

# GE Security

The Itemiser is the first trace detector in the world to simultaneously detect positive and negative ions, enabling the detection of a broad range of explosives and narcotics. Detection of both positive and negative

ions allows for effective identification from a single sample. It delivers fast, simultaneous explosives and narcotics detection in a package that is ergonomic and portable.

## Itemiser®

### *Explosives and Narcotics Detection in a Desktop System*

GE Security's flexible, lightweight desktop detector simultaneously analyzes both positive and negative ions, allowing for advanced explosive and narcotic contraband detection.

#### Applications

- Airports and seaports
- Customs/border interdiction
- Military facilities
- Embassies
- Government buildings
- Nuclear plants
- Petrochemical facilities
- Public utilities
- Prisons
- High-security events



imagination at work

## Simultaneous Dual-mode Detection

In recent years, the arsenal of explosives used by terrorist groups has expanded beyond the range of substances easily detected by instruments utilizing traditional Ion Mobility Spectrometry (IMS) technology. Traditional IMS instruments operate in either positive or negative mode, but not both modes simultaneously.

While negative mode operation detects the majority of explosives, certain explosives are detected in positive mode. Therefore to rule out the presence of all explosives, conventional IMS detectors require operators to sample and test in one mode, then switch modes and test again.

**Detects a broad range of explosives with simultaneous dual-mode detection... only from GE Security.**

## Easily Transported and Flexible Desktop Trace Detection

The Itemiser was designed with portability and flexibility in mind. This unit offers a compact footprint, folding touchscreen, easy-carrying handle, a 60-minute battery backup, and the potential to be relocated quickly.

- **Particle swipe:** Reusable sample traps are swiped across a surface and then inserted into the Itemiser for analysis. Typical surfaces include baggage, cargo, vehicles, containers, tickets, and ID cards.
- **Optional vacuum sampling:** An optional vacuum sampler draws vapors into a sponge-like sample trap, which is then inserted into the Itemiser for analysis. Applications include cargo containers, car trunks, and luggage.

## Easy-to-Use Operator Interface

Results can require minimal interpretation, so operators may concentrate on obtaining a good sample. Itemiser's onboard computer automatically handles all data logging, including time, date, and sample analysis for each alarm. A complete history of saved data and alarm files can be recalled and printed at any time.



Inserting a sample trap initiates detection.



Optional vacuum sampler.

## Features and Benefits

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### Sensitivity / Selectivity

- Patented ITMS® technology helps increase ion population, enabling detection of microscopic traces of explosives and narcotics
  - Patented switching mechanism simultaneously detects positive and negative ions, enabling the detection of a broad range of explosives, while also detecting narcotics
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### Versatile

- Detects both explosives and narcotics
  - Semi-permeable membrane excludes dust and dirt to allow continued operation in environments that have high traffic, humidity or contamination
  - Expandable libraries to accommodate unique user requirements
  - Three default user levels (operator, maintenance and administrator) for greater access control
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### Cost Effective

- Helps reduce capital investments by providing a single solution for both narcotics and explosives detection
  - Patented regenerative dryer can eliminate the need for monthly dryer replacement, and may reduce maintenance downtime, and lower consumables cost
  - Folding monitor screen automatically shuts off backlight to extend life of display
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### Reliable

- Automated calibration helps assure operational accuracy
  - Maintains a low, stable, humidity level in the detector allowing for consistent and reliable detection results
  - Automatically saves test results, preventing deletions
  - Robust internal solid-state flash drive for reliable data storage
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### Ease of Use

- Touchscreen menus on a graphical user interface can be easy to learn and operate
  - Built in printer for fast hard copy results or printing at a later date
  - Quick analysis and results in approximately 7 seconds
  - Software upgrades can be easy to install
  - Local language options available
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### Portability

- Lightweight (26.5 lbs/12 kg) with built-in handles and soft case for easy transport
  - Operates from a vehicle's 12VDC power outlet
  - Internal, one-hour battery allows instrument relocation without having to shut it off, eliminating warm up time
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## Worldwide Locations

7151 Gateway Boulevard  
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FAX: +1 202 637-4232  
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TEL: +852 2368 2332  
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[www.gesecurity.com](http://www.gesecurity.com)

## Specifications

### Detector Type:

Ion Trap Mobility Spectrometer (ITMS®)

### Analysis Time:

Default 7 seconds

### Sample Acquisition:

Surface wipe or optional vacuum collection

### Warmup Time:

Allow 30 minutes minimum for system to stabilize

### Operating Temperature:

0 to 40°C (32 to 104°F) IP20 protection rating

### Storage Temperature:

0 to 50°C (32 to 122°F)

### Power:

AC Input: 100-120 VAC, 200-240 VAC, 47-63 Hz, 150W

DC Input: 11-18 VDC input, 10A (150W) max

Battery Backup: Up to 60 minutes of standby time daily for transport

### Computer:

Pentium-based, industrial-grade, single-board computer, solid-state hard disk

### Display:

10.4 in (26.4 cm), 640x480 pixel, 300 nits brightness, TFT-LCD monitor with resistive touchscreen

### Signal Processing:

Recognition on multiple peaks and multiple controlled drugs and explosives

Output to 4 different display types, including bar graph display or time-of-flight plasmagram display

### Detection Modes:

Explosives (optimized negative ion mode)

Narcotics (optimized positive ion mode)

Dual (positive and negative ion mode)

## Dimensions

### Itemiser (with display opened)

Height	14.9 in (38 cm)
Display Clearance	16.3 in (41 cm)
Width	18.9 in (48 cm)
Depth	19.8 in (50 cm)
Weight	26.5 lbs (12.02 Kg)

### Itemiser (with display closed)

Height	7.1 in (18 cm)
Width	18.9 in (48 cm)
Depth	18.0 in (46 cm)

### Hand Wand

Length	11 in (28 cm)
Diameter	1.1 in (2.8 cm)
Weight	2.3 oz (65g)

### Optional Vacuum Sampling Unit

Length	16.8 in (42 cm)
Diameter	3.4 in (8.5 cm)
Weight	18.9 oz (535g)

