



Banshee Whirlwind

Aerial Targets

The Banshee Whirlwind is one of a range of remotely piloted aerial targets offered by QinetiQ Target Systems. The system has achieved worldwide acclaim and is in service, or has been operated under contract, in over 30 countries.

The Banshee range of aerial targets are typically used by customers to represent threats posed by UAVs, enemy aircraft and general aerial threat weapons. Variants of Banshee have been used to test the effectiveness and operational readiness of weapon systems including:

- Air-to-Air Missiles: Meteor, AMRAAM, Aim-7 Sparrow, Aim-9 Sidewinder, MICA, Aspide, and R550 Magic Missile
- Ground/MANPAD/Surface-to-Air Missiles: IRIS-T, Stinger, AKASH, Sea Wolf, Mistral, Sadral, Rapier/Jernas, HVM, Simbad, Crotale, Blowpipe, Javelin, Starburst, Starstreak, Sea Sparrow, ESSM, SPYDER, Hawk and Patriot
- Guns/Cannon Systems: Phalanx, Sea Zenith, Seaguard, AHEAD, Goalkeeper, plus a range of large/med cal naval guns & cannon systs (20mm-155mm)

Throughout its development, the Banshee system has been enhanced to include customer modifications that improve the maintainability, reliability and operability. These modifications and refined aerodynamics have contributed to the increased performance available in the current version.

The Banshee Whirlwind is powered by a rear-mounted rotary engine. It is fitted with QinetiQ's own digital autopilot, telemetry, GPS and waypoint navigation systems to provide accurate and reliable flight profiles to ranges of up to 100km. Up to four vehicles may be operated simultaneously from one ground control station when Banshee is flying in autonomous mode. This allows an entire mission, including launch and recovery, to be performed automatically. Flight to altitudes of up to 6096m can be achieved with Banshee Whirlwind, whilst the addition of a radar altimeter allows the target to achieve reliable controlled flight to altitudes as low as five metres ASL.

Alternative features are available to vary the system's performance, to suit customer requirements and provide specific enhancement for a range of weapon system sensors. These include passive and active radar enhancement, radar chaff and infrared decoy dispensing pods, a daylight surveillance package, pyrotechnic visual and infrared enhancements, plus the patented Hot Nose black-body infrared augmentation device.

Specifications

Physical	
Wingspan	2.49m (8ft 2in)
Length	2.85-2.95m (9ft 5in-9ft 8in)
Height	0.91m (3ft 0in)
Wing area	2.42m ² (26ft ²)
Power	40bhp static thrust Whirlwind rotary engine
Performance	
Speed range	46-100m/s (89-200 knots) (165-370km/hr) (Dependent on all-up-weight)
Launch speed	32m/s (62 knots) (115km/hr)
Operating range	>100km (54nm)
Endurance	>90 minutes at typical mission, mixed throttle settings
Maximum altitude	6096m (20,000ft)
Minimum altitude	5m (16ft)
Recovery	Parachute
Other features	
Stabilisation	QinetiQ's CASPA Avionics with digital autopilot and 3 axis IMU
Tracking and telemetry	Integrated GPS, autonomous waypoint navigation and digital telemetry systems
Typical payloads	Up to 16 smoke tracking flares Up to 16 infrared tracking flares (combinations of flares may be carried and activated as required) Hot Nose, black-body IR source IR and chaff decoy dispensing pods IFF transponder capable of modes A and C Two off 7.5" and/or 2 off 5.5" Luneberg Lenses Frequency specific, active radar augmenters Radar altimeter, sea-skimming module Acoustic and Doppler radar MDI (these payloads may be mixed and most carried simultaneously)

*ISA – International Standard Atmosphere



QinetiQ Target Systems BTT-3 Banshee Aerial Target



Banshee flying for the British Army in Canada

Key features

Suitable for use on land and sea

Suitable for use against surface-to-air and air-to-air weapon systems

Target performance and enhancement easily varied with weapon proven plug-in modules

Target airframe and enhancements proven worldwide over may thousands of hours of in-service operation

Note: Due to continuous process improvements, specifications are subject to change without notice.

Collaborating with QinetiQ

At QinetiQ we bring organisations and people together to provide innovative solutions to real world problems, creating customer advantage.

Working with our partners and customers, we collaborate widely, working in partnership, listening hard and thinking through what customers need. Building trusted partnerships, we are helping customers anticipate and shape future requirements, adding value and future advantage.

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