# The YEHUDA Sherlock Holmes 2.0 <u>User Manual</u>





Sherlock Holmes/ Yehuda

Version: ZY-SH130 Assure ID: 5169974

Tested: 02/2019





## About the Legend-Inventor of The Sherlock Holmes detector 2.0



Zvi Yehuda

Mr. Zvi Yehuda is a world renowned Scientist and Pioneer in the Diamond and Jewelry industry. His inventions have paved the way for generations to come. Here are just a few of his inventions to date:

- 1965—Laser Drilling of Diamonds. Some diamonds contain an internal black spot imperfection, and by using a laser he was able to drill into the black spot and clean it.
- 1977—The Yehuda Diamond Colorimeter, a device that examines rough diamonds and predicts their color after polishing. The Colorimeter diagnoses the entire normal scale of the D -K colors.
- 1982—Yehuda Clarity Enhancement- In the process he invented, a visible inclusion (called a feather) within the diamond is rendered invisible to the naked eye. He found a way to insert a microscopic amount of material that has the same optical properties as a diamond into the inclusion, using a high pressure and high temperature process.
- 2013-Present—The Sherlock Holmes Synthetic Diamond Detector a device which detects CVD and HPHT synthetic diamonds in matter of seconds.

## The YEHUDA Sherlock Holmes User Manual

The Yehuda detector detects **lab grown Diamonds** – loose diamonds, mounted in Jewelry, single stones, large parcels and any size Melee. It detects both CVD and HPHT lab grown diamonds.

This detector is designed to detect only white diamonds within **D- K colors**. Lower color diamonds and fancy color diamonds should not be tested.

Diamond simulants- CZ, Moissanite, diamond coated CZ and Moissanite can be detected fairly easily when they are tested loose.

As for other gem stones – we currently do not have enough information.

Diamonds can be tested loose, in a thin plastic bag, or mounted in jewelry. They cannot be tested if covered by a thick plastic or glass!!

Please visit our website www.yehuda.com. You can find a helpful video on how to use the detector and our most updated manual. We highly recommend checking our site for the latest manual.

## **Overview:**

The detector uses a built-in cellular phone.

The only use of this phone is to work with the detector. Please do not try to use this phone for any other use.

At any time, if the phone freezes – please re-start the phone.

Restarting the phone is done by pressing the ON/OFF button (left side of the detector) for a few seconds until the RESTART icon appears. If this action does not work, then press the ON/OFF button (left side of the detector) and the Volume button (right side of the detector) simultaneously for 10 seconds.

## **Warranty:**

The detector has a 1 year full warranty under normal use. Using or trying to use the phone for any other purpose will result in a loss of the warranty and the detector will not be covered for any repairs.

Opening or tampering with any of the screws or trying to open the detector body will also result in a loss in warranty and refusal to fix the detector.

It does not cover water damages, being hit, dropped or any other improper care.

The detector has protective stickers. Any attempt to open or tamper with the machine will result in an automatic loss of warranty.

#### Parts:

Inside the box you will find the following:

The Sherlock Holmes Detector.

An international charger.

2 trays.

Plastic ring holder.

Black finger ring holders.

One black square

1 lab grown diamond in a bag.

## **Operation:**

The charger can work in any voltage environment (100V-240V) but you need to connect the correct nozzle. The charger must be connected when working with the detector.

Insert the electric charger to the wall and screw it in the back of the detector. Press the ON/OFF button at the **back** of the detector.

The green LEDs at the back and front of the detector should light up to indicate that the detector is ON.

Please make sure you can see the green lights are on at the back and in the front of the detector. At the end of the day, please shut off the phone by holding the left button briefly and selecting the shutdown option on the screen.

Please pay attention that the battery of the phone is being charged **ONLY** when the detector is ON and the green LEDs are on. If the detector is OFF and the phone is ON, the battery will not be charged. At the end of the day please make sure to shut off **both** the phone and the detector.

