Digital bug detector BugHunter™ Professional BH-02 Rapid

Operating manual INTK.411153.009 RE

CONTENTS

Overview

This operating manual is to get you acquainted with construction, rules of operation (intended usage, technical maintenance and repair, storage and transportation) of the **Digital bug detector BugHunter™ Professional BH-02 Rapid** (hereafter referred to as the Product).

The Product is a portable device intended to detect near field radio transmitters such as wireless “bugs”, wireless microphones, wireless spy cams, portable radio sets, working cellphones, cellular signal killers and suppressors, etc.

The main feature of the Product is an extended dynamic range (from 30 to 4500 MHz), that makes it possible to increase the range of devices that can be successfully detected by the Product.

Warning!

Read carefully this manual in order to provide continuous, successful and safe operation of the Product.

Follow the rules, restrictions and instructions contained in this manual to increase the lifespan of the Product and to use it more effectively.

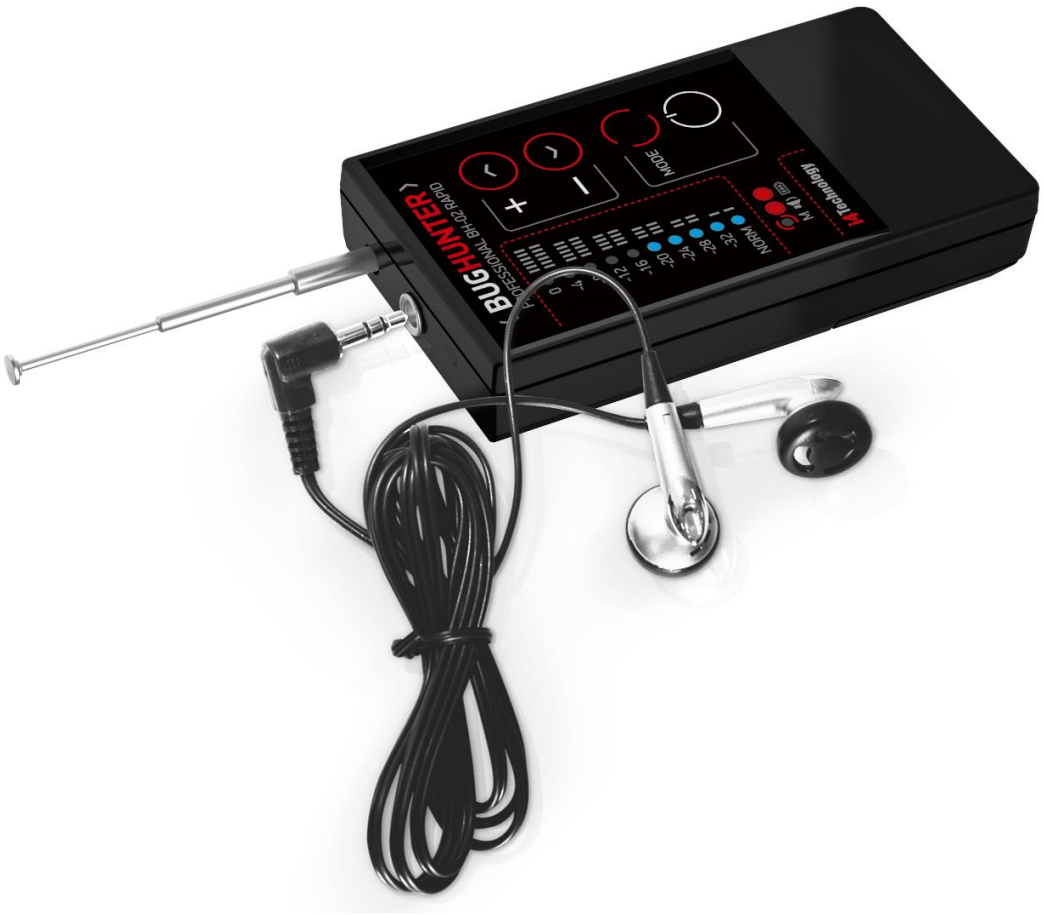
The manufacturer's warranty shall be void if operation and storage regulations are violated.

After storing the product in a cold place or transporting in wintertime, the Product should be kept at room temperature for two hours before operating.

Specification and operation

1. Technical features

The Picture 1 illustrates the physical configuration of the Product.

