



StreetLab Mobile™ **handheld substance identification system**

Art.-No.: 170153

Built to quickly and accurately identify threats in the field, GE's StreetLabMobile™ is a go-anywhere, user-friendly handheld unit that can identify chemical substances using Raman Spectroscopy for data capture and analysis. Rugged, yet ergonomic and lightweight, StreetLabMobile™ can reliably identify liquids, powders and solids in a single step without sample consumption or subjective interpretation.



Potential applications:

- ✓ **First responder**
- ✓ **Military facilities**
- ✓ **Customs/border interdiction**
- ✓ **High-security events**
- ✓ **Law enforcement**
- ✓ **Prisons**
- ✓ **Dangerous goods verification**

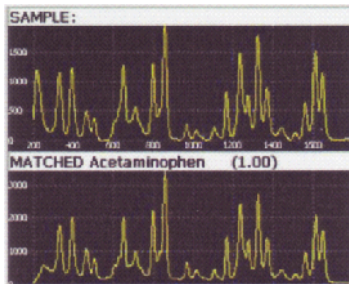
**MORE THAN 10.000 SUBSTANCES IN
LIBRARY**



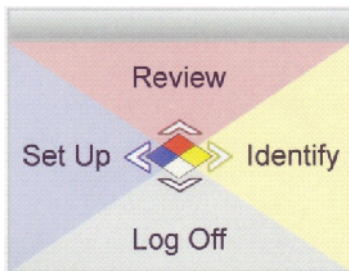
StreetLabMobile™ utilises a proven and widely accepted laboratory technology known as Raman-Spectroscopy.

In real-world applications, bulk amounts of unknown narcotic substance may come in form of labelled medicine bottles, pills and bricks. Flammable or explosive materials can also be mislabelled or disguised in various forms and containers.

By introducing laser light to a target substance by means of a fibre optic cable, energy is either gained or lost from the vibrations and rotations of the substance's molecules. The fibre optic cable also acts as receptor that conducts the "scattered light" (the light that is generated when the beam of laser excites or distorts molecules) back to the spectrometer for analysis. The resulting Raman spectrum or "Molecular Fingerprint" of an unknown substance is matched by StreetLabMobile™'s stored substance library for identification. Because of the unique nature of a given Raman Spectrum, substance matching can be performed with an extremely high degree of reliability and confidence.



Screen display uses spectral information to identify substances



Simple on-board user interface



Display indicates operational status to user

At home in the field

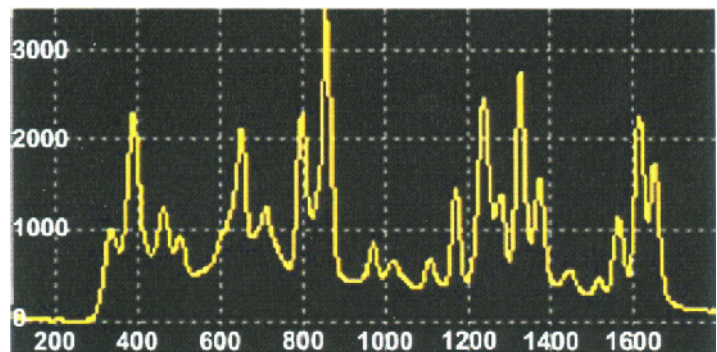
Designed with input from hazmat technicians, StreetLabMobile™ is ergonomically optimized for ease-of-use in Level A gear, with large buttons, straightforward on-board LCD screen readouts, joystick function and „point-and-shoot“ operation. Made of highly durable decontaminable LEXAN®, it is ready to perform in many environments – even in the hot zone.

StreetLabMobile™ uses extended-range wireless technology to quickly deliver results right from the hot zone via one-hand or remote operation, allowing incident command to make tactical decisions faster and more effectively while minimizing the team’s exposure to threats.

Reliable Analysis using Raman Technology

Utilizing Raman spectroscopy, StreetLabMobile™ identifies substances based on their molecular structure. Raman spectroscopy permits samples to be analyzed non-destructively and can be used to identify a wide range of substances including toxic industrial chemicals, explosives and narcotics. Unlike chemical tests, results are repeatable and completed in a single operation.

Equipped with a near-infrared laser, StreetLabMobile™ analyses frequency shifts in the light scattered off a sample to recognize the “spectral fingerprint” of a substance, even dissolved in water or other liquids.



