

AN/APQ-187 Silent Knight Radar

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Program Manager

Program Overview

Mission: Develop, Integrate, Test, And Procure A SOF Common Terrain Following, Terrain Avoidance (TF/TA) Multi-Mode Radar With Low Probability Of Intercept, Low Probability Of Detection (LPI/LPD) within current APB constraints.



BOI: 211 + 20% Spares

- 69 MH-47G, 72 MH-60M, 50 CV-22, 20 MC-130H
- Under consideration for 2nd LOS radar on 50 MC-130J

Vision

Develop and field the most advanced TF/TA capability to SOF aircrews to enhance operational effectiveness and combat survivability in high-threat environments and under all-weather conditions.

Objectives

- **Provide Airborne Forces Safe Low-Level Flight In Adverse Environments**
 - Safe Terrain Following Over Water And All Types Of Terrain, Including Sand, Ice, And Snow Covered And Man-Made Obstacles
 - At 100 To 1000 Feet Above Ground Level In Straight And Turning Flight, From 5 To 300 Knots, With Rain Up To 10 Millimeters/Hour
- **Provide Navigation Support, Ground/Maritime/Skin Paint/Windshear/Turbulence/Weather Information To Air Crews**
- **Radar Weight Less Than 175 Pounds**

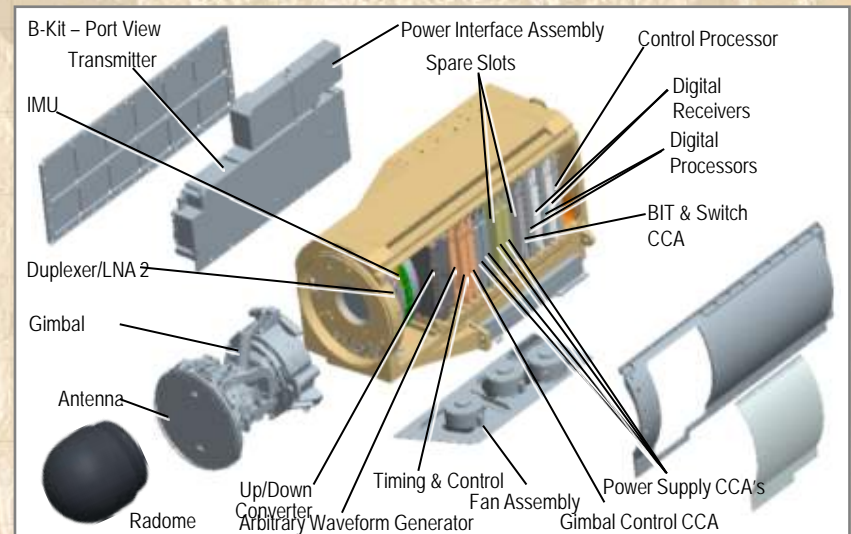
Material Solution

- **Operational**

- **Terrain Following/Terrain Avoidance**
 - **Higher** Turn Rate, **Lower** Velocity, **Coupled**
 - **LPI-LPD** Weather Penetration Operation
- **Weather Detection**
 - **LPI-LPD Weather, Windshear, Turbulence**
- **Ground Map**
 - **LPI, LPD Ground Map**
 - **Selectable x2 or x4 Magnification**
 - Selectable Azimuth Resolution Improvement
- **Skin Paint Detection and Tracking**
 - **Air-to-Air Lookdown Capable**
- **Maritime Detection and Tracking**
 - **High Sea States (Sea State 5) Capable**
- **Adds Anti-Ice Radome Capability (MH-47G/MH-60M)**
- **800 Hours Mean Time Between Failures**
- **Replaces AN/APQ-174, AN/APQ-186 and AN/APQ-170 (Ku)**

- **Physical**

- **One box Radar, Air Cooled, 162 lbs**
- **Ruggedized for Gunfire Vibration**
- **Room for future growth**



***New Capabilities
In Blue Italics***

Program Milestones

- **Developmental Testing – Started Jan 2012**
- **Low Rate Production Milestone C – 3rd Quarter FY13**
- **Operational Testing – 2nd Quarter FY15**
- **Full Rate Production – 3rd Quarter FY15**
- **Initial Operational Capability – 3rd Quarter FY15**

