

Blowpipe missile

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Canadian 129th Anti-Aircraft Defense Battery missile team with Blowpipe during NATO exercise Cornet Phaser. The men are wearing Nuclear, Biological and Chemical (NBC) protective gear.

The Shorts **Blowpipe** is a man-portable surface-to-air missile (MANPADS) which was in use with the British Army and Royal Marines from 1968. It was superseded by an interim design, Javelin, and later the greatly improved Starstreak missile.

Description

The missile is shipped as a single round in a storage cylinder/firing tube. The controller unit is clipped to the launch tube and fired from the operator's shoulder. To reduce the overall size of the container, the rear fins of the missile are stored in the larger diameter area at the front of the tube; during firing the fins clip onto the rear of the missile as it moves past. This gives the launch container a unique shape, seemingly oversized at the front and extremely thin at the rear. The missile is powered by a short duration solid rocket for launch, then by a main sustainer rocket once it is well clear of the launch tube.

Guidance of the Blowpipe is completely manual, or MCLOS, requiring the operator to steer the missile all the way to its target manually via a small thumb joystick. A flare in the tail of the missile makes it more easily visible in flight. Detonation is either by proximity or contact fuse. The

controller can then be removed from the empty missile container and fitted to a new round.

Blowpipe was developed as a SAM for submarines, fitted as a cluster of four missiles into a mast that could be raised from the submarine's conning tower under the name **Submarine Launched Airflight Missile (SLAM)** trialled on HMS *Aeneas* (P427) in 1972.

Combat performance

Blowpipe was used by both sides during the Falklands War in 1982. With the targets being fast flying aircraft, flying low and using the ground to hide their approach the Blowpipe had about 20 seconds to spot the target, align the unit and fire. A British officer compared using the weapon to "trying to shoot pheasants with a drainpipe." The official report stated that of the 95 missiles fired by the British, only 9 managed to destroy their targets and all of these were slow flying planes and helicopters [1]. A later report determined that only two kills could be attributed to Blowpipe: A British Harrier GR3 (XZ972) and a Argentine Aermacchi MB-339A (0766 (4-A-114)). Blowpipe was found to be particularly ineffective when used to engage a crossing target or to chase a target moving rapidly away from the operator. The poor performance led to it being withdrawn from UK service.

In 1986 some of the mothballed units were sent clandestinely to equip the Mujahideen fighting the Soviets in Afghanistan [2]. The system again proved ineffective [3]. With Blowpipe ineffective, a more effective system had to be found. While Blowpipe was available on the international arms market and therefore its origins were open to speculation, the provision of the US Stinger missile which was restricted meant that there had to be more open acknowledgment of western support for the Mujahideen. Blowpipe missile systems are still being found in weapon caches as recently as June 2003 in Afghanistan [4] [5].

The Canadian military took Blowpipe from storage to give some protection to their naval contribution to the 1991 Gulf war, however sheer age had affected the weapon and 9 out of 27 missiles tested mis-fired in some way. [6]



Another photo of the Canadian Blowpipe team in NBC suits

Replacement

Blowpipe was replaced by the Javelin surface-to-air missile, which is of a generally similar design but improved in performance and with a semi-automatic guidance system (SACLOS) - the operator now controls the missile by keeping the target in his sight, and the controller unit steers the missile to remain centered in the sight.

The basic Javelin missile body was retained in the Starburst surface-to-air missile, but the guidance system was further improved to a self-contained system in the missile itself. Unlike the Javelin where the guidance is calculated in the controller unit and sent to the missile via radio, in Starburst a laser in the control unit "paints" the target, and the missile passively guides itself to intercept the laser. This renders it largely immune to any possible jamming.

Starburst was used only briefly, before being replaced by the dramatically improved Starstreak. Starstreak uses the same beam-riding concept of Starburst, but dramatically improves the missile and warhead. In Starstreak the missile very quickly accelerates to Mach 3.5, then separates to release three dart-like interceptors. Each dart is

independently guided by riding the laser beam, dramatically improving the chances of a hit. The darts are also excellent at penetrating armor.

General characteristics

- Dimensions:
 - Length: 1.35 m
 - Diameter: 76 mm
 - Wingspan: 274 mm
- Weight:
 - Missile: 11 kg
 - Launch tube with missile: 14.5 kg
 - Control Unit: 6.2 kg
 - Complete system: 22 kg
- Warhead: 2.2 kg shaped charge
- Range: 500 m to 3.5 km
- Speed: Mach 1.5 (510 m/s)

Details from Wikipedia

http://en.wikipedia.org/wiki/Blowpipe_missile