

DETECTOR OF EXPLOSIVE TRACES ON DOCUMENTS

MO-2D



BRIEF TECHNICAL DESCRIPTION

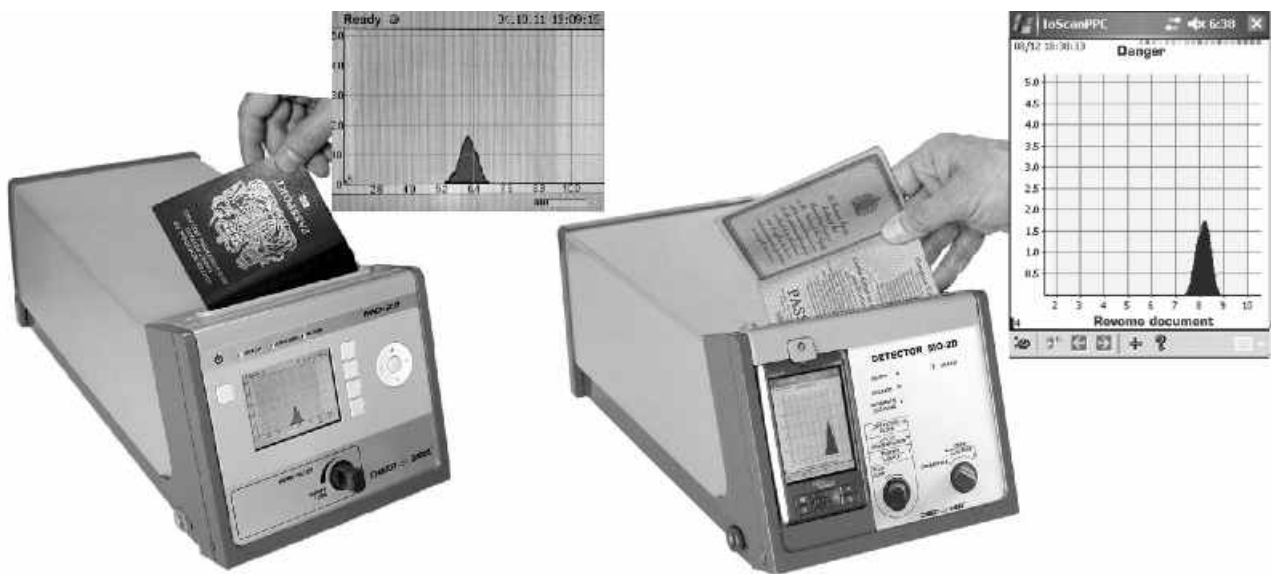
APPLICATION

The primary use of the MO-2D is to identify persons (travelers) who have recently been in contact with explosives. This information is critical for counter terrorism operations.

The MO-2D is designed to detect traces of explosives directly from documents (passports, ID, credit cards, etc.). It is also used to detect traces of explosives collected from other objects using sampling cards.

The analyzing process automatically starts when a document is placed into the reception slot (desorber): warm air is blown on the document to desorb volatile substances from it; the air flow then carries the vapors into the detector's analytical channel for analysis.

The presence of explosives generates a detection signal and triggers alarms.



SPECIAL FEATURES

The detector is controlled by a Pocket Personal Computer (PPC).

The special IoScanPPC software performs the following functions:

- Control of the detector's main elements;
- Data acquisition and processing;
- Display of the results of inspection (ionograms) and data storage for further analysis;
- Exchange of data with external computer.

For objects that generate an alarm, it is possible to collect additional samples for further analysis using the GCS-02P Portable Gas Chromatograph for very precise identification (forensic quality) of the detected compounds. For that, MO-2D and GCS-02P use the same air sampler and concentrators to collect samples.

The MO-2D detector does not contain any radioactive material; the ionization of the vapors is realized by a low energy soft X-Ray lamp. There is no need to coordinate the exploitation of the detector with sanitary services.

