METAL DETECTORS

- STATIONARY

- PORTABLE
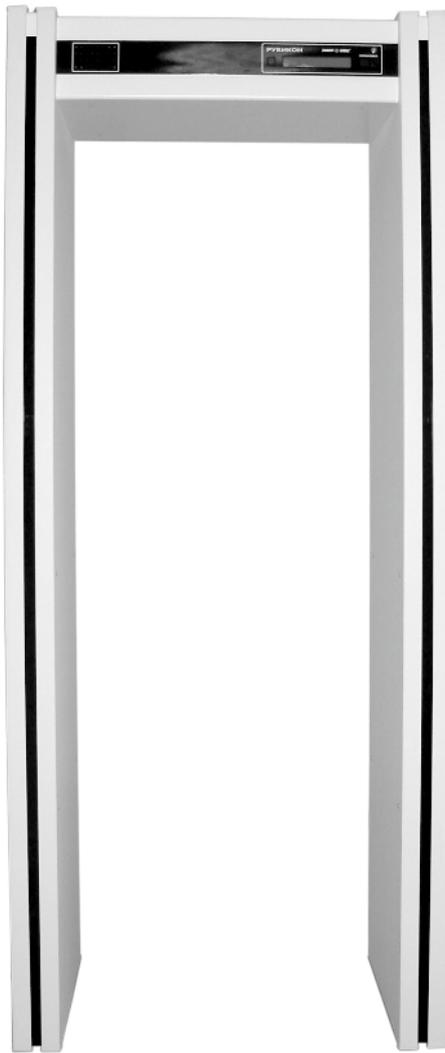
- HAND-HELD

RUBIKON
MOLE
OVERTONE

BRIEF TECHNICAL DESCRIPTION

СИБЕЛ SIBEL®

STATIONARY ARCHWAY METAL DETECTOR RUBIKON

APPLICATION

RUBIKON is a stationary multizone common purpose metal detector designed to screen persons for weapons or other metallic objects concealed under their clothes.

RUBIKON can be used to set-up security checkpoints at locations of mass gathering (airports, railway stations, stadiums, etc.), as well as at sensitive places (government buildings, banks, corporate offices, etc.).

COMMON CHARACTERISTICS

When the detector is switched on, it executes an automatic diagnosis of its two electronic blocks by selecting the working frequency operating at minimal electromagnetic noise (16 frequencies available between 8 to 11 kHz).

Depending on the objective of the operations, the operator can choose between two operation modes:

1. "Continuous" - for inspection of continuous traffic;
2. "Discrete" - for inspection of one person at a time: the detector is switched to active state by an IR sensor just for the period a person passes through the arch.

When the detector is working, continuous automatic adaptation to the metal objects located (or continuously appearing) right next to the detector's frame is going on. The detection of metal objects generates an audible alarm and the position (height) of the object is visualized by LED on the side of the arch.

TECHNICAL CHARACTERISITICS

Number of detection zones	12 zones (3 vertical zones and 4 horizontal zones) with independent sensitivity adjustment for 4 horizontal zones
Sensitivity adjustment range	up to 100 levels
Ferrous/non-ferrous metal selection	provided
Pass thru gate speed	from 0.2 to 5.0 m/s
Gates passageway dimensions	745 x 2100 mm
Gates throughput capacity	up to 50 person/min
Alarm signals	visible, audible
Power supply	- from main 100 - 240V / 50Hz - from integrated rechargeable battery, 12V / 7,2Ah (time of continuous operation is up to 4 hours)
Power consumption	less than 15W
Operating temperature	from 0 to + 50°C (at relative humidity up to 80%)
Dimensions	2300x960x600 mm

GENERAL INFORMATION

The principle of operation of the RUBIKON stationary multizone metal detector is based on disturbance of low-frequency three-dimensional electromagnetic field induced by appearance of metal object in that field. Electromagnetic field is generated by two excitation coils located in the sidewalls of the detector (one on each side). Changes in the field strength are detected by eight sensor coils located in the sidewalls (four on each side). Special digital signal processing algorithm allows to select up to three zones of detection in the vertical direction and up to four zones in the horizontal one. Special shapes of the sensor coils ensure that the metal detector is degree of radio-interference immunity.

To eliminate false alarms caused by mechanical impacts, the detector is equipped with infrared sensors so it is only active when a person crosses the detection area.

The operator can adjust the settings of the detector either directly from the built-in control panel or by using a remote control device. A security lock is used to protect the operating parameters setting of the detector.

LEDs located on the exit side of the arch indicate where a detected object is located in the detection area: LEDs of the corresponding vertical and horizontal detection zones are lit to indicate the specific location of the detected metal object. In case a metal object is detected around the central zone of the arch, the LEDs on the both sides light up.

The detector is designed to support a wide range of sensitivity adjustment.

COMPLETE SET

1	Detector "RUBIKON"	1
2	Remote control panel	1
3	Key for remote control panel	2
4	Power cable	1
5	Operating manual	1
6	Assembly set	1

PORTABLE METAL DETECTOR   # MOLE

APPLICATION

MOLE is a portable selective microprocessor metal detector designed to search for and to identify ferrous and non-ferrous objects in dielectric and weakly conductive environments.

