



**LOCKHEED MARTIN**   
*We never forget who we're working for™*

**AN/APS-145 Airborne Surveillance Radar**  
Sophistication, performance and reliability







## More Advanced Features Than Other Airborne Surveillance Radars

The APS-145 Airborne Surveillance Radar is the most reliable, cost effective, high power radar available. This sophisticated system is the latest in a long line of airborne early warning systems from Lockheed Martin. Its predecessors, the APS-120, APS-125, and APS-138 have helped make the Northrop Grumman E-2C Hawkeye the most reliable carrier-based aircraft in the world. Over 100 E-2C's have been completing nearly 100 percent of their missions, day in and day out, for more than 2 decades. The APS-145 carries on the tradition adding several significant features found in no other airborne surveillance radar.

The APS-145 is a high-power UHF Doppler radar. It utilizes a rotating antenna within a circular radome mounted atop the aircraft to simultaneously detect and track multiple threats on the sea, in the air, over land, and the critical land-sea interface. While its primary platform is the E-2C, it is easily adaptable to other aircraft, including the Lockheed Martin C-130 and P-3.

The APS-145 extends the performance of previous airborne surveillance radars to unprecedented levels. Its range is a full 40 percent beyond that of the APS-138 – greater than any airborne surveillance radar in the world. It will monitor and track more than 20,000 targets simultaneously. Sophisticated jam avoidance and ECCM techniques assure unparalleled performance in dense EMI and jamming environments. Adaptive signal processing provides superior target detection and tracking in complex target environments.

### Elegant Automation

The APS-145 handles itself with discipline in any environment. It is the first and only radar to incorporate automatic performance optimization. The APS-145 adapts to dynamic operating conditions automatically over varied terrain – with no operator intervention. That means the operator is never spending time performing routine functions at the expense of the tactical mission. And it means that the APS-145 is always

performing at its best over changing geographical and electromagnetic conditions.

### Made For Your Mission

The APS-145 combines sophistication, performance, and reliability. Its automation and Environmental Management System (EMS) capability sets it apart from any radar in the world.

From detection of small, low speed targets as required for drug interdiction, to long-range detection and tracking of advanced high speed military aircraft and missiles with low radar cross sections, there is simply no better, more cost-effective airborne surveillance radar than the APS-145. Whatever your mission, this radar is up to the task.

### The Most Cost-Effective Solution To Airborne Surveillance

The APS-145 broadens the capabilities of airborne surveillance, and introduces features never before available. Best of all, the APS-145 is extremely cost effective, especially compared to larger systems that promise more but don't include all of the APS-145's features and capabilities.

This type of performance is what you would expect from Lockheed Martin. We've been developing AEW systems since the beginning. From the APS-10 Search Radar in 1943 that led to the APS-20 in 1945, our expertise continues to produce advanced airborne surveillance solutions. Today our crowning achievement is the APS-145; the most capable, cost effective AEW system in the world. It's available today and built for tomorrow's threat. Whatever your mission, the APS-145 is ready.



The APS-145 also is easily adaptable to other aircraft, including the Lockheed Martin C-130 and P3.

### The APS-145 provides enhanced performance in the following areas:

#### 40 percent greater range:

The range of the APS-145 is 40 percent greater than the APS-138 radar, increasing the continuous surveillance volume to 6 million cubic miles.

#### Increased scan-to-scan correlation:

Long a feature of Lockheed Martin AEW systems, scan-to-scan correlation is greatly expanded in the APS-145 to maintain over 20,000 tracks and provide far more detailed target information to the processor. The result is greatly improved performance in all operational environments.

#### Enhanced operation in dense signal environments:

The APS-145 maintains operation in dense signal environments where others fail. Detection and tracking are fully automatic.

#### Automatic frequency evaluation and selection:

APS-145 finds its way through dense and dynamic electromagnetic interference conditions with automatic channel monitoring and selection. EMI impact is continuously assessed, and the clearest operating frequency is automatically selected.

#### Continuous target identification:

The APS-145 incorporates a triple Pulse Repetition Frequency (PRF) feature which allows for continuous detection of all targets over the entire tactical area; over land, sea and the horizon, simultaneously.

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