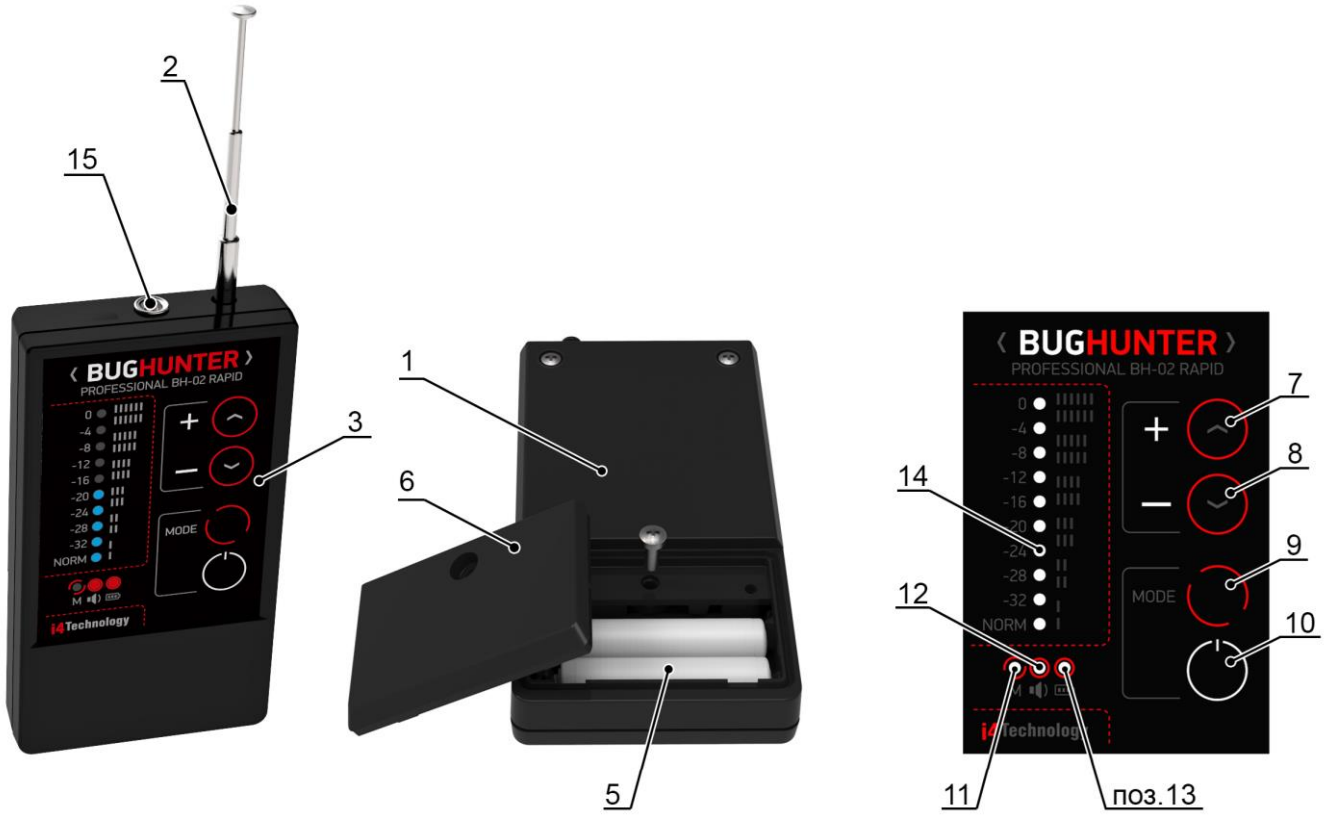


Pic. 1
Physical configuration

Dimensions, mm, not more than ……..105 x 58 x 18,5
Weight with batteries, kg, max ……..……..... 0,09
DC supply voltage (two AAA batteries), V ……...from 2,2 to 3,2
Power consumption, W, max ……..……0,06
Working frequency range, MHz ……..……..... 30-4500
Sensitivity (excluding frequency ranges 925..960 and 1805..1880 MHz), mV / m, min ……..50
Dynamic range, dB, min …..……48
Operating modes……. analog “bug” search mode, digital “bug” search mode, security mode
Detection range of a radio transmitter with the power of 5 mW, under a quiet radio background, m, min.....5
Operating environment:
- ambient temperature, ^{O}C ……..... from -10 to +40
- relative humidity at +25^{o}C, % (without condensated water) ……..... to 98
- atmospheric pressure ……..……..…84-106,7 kPa

2. Component parts

Picture 2 illustrates the Product’s internal design and the scheme of its main parts.



Pic. 2
Main parts scheme

The Product consists of an ABS plastic case (item 1) with pre-installed:
- electronic microprocessor-based module with receiving antenna (item 2);
- membrane keyboard (item 3);
- battery pack (item 5) situated in battery compartment with cover (item 6).

