



PRECISE IDENTIFICATION

RHEINMETALL APV

ACOUSTIC PLATFORM FOR VEHICLES

APV is the vehicle mounted version of Rheinmetall's Acoustic Shooter Localization System family.

In combat environments military personnel and vehicles are exposed to a constant threat through enemy fire. As soon as a vehicle is under attack, it is essential to know where the shots are fired from allowing the troops in contact to adapt position, accurately focus fire and to take other countermeasures. On vehicle platforms it is hard to determine direction and distance of enemies because of vehicle and battle noise. Rheinmetall closes this gap with the Acoustic Platform for Vehicles (APV), which automatically calculates the enemy shooter's position in direction and distance and warns in real-time of fired shots.

HOW IT WORKS

The system detects all shot related sounds. The APV monitors the complete environment in 360° and detects direct-fire weapons within its effective combat range. Using sophisticated algorithm the APV system is able to eliminate almost all false warnings.

The sensor can be connected to the C2 infrastructure of the vehicle or can be used independently on a dedicated display. The signal processing is part of the sensor, so the system is independent from additional external devices.

Operation of APV is simple and intuitive. Minimal training is needed in order for the user to operate the system. APV is designed for multiple vehicle platforms, including tracked platforms. This feature is unique with regards to acoustic sniper location systems and underlines the technical advantage of the Rheinmetall product.

BENEFITS

- Adaptable to vehicles of all types
- Transmission of absolute shooter position via C4I systems
- Automatic and immediate warning of the user (audio and/or visual)
- Precise identification of the shooter's position even with noise in the vicinity of the vehicle
- Can be operated stand-alone or integrated into existing architecture
- (N)GVA-compliant
- Reduced integration complexity
- "Slew-to-cue"-capable
- Automatic detection and localization of enemy fire real time
- Scalable & Modular Acoustic Platform
- 24/7 passive sensing
- Standard interface Ethernet
- Low energy consumption

TECHNICAL DATA

Accuracy of bearing	typ. $<3^{\circ}$ (1σ) static
Accuracy of bearing	typ. $<5^{\circ}$ (1σ) dyn.
Maximum detection range	Effective range of weapon (hypersonic ammunition up to 130+ mm)
Reaction time	<1 s
Qualification	AECTP 300, AECTP 400, MIL-STD-1275 and MIL-STD-461 (EMV)
Temperature range	-46°C to $+71^{\circ}\text{C}$ for storage and -32°C to $+49^{\circ}\text{C}$ operating
Size, power and weight	21 x 21 x 17 cm without fixing holes. Power <20 W, weight <5 kg
Compact and robust system design with integrated signal processing and motion sensor suite adaptable to wheeled and tracked platforms	

