

## The FOD Finder™ XF Process



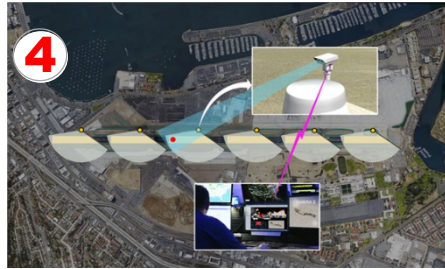
1 Radar units continuously scan 100% of runway surface.



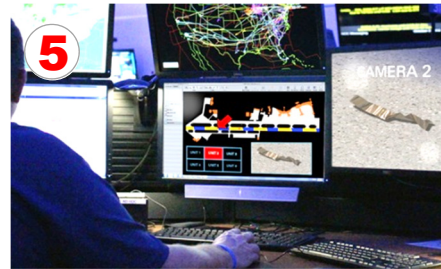
2 Plane approaches runway.



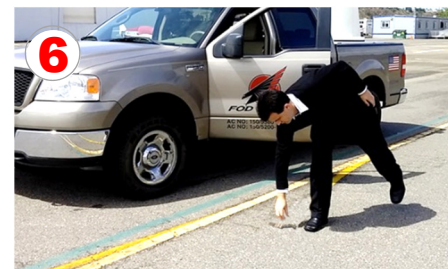
3 Upon touch down, material falls from aircraft onto runway.



4 The radar and camera system detects and identifies the FOD between flight movements (< 1 min detection, < 45 sec identification).



5 Operations personnel assesses the threat.



6 Operations personnel dispatched to retrieve FOD item.



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**TREX AVIATION**  
 SYSTEMS

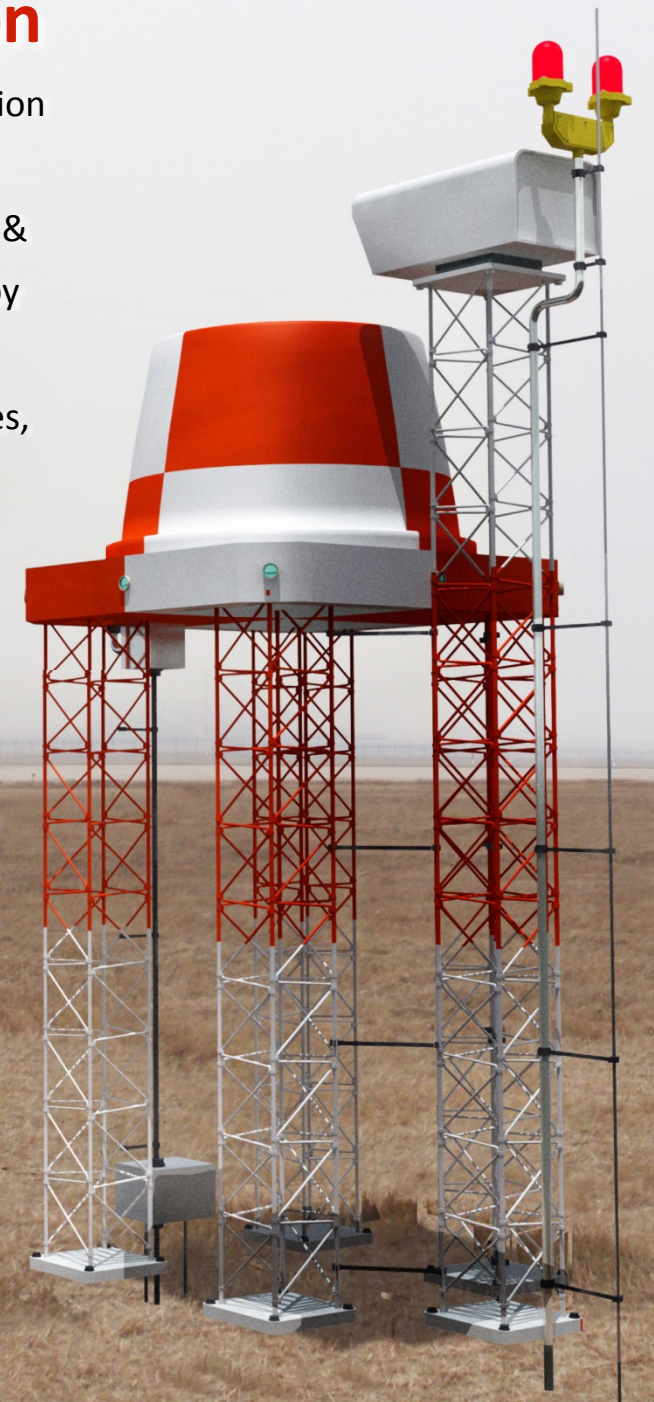
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# FOD Finder™



## The Ultimate Total Solution

for automatic FOD (Foreign Object Debris) detection and retrieval, using Fixed & Mobile systems (FAA, USDOD and FCC approved), for runways, taxiways & aprons, detecting FOD in all weather conditions, by day & night, resulting in increased operational readiness, efficiency & safety of airports & airbases, and significant reduction in downtime and repair costs of commercial & fighter jets.

