

LEADER Hasty / Wireless Detector / Camera Search

Search Equipment

AN INNOVATIVE RANGE
OF TOOLS FOR USAR

- LEADER Search
- LEADER Cam
- LEADER Hasty
- LEADER Scan

TECHNICAL SEARCH TOOLS FOR USAR RESPONSE

DESIGNED FOR TECHNICAL SEARCH SPECIALISTS BY TECHNICAL SEARCH SPECIALISTS. THESE INNOVATIVE PRODUCTS ARE **LIGHTWEIGHT, ERGONOMIC AND EFFICIENT** TO GIVE THE **GREATEST ADVANTAGE IN ALL PHASES OF SEARCH** (HASTY, PRIMARY AND SECONDARY) TO FIND ENTOMBED VICTIMS IN COLLAPSED STRUCTURES, LANDSLIDES, AVALANCHES... FOLLOWING DISASTERS.

LEADER Search - Wireless and/or wired Life Detector



LEADER Search is used in rescue operations to **detect** and then **locate the position of entombed victims**. LEADER Search will **pinpoint and detect the slightest of vibrations** by effectively turning the entire structure into a giant microphone.

Featuring **3 wireless seismic sensors** for a general use of about 30m (98') on the field

with a range in excess of 100m (328') in open field, and the **additional option of up to 3 wired sensors**, the LEADER Search delivers unequalled flexibility, sound quality and sound propagation. **Designed for rapid deployment and mobility of use** (no cable), LEADER Search quickly identifies sound sources and then locates the precise positions of potential victims.

LEADER Cam - Search Camera with Communication



LEADER Cam is used during rescue operations to **visually locate and communicate with buried victims**.

The **lightweight control box**, linked to a **flexible telescopic camera probe**, is designed to **help in identifying with accuracy the positional location of buried victims** in difficult to enter confined spaces,

to **communicate with them, evaluate and monitor their condition**.

The telescopic probe extends between **1.1m and 2.40m** (3' 6" to 8') or a versatile 1.1m to 4m (3' 6" to 13') option to allow **visual inspection of inaccessible areas** either at **height or sub-terrain and confined space**.

LEADER Hasty - Wireless Life Detector & Search Camera



The **WORLD'S only multi-functional HASTY tool**: SEE, SEARCH and SAVE with just one tool!

LEADER Hasty combines:

- A **search camera mode for a visual and precise location of victims** with an ultra-lightweight camera probe.
- A **listening seismic detection mode** for use with up to three wireless sensors for detecting signs of life.

The ability to **switch instantly between "visual search mode" and "wireless audible search mode"** in one deployment vastly improves the effectiveness and mobility of the rescuer and greatly reduces the time taken to find victims while increasing their chance of survival.

LEADER Scan - Life search & Breathing detection device



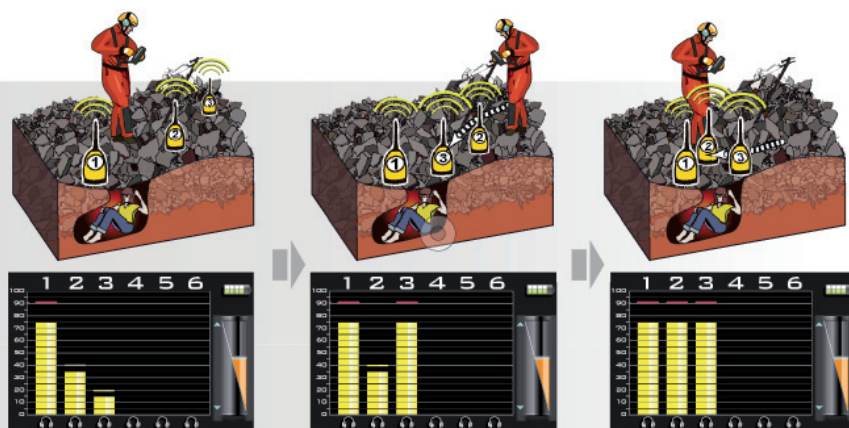
The world's only patented UWB device capable of detecting and locating the slightest of chest movements produced by breathing!

Using a stabilized **UWB** (Ultra Wide Band) technology, LEADER Scan interrogates the

sub-surface to identify the victim's location by detecting movements. Its superior sensitivity means the device can detect both irregular movements, such as **finger movement**, and **regular movements, such as chest movements from breathing**.

