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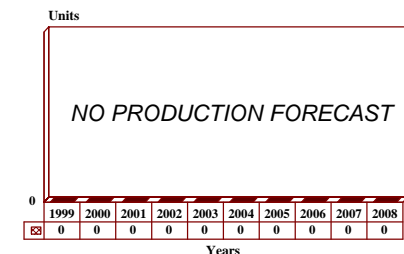
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TAS-6/UAS-11 - Archived 4/2000

Outlook

- Out of production
- Believed to still be in service with various nations
- **Barring an increase in production this report will be archived in 2000**

10 Year Unit Production Forecast
1999-2008



Orientation

Description. The UAS-11, of which the TAS-6 is a component, is also designated the Night Observation Device, Long Range (NODLR). The system is actually a derivative of the TOW thermal sight.

Sponsor

US Army
Communications - Electronics Command
Ft Monmouth, New Jersey (NJ)
USA

Contractors

Raytheon
(formerly Texas Instruments)
1001 Boston Post Road
Marlborough, Massachusetts (MA) 01752
USA
Tel: +1 508 490 1000

El-Op Electro-Optics Industries Ltd
(formerly Sequa Corp's Kollsman division)
Advanced Technology Park
Kiryat Weizman
PO Box 1165
IL-7611 Rehovot
Israel
Tel: +1 972 8 938 6421
Fax: +1 972 8 938 6237

(NOTE: El-Op may not have manufactured the TAS-6/UAS-11. This address is listed only as the acquirer of Kollsman, the last confirmed producer of the systems.)

Status. Out of production; believed to still be in service with some countries.

Total Produced. It is estimated that over 2,600 TAS-6s have been produced. Of these 623 were procured by the US Army.

Application. The TAS-6 forms part of the UAS-11 NODLR equipment set which included a tripod and the GVS-5 hand-held laser designator. This system provided long-range observation capability at night, with ground or vehicle mount coupled with the ability to call in accurate artillery strikes.

Price Range. The unit price of the TAS-6 could not be determined from available information. A best guess estimate based on similar systems is between US\$3,000-\$4,000 (1993 dollars).

Technical Data

Dimensions

Weight:	24.3 lb (11 kg)
Spectral band:	8-12 μm
Field of view:	3.4° x 6.6° (wide); 1.1° x 2.2° (narrow)
Magnification:	3X (wide); 9X (narrow)
Max. viewing range:	4,000 meters
Resolution:	0.5 mrad (wide); 0.167 mrad (narrow)
Power requirements:	30 W max with closed-cycle cooler 7.5 W max with Joule-Thompson cooling
Display type:	Binocular
Boresight accuracy:	0.1 mrad

Design Features. The TAS-6 Night Observation Device, Long Range (NODLR) was designed for observation in conditions of limited visibility. A biocular display incorporating an image intensifier tube allows the operator to view the scene with both eyes, thereby reducing eye fatigue. Obtaining accurate range data from the UAS-11 entails mounting a GVS-5 hand-held laser rangefinder unit with the TAS-6 NODLR. The mounting mechanism design, which places the two units side by side on a portable tripod, provides quick, precise and repeatable alignment of the night sight.

The TAS-6 was originally configured with the Joule-Thompson cooling system. High-pressure coolant cartridges supply 6,000 psi air or nitrogen to a cryostat. In addition to the TAS-6 and GVS-5, the UAS-11 equipment set includes the same self-contained ancillary equipment as its sister system, the UAS-12. This consists of a battery-powered conditioner to provide off-vehicle system power, a vehicle power conditioner (when the TAS-6 is mounted on a vehicle to draw power from the vehicle's power supply), a boresight collimator and a battery field handling case.

Variants/Upgrades

TAS-6 Detector Upgrade. The US Army implemented an optical performance enhancement for the TAS-6 to exploit advances in thermal imaging and visible optics technology. Central to this upgrade was replacement of the DT-591/UA detector/dewar assembly with the optically improved 120-channel detector/dewar designated DT-635/UA. The DT-591/UA was to be replaced through attrition.

Focal Plane Array Upgrade. Kollsman marketed an economical FLIR upgrade for its family of MCTNSs (Manportable Common Thermal Night Sights), which included the TAS-6. The upgrade featured a new focal plane array and cooler/dewar modules to improve performance by providing greater sensitivity, range and reliability.

Program Review

Background. Engineering development of the TAS-6 began in 1973, and was originally funded under the Army's STANO (Surveillance, Target Acquisition and Night Observation) program. The NODLR entered production in 1977. Texas Instruments (now Raytheon TI Systems) developed the TAS-6 and was its prime contractor through FY81. Sequa/Kollsman initially was responsible for the development of the common modules used in the TAS-6 and other night sights, and became the full TAS-6 manufacturer. El-Op of Israel purchased Kollsman in January 1996.

The original developer and manufacturer of the GVS-5 was RCA. The company was awarded a US\$1.5 million

contract in April 1975 to begin the rangefinder's development. Production began in 1977, with the first foreign military sales following in 1978. RCA continued to produce the system until 1983, when Optic Electronic Corp received its first production contracts. Optic Electronic was absorbed by IMO Industries/Varo in 1991; IMO Industries' electro-optical holdings were acquired by Litton in 1996. The US Army completed

its procurement of the GVS-5 in FY88 (at about 4,500 units), and the rangefinder is being gradually replaced

in US Army inventories by Litton's PVS-6 MELIOS, an eye-safe system (see separate report in this binder).

Funding

US procurement is complete; no funding for the NODLR has been identified, and none is expected.

Recent Contracts

No recent contracts have been identified.

Timetable

<u>Year</u>	<u>Major Development</u>
FY73	Development of TAS-6 began
FY77	Production of TAS-6 and GVS-5 began
thru 1990s	TAS-6/UAS-11 in service

Worldwide Distribution

The TAS-6 was in service with the **US Army**, but is believed to have been or soon will be retired from inventory due to the advent of more modern systems (such as MELIOS, etc.). The system has also been exported to unidentified customers.

Forecast Rationale

A long-running lack of significant activity is one indicator that TAS-6/UAS-11 production has been completed. Another is the fact that the GVS-5 hand-held laser rangefinder comounted on the UAS-11 is out of production and being gradually replaced with the newer, eye-safe PVS-6 MELIOS. Though it does exhibit adaptability to work in conjunction with advanced systems (such as Motorola's TAMER; see the PVS-6 MELIOS report in this binder), no mention has been made of MELIOS supplanting the GVS-5 on UAS-11 systems.

It is unknown if the US Army continues to rely on the UAS-11 equipment set – and its TAS-6 component – to provide tactical observation capabilities for its ground forces. It is believed that this is no longer the case due to the procurement of more modern systems since the mid-1990s. It is more probable that various international customers are still using this system – especially those nations that have a relatively small defense budget. In any event the last of the TAS-6 systems appear to have been delivered in 1993-94.

Ten-Year Outlook

No further production is expected for the TAS-6/UAS-11. **Barring an increase in production this report will be archived in 2000.**

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