COMMON CHARACTERISTICS

Convenient controls allow to easily choose the proper mode of operation and to set up the detector in accordance with different conditions.

Search for objects is conducted by moving progressively the search head above the surface of the ground, at a height of 3-5 cm. The detection of a metal object is accompanied by sound signals from the integrated speaker or from the earphone supplied with the device. The intensity and frequency of the signal depend on dimensions and type of the object detected, as well as on distance between the object and the search head.

Two rechargeable storage batteries give the detector autonomy of up to 30 hours of continuous work. The battery charger allows to charging a battery either from mains (220V) or from a car power supply.

TECHNICAL CHARACTERISTICS
Detection capability (maximum detection distance):

Small arms ammunition:
- cartridge caliber 7.62 .... 35 cm
- shell caliber 7.62 .... 32 cm
- bullet caliber 7.62 .... 20 cm

Anti-personnel mine:
- under send .... 12 cm
- under ground .... 8-12 cm
- under fresh water .... 12 cm
- under solt water .... 10 cm
- under concrete surface .... 13 cm

Other metal objects:
- test rod (steel rod Ø 0.9 mm, 10 mm long)............10 cm
- coin Ø 25 mm .... 30 cm
- can Ø 100 mm .... 80 cm
- sewage hatch .... 150 cm

Other parameters:
Telescopic bar length (adjustable) .... 400 ...950 mm
Weight .... 2.2 kg
Power supply .... (Ni-MH battery) 7.2 V 3000 mAh
Operating time (fully charged battery) .... 15 h
Operating temperature .... -20°C...+50°C
Relative humidity .... up to 95% (at 25°C)
Atmospheric pressure .... 630 ... 800 mm of mercury

Object Sizing and Ranging OPERATING MODE

The following features are displayed on the LCD:
- Distance between the search head and the object;
- Approximate size of the object;
- Location of the object relative to the search head;
- Presence of cavities and other ground discontinuities;
- Information on type of metal of the detected object.

Hodograph OPERATING MODE

The mode is useful for experienced operators.

-The signal reflected from the metal object is graphically displayed on the LCD to make identification of the object much more easy.

-Objects located close to each other are easily identified.

-The orientation of small flat non-ferrous objects and objects made from alloys is represented.

-The search head can be moved at a much higher allowable speed.

The integrated software for data management and processing allows:

- to compensate for ground influence;
- to use "masking" adjustments for appropriate metal types, in order to exclude signals from "metal garbage" and to focus more effeciently on the subject of the search;

- to chose the search range depending on a metal type;

- to set one of three working frequencies available in the range from 7.6 to 7.8 kHz;
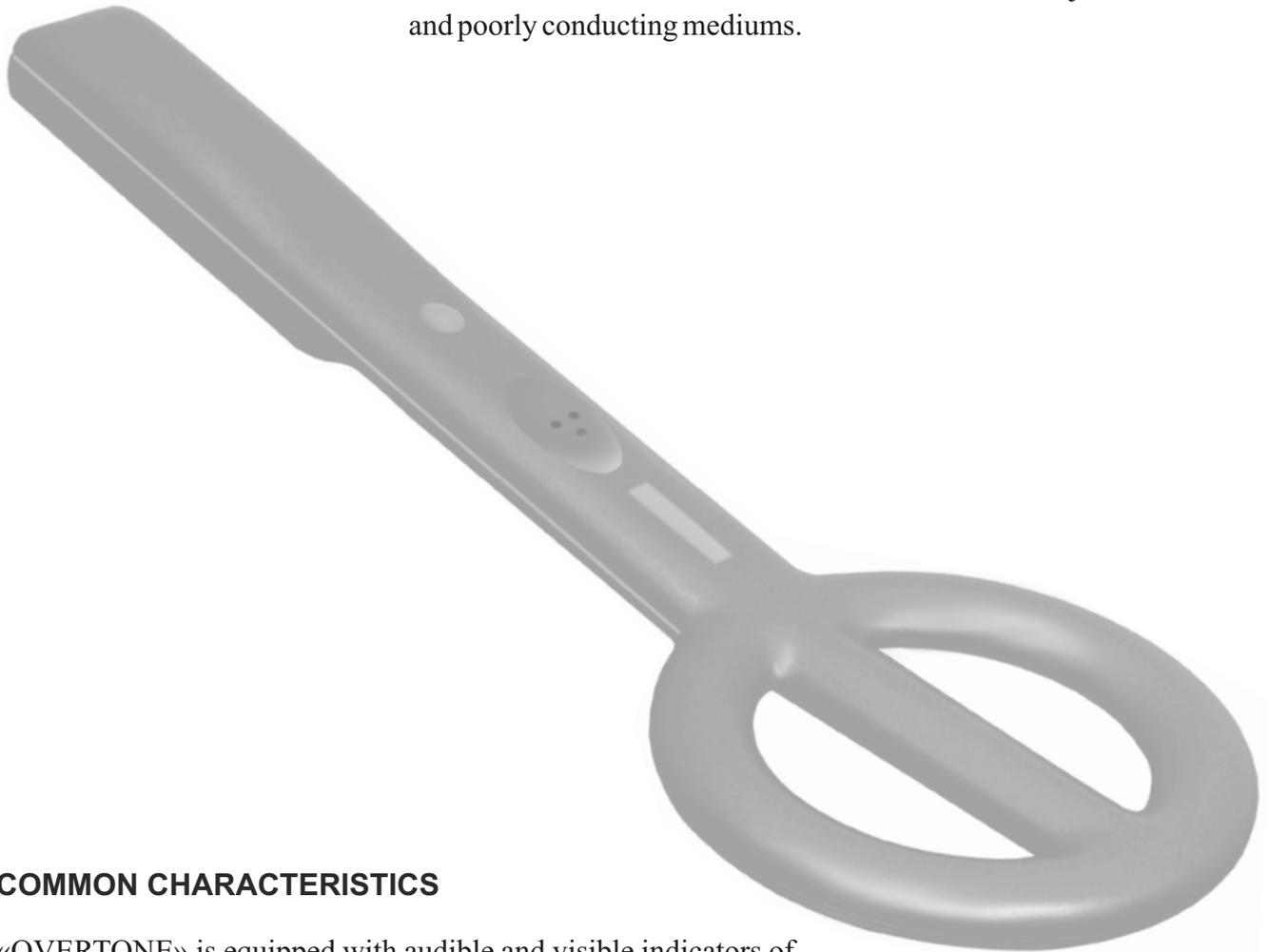to adjust the intensity of audible signal and display brightness.