There are the following controls and indicators on the faceplate:
- 2 sensitivity adjustment button - item 7 and 8;
- mode selection button - item 9;
- ON/OFF button - item 10;
- sound mode indicator - item 12;
- battery discharge indicator - item 13;
- indicating scale of incoming signal level - item 14.

The Product is equipped with a headphone jack (item 15) on the end surface. Headphones are supplied.

3. Operation and description

3.1 The device runs under a built-in processor board's microcontroller with pre-installed software.

3.2 The keyboard (item 3) is used to:

- switch the Product on and off (by pressing and holding it pressed at least for 3 sec the button ). When you do, the Product starts self-diagnosing; while self-diagnosis it produces a sound and LEDs of indicating scale flash one at a time. After self-diagnosing the LED's  and  still flash that means the Product has been prepared for work:

- increase the level of sensitivity by pressing the  button repeatedly, and set the maximum level by

pressing the button  and holing it pressed (at least for 3 sec);

- decrease the level of sensitivity by pressing the  button repeatedly, and automatically adjust the sensitivity to the ambient electromagnetic field by pressing the button  and holing it pressed (at least for 3 sec).

3.3 To switch between modes press  in turn, notice that:

a) if the indicator  flashes permanently, the Product is in analog “bug” search mode (permanent signal);

b) if the indicator  flashes on and off rapidly, the Product is in digital “bug” search mode (impulse signal);

c) if the indicators  flash on for a short term and off next, the Product is in security mode (the Product indicates if a new signal source has been detected in the room). This mode provides optimal sensitivity and effective battery charge economy.

To switch the Product into the modes with additional sound indication press the button  and hold it pressed at least for 3 seconds, notice that:

a) if the indicator  flashes on and off, the Product is in the mode with signal level sound indication (frequency and periodicity of sound ‘beeps’ depend on the signal level);

б) if the indicator  flashes permanently, the Product is in ‘sound feedback’ mode (a RF bug can be detected within 0,5 meters field);

в) if the indicator  doesn’t flash, the sound indication is off.

If the Product is switched off, briefly press the  button, and the battery charge level will be displayed on the indicating scale for a short time:

- the whole indicating scale is displayed – the battery charge level is 100%;
- no LEDs lights– the battery is almost completely discharged;
- 1 LED - 10% of maximum battery charge level, 2 LEDs - 20% of maximum battery charge level, etc.

4. Operation procedure

4.1 To switch the Product on press the button  , and next and press the button  and keep it pressed for 3 seconds at least. After switching on the sensitivity of the Product will be adjusted to the ambient electromagnetic field automatically.

4.2 Begin to walk around a room, holding the device at the distance of 0,3 – 0,5 meters from the researched surface. If a maximum signal strength level is displayed on the indicating scale (all LEDS on the indicating scale are on), press the button  and keep it pressed for 3 seconds at least. Repeat these actions until the site, where the evident maximum level of emission is, is located.

4.3 Carefully inspect for the presence of wireless “bugs” the site, where the maximum emission strength has been found, the sensitivity level can be adjusted manually at that by pressing  (increasing) button and  (decreasing) button.

4.4 If in the analog (permanent) search mode all or a part of LEDs on the indicating scale flash on and off rapidly, switch the Product into digital (impulse) search mode.

4.5 If the local maximum of unknown emission has been detected, switch the Product into the ‘sound feedback’ mode; in this mode if you hear the indicative whizz, it means a RF bug operates close to you.

4.6 Switch the Product into ‘security’ mode when there are no unknown emissions in a room. After it for about 30 seconds the Product adjusts the sensitivity to background emission, and the indicator  flashes on and off rapidly. After this procedure the Product starts operating in the ‘security’ mode, and the indicators  sometimes flash for a little.

If some new source of signal appears, the Product will go to the permanent indication of emission level with sound alarm mode. When the alarm cause is removed, the Product will go back to ‘security mode’.

4.7 The device is powered by two AAA type batteries. How to install the batteries into the case you can see in the Picture 3 and on the battery compartment’s bottom (see polarity).

Pic. 3.
Batteries installation scheme

WARNING! Respect polarities. Otherwise the Product may fail.

When the battery is discharged to 2,5 V, the indicator  starts flashing on and off, and when the battery is discharged to 2 V (batteries are fully discharged) the indicator  switches off.

4.8 Practical recommendations on using the Product:

- Before starting the search, switch off all radio-emitting devices if possible (Wi-Fi, smartphones, tablets, computers and other household and office equipment). It simplifies the search by eliminating the excess noise, and makes it possible to use higher sensitivity while searching.

