

By moving towards the metal objects, ferromagnetic objects or switched on electronic devices the number of flashing LED indicators (D2) will increase.

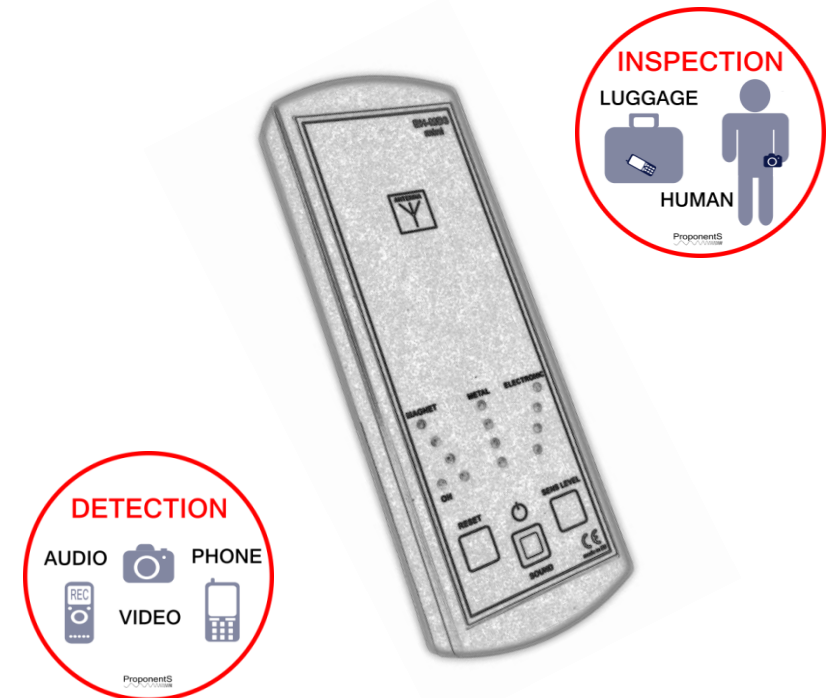
Flashing D1 indicates the low level of battery. In this case the detection results are not correct.

To switch off the Detector, press and hold the K1 button.

Metal detector – Detector of electronic devices

«EH-MD3-mini»

Operating manual



## Description and operation

EH-MD3-mini device is designed to detect a wide range of concealed metal objects ferromagnetic objects and switched ON electronic devices.

EH-MD3-mini device provides the detection objects hidden on a person's body in or under clothes and also in hand luggage (bags, packages and etc). The device also can be used for searching in interior items.

### Technical characteristics.

Name	Value
Range of detection:	
Metal objects: steel disk 25*0,1mm	Not less than 50 mm
Swithed ON: mobile phones such as Nokia 113	Not less than 60 mm
Power supply	4 battery AA type
Current consumption	Less than 150 mA
Continuous operating time of a set of 4 alkaline batteries	Not less than 4 hours
Operating conditions:	
operating temperature range	+5C...+40C
operating temperature limits during transportation and storage	-10C...+50C
Dimensions of the main unit of the product (not more than)	230*85*30 mm
Weight of the product (not more than)	400g

When the device is ON, the system will automatically install the following parameters:

- zero threshold levels for all detectors;
- sensitivity level of the Ferromagnetic objects detector - middle;
- sensitivity level of the Metal detector - middle;
- sensitivity level of the Switched ON detector- maximum;
- without sound.

To Add/remove the sound, shortly press the K1 button.

To reset zero threshold levels, press shortly the K2 button. The device will set the levels for each of the channels (ferromagnetic, metal, switched ON electronic) based on the environmental interference at the moment the button is pressed. Once the settings are changed, the indicators D2 will flash upper segments for 1-2 seconds.

To change the sensitivity level use the K3 button. Each short press of the K3 button changes the detector which you will tune. Upper segment of the tuned LED indicator flashes, while the other segments display the current sensitivity level. The following level of sensitivity is indicated: 3 flashing LEDs – maximum sensitivity; 0 flashing LED - minimum sensitivity. While holding down the K3 button, the sensitivity of selected detector will reduce every second for one step (1 LED) and then, reaching the minimum level, the sensitivity will increase again to the maximum value (and the circle starts again).

The detection process is to bring closer the antenna of the device to the object. To ensure maximum detection of faint signals, slowly move your detector sideways toward the target's suspected position at a speed of about 5 to 10 cm per second, monitoring the LED indicators (sound signals).

## Operation with EH-MD3-mini

To ensure maximum sensitivity when using EH-MD3-mini, you need to turn off TVs, displays and other devices which can generate strong magnetic fields and located no further than 2 meters from the working device. Otherwise, it can lead to a decrease in the detection distance.

Prepare the device to work in the following order:

- Remove the device from its packaging;
- Remove the battery cover by sliding it downwards to insert four AA batteries. Make sure the positive and negative ends are facing the correct direction. Replace the battery compartment cover.

Switching on and testing the EH-MD3-mini device:

- Switch on the device by pushing the K1 button, the Power On LED indicator (D1) will light green (Fig.2). After a few seconds the detector produces a short beep, then LED indicator of detectors (D2) goes off (the rarely flashing of the first LED indicators D2 is acceptable).

Testing the detector:

- Slowly bring closer (up to distance of 50-40 mm) switched ON mobile phone (in sleeping mode) to the antenna system of the device. The closer the phone is the higher the level of flashing LED indicators should be, up to full brightness of both LEDs.
- By increasing the distance between the phone and the device – the number of flashing LED indicators will decrease and, finally, all LED indicators turn off.