Press the cell phone ON/OFF button on the left side of the phone. When the phone starts up — it will show an upside-down home screen. Please swipe the screen, in the center of the phone (from left to right), and the screen will flip.

If you see a red circle on the top left of the screen- please take the charger out of the wall electric outlet, wait 10 seconds and put back into the outlet.

If at any time you get a system message with "Diamond tester" on topplease check the circle on the left of the message and click "OK".

On the home screen you will only see 3 icons:

- 1. History
- 2. Test
- 3. Settings. (Please do not try using the settings. It is password protected and for our technician use only.)

For your confidence you can check the lab grown diamond sample that you have received in the clear bag. Insert the bag into the drawer. Press the EYE icon to test.

Insert the bag with the sample lab grown diamond into the drawer and shut it.

Press the LOOSE DIAMOND icon to perform a test.

The sample diamond should be marked in red at the end of the test.

This test shows that the detector has identified your lab grown diamond and is working correctly.

It is recommended to check the sample diamond every day.

You can use our sample diamond or any other sample that you have, so long as you know for a fact that it is an actual Lab grown diamond. After the test, you can save the result or press the back arrow to perform another test. If you are not going to perform another test – press the HOME icon.

#### ALWAYS MAKE SURE THAT THE DRAWER IS SHUT PROPERLY!

If the drawer is not fully shut you will get a yellow warning triangle symbol on the top right and a message:

"Warning! Please close the drawer! Ok"

Press the OK and shut the drawer. The yellow triangle symbol may remain until you press "Test". If the drawer is shut, the next time you press the "Test" button it will disappear. If the drawer is not fully shut, you will get the message again.

If you open the drawer during the test you may see a white light. This is the flash light of the cell phone.

Please do not be alarmed. The detector will not emit the testing lights if the drawer is not fully closed.

## **Connecting to WIFI.**

- 1. On the main screen -swipe with your finger from the top of the screen down.
- 2. Press on the top left sign of the WIFI.
- 3. You will get a list of one or more available WIFI networks- pick your network and enter the password.

## Preparations for sending emails.

1. First you have to decide which email account you would like to use.

Bear in mind that we recommend CREATING A NEW EMAIL/GMAIL ACCOUNT for the detector.

If you use your personal email/Gmail account all of your mail will be downloaded to the detector and we highly recommend NOT TO DO SO.

Please CREATE A NEW Gmail or email account that will be used for this purpose.

You may call it Sherlock Holmes and the detector se

rial number as appears at the back of the detector.

- 2. Make sure you have saved at least one test. (If you did not- make a test and press the "save" icon at the end of the test)
- 3. Go to History.
- 4. Press the "I" Icon.
- 5. Press the send icon in the bottom right.
- 6. Choose the Gmail or Email icon per your email account that you have prepared.
- 7. Follow the instruction of adding your email address and password.
- 8. If at any time the phone is asking permission to update the Gmail/email account allow it to do so. (Please remember that sometimes GMAIL or other email accounts may ask you on your computer or other phone for permission.
- 9. If you set up Gmail- at the end of the setting you will be asked to go to Gmail -enter the recipient email and send it. (It is recommended to allow Gmail to access your contact list so whenever you start typing an account name – Gmail will automatically load it.)
- 10.At any time if you get stuck just restart the phone by long press on the left-hand button.
- 11.All pictures will be emailed with your serial number.

## **Setting Bluetooth connection.**

- 1. Please pay attention that in most cases iPhones do not connect with Android phones via Bluetooth. For this reason, you may only pair with Android phones.
- 2. You may also export your picture to another phone via Bluetooth.
- 3. In the phone that you would like to transfer the results to open the setting of the Bluetooth connection and scan for nearby devices.
- 4. Swipe the screen from the top down
- 5. Press the setting wheel.
- 6. Go to connections/ Bluetooth.
- 7. Scan and find your phone.
- 8. Pair the devices in the same way as you pair any 2 phones.
- 9. Restart the phone.
- 10. Now your Sherlock is ready to export via Bluetooth.