COMPLETE SET

The detector with handle and telescopic bar 1
Search head 1
Armrest 1
Rechargeable battery 2
Battery charger 1
Earphone 1
Cable for the battery charger and the battery connection 1
Cable for connection to car power supply 1
Test rod 1
Operating manual 1
Device passport 1
Backpack 1
Case for transportation and storage 1

HAND-HELD SELECTIVE MICROPROCESSOR METAL DETECTOR **OVERTONE**

APPLICATION

The hand-held selective microprocessor metal detector «OVERTONE» is intended for detection of ferrous and non-ferrous objects in dielectric and poorly conducting mediums.
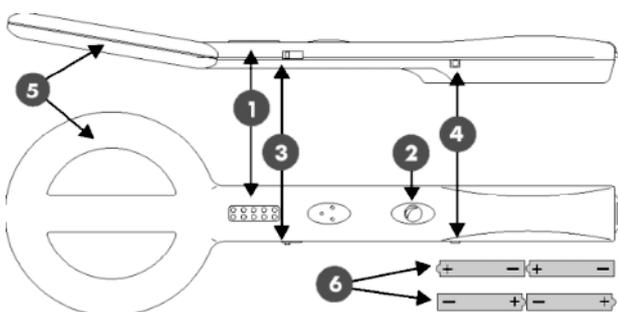
COMMON CHARACTERISTICS

«OVERTONE» is equipped with audible and visible indicators of different tones and colors to distinguish between ferrous and non-ferrous metals.

«OVERTONE» is equipped with a switch to select between 2 sensitivity levels, depending on the purpose of the search or examination.

The detector casing is made of break-resistant plastics (ABS). Standard color is gray (in the case of more than 100 units ordered, the color may be specified by the customer).

1. LED bar indicator (indicates the signal level, type of metal detected, voltage and operating mode)
2. Sensitivity level switch
3. Power switch
4. Charger connector
5. Detector's antenna disk
6. Storage batteries (indicated according to polarity)

TECHNICAL CHARACTERISITICS

Power supply	4 standard storage or AA type elements (5-6 V) provides for the time of continuous operation up to 20 hours at 20°C
Dimensions	400 x 140 x 60 mm
Weight with batteries	300 g
Exploitation conditions	- relative humidity: up to 98 % at +25°C - atmospheric pressure: from 630 to 800 millimeters of mercury - temperature range: from - 10 to +45°C

SELECTION PROPERTIES (cm)

Ferrous Metals	High, cm	Low, cm	Non-ferrous Metals	High, cm	Low, cm
Makarov pistol	30	22	Brass plate (130x80 mm)	25	17
RGD grenade	26	13	Copper disk (25x1mm)	14	7
Knife (8" blade)	20	10	Bullet (cal. 7.62 mm)	8	5
Safe razor blade	5	2	Golden ring (Ø16 mm, 1g)	5	3
Screw M3x7	6	2	Silver ring (Ø16 mm, 1g)	5	4

COMPLETE SET includes:

1. Hand-held unit (detector) 1
2. Power supply elements (accumulators) 4
3. Operating maual 1
4. Case for transportation and storage 1
5. Charger for accumulators 1

СИБЕЛ SIBEL®

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-02F
- ■ 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-02FN

THE DEVICES ARE ADOPTED BY SECURITY SERVICES OF RUSSIA

THE DEVICES ARE USED IN 50 COUNTRIES FROM 4 CONTINENTS