MVR

Muzzle Velocity Radar

RSL ELECTRONICS

RSL ELECTRONICS

MVR

Muzzle Velocity Radar System

RSL's Muzzle Velocity Radar (MVR) system measures a wide variety of ammunition for Field Artillery and Mortars, Naval guns, as well as Anti-Aircraft guns.
The system provides accurate muzzle velocity measurement which significantly increases the first round hit probability, and also provides the following operational flexibility.

Fewer guns are required to achieve an effect on target. Therefore remaining guns/artillery formations are available for other missions.

RSL's MVR is the most used and battle-proven tactical Muzzle Velocity Radar in the world, with over 5000 systems currently in use by many armed forces.

- In service with the Israel Defense Forces (IDF), the US Army and Marine Corps, the Indian Army & Navy, the Turkish Army & Navy, the Canadian Army and many more
- Qualified according to STANAG 4114, AEP-34.
- Extensively battle proven

Benefits

Accurate muzzle velocity measurement provides:

Operational advantages

- Improved first round hit-probability.
- Faster response time for battery Fire-For-Effect.
- Better use of available artillery platforms

Logistical advantages

- Less ammunition per required effect.
- Less gun barrel wear and deterioration.
- Less strain on the logistic structure.

Main Features

- Muzzle Velocity measurement capability for any existing type of guns, projectiles and propellants
- Displays the average number of rounds fired and normalized average velocity in accordance with the projectile weight and propellant temperature
- Up to 1000 combinations of the Muzzle Velocity Variation (MVV) can be stored in the system's memory
- Automatic activation upon gun firing with no need for man-in-the-loop
- X-band transmission only during the actual measurement.
- Modular design simplifies maintenance at field and depot levels
- BIT
  - Sophisticated Built-In Test identifies faults down to the module level
  - Integrated Doppler simulator fully tests all RF circuits

RSL ELECTRONICS

Technical Data

• Accuracy:	Better than 0.05%
• Precision:	Better than 0.1%
• Caliber Range:	20mm and higher
• Muzzle Velocity Range:	50 to 2000 m/sec
• Firing Rate:	Up to 20 rounds per minute in single mode or 3000 rounds per minute in salvo mode
• Trigger Mode:	Automatic detection of firing
• RF Transmission:	Short duration only during measurement
	18-33 VDC IAW MIL-STD-1275A(AT)
• Input Power (Max/Stby):	15/15 Watts CPDU
	15/3 Watts ITRAN
• Dimensions:	CPDU: (HxWxL) 212 x 269 x 125 mm
	ITRAN: (HxWxL) 304 x 214 x 95 mm
• Weight:	CPDU: 5.5 Kg
	ITRAN: 6.5 Kg
• Qualifications:	MIL-STD-810 and MIL-STD-461

SYSTEM COMPONENTS

➤ Integrated Transceiver (ITRAN)

The ITRAN contains the RF unit and the Muzzle Velocity Processor (MVP).

- The RF unit is a compact X-band transceiver that generates a Doppler signal, measuring the velocity of the round fired from the gun.
- The MVP is a Digital Signal Processing (DSP) based processor that performs all the Muzzle Velocity (MV) measurement calculations.

The ITRAN is controlled through RS232/RS422 communication channel and is controlled either directly from a Fire Control System (FCS) or by a CPDU, in case no Fire Control System exists on the gun.

➤ CPDU

The Control Processing and Display Unit (CPDU) contains a keyboard, display and processing board.

It is used as the man-machine interface to each MVR system in those platforms which do not have a Fire Control System (FCS).

The CPDU:

- Controls the ITRAN operation.
- Performs all the data base management functions.

COMPANY PROFILE

RSL Electronics Ltd. designs, develops and manufactures state-of-the-art control and diagnostic solutions for defense and aerospace applications.
The wide range of systems offered by RSL includes airborne utilities and control systems as well as airborne Health and Usage Management Systems (HUMS). These are used in conjunction with turbo-jet, turbo-shaft & turbo-prop engines, fuel systems, and electrical power systems.

RSL maintains a strict quality assurance policy and is an approved supplier for the Israeli Air Force, the U.S. Army and Air Force, the Korean Air Force, the Japanese Air Force, Lockheed Martin, Israeli Aerospace Industries and many others.

RSL ELECTRONICS
www.rsl-electronics.com

Head Office
P.O.Box 21 Migdal Ha'Emek 2310001, Israel
Tel: 972-4-654-7510 Fax: 972-4-654-7520

US Subsidiary
70 Round Hill Road Pougheepsie, N.Y. 12603
Tel: 845-462-6963 Fax: 845-462-2755

CERTIFIED QMS AS 9100 THE STANDARDS INSTITUTION OF ISRAEL

CERTIFIED QMS SI ISO 9001: 2008 THE STANDARDS INSTITUTION OF ISRAEL