

[SA-8 GECKO Low Altitude Surface-to-Air Missile System](#)

The SA-8 GECKO is a single-stage, solid-fuel, short-range, low-altitude, all-weather SAM system. The TELAR (transporter erector launcher and radar) vehicle is a six-wheeled design designated BAZ-5937.

The driver's compartment at the front of the vehicle has accommodation for two, the driver and commander, with access to it via a hatch in the roof.

The engine is at the very rear. Four command-guided missiles are carried ready to launch, two either side. The main fire control radar is at the rear of a one-man gunner-radar operator position and folds back 90 degrees to reduce the overall height of the vehicle for air transport and during high speed road travel. It is known that the radar operates in the H-band with a 360 degrees traverse and has a maximum range of 35 km. The complete conical-scan radar installation of the GECKO has been assigned the NATO code name LAND ROLL.

Each battery also has two missile transloaders based on the same chassis with a long coffin-like blunt pointed tarp roofed structure covering the cargo space and crane. When operating, the blunt point area is raised and the tarped structure is slid to the rear.

A total of 18 reloads in boxed sets of three are transferred to the TELARs by the hydraulic crane mounted centrally behind the vehicle cab. In the Regiments Maintenance battery there is a single radar collimation vehicle using the same chassis. This has a collimation antenna which lies on both sides of the vehicle and overhangs the rear during transit. In operation it is raised and mounted on each side of the hull directly behind the cab.

The SA-8a (GECKO Mod 0) high acceleration missile (Factory Index number 9M33) has a launch weight of about 130 kg. Maximum speed is Mach 2.4, minimum altitude is 25 m, maximum effective altitude 5000 m. The minimum range is 1500 m and the maximum range 12000 m. Against an F-4 Phantom target the warhead's lethal radius at low altitude is 5 m and is fitted with proximity and contact fuses. In 1980 a newer missile, the SA-8b or GECKO Mod 1, was introduced into service. Contained in a rectangular launch box it has improved guidance and speed characteristics to give an increased maximum range of 15000 m.

The warhead weight of both missiles is 19 kg. The reloading time is five minutes. Combat deployment time is four minutes with system reaction 26 seconds.

The surveillance radar of the LAND ROLL operates in the H band and has an effective range of around 30 kilometers against a typical target.

The tracking radar is of the pulsed type and it operates in the J band with a range of 20 to 25 kilometers. The two I-band guidance radars make it possible to launch two missiles at the same target, each one responding to a different frequency to frustrate ECM.

Mounted on top of each missile guidance radar is an LLLTV/optical assist system for target tracking in low visibility and heavy ECM. LAND ROLL is also known to have a short-range target acquisition capability.

The vehicle is fully amphibious, being propelled in the water by two water jets at the rear of the hull. The vehicle is fitted with an air filtration and overpressure NBC system together with IR systems for the commander and driver.

About the Author

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