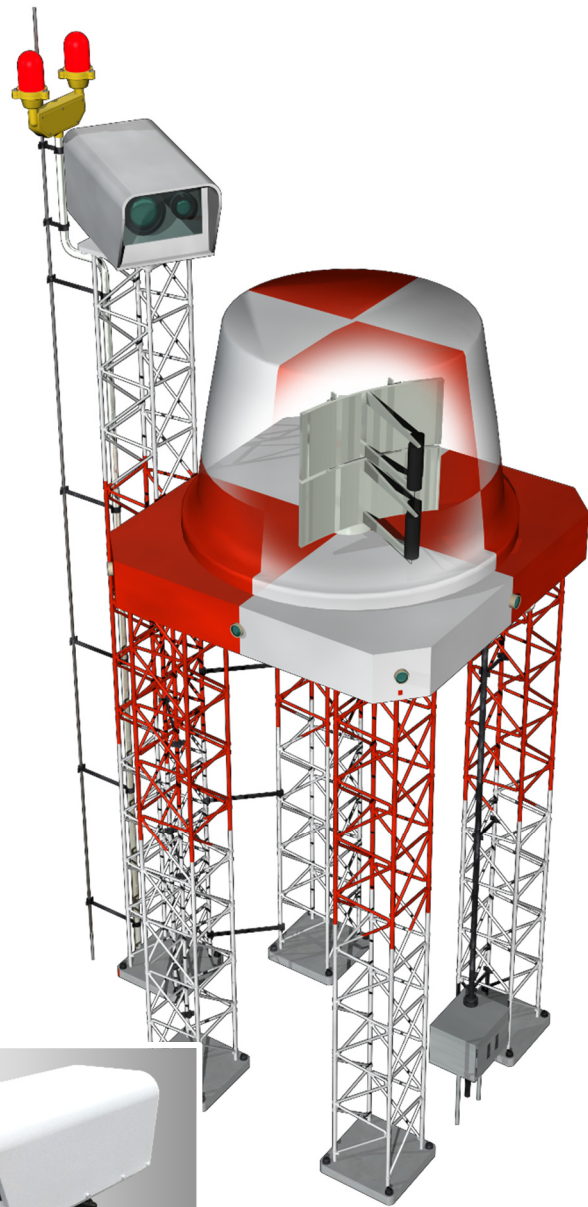


**TREX AVIATION**  
 SYSTEMS

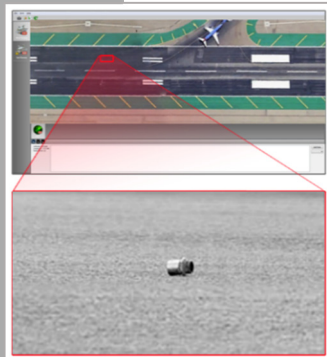


# FOD Finder™ XF

Fixed system for 24/7 continuous runway coverage



HD Camera



**Intuitive Operator Interface**  
Provides airfield overview with audible and visual alarms on FOD detection

- Part 139 compliant
- Autonomous operation and reporting
- Visual confirmation of detected FOD
- Database management and reporting

**FOD Finder™** is the only FOD detection system tested by the FAA with 100% detection capability in all weather conditions (DOT/FAA/AR-11/12). FOD Finder™ is FCC approved for use at airports.

**Reliability:** FOD Finder™ sees through fog, rain, snow, haze, heat haze, and sandstorms at day and night, where finding and removing hazards from runways and taxiways is mission critical. Limited system downtime with little to no maintenance required. FOD Finder™ is robust and can operate on a variety of airport surfaces.

**Option:** Extreme weather package.

## \*Specifications:

### System

Power	AC 110V/14A   AC 220V/7A
IP Protection	IP65

### Radar

Operating Temperature	-40°F to 140°F   -40°C to 60°C
Operating Humidity	100%
Operating Conditions	All weather, day and night
Detection Range	230 ft to 900 ft   70 m to 275 m
Geo-Tagging Accuracy	5 ft   1.5 m
Angular Coverage	4 scans per minute (for -75° to 75°)
Frangibility	According to FAA AC 150/5220-23

### Camera

Physical Dimensions (unmounted)	25.6 in (L) x 13.8 in (W) x 18.1 in (H)   0.65 m (L) x 0.35 m (W) x 0.46 m (H)
Weight	73 lbs   33 kg
Max. Scanning Area (Az)	-85° to 85°
Max. Scanning Area (El)	0° to -6°
Range	164 ft - 902 ft   50 m - 275 m
Field-of-View	10 ft   3 m (Horizontal)
Max Time Between Radar Detection and Image	<45 sec
Illuminator Beam Diameter at Exit Window	2.95 in.   75 mm
Illumination Wavelength	Near Infrared (NIR)
Illumination Peak Power	10 W
Eye Safety Range from Illuminator	>197 ft   >60 m

*\*for U.S. standard installation*



# FOD Finder™ XM

Mobile system for entire airport coverage



**Safety:** FOD Finder™ detection, interrogation, verification, and cataloging of runway debris is FAA Part 139 compliant with database management and tracking. FOD Finder™ has received an FCC waiver (FCC 2013-18013) to operate the low-power radar system at airport locations.

**Value:** FOD Finder™ is a revolutionary technology tool used by airports in the combat against the estimated \$4 Billion U.S. dollars in damage and loss of aircraft utilization. Designed to assist airport personnel in the detection, retrieval and cataloging of runway debris and identifies areas of FOD accumulation over time.

## \*Specifications:

Operating Temperature	-40°F to 140°F   -40°C to 60°C
Operating Humidity	100%
Operating Conditions	All weather, day and night
Detection Range	80 ft to 460 ft   25 m to 140 m
Geo-Tagging Accuracy	5 ft   1.5 m
Angular Coverage	30 scans per minute (for -40° to 40°)
Power	DC 12V/15A
Frequency	78-81 GHz, 3 GHz occupied bandwidth FMCW
Radar Enclosure	58 in x 58 in x 44 in   1474 mm x 1474 mm x 1118 mm
Radar Weight	500 lbs   227 kg
Maximum Vehicle Speed	30 miles per hour   48 km per hour

*\*for U.S. standard installation*



### Intuitive Touch Screen Interface

"A.I.R. Boss" information system

- Part 139 compliant
- Automatic surface management
- Database management and reporting