#### **G-drive setting**.

If you have set a Gmail account you have automatically created a G-drive account by the same name and the same password.

### **Export the results.**

- Go to History and choose the test results that you wish to export.
   (Pressing the arrows in the bottom of the picture or sliding the slider at the top of the screen
- 2. Press the "I" icon
- 3. Press the export icon.
- 4. Choose the (already set) Gmail/email/Bluetooth icon/G-drive
- 5. By default, the detector will export the result picture. If you wish to also export the original picture and/or the colored and/or the glowing picture—you have to mark the circle next to any/all them and they will be exported as well.
- 6. Enter the recipient email address or the Bluetooth paired device and send it.
- 7. At any time if you get stuck reset the phone by pressing the left button for a few seconds.

Now you can start performing tests with the detector.

You can test mounted diamond jewelry, loose diamonds or loose diamonds in a plastic bag.

## DO NOT TEST DIAMONDS IN A PLASTIC BOX (THE BLUE BOX) OR COVERED WITH A THICK PLASTIC OR GLASS. If you test diamonds in a plastic bag- make sure it is thin and clean.

The best way to test loose diamonds is uncovered in a tray or on the glass base.

In any event – the detector detects only diamonds that it can SEE from the top. If a diamond is covered by another diamond - it will not be seen. The same goes for jewelry - only diamonds facing the top camera will be seen.

If you test a ring or any other jewelry make sure to test it a few times from all angles and lying flat on the bottom.

Insert the diamond/s or the jewelry piece into the center of the drawer above the glass square. You can tap on the screen before starting the test in order to use the autofocus mode.

You can use manual focus by sliding the slider on the bottom of the screen. When the slider is located around the middle - the focus is on the bottom of the tray. (Testing loose diamonds)

When the slider is all the way to the right - the focus is on the top of the drawer. (Testing rings)

You can use the autofocus by taping on the screen or the manual focus by using the slider.

The detector will remember the focus for your next test.

If you do not tap the screen or move the slider- the focus height will remain the same for the next test.

When using the autofocus mode the test may take a few seconds longer than when using the manual focus.

The reason is that with the autofocus mode the camera needs to find the focus. When using the manual mode, the camera already knows where the focus is.

When inserting jewelry into the drawer you need to press the RING icon in order to perform the test.

When inserting **loose diamonds** into the drawer – you also need to press the **RING** icon as well in order to perform the test. If the resulting image shows too much red and you cannot distinguish between the diamonds – redo the test by pressing the LOOSE DIAMOND icon

When you test with the RING icon, the detector is set to be more sensitive.

This is the reason that you may see small red dots around the jewelry. Please ignore them.

When you get the result of either mode (loose or jewelry) you can see a picture of the tested diamonds/jewelry.

## **Checking jewelry**

It is recommended to check rings using any of the ring holders and lying on the glass table.

Make sure to test the jewelry from all sides.

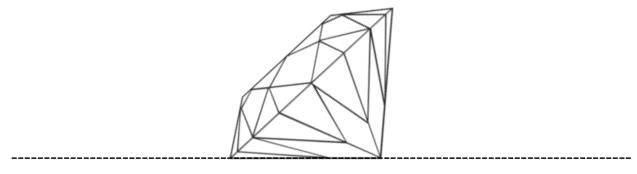
When using a ring holder, you may cover the bottom lamp with the black square. In this case the result pictures will be more vivid.

You can use it or not use it as per your preference.

## Please pay attention:

The diamonds in the pictures you are about to see in the next 3 pages, are positioned with the table facing down. This is done for the photographic purposes.

We recommend, when testing loose diamonds, to position them on the pavilion side shown in the example picture below.