OPERATIONAL EXAMPLES

LEADER Search allows fast victim detection and then, by introducing more sensors, simple and fast triangulation to locate the victim. By systematically moving sensors within a virtual grid across the disaster area, and always leaving the highest peak sensor in place, the victim location is identified when all sensors peak at the highest equal level.



LEADER Cam cable reel versions can also be used for inspections of vessels, wells, cavities, crevices etc., to a distance of 90m or 180m (295' and 590'). A waterproof version is available for deep entry into many environments.



LEADER Hasty allows the rescuer to detect, locate and communicate with use of a single control box for maximum efficiency! Its dual function also makes it very useful on "Primary" and "Secondary Search" phases: a rescuer can now single-handedly, or with the help of search team members, accomplish a Hasty Search and/or a more detailed investigation of a catastrophe area with this unique multi-functional control box. LEADER Hasty will allow a quick conclusion for reconnaissance, size up, and triage.



LEADER Scan has a rugged plastic case containing the sensor which is moved systematically on the rubble within a virtual grid across the disaster area to map underground objects, while an operator monitors the progress from a control box.

It is dedicated to Secondary search as UWB technology detects movement in the search vertical axis of the sensor. The signal shape can be simply represented by a cone which precisely detects the movement of an object or those characterizing the breath. LEADER Scan can detect movement at a depth of few meters through more than 200 mm thick concrete wall and allows a 98 ft (30m) search in free space.



LEADER Search

WIRELESS AND/OR WIRED LIFE DETECTOR

The world's only wireless listening device for search operations



Noise-reduction stereo headset 1

Noise-reduction stereo headset 2 (optional)

Control box IP54

Up to 3 wired sensors with 8m (26ft) cables each

Battery pack

IP68 Waterproof connectors:
Colour coded connection port

Each sensor is controlled by **individually numbered buttons**

Communication probe
Included in full 3 wireless + 3 wired sensors versions. (Option for other versions)

Up to 3 wireless sensors with over 100m (330') range open field



Sunshade
Ideal for shading the screen in bright conditions



Magnets & Spikes
To allow use on metal debris, loose soil, etc., by attaching to the bottom of the sensors



Hand strap
Offers an ergonomic grip when using as hand held. Also comes with neck strap



Orange carrying case
Rugged, waterproof and shockproof

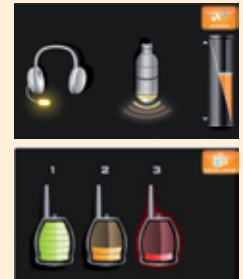
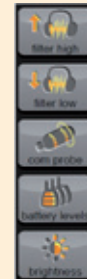
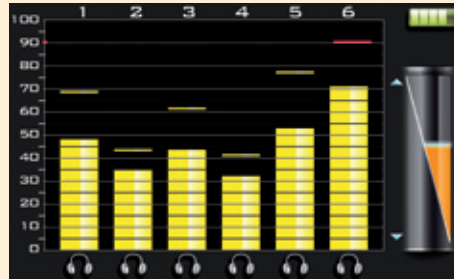
ADVANTAGES THAT MAKE THE DIFFERENCE

> CONTROL BOX

- Lightweight and compact:
 - > 1.225 kg (2.7 lbs)
 - > W 240mm x H 152mm x D 51mm (W 9 ½" x H 6" x D 2")
 - > Extra-large full colour screen (5" – 800x480 px) with high luminosity

> INTERFACE

- User friendly menu and graphics
- Yellow and red peak tracers to identify the highest peak
- Battery level always shown



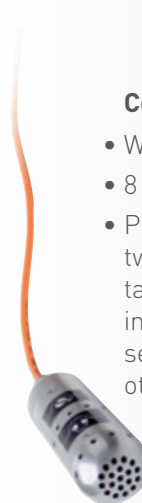
> LISTENING MODE WITH:

Seismic Sensors:

- Usable with 1 to 6 seismic sensors to cover a wider area
- Up to 3 wireless sensors for a general use of about 30m (98') on the field with over 100m (330') range each in open field
- Up to 3 wired sensors with 8m (26') of cable for each sensor
- Adjustable high and low frequency noise filters to eliminate unwanted noises from pneumatic drills, breakers, vehicles, wind, power cables, etc.

