

Special Operations Forces

Industry Conference



Silent Knight Radar

AN/APQ-187

The background of the slide is a composite image. It features a military helicopter, likely a Sikorsky UH-60 Black Hawk, in the center. Two soldiers in full combat gear are running towards the right, carrying rifles. The scene is overlaid with a semi-transparent globe showing a grid of latitude and longitude lines. The overall color palette is muted, with greys, browns, and yellows.

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Program Overview

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



- BOI: 211 + 20% Spares
 - 69 MH-47G, 72 MH-60M, 50 CV-22, 20 MC-130H



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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**



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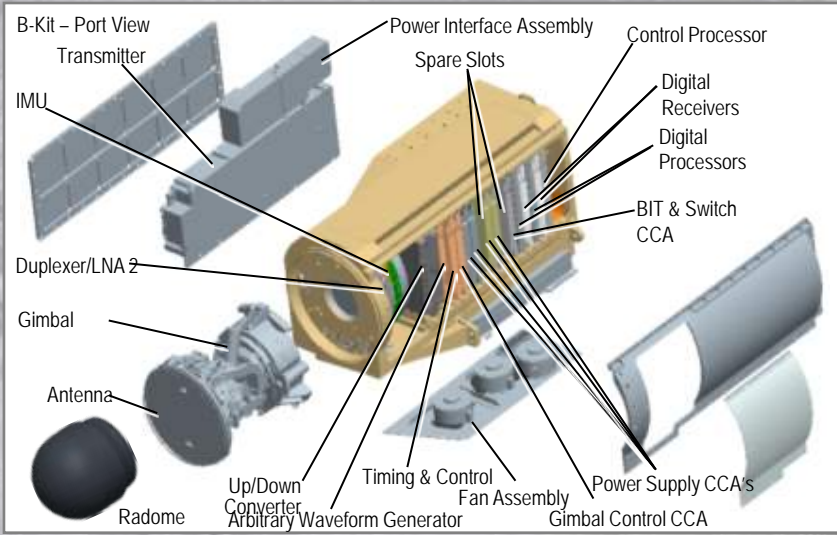
Material Solution

- 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*



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Program Milestones

- Developmental Testing – Started Jan 2012
- Low Rate Production Milestone C – 2nd Quarter 2013
- Operational Testing – 1st Quarter 2015
- Full Rate Production – 2nd Quarter 2015
- Initial Operational Capability – 2nd Quarter 2016



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Accomplishments/Plans

- **FY 2011 Accomplishments**
 - Continued Engineering and Manufacturing Development (EMD)
 - Conducted Prototype Radar Integration And Testing
 - Demonstrated Prototype Radar On Contractor Flight Testing
 - Assembled Pre-Production Radars And Aircraft Install Kits
 - Installed Pre-Production Radar And A-Kit On MH-47G
- **FY 2012 Plans**
 - Radar Developmental Flight Testing On MH-47G and MH-60M
 - Continue Radar Qualification Testing



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Accomplishments Radar Installations



- AN/APQ-187 Radar Installation On MH-47G



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Accomplishments Developmental Testing (DT)



- AN/APQ-187 Radar Test Flight On MH-47G

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Questions?



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