Note. Test the Detector in spaces with the minimum level of magnetic interferences away from the power cables and working devices.

## EH-MD3-mini parts

The complete set of parts include:

Name	Quantity
Main unit	1
Batteries AA type	4
Regular packing	1
User manual	1

## Features

EH-MD3 is a hand-held device in which the detector of switched on electronic devices is combined with metal detector and detector of ferromagnetic objects.

- 1) The Pulse metal detector channel is designed to detect every type of metal.
- 2) The Detector of ferromagnetic objects channel is based on the measurement of the magnetic field vector. The magnetic field is generated by the earth and distorted by objects made of ferromagnetic materials such as large iron objects, magnets, etc. Magnets are included in the speakers and microphones of phones, which allows phones to be detected when they are off.
- 3) The Switched ON electronic devices detector – this channel can be used in finding the different types of switched ON electronic devices, namely digital timers and remote control units, photo and audio/video recording devices, laptops, touchpads, cell phones of all standards (also in a sleeping mode) and etc. The principle of operation is based on registration of the magnetic field pulses generated by the current pulses of switched ON electronic devices.

## Construction

Structurally the construction of EH-MD3-mini main unit consists of the following components: the internal receiver, the compo antenna - sensor, the battery compartment, the control and indicating panel.

The appearance of the product is shown in figure1.

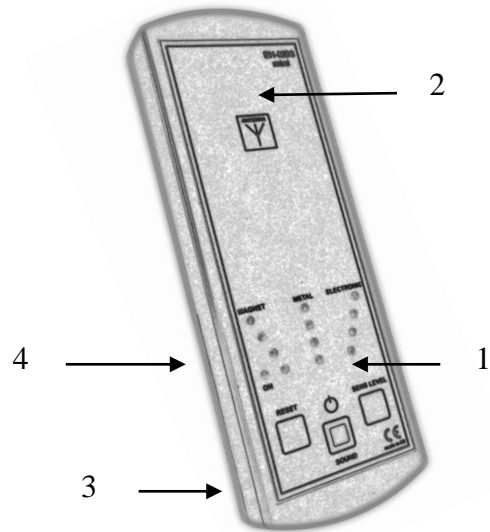


Figure 1

The internal receiver and batteries are located in the handle (1) of the device.

Antennas are located in the housing of the spherical shape (2) of the product.

The battery compartment is located at the back side of the handle (3).

The location of the sound dynamic (4).

EH-MD3-mini controls are located on the face panel of the handle.  
Description of the buttons and scale are shown in figure 2.

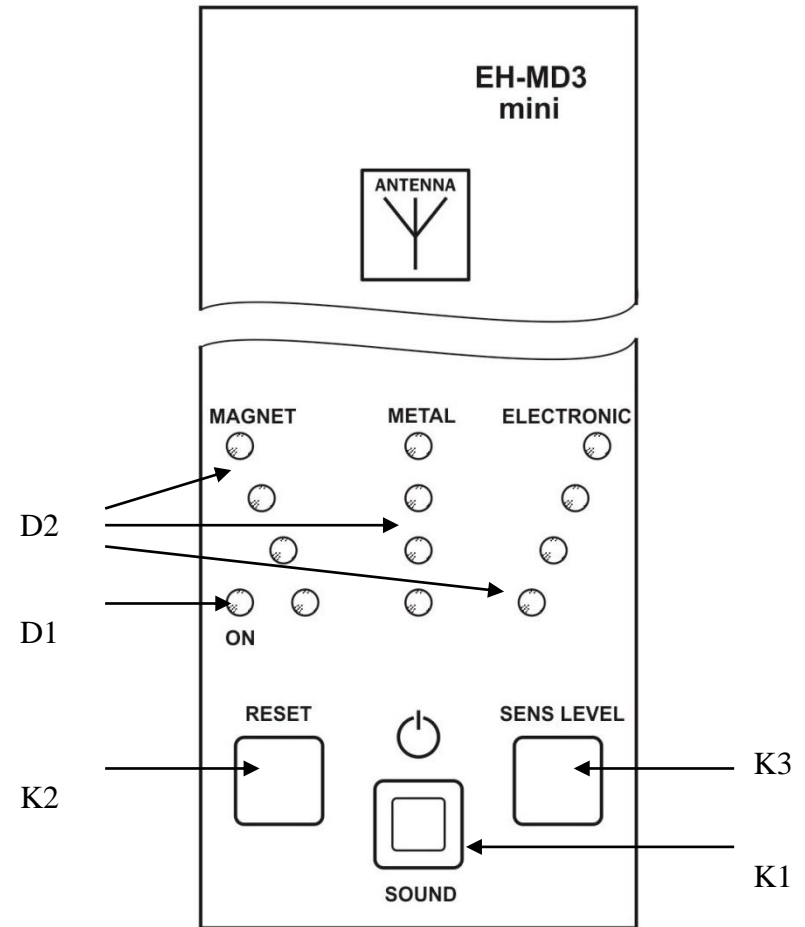


Figure 2

D1– Power On LED indicator;

D2 – LED indicators of Ferromagnetic (blue), Metal (yellow) and switched ON electronics (red) detectors;

K1 – ON/OFF Power and Sound button;

K2 – Zero threshold levels Button for all detectors;

K3 - Sensitivity settings Button for all detectors.