TECHNICAL CHARACTERISTICS

<i>Analytical principle</i>	Non-Linear Dependence of ion Mobility on an electric field (NLDM)
<i>Analysis time</i>	from 8 to 99 s (adjustable)
<i>Detectable substances</i>	Explosives based on: Hexogen (RDX), pentaeritrotetranitrate (PETN), trinitrotoluene (TNT), nitroglycerine (NG)
<i>Sensitivity to TNT</i>	not more than 5 ng
<i>Warm-up time and calibration</i>	Less than 15 min
<i>Alarm signals</i>	Audible, LEDs Visual: graphs (ionograms) of detection on the PPC screen
<i>Inner memory</i>	30 Mb (approximately 3200 detection events (ionograms))
<i>Power supply</i>	Mains (100-240V, 50/60Hz), or Storage battery (12V)
<i>Power consumption</i>	not more than 80VA
<i>Weight of the detector with battery</i>	not more than 6 kg
<i>Weight of complete set in case</i>	not more than 9 kg
<i>Detector dimensions</i>	420x200x180 mm
<i>Operation temperature</i>	+ 5°C ... + 45°C (relative humidity up to 80%)

COMPLETE SET

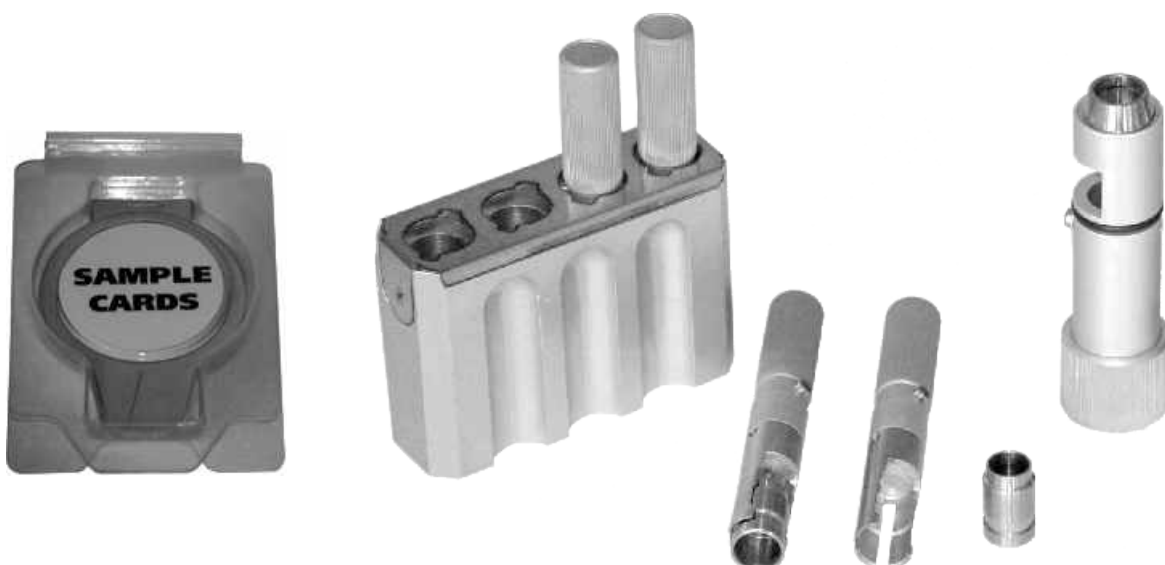
The following accessories are included with the detector: AC adapter, mini USB cable to connect to external PC, stylus for PPC sensor display, test rod and TNT vapor generator to test operability, rod to clean document slot, operating manual, CD with Software, and case for transportation.



The following accessories (optional) can be delivered on demand:

Sampling swipes for collection particles from the surface of inspected objects (door or bag handles, case locks, switches, steering wheels, etc.). The swipe analysis procedure is similar to the one for documents.

Concentrator for sampling for consequent analysis by the Portable Gas Chromatograph "GCS-02P". Input device and concentrators' holders. Device for input of the concentrator. Container for concentrator storage.



TECHNICAL MEANS OF COUNTERACTION AGAINST TERRORISM DEVELOPMENT AND PRODUCTION

- Detecton of explosives

- detection of explosive vapors and traces
MO-2M, MO-2D, MO-2DT, GCS-02P
- non-linear location of semi-conductor components
RFD 23
- visualization of hidden components
SXR-150
- metal detection
OVERTONE, RUBIKON, MOLE

- Express detecton of drugs

- GCS-02PN

**THE DEVICES ARE ADOPTED BY
SECURITY SERVICES OF RUSSIA**

THE DEVICES ARE USED IN 50 COUNTRIES FROM 4 CONTINENTS

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