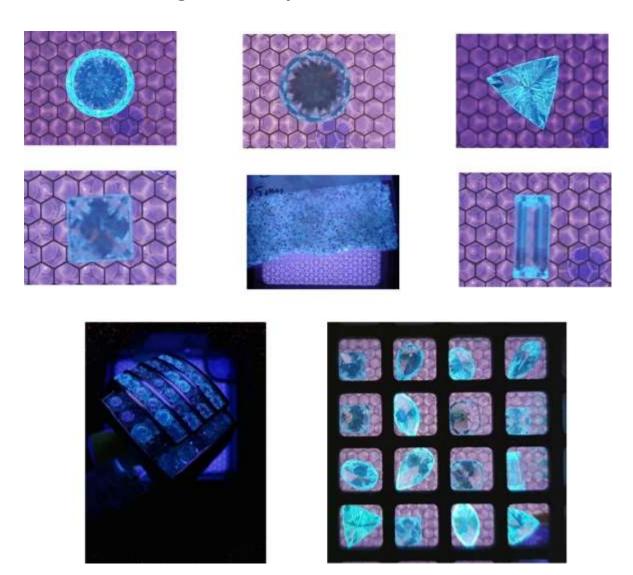
An example of a diamond lying on the pavilion

In order to know if a diamond is natural or lab grown please follow these rules:

## **Natural diamonds results:**

Any diamond that shines <u>ONLY</u> blue or light blue colors without any red marking <u>means it's a natural</u> <u>diamond!</u> (Any shade of blue)

## All the following are examples of NATURAL DIAMONDS



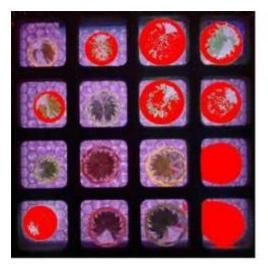
If the diamond shows any other color or red marking – it is a lab grown diamond. It is either CVD or HPHT grown.

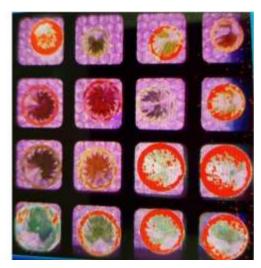
## There are a few different results that you may see from the detector – all of the below results indicate that the diamond is a Lab Grown Diamond

- 1. If the diamond is fully marked in RED. Results are (CVD OR HPHT)
- 2. If the diamond shines in any color (INCLUDING blue) AND is partially marked in RED. Results are (CVD)
- 3. If the diamond shines in any color except blue. It can be YELLOW, GREEN, RED, ORANGE, PURPLE results are (CVD)

Pay attention: If the diamond shines in blue **AND** there is a red marking - the results is CVD.

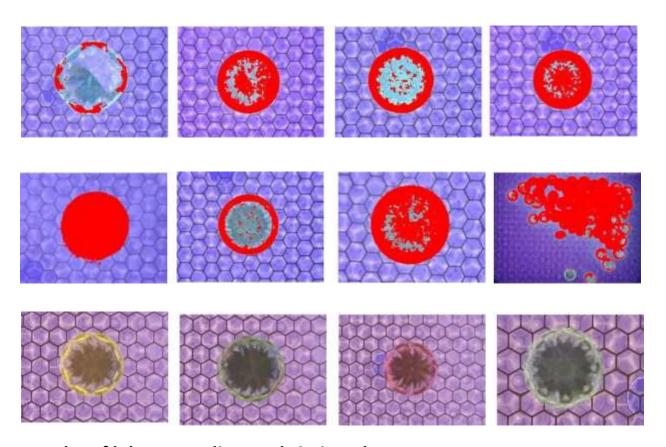
## **Examples of results of lab grown diamonds**





They are either marked in red or shine in a NON BLUE color.

## **More Examples of results of lab grown diamonds**



## Results of lab grown diamonds in jewelry:

The center stone and the red marked stones are lab grown diamonds. The blue stones are Natural diamonds.







## **Reading the results**

With most diamonds the results are very clear.

