

A closer look at the Man-Portable Air-Defence System.

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A closer look at the Man-Portable Air-Defence System.

Recently, USA approved a \$200-million arms package for Ukraine, including Stinger Missiles, which are a type of shoulder-fired Man-Portable Air-Defence Systems (MANPADS).



[Ref: Defence Update]

What are MANPADS?

- They are **short-range**, and **portable surface-to-air missiles** that can be fired by individuals to destroy aircraft or helicopters.
- They **help shield troops from aerial attacks** and are most effective in targeting low-flying aircrafts.

Features:

- MANPADS can be **shoulder-fired**.
- They can be launched from atop a ground-vehicle, **fired from a tripod or stand**, and from a helicopter or boat.
- **They are lightweight** as compared to other elaborate weapon systems, making them **easy to operate by individual soldiers**.
- They have a **maximum range** of 8 kilometres and can engage targets at altitudes of 4.5 km.
- Most MANPADS have passive or '**fire and forget**' guidance systems.
- The missiles are fitted with **infrared (IR) seekers** that target the airborne vehicle through heat radiation being emitted by the latter.

Variants of MANPADs:

Stinger Missiles

- The most common make of MANPADs is the U.S.-made **Stinger missiles**.
- They have a range of 4.8 km, and can engage **low-flying aircrafts** at an altitude of 3,800 metres.
- They have a **passive guidance system**, which uses infrared technology.

Igla MANPADS

- The Soviet-made counterparts are the **Igla MANPADS**, which also employ infrared technology.
- **They were used in Iraq** when it was invaded by the U.S. in 2003.
- They have also been used by India, as part of **Operation Trishul Shakti** of 1992, during the Siachen conflict.

Star Streak

- The British army's equivalent of the Stinger missiles has also been used in the past.

RBS-70 MANPADS

- Sweden makes the **RBS-70 MANPADS** series while China's version, **FN-6**, is akin to the Stinger.

Concerns around MANPADS:

- There are risks involved in this weapons transfer as **Ukraine** is believed to have one of the **largest arms trafficking markets in Europe**.
- Sending MANPADS to Ukraine may contribute to intensifying the network of **illegal weapon trade**.
- There is widespread evidence of MANPADS ending up with **non-state and terrorist groups**.
 - The most prominent cases being Syria, Libya and Afghanistan.
- 57 non-state armed groups were confirmed or suspected to be possessing MANPADS.
- Another concern around MANPADS is **civilian attacks**.
 - More than 60 civilian aircraft have been hit by MANPADS since the 1970s, claiming the lives of more than 1,000 civilians.