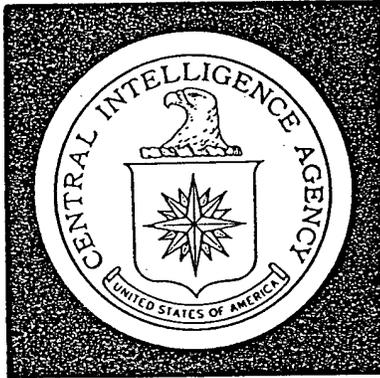


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Intelligence Memorandum

The Soviet "Strela" System--A Man-Portable SAM

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SR IM 70-25
July 1970

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
21 July 1970

INTELLIGENCE MEMORANDUM

The Soviet "Strela" System--A Man-Portable SAM

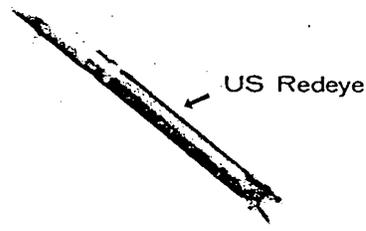
Summary

Since late 1969 several independent sources have provided evidence indicating the existence of a man-portable, low-altitude surface-to-air missile system developed by the USSR. Analysis of the available reporting and of some components of the missile has led to these preliminary conclusions:

- The weapon is a small, man-portable, heat-seeking missile similar in many respects to the US Redeye. The Soviet designation for the system is "Strela."
- Egyptian army personnel are being trained on the system and the Soviets have provided the weapon for use against Israeli aircraft.
- The weapon probably has been serially produced by the Soviets since at least the first half of 1969, and probably has been deployed to a limited extent with Soviet troops.
- Wider deployment of this system is likely, both in Egypt and with Soviet army units.

Note: This memorandum was produced solely by the Central Intelligence Agency. It was prepared by the Office of Strategic Research and coordinated with the Office of Scientific Intelligence.

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US and Soviet Man-Portable SAMs

	Strela	Redeye
Diameter	2.75 inches	2.75 inches
Length	Not over 54 inches	47 inches
Altitude	6,000 feet	9,000 feet
Guidance	Infrared homing (uncooled)	Infrared homing (cooled)
Warhead	2-pound high explosive	2.35-pound high explosive
Propulsion	Solid propellant	Solid propellant
Launcher	Man-portable tube	Man-portable tube

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System Description

The designation "Strela" is the Russian word for arrow, and is equated with a new SAM system

The missile reportedly can reach an altitude of two miles and is a heat-seeking missile.

the new Strela antiaircraft rocket would not be sold to Warsaw Pact countries because several years of production will be required for the Soviets to meet their own needs.

The apparent characteristics of the missile compare closely to those of the US Redeye missile developed in the early Sixties and first deployed in early 1967 (see illustration, facing). It is clearly not a copy of the Redeye, however.

Use in Egypt

That the Soviets are providing the Egyptians with the Strela missile and training them in its use

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indicate that use of the system in Egypt is continuing and may expand in the future. Soviet personnel are almost certainly involved in this program as advisers or technicians,

In-
initial training may have begun in mid-1969, enabling the Egyptians to carry out combat firings beginning in the fall.

Program Status

The current production status of the Strela system is unclear.

On balance, the evidence indicates that series production of the missile began at least as early as mid-1969.

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Future Deployment

Unless the performance of the system falls far short of Soviet requirements, the Soviets' evident concern for tactical air defense promises a large deployment program for the system.

The following preliminary projections of likely Soviet force goals for the system are based on the assumption that the Soviets will issue the system only to selected front line company-level units, which are not assigned large caliber air defense guns or other SAM defenses. Given current Soviet army organization and doctrine, the man-portable, short-range characteristics of such a missile could be employed to best advantage in the company, the lowest level where adequate control of the system can be exercised.

Organization and missile allocation of Strela firing teams within the company are difficult to anticipate. The US concept for the Redeye allocates 12 missiles to each line company. They are carried in a jeep, 6 at a time, to the immediate area of operations where the two operators dismount and deploy with their weapons.

On a similar basis (12 Strela missiles per company) it would take about 50,000 missiles to equip all the rifle, artillery, and engineer companies in Soviet Category I and II divisions--that is, divisions ready for early commitment. At a minimum, the Soviet groups of forces in Eastern Europe, Category I

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divisions in the western USSR, and the seven Soviet airborne divisions will probably be equipped with the Strela. This would require some 17,000 missiles. A minimum program would probably also include at least some of the units on the Sino-Soviet border. (The US inventory objective is about 20,000 Redeyes deployed, which--allowing for training and replacements--will require production of some 27,000 missiles by 1974.)

Widespread deployment of the Strela missile system would enhance Soviet tactical air defense capabilities.

its performance may improve as the operators become more proficient or if modifications are made. The Strela probably would be more effective against the slow moving or hovering gunship aircraft and helicopters which have become an important factor in modern tactical warfare.

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