

BACKGROUND

1. The SA-7 (STRELA) is a Soviet made, man launched, infrared (IR) heat seeking surface - to - air missile with an estimated range of about two miles and altitude to about 9000 feet. It was first employed in SEA on 29 Apr 72 and from that date to 3 Jul 72 has been credited with downing 13 U.S. aircraft. The most frequent target are slow moving aircraft. Subsequent to initial SA-7 employment, action was taken to provide immediate counter measures for the most vulnerable aircraft from resources readily available. These counter measures consisted of developed tactics and providing flare decoys for aircraft which could employ them. Pyrotechnic pistol flares and modified LUU-2/B illumination flares, were identified as being most appropriate for immediate implementation.

Current Status

2. Pyrotechnic pistol flares have been made available for all aircraft which have an opening from which they can be fired. The IR energy from standard pyrotechnic signaling flares is marginal for SA-7 protection; however, hotter EX-50 flares are being readied for shipment to NKP, Ubon, DaNang and TSN. To provide a more intense IR decoy flare, the LUU-2/B was modified to ignite immediate upon release. The modified LUU-2/B can be carried on the following aircraft:

AC-130	AC-119
A-1	A-37
OV-10	O-2

A readily adaptable flare dispensing capability is not immediately available for HC-130 and HH-53 rescue aircraft or for C-130 airlift aircraft. Airlift aircraft have implemented high altitude, high speed cargo deliveries in suspected SA-7 areas so they can remain outside the threat envelope. 7AF is in the process of evaluating the use of the Army "Towbee"; which is a propane heated IR emitter on the end of a 100-foot cable. Two captured STRELA missiles are being dismantled in the CONUS for exploitation to better determine SA-7 capabilities.

Future Actions

3. Flares are very effective in decoying the SA-7 away from the target, if they are dispensed at the proper time. Too often, however, the target aircraft does not see the SA-7 in time; so flares are not dispensed, or are dispensed too late to be effective. Lack of an adequate warning capability makes the use of flares marginal as a countermeasure. Attempts at developing a warning system so far have been plagued with high false alarm rates. It appears that present capabilities are limited to visual warnings and manual activation of countermeasure flares. We are at the mercy of a needed technological breakthrough.