

INFORMATION PAPER

ON

PANORAMIC NIGHT VISION GOGGLE (PNVG)

1. Background. The most widely utilized Night Vision Goggle (NVG) is the AN/AVS-9 (F4949) used by both fixed and rotary-wing aircrews in the United States Air Force. Unfortunately, the AN/AVS-9 system only provides the user with an instantaneous 40° circular field of view (FOV). A number of FOV studies have been performed and indicate that the optimal FOV appears to be between 80° and 100°. The PNVG's 100° x 40° FOV provides a 160% increase in the intensified viewing area over the AN/AVS-9. For the F-15, PNVG Block IV integrates the PNVG system with Joint Helmet Mounted Cueing System (JHMCS). This provides weapons and sensor cueing with throughout full range of head motion at night. Without JHMCS, the PNVG system is designed to attach to a standard NVG helmet mount. The PNVG will also increase resolution from 20/40 to 20/20 while reducing the halo effect when viewing bright lights.

2. Requirement. SAC SORD 309-87-I/II, dated 30 Nov 91; CAF-MAF-AFSOC-AETC ORD 319-93-B, dated 29 Mar 01; PMD 2269(6) 4 Jun 03.

3. Impacts If Not Funded. Pilot situational awareness is degraded with prolonged use of the current Night Vision Goggles (F4949). PNVG's will significantly enhance aircrew safety and performance.

4. Units Impacted.

102 FW Otis ANGB, MA	104 FW Westfield, MA	120 FW Great Falls, MT
125 FW Jacksonville, FL	131 FW St. Louis, MO	142 FW Portland, OR
154 WG Hickam AFB, HI	159 FW New Orleans, LA	173 FW Klamath Falls, OR

5. Contractors. Insight Technology Manchester NH

6. Cost.

Units Required	Unit Cost	Program Cost*
84 (3080)	\$65K	\$5.46M

* Includes 10% spares & TCTOs

INFORMATION PAPER

ON

HH-60G PANORAMIC NIGHT VISION GOGGLE SYSTEM (PNVG)

1. Background. The AN/AVS-9 (F4949) night vision system is the most widely utilized by both fixed and rotary-wing aircrews in the United States Air Force performing night operations. Unfortunately, the AN/AVS-9 system only provides the user with a 40° circular field of view (FOV). Because of the limited FOV, aggressive head scanning is necessary to maintain minimal situational awareness during night missions. This scanning creates the possibility for disorientation, neck strain, and rapid fatigue. A number of FOV studies have been performed and indicate that the optimal FOV is between 80° and 100°. The PNVG's 100° x 40° FOV provides a 160% increase in the intensified viewing area over the AN/AVS-9. This system is designed to attach to a standard NVG helmet mount and is useful for both fixed and rotary wing aircraft. The PNVG will also increase resolution from 20/40 to 20/20 while reducing the halo effect when viewing bright lights.

2. Requirement. SAC SORD 309-87-I/II, dated 30 Nov 91; CAF-MAF-AFSOC-AETC ORD 319-93-B, dated 29 Mar 01.

3. Impacts If Not Funded. Pilot situational awareness will be degraded with prolonged use of the Night Vision Goggles (F4949) used currently. PNVGs will significantly enhance aircrew safety and performance.

4. Units Impacted.

106 RQW Gabreski Field, NY
129 RQW Moffett Federal Airfield, CA
176 WG Kulis ANGB, AK

5. Contractors. Insight Technology In, Manchester NH

6. Cost.

Units Required	Unit Cost	Program Cost*
90 (3080)	\$68K	\$6.12M

* Includes 10% spares & TCTO's