

MANPADS

NOTE

This paper is an update to and supersedes 15POS09.

BACKGROUND

The MANPADS (Man-Portable Air Defence Systems) threat is not a new one for civil aviation. Since 1975, more than 60 civilian aircraft have been hit by MANPADS, causing 28 accidents and more than 1,000 deaths around the world (RAND Group 2019).

There was a MANPADS attack in 2003 over Baghdad Airport, Iraq, against a DHL Airbus 300. The crew did an outstanding job landing their disabled aircraft after the left wing was hit by a shoulder launched SA-7 surface-to-air missile, one of the so-called “first generation MANPADS”.

These types of attacks on commercial aircraft have occurred mostly in conflict zones, one notable exception being the attack against an Arkia Israeli Airlines B757 whilst departing Mombasa, Kenya, in 2002. Two SA-7 missiles were launched at the aircraft, and both failed to hit their target.

Although the vast majority of MANPADS are kept securely in State-owned facilities, it is estimated that several thousands of MANPADS are in the hands of non-State actors, having been acquired by tactics such as illicit transfer, black market purchase, or theft. Most components of MANPADS have a long shelf life.

MANPADS are portable by the human body, light and small. In general, they carry approximately less than 3kg of explosives and can operate up to an altitude of 26,000ft. Most have a short flight time before they are armed, meaning they are not a close-proximity weapon. In terms of detonation, most systems have a proximity sensor causing the warhead to explode and scatter shrapnel over a wider area when approaching the target. However, next generation systems can also track a laser to target or are even flown using virtual reality (VR).

Military operators have tried to enhance aircraft-fitted systems to counter ground-and air-launched weapons. However, most Civilian operators do not carry that same counter capability and protection. In addition, MANPADS development has largely focussed on defeating these countermeasures, ensuring the warhead remains on target.

PREVENTION

IFALPA believes that preventing the proliferation of MANPADS is the most effective countermeasure. States should continue to develop relevant policies, control global exports, and provide transparency as to where the weapons systems are sold or destroyed. National Agencies should share information on the presence and availability of MANPADS.

CONCLUSION

- The MANPADS threat is a continuing concern, even outside conflict zones.
- Prevention of MANPADS proliferation is the most effective countermeasure.