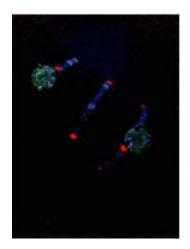
If the stone is marked in red- the diamond is a lab grown diamond.

If the diamond is not marked in red – you need to make a decision.

## Is it BLUE or NOT BLUE?

## If the color is BLUE then the diamond is a natural diamond.

In rare cases if it is hard for you to determine the color and you can't make a decision – please refer the stone to a gemological institute for further testing.



Is it BLUE or NOT BLUE?



Is it BLUE or NOT BLUE?



Is it BLUE or NOT BLUE?

- -The two center stones are green (CVD)—NOT BLUE.
- -There are a total 6 red stones (HPHT or CVD)— NOT BLUE.
- -Every other stone in all 3 rings above are blue (NATURAL)—BLUE.
- -The center stone is green (CVD) —NOT BLUE. -Every side stone in the ring is blue (NATURAL) BLUE.
- \*\*\*If a stone looks very bright blue or very dark blue, DO NOT confuse them with other colors such as white or purple because they are all different shades of BLUE.
- -The top wedding band has a total of 15 red stones (HPHT or CVD)— NOT BLUE.
- -The bottom wedding band has a total of 7 mixed green stones (CVD)—NOT BLUE.

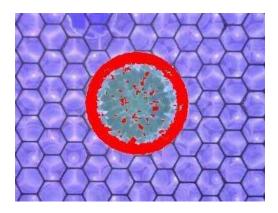
#### **Detection errors:**

To-date, 99.9% of all known lab grown diamonds that we have checked were detected by the Sherlock Homes as lab grown diamonds.

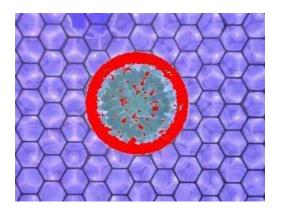
### **False positive situations:**

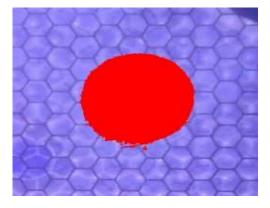
A minute amount of natural diamonds will be marked by the detector as lab grown diamonds even though they are natural diamonds.

This rare mistake of the detector will usually happen with type 2B diamonds. Type 2B diamonds usually carry a blue or gray tint. These diamonds will show blue fluorescence with partial red marking.



There are also some very rare type 2A natural diamonds that are D or E color and show partial or full red marking.





Therefore - most type 2A natural diamonds will be detected as natural diamonds, (without red marking) but a few percent of them will result as false positive lab grown diamonds.

If the diamond shows blue color and partial red and it is a D or E color- we recommend to refer to a laboratory for further inspection.

There are also other natural diamonds that may show irregular results. (Blue fluorescence and partial red marking or fully marked red color). They are very rare.

We did not encounter natural diamonds with a NON BLUE fluorescence and red marking. This means that if the diamond shows a NON blue fluorescence and shows red marking, it is a CVD lab grown diamond as per our testing.

We have encountered a natural diamond that showed a green color similar to CVD results.

Therefore, we recommend that in case you get a green color result you should check this diamond under a regular UV lamp.

If it shows fluorescence- it is a natural diamond. If there is no fluorescence, we recommend to send this diamond for further testing.

### <u>Detecting CZ (Cubic Zirconium) and Moissanite – in loose stones.</u>

The Sherlock Holmes can be very helpful in detecting CZ, Moissanite and diamond coated CZ and Moissanite in loose stones only!

The diamond coated CZ and Moissanite show the exact same results as the regular non-coated CZ and Moissanite. From now on when we refer to CZ and Mossanite- we refer to both coated and non-coated CZ and Moissanite.

Please carefully view the pictures in order to understand how to distinguish between Diamonds (Grown and Natural) and these simulants:

In general, both CZ and Moissanite DO NOT SHOW FLUORESCENCE under our lighting.

