

## H-1 Upgrade Program



### Description

The H-1 Upgrade (UH-1Y/AH-1Z) program replaces the current two-bladed rotor system on the UH-1N and AH-1W aircraft with a new four-bladed, all-composite rotor system that is coupled with a sophisticated, fully integrated, state-of-the-art cockpit. In addition to the new rotor system and cockpit, the UH-1Y and AH-1Z will incorporate a new performance-matched transmission, four-bladed tail rotor and drive system, and upgraded landing gear for both aircraft. Additionally, structural modifications to the AH-1Z will support the increase to six weapons stations. The advanced cockpit, common to both aircraft, reduces operator workload, improves situational awareness, and provides growth potential for future weapons and joint interoperability. The cockpit integrates on-board planning, communications, digital fire control, self-contained navigation, night targeting, and weapons systems in mirror-imaged crew stations. The UH-1Y and AH-1Z are approximately 84-percent common throughout the aircraft, which significantly benefits the Marine Air-Ground Task Force (MAGTF) in supportability of the two aircraft. Ongoing developmental testing of the UH-1Y and AH-1Z has demonstrated a marked increase in aircraft agility, maximum continuous speed, and payload.

### Operational Impact

The H-1 Upgrade program is designed to resolve existing safety deficiencies, significantly improve operational capabilities, and reduce life-cycle costs. Commonality between aircraft will greatly enhance the maintainability and deployability of the systems with the capability to support and operate both aircraft within the same squadron structure.

### Program Status

The H-1 Upgrade continues in the Engineering and Manufacturing Development (EMD) phase. To date, the five EMD aircraft (three AH-1Zs and two UH-1Ys) have amassed more than 2,500 flight hours since first flight. In December of 2003, a contract was signed for Low Rate Initial Production of nine aircraft. In 2005, the program will enter the Operational Test phase, which will verify the effectiveness and suitability of these aircraft for the warfighter. Due to substantial operational demands and aircraft attrition—both resulting from the Global War On Terrorism—the Marine Corps is pursuing a “build new” strategy for the UH-1 and examining a “build new” strategy for the AH-1, in order to preclude significant inventory shortfalls. The total program objective is 100 UH-1Ys and 180 AH-1Zs.

**Procurement Profile:** FY 05 FY 06

**Quantity:** 9 10

**Developer/Manufacturer:**

Bell Helicopter Textron Inc., Fort Worth, TX

**Integrated Cockpit:**

Northrop Grumman, Woodland Hills, CA

**AH-1Z Target Sight System:**

Lockheed Martin, Orlando, FL