Communication Probe:

- Waterproof IP67 - Ø : 38 mm (1,5")
- 8 m of cable length (26')
- Push to Talk function using the two way communication probe to talk with buried victims (included in full 3 wireless + 3 wired sensors versions. Optional for other versions)



> HEADSET

- One or two headset option for use in seismic listening or for 2-way victim communication when using the communication probe
- High performance noise reducing headsets with noise cancelling boom microphone for clear communication with victims
- Optional 2nd noise-reduction stereo headset

> POWER SUPPLY

- Lithium Ion polymer (LiPo) rechargeable battery pack to supply control box and wired sensors
- Standard running time of about 5 hours (Recharge time of 3.5 hours)
- Rechargeable battery pack - small, lightweight and quickly replaceable – fits easily in pockets - W.63 x D.127 x H.25mm (2½" x 1" x 5")
- Compatible battery with LEADER Cam, LEADER Hasty and LEADER Scan
- Spare clam shell battery pack holds 10 AAA batteries (not included). Makes the device functional even when conventional battery charging is not possible!
- Wireless sensors with a running time of about 8 hours powered by 3 AAA batteries

2-year guarantee

LEADER Cam

SEARCH CAMERA WITH COMMUNICATION

A new design for better search effectiveness



Battery pack

Noise-reduction stereo headset 1

Noise-reduction stereo headset 2 (optional)

IP68 Waterproof connectors
Colour coded connection ports

Control box IP54

Removable pistol grip

Telescopic probe

Audio-microphone / receiver

Articulated water resistant camera head supplied with removable plugs allowing camera to be waterproof up to 2 m.



8 levels of illumination

Optional extra:

- Articulated water resistant camera head with 90m (295') or 180m (590') cable
- Waterproof camera head available



Sunshade
Ideal for shading the screen in bright conditions



Hand strap
Offers an ergonomic grip when using as hand held. Also comes with neck strap



Orange carrying case
Rugged, waterproof and shockproof



ADVANTAGES THAT MAKE THE DIFFERENCE

> CONTROL BOX

- Lightweight and compact:
 - > 1.380 kg (3 lbs)
 - > W 240 x H 152 x D 51mm (9 ½" x 6" x 2")
- Extra-large full colour screen (7" – 800x480 px) with high luminosity
- High-definition image with 2x digital zoom
- Right or left handed operation
- Simultaneous functions: zoom, picture rotation, photo or video capture and right or left handed functions
- Push to Talk function using the two way communication camera head to talk with victims

> NEW INTERFACE

- User friendly menu and graphics
- Battery level always shown



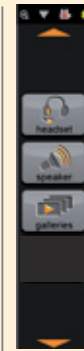
Camera position



Illumination level

> MENU

- 2x digital zoom
- Picture rotation
- Videos capture
- Pictures capture
- Right or left handed operation
- Adjustable brightness



- Headset volume
- Microphone headset volumes
- Back to main menu
- Photo and video gallery for playback of recordings



> SEARCH CAMERA MODE WITH:

Camera head:

- A diameter of 47 mm (1.85") to fit with 51 mm standard hole (2.0")
- Protected by durable scratch resistant sapphire lens
- Articulation is 170° with a 260° total field of vision
- Mounted on flexible coupling prevents impact damage
- LED lights (18.5 cd) illuminate up to 6m (20') in zero visibility
- Adjustable brightness with 8 levels of illumination intensity
- Submersible up to 2m (6'6") with a waterproof cap

Carbon fibre probe:

- Ultra-lightweight: 1.4kg (3 lbs)
- Telescopic from 110 cm to 240 cm (3 ½' to 8') - option up to 4 m (13.1')
- "Articulated fixing" to mount the control box on probe



> HEADSET

- One or two headset option for 2-way communication with victims when using the probe
- High performance noise reducing headsets with noise cancelling boom microphone for clear communication with victims
- Optional 2nd noise-reduction stereo headset

> POWER SUPPLY

- Lithium Ion polymer (LiPo) rechargeable battery pack to supply control box and the camera
- Standard running time of about 2,5 hours at full working capacity (Recharge time of 3.5 hours)
- Small lightweight and quickly replaceable rechargeable battery pack – fits easily in pockets - W.63 x D.127 x H.25mm (2 ½" x 5" x 1")
- Compatible battery with LEADER Search, LEADER Hasty and LEADER Scan
- Spare clam shell battery pack holds 10 AAA batteries (not included). Makes the device functional even when conventional battery charging is not possible!

