAN
DAMAGE THE COATING.**

4.2 Deactivation:

Power down the system by turning the power switch knob to OFF.

4.3 Battery Removal:

Open battery compartment, remove battery and store in carrying case. Close the battery compartment before cleaning.

4.4 Cleaning the PVS-14A:

When necessary, use a moistened clean cloth to wipe the outside of the unit, EXCEPT FOR THE OPTICAL SURFACES.

Be sure to wipe away excess dirt and dust that may restrict the performance of and damage moving and mating parts. If needed, the use of a very diluted detergent solution is permissible. Dry with a soft clean cloth, or allow unit to air-dry before storing it.

4.5 Cleaning the Optics:

When cleaning of the lens is required, first blow any loose dirt or grit away from the surface of the lens. EXCEPT FOR THE DEMIST SHIELD, use the supplied lens tissue lightly moistened with water or lens cleaning fluid to lightly wipe the optical surfaces, using a circular motion. Discard each lens tissue after one use to avoid transferring grit or foreign matter onto the lens surfaces. If the lens remains dirty use a cotton swab lightly moistened with lens cleaning fluid to remove the foreign matter from the lens. Dry with a clean unused lens tissue.

4.6 Checking for Damage and Corrosion:

As a general guideline, conduct an inspection of the PVS-14A, accessories, and the case after every use. Look for heavy wear and cracks in rubber or plastic. Inspect for moisture or corrosion in electronic housings and in the battery compartment. Check for scratches, condensation and foreign matter on optical surfaces. Report missing or damaged items, for replacement.

CHAPTER 5:

TROUBLESHOOTING

5.1 Troubleshooting Procedures:

Table 5-1 lists common malfunctions that may occur with the equipment. Perform the tests, inspections and corrective actions in the order they appear in the table.

This table cannot list all the malfunctions that may occur, all the tests and inspections needed to find the fault, or all the corrective actions needed to correct the fault. If the equipment malfunction is not listed or actions listed do not correct the fault, notify your maintainer.

Malfunction	Test for Inspection	Corrective Action
Monocular fails to activate.	Visual. Check for defective, missing or improperly installed battery.	Turn switch knob to RESET/OFF position and then ON. Replace battery or install correctly. If PVS-14A still fails to activate, refer to higher level of maintenance.

Table 5-1 Troubleshooting

IR source fails to activate.	In a dark location with system turned on, activate IR source. Visually check IR source operation; scene should brighten.	If IR source still fails to activate, refer to higher level of maintenance.
IR source indicator fails to activate.	Visual.	Refer to higher level of maintenance.
Poor image quality.	<p>Check objective lens or eyepiece.</p> <p>Check for fogging or dirt on objective lens or eyepiece lens.</p> <p>Check eye relief distance.</p>	<p>Refocus.</p> <p>Clean lens surface per paragraph 4.5.</p> <p>Readjust for proper eye relief distance.</p>
Light visible around eyecup.	Check eyecup for resiliency.	If eyecup is defective, refer to higher level of maintenance.
Diopter adjustment cannot be made.	Check to see if the diopter adjustment is bent or broken.	If damaged, refer to higher level of maintenance.
Head straps cannot be tightened.	Check for defective buckles, fasteners or straps.	If damaged, refer to higher level of maintenance.

Table 5-1 Troubleshooting, (cont.)

Headmount socket and headmount adapter latch do not catch.	<p>Check socket or latch for dirt.</p> <p>Check socket or latch for damage.</p>	<p>Clean socket and latch.</p> <p>If damaged, return either headmount to higher level of maintenance.</p>
Monocular does not cut off when exposed to high light.	<p>Visual.</p> <p>Perform the following test under daylight or bright room light (not fluorescent light).</p> <p>Place the objective lens cap on the objective lens. Turn monocular ON and observe that it cuts off within 70 ± 30 seconds after energized.</p> <p>Turn monocular OFF and then ON to reenergize monocular.</p>	<p>If damaged, return to higher level of maintenance.</p>

Table 5-1 Troubleshooting, (cont.)

This page intentionally left blank.