Jede Substanz weist einen charakteristischen „Fingerabdruck“ mit mehrfachen „Peaks“



Innovative Threat Identification Technology, Optimized for Field use

<i>Versatile</i>	<ul style="list-style-type: none"> Identifies broad range of substances (i.e. toxic industrial chemicals, toxic industrial materials, explosives(*) and narcotics) Samples through glass, plastic, transparent –and even translucent- materials Analyses pills, powders, liquids and solids.
<i>Rugged, Go-anywhere Design</i>	<ul style="list-style-type: none"> Ergonomically-optimized with large buttons, trigger activation and joystick for operation in Level A gear LEXAN®EXL-fabrication with rubber molding for strength and durability Submersible for full post-use decontamination
<i>Expandable Library & Accurate Mixture Analysis</i>	<ul style="list-style-type: none"> Extensive and expandable relevant threat libraries allow for a range of identification needs Quick-analysis of chemicals and mixtures Accurately identifies chemicals in mixtures at concentration as low as 30%
<i>Easy to operate</i>	<ul style="list-style-type: none"> „Pont-and-shoot“ single handed operation with joystick controls Optimised balance allows for stable one handed or hands-free analysis Rapid automated calibration to ensure operational accuracy Simple software interface delivers on-board results 24 x 7 technical support (USA only)
<i>Extended Wireless Capability</i>	<ul style="list-style-type: none"> Remote operation to safely interrogate samples from a distance)* Transmit results in <2 s Maximized urban line-of-sight: approx. 500 m LOS Wireless modem technology
<i>Fast</i>	<ul style="list-style-type: none"> No sample preparation required Identifies substance from a single test On-the-spot results (<2 minute analysis for most compounds)
<i>Accurate</i>	<ul style="list-style-type: none"> Rapid automated calibration to ensure operational accuracy Minimizes human error by minimizing sample preparation and test interpretation Standardized libraries provide precise results
<i>Sample/Process</i>	<ul style="list-style-type: none"> Automatically saves test results, preventing intentional or unintentional modifications or deletions Integrated sample vial holders allows for added sampling flexibility Non-destructive testing preserves samples for additional tests and/or as evidence
<i>Portable</i>	<ul style="list-style-type: none"> Light weight; 6,5 lbs including battery 5 hrs battery life for field operation Hard case for added protection during shipping and
<i>Safe</i>	<ul style="list-style-type: none"> No sample preparation reduces potential exposure to additional hazardous chemicals Environmentally friendly, no chemical disposal
<i>Cost-effective</i>	<ul style="list-style-type: none"> Can require virtually no maintenance, potentially minimizing operational costs Can help customers reduce capital investment by providing a single solution for field use

)* As with any laser application operating Raman instruments result in transfer of energy. Therefore analysing dark or black substances leads to absorption of the laser light and will therefore raise the temperature of the substance. When analysing substances suspected to be or to hold explosives components sampling has to be carried out with only very small amounts (less than a gram)!



Techn. Specification:

Laser		785 nm
Battery life		< 5Std
Warm-up time		≈ 30 s
Analysis time, average		Depending on substance, mostly <2 Min
Operation		One-hand, free-hand and vial container
Controls		Joystick & 2 switches + trigger
Library		900 Chemicals
Wireless transmittance		Wireless modem technology 900 MHz and 2,4 GHz available
Distance		Approx. 500 m line – of sight
I/O		DC Input, 2 USB Master, USB Slave and serial
Dimensions		Height: 381 mm Width: 140 mm Depth: 203 mm Weight: 3 kg incl. battery



StreetLab Mobile is a trademark of GE Homeland Protection, Inc.
Product specifications are subject to change without notice.
© 2008 GE Homeland Protection, Inc. All rights reserved.
MKT-DS-00509 rev8 05/08

Specifications are subject to change without notice!

\\Daten\OfficeDaten\kataloge\english 2011\08 CBRN\170153.docx

ELP GmbH
European Logistic Partners

Tel.: 0049 (0)202 69894 0
FAX : 0049 (0)202 69894 10

Nuetzenberger Str. 359
D 42115 Wuppertal
GERMANY

e-mail: elp@elp-gmbh.de / http://www.elp-gmbh.de

