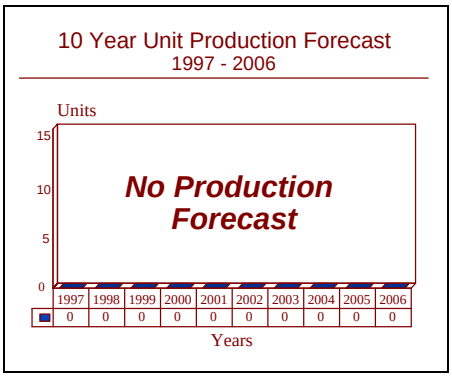
GVS-5 - Archived 01/98

Outlook

- Production complete
- Gradually being replaced by eye-safe PVS-6 MELIOS



Orientation

Description. Portable, hand-held laser rangefinder.

Sponsor

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

Contractors

Varo Inc.
2203 West Walnut
Garland, Texas (TX) 75042
USA
Tel: +1 214 487 4100
Fax: +1 214 487 4265

Status. In service, production complete.

Total Produced. Through 1995, a total of approximately 11,950 were produced.

Application. The GVS-5 is considered to be a tactical rangefinder and can be used for many targeting applications, such as increasing the first-round accuracy of infantry mortars. Deployed by US Army and Marine Corps.

Price Range. Unit cost was approximately US$6,200.

Technical Data

Design Features. The GVS-5 is a portable, hand-held laser rangefinder that weighs about five pounds and is approximately the size and shape of a pair of binoculars. The unit is completely self-contained and incorporates an internal power supply in the form of a rechargeable nickel-cadmium battery. A neodymium-YAG laser is used, Q-switched by a chemical Q-switch wafer. The latter consists of a saturable absorbing dye in acrylic plastic which becomes transparent at the correct power level to produce the laser pulse.

The transmitter and receiver optics are combined into a single group comprised of the housing, transmitter telescope, and receiver/sighting telescope. This is essentially like one half of a normal binocular assembly with an objective lens and an eyepiece. However, a beam splitter in the optical path provides a means for projection

of a reticle and LED range display to the eyepiece, and for providing an optical path to the photodiode detector for the returned laser energy.

The GVS-5 can measure distances from 200 to 9,990 meters within a tolerance of 10 meters - accurate enough that the use of surprise-robbing ranging shots can be dispensed with. The system has since been upgraded to extend the range to 20 kilometers. The field of view is 7°. Range resolution is +/- 10 meters. Unit weight with batteries is 4.7 pounds (2.13 kilograms).

The operator is warned by an indicator light when there are too many targets within the laser beam's narrow width to be accurately measured. A range gate that blocks out all targets up to 5,000 meters is incorporated to help solve this problem. Operation is quite simple since there are only the following controls: power on/off, minimum range on/off, and switches for adjustment, reticle brightness, and "fire."

The GVS-5 can be either boresighted or fastened to the TAS-2 or PVS-4 night sights.

Variants/Upgrades

No known variants or upgrades identified.

Program Review

Background. The original developer and manufacturer was RCA. The company was awarded a US$1.5 million contract in April 1975 to begin development of the GVS-5 hand-held laser rangefinder. 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 Varo in 1991. Varo itself is a division of IMO Industries Inc.

The US Army completed its procurement of the GVS-5 in FY88 (at about 4,500 units). The GVS-5 itself is being gradually replaced in US Army inventories by the PVS-6 MELIOS, an eye-safe system which Varo also produces. With the advent of eyesafe laser rangefinder technology, remaining production of the GVS-5 has focused on foreign purchases, but that too has been effectively phased out.

The last known activity regarding the GVS-5 was the award of a negligible US$46,500 contract to Custom Containers and Assembly in Azusa, CA for the purpose of case transit (DAAB07-92-C-M222) by the US Army CECOM, Command, Control, Communications, and Intelligence Acquisition Center in Fort Monmouth, NJ.

Recent Contracts

Contractor	Award ($ millions)	Date/Description
Optic Electronic	0.3	Sep 1988 — GVS-5 microcircuit range counter display (DAB07-88-C-F425)

Timetable

	1975	RCA awarded a US$1.5 million contract for development of an initial batch of 20 LED models for test and evaluation
Jul	1977	Type classification completed
Dec	1977	Production contract awarded to RCA
	1978	Contract for FMS sales to Argentina and Canada
	1981	FMS contract for sales to Canada and Saudi Arabia
	FY83	Optic Electronic Corp took over production
	1988	RCA awarded small contract for Mini GVS-5

Worldwide Distribution

The GVS-5 is in use by a wide variety of foreign nations including **Argentina**, **Canada**, **Israel**, **Portugal**, **Saudi Arabia**, **The UK** and **The US**.

Forecast Rationale

The PVS-6 MELIOS eye safe laser rangefinder has effectively superceded the GVS-5. Due to the large numbers required, however, the two systems will co-exist in the field for a number of years until a sufficient number of PVS-6s can be produced and deployed.

Ten-Year Outlook

Some maintenance and support activity will be required, but no further production is anticipated.

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