APPENDIX A:

SPARE AND REPAIR PARTS LIST

A.1 Introduction:

This section provides information needed to identify, contact and order spare and/or repair parts for the PVS-14A.

A.2 Contact Information:

To order spare or repair parts for the PVS-14A or any of your night vision products contact:

Nivisys, LLC
1120 Alza Drive
El Paso, Texas 79907 USA

Phone: 1-915-633-8354

Fax: 1-915-633-8529

A.3 Spare Parts List:

The following is a list of parts that may be ordered for spare parts for the PVS-14A.

Part No.	Description	Qty.
A3144404	Switch Knob Assembly	1
A3144315	Purge Screw	1
A3144316	Purge Screw O-Ring	1
A3144306	Neck Cord	1
A3144318	Objective Lens Cap	1

Table A-1 Spare and Repair Parts List

A3144422	Eyeclip Assembly	1
A3256345	Shuttered Eyeguard	1
A3256353	Demist Shield	1
A3144268	Headmount Assembly with Brow Pads	1
A3144264	Sacrificial Window	1
A3256368	PASGT Helmet Mount, Flip-Up	1
A3256368-2	MICH Helmet Mount	1
A3187430	Magnetic Compass	1
7B257-2F	Shipping/Storage Case	1
A3187392	Soft Carrying Case	1
830-0058-0	Operator Manual	1
830-0059-0	Quick Reference Guide	1
A3144267	Shoulder Strap	1
A3256351	Variable Gain Knob	1
A3256348	Weapon Mount	1
A3256347	Head/Helmet Mount Adapter	1
A3144292	Elevation Strap	1
A3144290	Neckpad	1
A3144293	Side Strap	1
A3144436	Browpad, Thick	1
A3144435	Browpad, Medium	1
A3144280	Browpad, Thin	1

Table A-1 Spare and Repair Parts List, (cont.)

APPENDIX B: WARRANTY INFORMATION

Equipment Warranties And Remedy:

Seller warrants that each newly manufactured item sold hereunder and such portion of a repaired/refurbished item as has been repaired or replaced by Seller under this warranty, shall be free from defects in material or workmanship at the time of shipment and shall perform during the warranty period in accordance with the specifications incorporated herein. Should any failure to conform to these warranties be discovered and brought to Seller's attention during the warranty period and be substantiated by examination at Seller's factory or by authorized field personnel, then at its own cost, Seller shall correct such failure by, at Seller's option, repair or replacement of the non-conforming item or portion thereof, or return the unit purchase price of the non-conforming item or component. Buyer agrees that this remedy shall be its sole and exclusive remedy against Seller and that no other remedy shall be available or pursued by Buyer against Seller. In no event shall the Seller be liable for any cost or expense in excess of those described in this paragraph and expressly excluding any liability or damages for special, incidental or consequential damages.

The warranty period for newly-manufactured items shall extend 24 months from the date of shipment by Seller unless a different warranty period is agreed in writing to by Seller. The warranty period for repaired/refurbished electronic components shall extend for the unexpired warranty period or 90 days, whichever is longer, of the item repaired or replaced.

This warranty shall not extend to any item that upon examination by Seller is found to have been subject to:

- A. Mishandling, misuse, negligence or accident.

- B. Installation, operation or maintenance that either was not in accordance with Seller's specifications and instructions, or otherwise improper.
- C. Tampering, as evidenced, for example, by broken seals, damaged packaging containers, etc.
- D. Repair or alteration by anyone other than Seller without Seller's express advance written approval.

Failure to promptly notify Seller in writing upon discovery of any non-conforming item during the warranty period shall void the warranty as to such item. Buyer shall describe any such non-conformity in detail, expressing its position as to return of any article under the remedy provided herein. No returns shall be accepted without prior approval by Seller.

Return Material Authorization Number (RMA#):

Warranty and non-warranty items returned to Nivisys for repair or replacement require a RMA#. Email services@nivisys.com, call 1-915-633-8354 or fax 1-915-633-8529 with a serial number and detailed information to obtain a RMA#.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Inside back cover intentionally left blank.

NIVISYSTM_{LLC}

Nivisys, LLC
1120 Alza Drive
El Paso, TX 79907
USA

nivisys.com