LEADER Scan
Life search & Breathing detection device

The world's only UWB system capable of detecting and locating the slightest of chest movements produced by breathing!

- **UWB technology:**
  Using Ultra Wide Band radar technology, LEADER Scan interrogates the sub-surface to identify the trapped, buried or entombed victim's location in collapse structures, landslides, avalanches, etc... by detecting movements.

- **High sensitivity:**
  Its superior sensitivity means the device will indicate the victim location by detecting:
  - Irregular movements, such as finger movement,
  - Regular movements, such as chest movements from breathing.

- **On the field with rescuers:**
  The rugged plastic case which contains the sensor is placed completely flat on the rubbles and moved within a virtual grid across the disaster area to map buried victims, while an operator monitors the progress from a control box. It is dedicated more realistically to Secondary search as UWB detects movement directly in the path of the sensor.

- **Signal:**
  The signal shape is basically an inverted cone that precisely detects reflection from moving objects or breathing characteristics into an about 5200 m³ search volume.

  It could detect movements at a depth of a few metres through more than 200mm thick concrete wall and allows a 30m search with 10cm accuracy in free space.

- **Motion detection up to 30 m**
- **Breathing detection up to 10 m**
- **Real time motion detection**
- **Data saving during search**
- **Compact and light weight**
- **Automatic mode: no need to select the type of material**
As part of our policy of constantly researching to improve our equipment, we reserve the right to change the characteristics of our apparatus at any time without prior notice.

- **Interface & main functions**
  Control box screen indicates depth of victims and provides visual information on their movements:
  - Weak and strong movement display
  - Movements frequency display
  - Data recording (useful for reviewing search history, re-evaluating and also training)
  - Adjustable brightness

- 2 search modes to detect movements at sub-surface:
  - Variable search mode with user defined selection of search zone (minimum and maximum search distance)
  - Automatic search mode for quick deployment. The device automatically scans several preset zones (0-4m, 4-8m, 8-12m or 0-13.1', 13.1'-26.2', 26.2’-39.4’)

- **Distance Point Oscillogram function:**
  - Unique worldwide!
  - Real time viewing concentrated on the strongest signals to confirm detected movement in the search zone

- An arrow on the screen positioned where movement is detected will check if:
  1. there is a movement
  2. the frequency of the movements indicate whether it is human life or not

- Using the user defined selection of the search zone (minimum and maximum search distance), movement noises from outside the chosen zone are eliminated, giving more focussed data

**CHARACTERISTICS:**

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Control box (Tough book):</th>
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<tbody>
<tr>
<td>Technology: UWB (Ultra Wide Band)</td>
<td>8.4” High Quality SVGA Resolution TFT-LCD Panel</td>
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<tr>
<td>Search distance: Up to 30m (98.4’) search in free space</td>
<td>Brightness up to 500 nit enhanced visibility</td>
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<tr>
<td>Search Volume: Up to 5200 m³</td>
<td>Alu-Mg Alloy Housing with Protective Rubber</td>
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<tr>
<td>Accuracy: 10cm (4”) accuracy in air and 1m (3.3’) in rubble</td>
<td>Built-in Wireless / Bluetooth / and GPS module</td>
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<tr>
<td>Material: Sensor in waterproof and shockproof Orange Pelican ABS case</td>
<td>6 cell, 5200mAh Lithium-Ion Battery Pack</td>
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<tr>
<td>Dimensions: L430 x W244 x D341mm (17” x 9.5” x 13.5”)</td>
<td>Low Power consumption CPU only 3.5W</td>
</tr>
<tr>
<td>Weight: 7kg (15.5 lbs) including battery</td>
<td>Weight: 2 kg (4.41 lbs)</td>
</tr>
<tr>
<td>Connection: Wi-Fi connection to control box with over 10m (33’) range, eliminating cable management issues</td>
<td>Operating Temperature: -20 °C to 60 °C</td>
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<tr>
<td>Waterproof USB wired connection (5m or 16.4’ cable), providing back up where there is high environment interference</td>
<td>IP 54</td>
</tr>
<tr>
<td>Warranty: 2 years</td>
<td>Warranty: 1 years</td>
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**Sensor power supply**

| Battery: DC9-16V Rechargeable Lithium polymer battery - 18000mAh | Wire Fox 2022 2 YR |
| Running time: Up to 5 hours | User friendly menu and graphics! |
| Recharge time: 4 hours | Small movement indicator with a motionless victim: |
| Weight: 515 gr (1.14 lbs) | Strong movement indicator produced by body movement: |