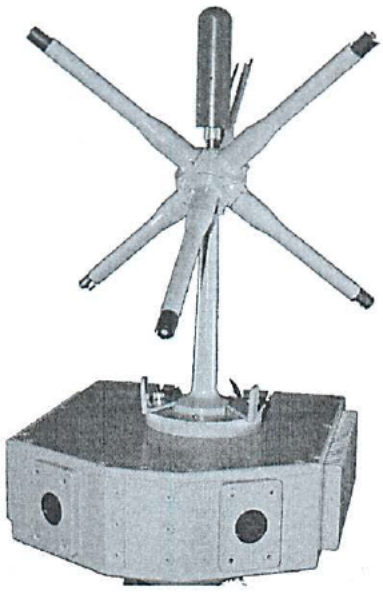
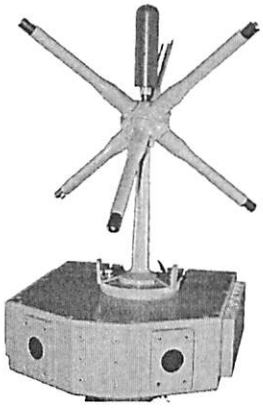
FireFly Threat Detection System (FTDS) User Manual



GENERAL APPLICATION –

The FireFly Threat Detection System (FTDS) senses weapons fire events and reports the location of the fired weapon. The FTDS consists of 3 networked FireFly Sensor Subsystems (FSS) which together provide 360 degree coverage around the area to be defended.

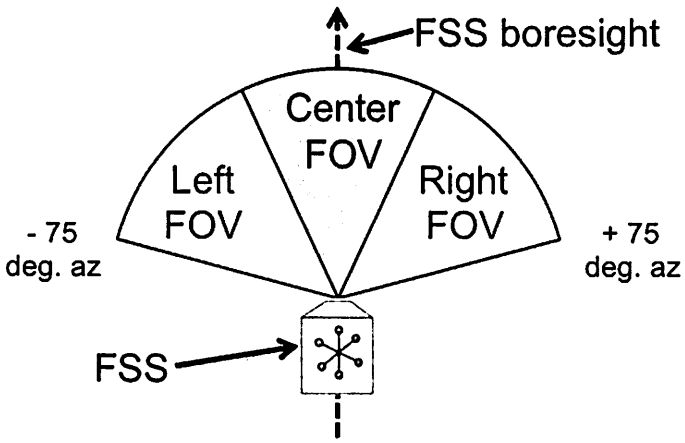


FireFly Sensor Subsystem

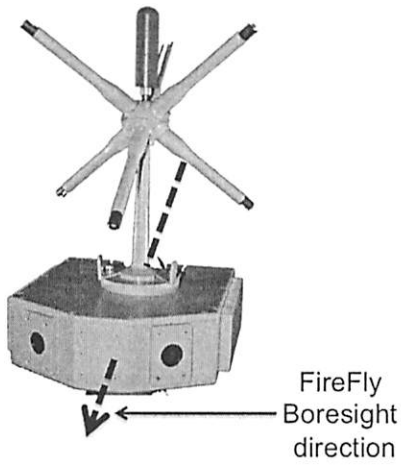
OPEPRATION

Emplacement and Alignment of Single FSS

Each FSS has a horizontal field of view (FOV) of approximately 75 degrees on either side of its boresight direction (150 degrees total). The center portion of the FOV provides the most sensitivity and should be roughly aligned in the direction judged as the most likely avenue of approach by hostile forces.



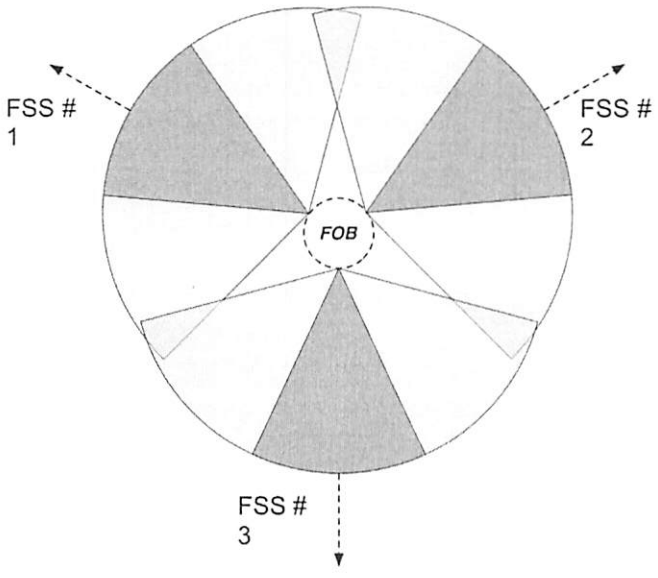
FOV for a single FSS



FSS Boresight Direction

Emplacement and Alignment of Multiple FSSs

Using 3 FSS units, it is possble to provide 360 degree threat detection around a FOB, COP, etc. Because each FSS has a 150 degree FOV, the individual FSSs can be aligned so that their individual FOVs will overlap at the edges to ensure 360 degree coverage.



360 degree coverage using 3 FSSs

FSS Setup

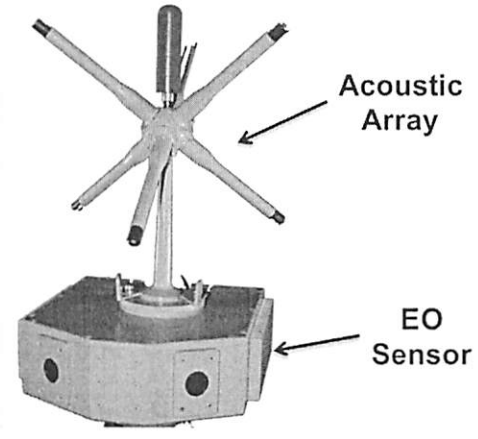
Each FSS is comprised of the following parts contained in 3 separate man-portable cases:

Case # 1:
- FireFly Sensor Head
- Acoustic array
- Acoustic array windscreens

Case # 2:
- Tripod
- Network cable
- Battery-to-FSS power cable
- Battery AC power cord
- Lens cleaning supplies
- Tools

Case # 3
- Battery case with 6 2590/U Rechargeable Lithium Ion Batteries

FSS Set-up Directions



FSS Acoustic Array and EO Sensor sub-assemblies

Assembly

1. Remove Tripod from Case # 2, extend tripod legs, level tripod head using the built-in bubble level on the tripod.
2. Remove FSS EO Sensor sub-assembly from Case # 1 and mount on tripod.

3. Remove FSS Acoustic Array sub-assembly from Case # 1, mount on EO Sensor sub-assembly and engage Acoustic Array locking latches.
4. Remove network cable from Case # 2 and connect to network connector on back of EO Sensor sub-assembly.
5. Remove Battery-to-FSS power cable from Case # 2 and connect one end to power connector on back of EO Sensor sub-assembly, and the other end to the Case # 3 (battery).
6. If an AC power source is available, remove Battery AC power cord from Case # 2 and connect one end to battery and the other to AC power source.

Technical Specifications

TBD