WIN THE CURRENT FIGHT
THE GLOBAL SOF NETWORK
THE FORCES AND FAMILIES
RESPONSIVE RESOURCING

Accomplishments/Plans

- **FY 2012 Accomplishments**
 - **Installed Pre-Production Radar And A-Kit On MH-60M**
 - **Conducted Developmental Flight Testing On MH-60M and MH-47G**
 - **Completed Software Development Of All Radar Operational Modes**
 - **Demonstrated Specification Compliance Over Foliated and Unfoliated Terrain, Mountains, Snow, Sand Dunes, and Over Water**
- **FY 2013 Plans**
 - **Continue Radar Developmental Flight Testing**
 - **Complete SKR A-Kit Installation Design On 2.3-Modified MH-47G Aircraft**
 - **Execute Milestone C Brief**
 - **Award LRIP I Contract**



AN/APQ-187 Radar Installations



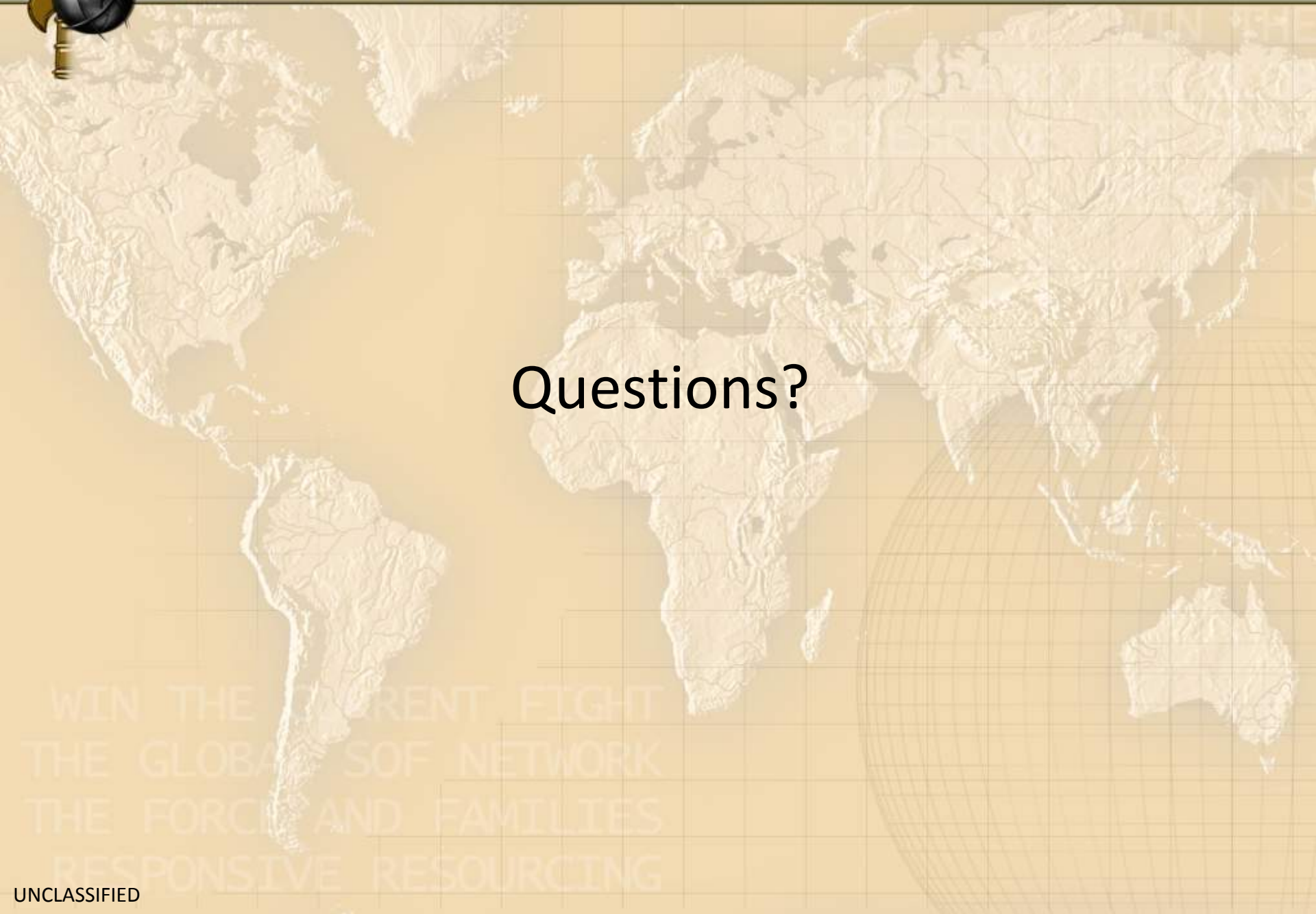
**Radar
Installation
On MH-47G**

**Radar
Installation
On MH-60M**



Accomplishments Developmental Testing (DT)





Questions?

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