- The locations where eavesdropping devices and hidden cameras are usually placed are: cavities and chinks in plinths and walls, behind radiators, remote places on wardrobes and curtain-rods, cavities of suspended ceiling, ventilating shafts, furniture elements, household equipment, flowers, car dashboards and seats, etc.

- The device automatically adjusts the sensitivity level and starts displaying the actual value of signal strength on the indicating scale when you turn it on.

- If a RF bug is detected, the Product displays it on the indicating scale and alarms by sound. The closer detector to the RF bug is, the higher is the level on the indicating scale.

- While searching, search for analog and digital bugs (operate in two different modes).

- The device is switched to the "security" mode when there are no unknown emissions in a room and the implicit control of the situation is needed, for example during negotiations. When switched into "security" mode, the device assesses surrounding radio environment. If some new source of signal appears, for example a cell phone turns on to transmit the information or a "bug" activates, the device will alarm you about this.

- 'sound feedback' is used for searching for hidden RF bugs, working in the analog mode.

While searching in 'sound feedback' mode, a wireless bug receives the sound produced by detector and transmits it on the air; the signal detects by the Product next, that leads to acoustic amplification of the sound produced by the Product. As a result, the cycle is closed and you hear the indicative whizz.

The 'sound feedback' mode helps to detect the source of signal exactly, and at the same time it cuts the searching time.

5. Contents of delivery

The table below gives information on components of the product and the delivery set.

Table 1

№	Description	Quantity	Note
1	Digital bug detector «BugHunter™ Professional BH-02 Rapid»	1	
2	AAA type battery	2	
3	Headphones	1	
4	Shipping box	1	
5	User manual INTK.411153.009 RE	1	

6. Maintenance

The maintenance includes changing the batteries if it's out of service and keeping the surface clean by removing the dirt if needed.

7. Package and transportation

Every Product delivery set (see Table 1) is packaged in an individual corrugated fiberboard box. The moving of contents of the box is not allowed. The packaged products are put into cargo corrugated containers according to the GOST 22637.

Packaged products can be transported by train or by trucks in covered trucks or containers or by air transport in pressurized modules.

While transporting the packaged products should be protected from the direct impact of atmospheric condensation and insolation.

Terms of transportation:

- environment temperature from -50 to 50 °C;

- - relative humidity below 95 % at 25 °C;

- - atmospheric pressure from 84 to 107 kPa (from 630 to 800 millimeters of mercury)

- shock acceleration peak values below 147 m/s^2 (15 g) with duration 10-15 ms.

The requirements specified on the package warning labels must be strictly observed during loading and transportation.

8. Acceptance certificate

Digital bug detector BugHunter™ Professional BH-02 Rapid

Serial number_____

Date of manufacture_____

It is manufactured and accepted according to the valid technological documents and considered

exploitable.

QC stamp _____

9. Manufacturer's warranty

9.1 The products made by Russian manufacturer and developer of innovative electronic devices i4Technology™ is distinguished by high quality and long service life. Multiple tier system is implemented in the manufacturing plant.

The manufacturer uses only high quality and expensive element base made in Europe, USA and Japan.

9.2 Manufacturer warrants that the Product satisfies the requirements under observance of operation, storage and transportation regulations indicated on the exploitative documents.

9.3 The service life of the Product is not less than 5 years

9.4 Warranty period is 12 months from the date of sale.

9.5 The consumer may choose to return or repair the Product failed within the warranty period, at the expense of a vendor (manufacturer or a provider of complete services).

9.6 This warranty shall be void if

- warranty period is over;
- operation, storage and transportation regulations are violated;
- the product put into service failed due to mechanical defects;
- the seal is broken.

9.7 When the warranty period ends, the maintenance of the Product will be provided at the expense of a Consumer.

10. Certification details

10.1 The product meets the requirements of the Technical regulations of the Customs Union TRCU 020/2011 "Electromagnetic compatibility of technical means". Declaration of conformance EEU № RU Д-RU.МЛ.66.В.02237. Period of validity is up to and including 06.04.2022.

10.2 The requirements of the Technical regulations of the Customs Union TRCU 004/2011 "On safety of low voltage equipment" do not apply to the product (section 1, article 1 TRCU 004/2011).

OOO Aifo-Technology

Technical support: www.i4Technology.ru

Warranty card

Product name: digital bug detector BugHunter™ Professional BH-02 Rapid

Manufacturing number

_____

Manufacture date

_____

QC stamp

_____

Sale date

_____

Vendor’s stamp and signature

_____

The customer does not have any claims on quality of the product and the contents of delivery. The equipment is in good repair.

_____

(customer’s signature)