2-year guarantee



LEADER Hasty

SEARCH CAMERA & SEISMIC WIRELESS LIFE DETECTOR*

World's ONLY dual search system for quick deployment!



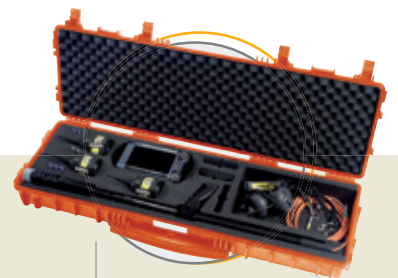
Sunshade
Ideal for shading the screen in bright conditions



Magnets & Spikes
To allow use on metal debris, loose soil, etc., by attaching to the bottom of the sensors



Hand strap
Offers an ergonomic grip when using as hand held. Also comes with neck strap



Orange carrying case
Rugged, waterproof and shockproof

*Patent pending

ADVANTAGES THAT MAKE THE DIFFERENCE

> CONTROL BOX

- Lightweight and compact:
 - > 1.380 kg (3 lbs)
 - > W 240 x H 152 x D 51mm (9 ½" x 6" x 2")
- Extra-large full colour screen (7" – 800x480 px) with high luminosity

- High-definition image with 2x digital zoom
- Right or left handed operation
- Simultaneous functions: zoom, picture rotation, photo or video capture and right or left handed functions
- Push to Talk function using the two way communication camera head to talk with victims

> 2 SWITCHABLE INTERFACES



> Camera mode

- 2x digital zoom
- Picture rotation
- Video capture
- Picture capture
- Right or left handed operation
- Adjustable brightness



- Headset volume
- Microphone volume
- Playback function



> Listening mode

- High noise filter
- Low noise filter
- Charge level of the sensors battery
- Brightness adjustment
- Search camera mode
- Left and right hand function



> SEARCH CAMERA MODE:

Camera head:

- A diameter of 47 mm (1.85") to fit with 51 mm standard hole (2.01")
- Protected by durable scratch resistant sapphire lens
- Articulation is 170° with a 260° total field of vision
- Mounted on flexible coupling prevents impact damage
- LED lights (18.5 cd) illuminate up to 6m (20') in zero visibility
- Adjustable brightness with 8 levels of illumination intensity
- Submersible up to 2m (6'6") with a waterproof cap

Carbon fibre probe:

- Ultra-lightweight: 1.4kg (3 lbs)
- Telescopic from 110 cm to 240 cm (3 ½' to 8') - Option: up to 4m (13.1')
- "Articulated fixing" to mount the control box on probe



> LISTENING MODE:

- 1, 2 or 3 wireless seismic sensors for a general use of about 30m (98') on the field with over 100m (330') range in open field to detect sounds from victims (No cable management issues).
- Adjustable high and low noise filters to eliminate unwanted environment noise from pneumatic drills, breakers, vehicles, wind, power cables, etc.

> POWER SUPPLY

- Lithium polymer (LiPo) rechargeable battery pack to supply control box
- Standard running time of about 2,5 hours at full working capacity (Recharge time of 3.5 hours)
- Small lightweight and quickly replaceable rechargeable battery pack. Fits easily in pockets W 63 x D 127 x H 25mm (2 ½" x 5" x 1")
- Compatible battery with LEADER Search, LEADER cam and LEADER Scan
- Spare clam shell battery pack holds 10 AAA batteries (not included). Makes the device functional even when conventional battery charging is not possible!
- Wireless sensors with a running time of about 8 hours powered by 3 AAA batteries

> HEADSET

- One or two headset option for use in seismic listening or for 2-way victim communication when using the probe
- High performance noise reducing headsets with noise cancelling boom microphone for clear communication with victims
- Optional 2nd noise reduction stereo headset

2-year guarantee

LEADER Scan

LIFE SEARCH AND BREATHING DETECTION DEVICE*

The world's only patented UWB system capable of detecting and locating the slightest of chest movements produced by breathing of conscious or unconscious buried victim!



Sunshade*
Ideal for shading the screen in bright conditions



Hand strap*
Offers an ergonomic grip when using as hand held



Neckstrap*
For easy carrying, leaving the hands free



Current control box:
Rugged Tough Book computer
Available

*Accessories supplied with the LEADER control box under development.