It is highly recommended to check loose stones with and without the bottom lamp covered with the black square supplied with the detector.

IN ORDER TO MAKE THE FINAL DECISION YOU MUST COVER THE BOTTOM LAMP.

When you see a stone that does not show fluorescence you can draw the conclusion that it is a SIMULANT AND NOT A DIAMOND.

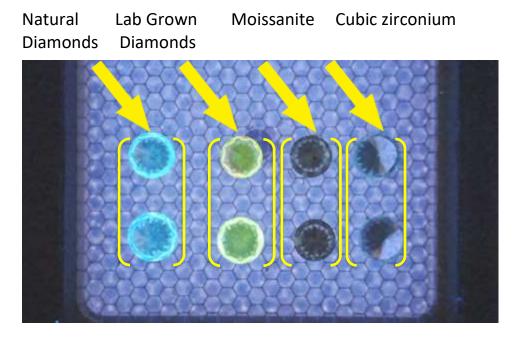
In the history of your detector we stored one picture with 6 stones with the bottom lamp covered.

The top 2 stones are diamonds and the 4 stones under them are CZ and Moissanite. Please go to the history and make sure you understand the results.

The following pictures are not stored in your history and are just an example for your reference. You can see the difference between diamonds (natural and lab grown) and the CZ and Moissanite simulants with and without the bottom lamp covered.

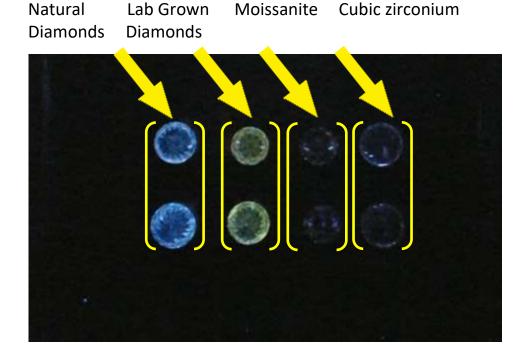
The 4 stones on the right-hand side are suspicious to be simulants as they hardly show any color with the bottom lamp NOT covered.

In this case – please cover the bottom lamp with the black cover and recheck.



Now in the bottom picture with the lamp covered you can see that these 4 stones are not fluorescent and thus they are simulants.

The 2 on the right are CZ and the 2 next to them are Moissanites.



#### Please pay special attention

Recently there has been a new product on the market.

This product is a diamond coated CZ that is used as a color master. The cost for a set is quite expensive compared with regular CZ's and regular diamond coated CZ, therefore it is not very common on the market. The reason is that the thickness of the diamond coat layer is thicker than usual.

Loose CZ and regular diamond coated CZ are easily detected by the Sherlock Holmes.

The new thicker layer of lab diamond coated CZ will also be detected by the Sherlock Holmes but you must pay special attention.

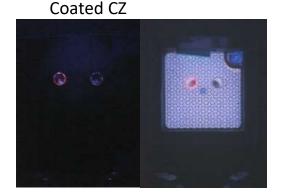
## Please note that in order to be sure

## EVERY LOOSE DIAMOND MUST BE ALSO CHECKED WITH THE BOTTOM LAMP COVERED!!!!!

Please see the pictures below to understand how to identify the coated CZ.

Coated CZ

Diamonds





In the pictures above, the 2 left hand pictures are coated CZ and the 2 pictures on the right, are of a CVD (left) and a natural diamond (right).

When the bottom lamp is covered the diamonds (both CVD and natural) show strong fluorescence, where the coated CZ shows a very light color, almost inert. This is the way to distinguish between diamonds and CZ coated with a diamond layer.

Please make sure to position every stone on its table.

As you can see, when the bottom lamp is not covered, the result looks a bit like a diamond result. But when the bottom lamp is covered, you can easily see that the stones do not shine as diamonds (natural or CVD).

