

# Night Vision Thermal Systems—Thermal Weapon Sight (TWS)

## INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

### MISSION

Enables the Soldier to detect and engage targets, day or night, in all weather and visibility-obscured conditions.

### DESCRIPTION

The Thermal Weapon Sight (TWS) family is a group of advanced infrared devices for both in-line and stand-alone use. Its technologies include multi-band fused sensors and rapid target acquisition capabilities. The AN/PAS-13 TWS gives Soldiers with individual and crew served weapons the capability to see deep into the battlefield, increase surveillance and target acquisition range, and penetrate obscurants, day or night. The TWS systems use uncooled, forward-looking infrared technology and provide a standard video output for training, image transfer, or remote viewing. TWS systems are lightweight and

mountable to a weapon rail. They operate to the maximum effective range of the weapon.

The TWS family comprises three variants, each of which is silent, lightweight, compact, durable, and battery-powered. They include:

**AN/PAS-13(V)1 Light Weapon Thermal Sight (LWTS)** for the M16 and M4 series rifles and carbines, as well as the M136 Light Anti-Armor Weapon

- **Weight:** 1.95 pounds
- **Magnification:** 1.55x
- **Field of view:**  $\geq 15$  degrees
- **Operational time:** 5 hours
- **Power:** four lithium AA batteries

**AN/PAS-13(V)2 Medium Weapon Thermal Sight (MWTS)** for the M249 Squad Automatic Weapon and M240B series medium machine guns

- **Weight:** 2.9 pounds
- **Magnification:** 5x/1.66x (narrow/wide)

- **Field of view:**  $\geq 6$  degrees/18 degrees (narrow/wide)
- **Operational time:** 6.5 hours
- **Power:** six lithium AA batteries

**AN/PAS-13(V)3 Heavy Weapon Thermal Sight (HWTS)** for the squad leader's weapon M16 and M4 series rifles and carbines, M24 and M107 sniper rifles, and M2 HB and MK19 machine guns

- **Weight:** 3.9 pounds
- **Magnification:** 10x/3.3x (narrow/wide)
- **Field of view:**  $\geq 3$  degrees/9 degrees (narrow/wide)
- **Operational time:** 6.5 hours
- **Power:** six lithium AA batteries

### SYSTEM INTERDEPENDENCIES

None

### PROGRAM STATUS

- **FY98:** Type classification
- **FY99:** First unit equipped
- **FY10:** Fielded to units supporting Operation Enduring Freedom and Operation Iraqi Freedom
- **FY10:** Began 17 micron technology validation testing; 17 micron technology allows production of a LWTS clip-on and reduces power and weight in the MWTS and HWTS

### PROJECTED ACTIVITIES

- **FY11:** Continue to support and field in accordance with Headquarters Department of the Army G8 guidance
- **Continue:** 17 micron validation testing

## ACQUISITION PHASE

Technology Development

Engineering & Manufacturing Development

Production & Deployment

Operations & Support

## Night Vision Thermal Systems– Thermal Weapon Sight (TWS)

### FOREIGN MILITARY SALES

Deputy Assistant Secretary of the Army  
Defense Exports and Cooperation (DASA  
DE&C)

### CONTRACTORS

BAE Systems (Lexington, MA;  
Manassas VA)  
DRS Optronics (Dallas, TX; Melbourne, FL)  
Raytheon (Dallas, TX; Goleta, CA;  
McKinney, TX)

