



# ADE 651<sup>®</sup> ADVANCED DETECTION EQUIPMENT

Advanced Tactical Security & Communications UK [ATSC-UK]



## Portable Explosives and Drugs Detection

ADE651<sup>®</sup> is the next generation of long-range detector products offered by ATSC. As with the other ADE<sup>™</sup> substance detectors, it incorporates the long range electrostatic attraction of highly-charged ions for the effective identification of even the most difficult substances. Unlike other trace detectors that are limited by the need to have actual physical contact with the item sampled; the ADE651<sup>®</sup> is able to detect programmed substances at long distances safely and without the need to have actual physical contact with the substance. As such, the ADE651<sup>®</sup> continues to set standards for ion detection unlike any product on the market today. It is extremely easy to operate and delivers fast detection of the programmed substances in a small lightweight package. Parts of the New features include reduced 'false-positive' readings on contaminated targets. (NOTE: Static-meter shown is a 'cost-optional' extra).

The ADE651<sup>®</sup> is now latest in the ADE<sup>™</sup> line for Law Enforcement and Government users, world-wide.

## Applications

- Airports/ Customs
- Border Control
- Military Facilities
- Embassies/VIP Guards
- Government buildings
- Nuclear Plants
- Fuel Depots
- Public Utilities
- Police/Prisons
- High-Security events
- Search & Rescue
- Wildlife Reserves

## Detection Technology

Using ATSC's proprietary application of electrostatic ion attraction, (also referred to as Electrostatic Attraction [ESA]), the ADE651<sup>®</sup> provides detection of programmed substances with unprecedented sensitivity. It can detect substances at long range to levels as low as simple contamination. Targeting the specific fluctuating ions of the programmed substance the ADE651<sup>®</sup> is able to bypass any known attempts to camouflage or hide the target substance(s). It can quickly and effectively scan a large search area targeting a specific group of substances in all types of environments. In dry, humid, cold, and severe weather environments, the ADE651<sup>®</sup> will identify the area(s) of detection and define the search areas for use of close range detection devices such as Trace Detectors and Canines.

## Portable and Easy-to-Use

The ADE651<sup>®</sup> was designed with portability and ease of use in mind. Setup takes less than one minute and can be transported easily in its carrying case. It can be used by multiple operators without the need of recalibration.



- Results require minimal interpretation and can easily be reconfirmed. ATSC's Operator Training Course provides complete training for the operator to be able to identify substance detection and take the proper steps to interpret the level of the identification.
- The ADE651<sup>®</sup> identifies the existence of the programmed substance; it does not quantify the amount or level of substance detected. In real-world situations, detection levels are in the pictogram range and below. The trained Operator is able to decipher these levels and take appropriate steps to confirm the existence, type, and location of the target substance to less than a four cubic meter area. It was not designed as a pin point locator, but is designed to define the area to be searched.

## Features and Benefits

### Simultaneous Detection of Multiple Types of Explosives or Drugs

The ADE651<sup>®</sup> incorporates electrostatic ion attraction [ESA] technology to target the specific substances. It can accommodate multiple substance detection cards to detect a broad range of explosive or drug [narcotic] substances. It can more specifically identify a substance by removing detection cards from the ADE651<sup>®</sup> after detection is received until the attraction is lost.

### Ignores All Known Concealment Methods

By programming the detection cards to specifically target a particular substance, (through the proprietary process of electro-static matching of the ionic charge and structure of the substance), the ADE651<sup>®</sup> will "by-pass" all known attempts to conceal the target substance. It has been shown to penetrate Lead, other metals, concrete, and other matter (including hiding in the body) used in attempts to block the attraction.

### No Consumables nor Maintenance Contracts Required

Unlike Trace Detectors that require the supply of sample traps, the ADE651<sup>®</sup> does not utilize any consumables (exceptions include: cotton-gloves and cleanser) thereby reducing the operational costs of the equipment. The equipment is Operator maintained and requires no ongoing maintenance service contracts. It comes with a hardware three year warranty. Since the equipment is powered electro statically, there are no batteries or conventional power supplies to change or maintain.

## Specifications

Detection Method:	Electro-Static (ionic) Attraction [ESA]
Sensitivity:	Below Trace level. <i>[Fingerprint]</i> (In the Pico-gram range.)
Selectivity:	< 2% typical false positive rate (Mainly due to the inability to visibly see or trace-detector sampling, unable to analyze.)
Detection/Reaction Time:	< 5 Seconds
Setup Time:	Less than 1 minute
Environmental:	Operating temperature -40°C to +60°C (-40°F to +140°F)
Power:	Electrostatic (*500 Volts minimum, typically *2500~3000 Volts) *Readings taken by <i>Static-Electrometer to ensure proper power levels.</i>
Signal Processing:	Attraction input to moving directional antenna Detection at 90° across Operator's body
Calibration:	Not required. Operator tests equipment prior to use by detecting a sample substance. Regular normal cleaning recommended.
Detection Modes:	Ion-like-charged fluctuation, Passive receiver
Substance Detection:	<i>High Explosives or Detonable Explosives</i> Trinitrotoluene (TNT), DNT Nitro Esters (PETN, nitroglycerine, ethylene glycol dinitrate) Ammonium nitrate Dynamite RDX/Hexogen/Octogan Black Powder, Ammunition & Propellants Tetryl <i>Narcotics</i> Cocaine/Heroin/Morphine THC/Marijuana/Cannabis LSD/Ketamine/Midazolam Amphetamine / D-methamphetamine Ecstasy Opium/Opiates Chloro-Methyl & Benzodiazepine drugs Ivory  Human Recognition (Detection)  <b><i>Additional substances Available.</i></b> <b><i>Contact ATSC for further information.</i></b>
Sensor Cards:	Sensor Cards are of Credit-card size and are fused (non-laminate) so as to warranty against defects for a minimum of 10 years. Multi-language can be printed to indicate substance type to be detected.
Warranty	2 year limited warranty on hardware only. 2 year electronic media support
Training Courses	Basic operator training course (required) in the use of the equipment and additional course training in Maritime or Aviation use is available. Search and Rescue for Humans course using the ADE651® is available. Contact ATSC® for further information.
Detection Range (in Tests)	Up to 1000*+ meters ( <i>*in ideal conditions</i> )
<ul style="list-style-type: none"> <li>• Above ground</li> <li>• From Aircraft</li> <li>• Under Water</li> <li>• Underground</li> <li>• NOTES:</li> </ul>	<ul style="list-style-type: none"> <li>Up to 5000* meters (3+ miles)</li> <li>Up to 30* meters (100+ feet)</li> <li>Up to 10* meters (30+ feet)</li> <li><i>*All of the above are indications in ideal conditions. Aspects relating to weather such as high temperatures, high humidity and extreme cold, will affect results shown above.</i></li> </ul>

Hand Held (Attraction Direction Indicator)	150mm x 170mm x 25mm (6" x 6 ¾" x 1")
Detection Card Reader	110mm x 125mm x 25mm (4 ¼" x 5" x 1")
Interconnection:	BNC interconnecting cable
Weight (including Soft Case)	900 grams (2 lbs)

*\*NOTE: Design changes may vary the spec. shown*



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