## **General note:**

A useful tool when in doubt is the regular long UV fluorescent test.

Lab grown diamonds do not show, in general, a reaction to exposure of a regular jeweler's UV light.

So in case of a doubt- if a stone shows fluorescence under your regular UV light- it is most likely a natural diamond.

## Modes

At the end of the test you will get the result. On the top of the screen you see 4 headers.

RESULT, ORIGINAL PICTURE, GLOWING PICTURE, COLORED PICTURE.

You can see the press EACH header of the results screen.

"Result"- At the end of the test you will see the results of the test. If you have pressed any other header - press the "result" again to go back to see the result of the test.

It combines the final test results. There is no need to go to the other tabs but for your convenience – you can see them.

"Original picture" - Press "ORIGINAL PICTURE" to see the original picture without any markings.

"Glowing picture" - Press "GLOWING PICTURE" to see the diamonds glow in the dark. The diamonds that glow in the dark are Lab Grown diamonds that are marked in red with our software.

Sometimes it is easy to see them when they glow in the dark.

"Colored picture"- Press "COLORED PICTURE" to see the diamonds shine. You can go back and forth between the 4 positions.

At the end of the test you can go back by pressing the ARROW or save the results by pressing the MEMORY CARD icon.

If you are done testing-press the HOME button to go back to the main screen. You may press the HISTORY icon to see the saved results.

To see the saved results, press the HISTORY icon in the main home screen. The pictures are stored in the order they were taken.

Use the arrows to go back and forth between the saved pictures, or slide the top bar with your finger.

You can tap twice on the main picture and enlarge it.

Press the "i" icon and you will get a split screen.

Now you can see all different modes.

You can tap twice on the big picture and enlarge the results. Sliding your finger on the screen enables you to move the picture. If the memory is full or whenever you wish, you can delete a picture by pressing DELETE. Please make sure to delete older pictures as the memory card is limited.

## **Notice:**

The Sherlock Holmes detector provides a convenient and quick method of detecting synthetic diamonds. Sherlock Holmes has an accuracy rate of approximately 99%. It is not a substitute for gemological laboratory analysis. Inaccurate results may be caused by new technologies by which synthetic diamonds are created, or irregular features in either natural or synthetic diamonds, or other errors. Sherlock Holmes results should be treated as informational only.

The Sherlock Holmes results are provided "as is", with no guarantee of completeness or accuracy. Sherlock Holmes is provided without warranty of any kind, express or implied, including, but not limited to warranties of performance, merchantability and fitness for a particular purpose. In no event will the Company, its related entities, or their respective stockholders, officers, directors, agents or employees be liable to you or anyone else for any decision made or action taken in reliance on the information provided by Sherlock Holmes, or for any consequential, special or similar damages, even if advised of the possibility of such damages.

## **Troubleshooting:**

Most of the problems arise from the phone itself.

- 1. **For any problem** First make sure that the electric cord is fully inserted and screwed into the back of the detector, and the **green light** LED in the back of the machine is ON.
- 2. You see a red circle on the top left of the home screen Make sure the green light is on at the back of the detector. If you see a green light at the back of the detector- shut it off and then turns it on again with the knob next to the green light.
- 3. The screen goes black press lightly on
- 4. the ON/OFF button of the phone and swipe the screen. (On the left side of the detector)
- 5. The time appears on the screen with "how is the weather" swipe the screen from bottom to top.
- 6. **The phone freezes** press the ON/OFF button (left side) and hold for 10 Seconds to restart the phone.
- 6. The phone freezes and pressing the ON/OFF button does not help-Press the ON/OFF button and the VOLUME button on the other side at simultaneously for 10 seconds. The phone will restart.
- 7. The detector keeps showing the "close the drawer" message make sure the drawer is fully shut.
- 8. **The detector is frozen** Press the home button and make sure that the green light is ON. You may need to turn it off and ON with the knob next to the green light.

For further information, please log-on to: www.yehuda.com

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