ADVANTAGES THAT MAKE THE DIFFERENCE

> CONTROL BOX*

- Lightweight and compact:
 - > About 1.7 kg (3.7 lbs)
 - > W 240 x H 152 x D 51mm (9 ½" x 6" x 2")
- Extra-large full colour screen (7" – 800 x 480 px) with high luminosity
- Right or left handed operation

> CONTROL BOX POWER SUPPLY*

- Lithium polymer (LiPo) rechargeable battery pack
- Standard running time of about 2.5 hours
- Recharge time of about 3.5 hours
- Small and lightweight rechargeable battery pack - fits easily in pockets
W 63 x D 127 x H 25mm (2 ½" x 5" x 1")
- Compatible battery with LEADER Search, LEADER cam and LEADER Hasty.
- Spare clam shell battery pack holds 10 AAA batteries (not included). Makes the device functional even when conventional battery charging is not possible!

> SENSOR

- Lightweight and compact : the world's smallest !
 - > Sensor in waterproof and shockproof case
 - > 6.7 kg (14.8 lbs) including battery
 - > L 430 x W 244 x D 341mm (17" x 9.6" x 13.5")
- System using UWB (Ultra Wide Band) technology
- Wi-Fi connection to control box with over 20m (66') range, eliminating cable management issues
- Waterproof USB wired connection (5m or 16.4' cable), providing back up where there is high environment interference (FEMA requirement)
- Search distance: up to 30 m (98.4') search in free space
- Accuracy: 1m (3.3')

> SENSOR POWER SUPPLY

- Li-Ion rechargeable battery pack
- Standard running time: 4 hours per battery (2 batteries supplied)
- Recharge time: 4 hours
- Easy access to battery for quick replacement
- Indicators of battery charge level on case

* Model under development

> INTERFACE AND MAIN FUNCTIONS

Control box screen indicates depth of victim and provides visual information on his/her movement.

- Weak and strong movement display
- Movements frequency display
- Data recording
- 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')

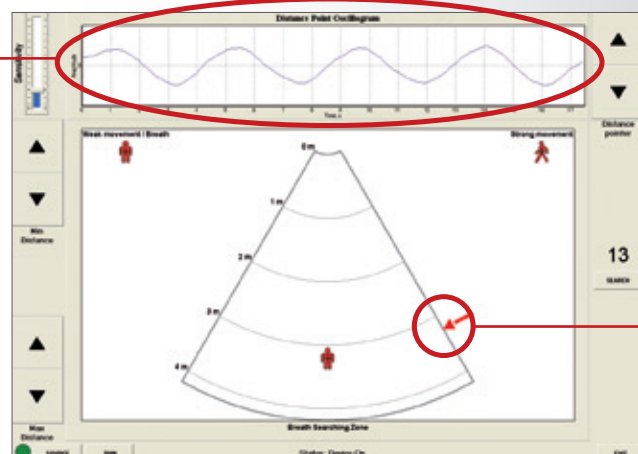
Distance Point Oscillogram function:

- Real time viewing concentrated on the strongest signal to confirm detected movement in the search zone

An arrow positioned on the screen where movement is indicated 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 frequencies from outside the chosen zone are eliminated, giving more focussed data.





always in touch with our clients
to design the **products you will need in the future**

HEAD OFFICE

LEADER S.A.S.

ZI des Hautes-Vallées - Chemin n° 34 - CS20014 - 76930 Octeville sur Mer - France
Tél +33 (0)2.35.53.05.75 - Fax +33 (0)2.35.53.16.32
info@leader-group.eu

SUBSIDIARIES

LEADER GmbH

Zur Fabrik 10 - 66271 Kleinblittersdorf - Germany
Tel. : +49 (0) 6805/60067-0 - Fax : +49 (0) 6805/60067-10
info@leader-gmbh.de

LEADER UK LTD

195, Allport Road - BROMBOROUGH - Wirral CH62 6BA - England
info@leader-group.co.uk

LEADER NORTH AMERICA INC.

109-A Summerville Drive, Mooresville, NC28115 - USA
Tel: + 1 704-662-3377 - Fax: + 1 704-662-3397
info@LeaderNorthAmerica.com

INTERNATIONAL SALES OFFICES

SPAIN / PORTUGAL / LATIN AMERICA

Miami
spain.portugal.latinamerica@leader-group.eu

EAST ASIA / PACIFIC

Singapore
asiapacific@leader-group.eu

CHINA / HONG KONG / MACAU

Ningbo
china@leader-group.eu

www.leader-group.eu



Part of the Genetech group