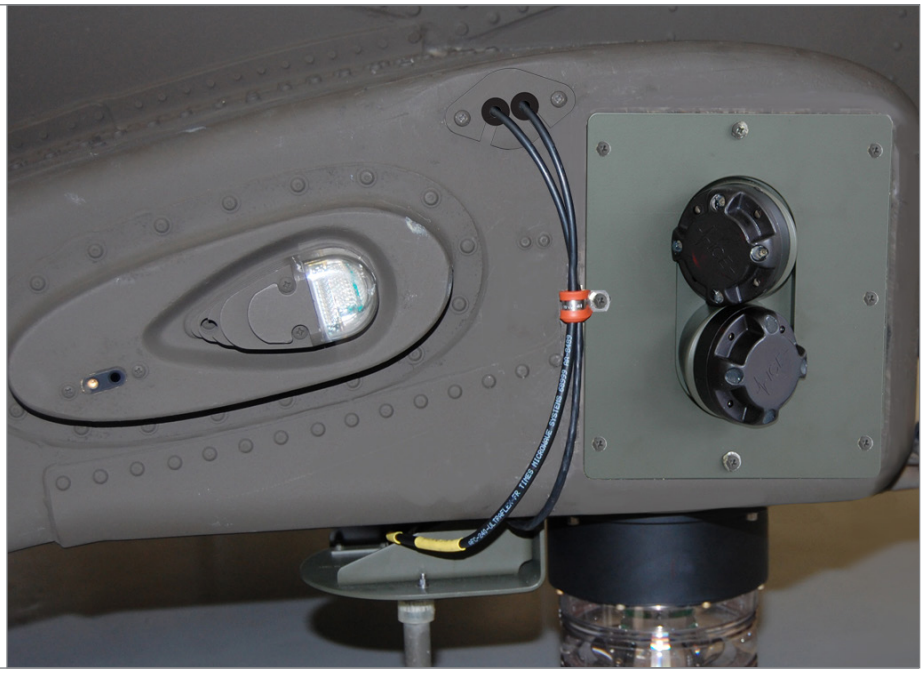
AVIATION MILES DETECTOR PLATE

Tested and approved to Military Standards, the AMDP is MILES encoded to provide detection of 904nm Laser Training Engagements.



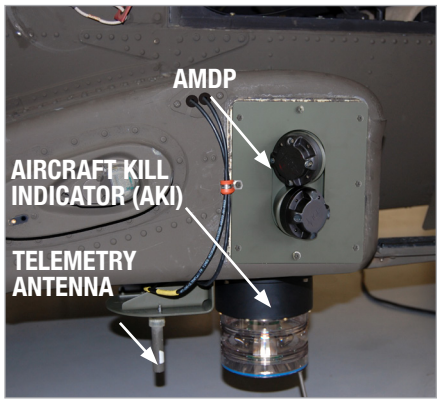
The Aviation MILES Detector Plate (AMDP) is designed as part of the Aviation Tactical Engagement Simulation System (TESS) to support Observer Controller and Opposing Force aviation participation at Maneuver Combat Training Centers (MCTC).

MILES Detectors provide detection of 904nm MILES Laser training engagements. Four assemblies are installed to detect, identify and characterize MILES engagements. Weapons adjudication is accomplished through a MILES Encoded Laser on the Player platform and Laser Sensors on the Target platform. The aircraft casualty assessment status is provided via wave files through the Intercom Communication System (ICS).

The Aircraft Kill Indicator (AKI) provides a visual indication of player status. The AKI is a hermitically sealed, high-intensity strobe light that transmits standard “Hit”, “Kill” or “Near Miss” flash sequence indications when the Laser Sensors detect MILES Laser energy.

The MILES Detector has a viewing window of 120° (60° of the center line spherically). It is designed with a Built-In Test (BIT) capability and reports the BIT status to the Smart Onboard Data Interface Module (SMODIM).

The SMODIM processes signals received from the Laser Sensors to calculate Real Time Casualty Assessment (RTCA) for the host helicopter. Depending on the RTCA outcome for a given event, the SMODIM will control AKI signaling, inject audio messages via the ICS, and transmit event data via the Telemetry Antenna.



AMDPs are installed and connected to the aircraft Laser Warning System when the aircraft does not have the AN/AVR-2B Laser Detector Sets installed.The Plate Brackets are mounted at the same location as the four AN/AVR-2B Laser Detectors and are connected to the aircraft installed AN/AVR-2B Laser Warning System. The aircraft may have the AMDPs and AKI installed but not active.

A stand alone, platform agnostic, wired detector that can support a broad range of applications

POSITION MESSAGES:

- Player ID (PID)
- Shooter PID
- Platform Type
- Weapon Type
- Time Tag
- GPS Location
- GPS Altitude
- Player Status
- DGPS Pseudo Range Corrections
- GPS Tracking
- RTCA Status
- Velocity
- Heading

The TESS equipment is interfaced with the aircraft as shown. The SMODIM controls the AKI's "Hit", "Kill" and "Near Miss" standard MILES flash sequence indications when an AMDP detects MILES 904 nm Laser energy. Once adjudication has resulted in a kill, the player's weapons system is deactivated, requiring reset or resurrection from the MCTC Core Instrumentation Subsystem (CIS) or from a controller gun. A situational awareness display provides the current position/location of all SMODIM players over a moving map using aircraft monitors or an Electronic Data Manager (EDM) that is strapped to a pilot's leg.

AMDP Characteristics	
Weight	10 ounces
Operting Bandwidth	Near Infra-Red (NIR) spectrum, specifically .904µm (± .025 µm)
Sensitivity	less than 2 pJ/cm^2 @ 904nm
Built-In Test (BIT)	Fully tests via optical IR pulse
Reception	120 degree conical / -3dB
Operating Temp	-45 to +70 C
Storage Temp	-55 to + 85 C
Environmental	Hermetically sealed & Nitrogen purged
Meets or Exceeds MIL-STD-810G and MIL-STD-461F per DO160E Requirements	

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