

## JSOW

### Family of Precision Strike Weapons



**The Joint Standoff Weapon is a family of affordable, highly-lethal weapons revolutionizing strike warfare.**

#### Benefits

- Increased weapon and platform survivability
- Multiple launch capability
- Tactical flexibility
- Jointness and interoperability
- Cost effective

#### Joint Standoff Weapon (JSOW)

This new generation glide weapon ensures warfighter survivability by enabling precision air strike launches from well-beyond most enemy air defenses, at kinematic standoff ranges up to 70 nm (130 km). JSOW Block II development significantly reduces JSOW unit costs and adds Selective Availability/Anti-Spoofing Module (SAASM) Global Positioning System (GPS) capability. It will be complete in 2006.

The family of JSOW precision strike weapons is modular in design with variants that integrate different lethal submunitions, and a blast/fragmentation unitary warhead and a hardened target penetrator that can be programmed for blast and fragmentation effects. JSOW targets vary from all types of area targets to hard point targets. JSOW's low radar cross section and infrared signature are key stealth features and ensure a high probability of survival en route to heavily defended targets.

JSOW integrates the BLU-97 combined effects bomblets and the BLU-108 sensor-fused weapon submunitions for area targets or armored vehicles. The blast/fragmentation unitary variant incorporates the insensitive 500-pound BLU-111 (MK-82). The BROACH penetrator/blast/fragmentation variant incorporates an uncooled Imaging Infrared (IIR) autonomous terminal seeker and tracker, and integrates the UK BROACH dual-stage blast/fragmentation and/or penetrator warhead. This variant enables precision attack of point targets.

Since 1999, JSOW has been combat proven in operations Southern Watch, NATO Allied Force, Enduring Freedom and Iraqi Freedom with more than 400 weapons employed. More than 2,500 JSOWs have been produced.

#### Operations

Today, JSOW variants can engage and destroy virtually the entire target set for U.S. forces spanning a range of threat

environments. All JSOW variants are guided to the target area by a highly-integrated GPS and Inertial Measurement System. JSOW receives the targeting information in preplanned mode, in the cockpit with data received while airborne through onboard sensors, or through other third-party targeting assets. After the AGM-154C BROACH variant arrives in the target area, it utilizes the IIR seeker for autonomous guidance in the terminal phase of the flight to attack with precision accuracy.

#### Modularity/Growth

JSOW is designed to take advantage of new developments in payloads and sensors through design modularity of the air vehicle. The payload bay can accommodate lethal and nonlethal payloads — from warheads to pamphlets to sensor packages. The terminal seeker space can accept the latest sensors as they are developed. Space is allocated in the aft section of the air vehicle to allow the integration of a data link with development that started





in 2005 for capability against moving/time sensitive targets and maritime interdiction. Space for a turbojet engine for added range is also available, making JSOW a versatile system well into the 21st century.

#### Performance

JSOW demonstrated all standoff accuracy and lethality requirements in a highly-successful development and operational test program. This demonstrated the ability to launch from high or low altitudes and accurately navigate to the target area via selected waypoints, further enhancing weapon and aircrew survivability.

The AGM-154A (BLU-97) is in full-rate production. The AGM-154A-1 (BLU-111) is under development by Raytheon and will be ready for production in FY 2006. The AGM-154B (BLU-108) has completed

Engineering and Manufacturing Development, and production is deferred. The AGM-154C (BROACH) has demonstrated precision accuracy within approximately four feet in developmental and operational tests. The weapon is in full-rate production and achieved initial operating capability in February 2005.

JSOW is integrated on the F-15E, F-16, F/A-18, B-2 and B-52 aircraft. JSOW is also a threshold internal bay weapon for the F-35 Joint Strike Fighter initial operational capability. The aircraft compatibility built into the JSOW design will minimize integration costs for future aircraft platforms. The maturity and proven capabilities within the JSOW make this a user-friendly, highly-reliable, cost-effective system.

| VARIANT              | GUIDANCE                                                                                                            | PAYLOAD                                                                                                               | AFT                                                                                                          |
|----------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| AGM-154A (BLU-97)    | <br>GUIDANCE COMPUTER            | <br>BLU-97 SUBMUNITIONS            | <br>FLIGHT CONTROL SYSTEM |
| AGM-154A-1 (BLU-111) | <br>GUIDANCE COMPUTER            | <br>BLU-111 BLAST/FRAG             | <br>FLIGHT CONTROL SYSTEM |
| AGM-154B             | <br>GUIDANCE COMPUTER            | <br>BLU-108 SUBMUNITIONS           | <br>FLIGHT CONTROL SYSTEM |
| AGM-154C             | <br>GUIDANCE COMPUTER IIR SEEKER | <br>BROACH BLAST/FRAG/ PENETRATING | <br>FLIGHT CONTROL SYSTEM |

#### JSOW Specifications

|                |          |                             |
|----------------|----------|-----------------------------|
| <b>Length:</b> | 160 in   | (4.1 m)                     |
| <b>Weight:</b> | 1,050 lb | (475 kg) Depends on variant |

#### Aircraft Compatibility:

- F-16, F-15E, F/A-18, B-2, B-52, P-3, F-35 (JSF), JAS 39 Gripen, Eurofighter 2000, Tornado
- Multiple carriage capable on BRU-55/BRU-57 twin launchers
- MIL-STD 1553/1760 and NATO STANAG 3837 AA interface for full capability

#### Range (unpowered):

- Low altitude 500-ft launch 12 nm (22 km)
- High altitude 40,000-ft launch 70 nm maximum kinematic range (130 km)

#### Range (powered):

- ~155 nm (290 km)

#### Warheads:

- BLU-97 Combined effects bomblets
- BLU-108 Sensor-fused submunitions
- 500-lb BROACH Blast/fragmentation and/or penetrating warhead  
Demonstrated 5-ft (1.5-m) concrete penetration in testing
- 500-lb BLU-111 Unitary blast/fragmentation warhead

Raytheon Company  
**Missile Systems**  
 Strike Systems  
 P.O. Box 11337  
 Tucson, Arizona  
 85734-1337 USA  
 520.663.8042 phone  
 520.663.8020 fax

[www.raytheon.com](http://www.raytheon.com)

**Raytheon**

*Customer Success Is Our Mission*