Longbow™
Fire Control Radar and RF Longbow HELLFIRE™ Fire-and-Forget Missile for the Apache
Longbow

The Longbow™ system is manufactured by a Joint Venture of Lockheed Martin and Northrop Grumman. Integrated capabilities enhance Apache’s lethality fourfold and survivability sevenfold. The mission equipment package is in production for the US and several international countries. Longbow makes a major contribution to the warfighting capability of the Apache. It is a proven force multiplier tested in rigorous independent operational evaluations. The Apache Longbow system was battle-proven in Operation Enduring Freedom and Operation Iraqi Freedom.

Fire Control Radar

The radar provides high performance with very low probability of intercept. Longbow’s radar rapidly and automatically searches, detects, locates, classifies, and prioritizes multiple moving and stationary targets on land, air, and water in all weather and battlefield conditions to the maximum range of the Longbow missile. Target coordinates are automatically available to all sensors and weapons-enabling target confirmation, reducing fratricide, and permitting rapid launch. Target data is also digitally available through the improved data modem for real-time transfer to other platforms and command posts. The self-contained Radio Frequency Interferometer (RFI) ensures rapid identification and accurate azimuth to enemy air defense units. High system reliability and two-level maintenance provide high operational availability with low support costs. The radar is fielded with the Apache AH-64D Attack Helicopter system in the US Army.

Specifications

**Fire Control Radar (AN/APG-78)**
- **Range**: 8 km
- **Frequency**: Ka band
- **Modes**: Surveillance, targeting, RFI cued, terrain profiling, and air overwatch
- **Weather**: Clear to adverse
- **Environments**: All battlefield obscurants

**Missile (AGM-114L)**
- **Range**: 0.5 – 8 km
- **Guidance**: Millimeter wave
- **Compatability**: Launch from multiple platforms
- **Commonality**: Bus and warhead with HELLFIRE II
- **Weight**: 108 lb (49 kg)
- **Length**: 69 in (175 cm)
- **Diameter**: 7 in (17.8 cm)

Longbow HELLFIRE Missile™

The Longbow system incorporates a fire-and-forget RF missile, allowing the Apache to launch from defilade, increasing battlefield survivability. The missile is capable of locking on before or after launch and has been extensively tested in multiple countermeasures.

The M299 Launcher™ has a fully digital interface to the Apache and is capable of firing any HELLFIRE missile. The missile and launcher system is fielded by the US Army.

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