

Dear Customer; Thank you for choosing GROUNDTECH products.. It is recommended that you read this user manual carefully to understand how the products work and then try to gain experience. This is a scientific and electronic device and all instructions in the user manual must be followed.

We wish you success in your work.

ATTENTION ! MUST READ BEFORE USING THE PRODUCTS.

The information in this user manual is subject to change without notice.

Reproduction, distribution and copying of this user guide unauthorized by the Groundtech Detectors is strictly prohibited.

General Information

GROUNDTECH products should be used with caution as one do with electronic devices. Search coils and main unit should be used with caution; they should be protected against impacts and hard objects and refrained from applying excessive force.

Injury

GROUNDTECH products do not cause injury or health problems when used normally. GROUNDTECH products usually do not pose a threat to the human body. It should be kept away from children as one would do with electronic devices. Be careful to take all precautions against any kind of risk.

Before starting to search, make sure that the main unit battery is fully charged. Inadequate battery level may cause you to be in the wrong.

Repair

Any repairs resulting from technical malfunctions for a period of two (2) years from the date you purchased the product are free. Contact your dealer for product service or inquiries. The unit is inspected by a qualified technician and repaired if necessary. After two years, all repairs are charged.

If you damage the product or open the main unit, the warranty will lose its validity.

1 - CONTROLLING COMPONENTS

Automatic, manual and live search buttons are available for general controls on the product main body.



You can use the Auto, manual, live buttons to select the search mode.

On/Off – It allows you to switch the device on and off.

Auto – Allows you to start automatic search.

Man. - Allows you to start a manual search.

Live – It allows you to make 2D graphical live data transfer.

Also there is a Start button which is used during manual search. You can charge the device using the micro usb charging cable.



Attention! The main body is charged with 5V. Do not charge with voltage over 5 volts. Use only the charging adapter supplied with the product.

The Led lamp, located on the top of the product main body, works in three different colors. The LED lamp gives different colors when the product is on, charging and when the charge of the device is low.

Green - Product is on and ready to use.

Blue - The product is in standby mode and will automatically shut down within a few seconds.

Red – Indicates that the product battery is low. When it is red, please charge the product. While the product is charging, the LED lamp will flash blue. When fully charged, the blue lamp will light steadily.

2- ASSEMBLY

Your product will be delivered ready for use. There is a built-in Li-ion battery in the product. Charge your product before you start using it.



You can adjust the telescopic body part of the product according to the desired height.

You can use the rings on the telescopic body to adjust the length of the product. **ATTENTION! Do not open the adjustment rings until the end.** If you open the adjustment rings until the end, it separates main body. After adjusting the length of the product, tighten the adjustment rings again. You can review the usage video in the tablet supplied with the product.

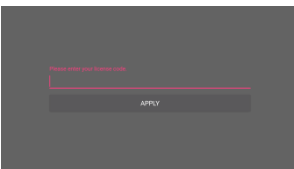
You can start using the product with the ON / OFF button on the device.

3- APPLICATION DOWNLOAD, INSTALLATION AND ACTIVATION

Download 3D Ground Monitoring, the Android app for the product, from the Google play store. The tablet supplied with the product is pre-installed and ready to use. Open the app you downloaded from Play Store and installed on your Mobile device.

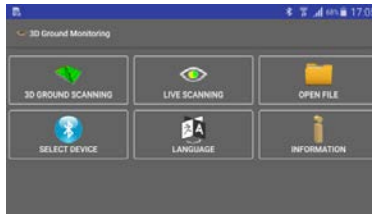


Once you have installed the application, the application will ask you for the license code.



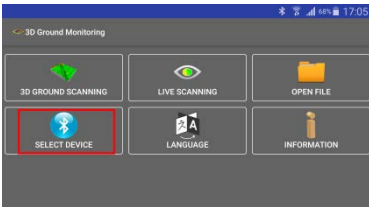
For the activation code, you can contact info@groundtechdetectors.com by e-mail or call +90 216 371 1010. You need to provide the serial number of the product for activation.

Your application will become active when you enter the activation code. You can start searching according to the information below.

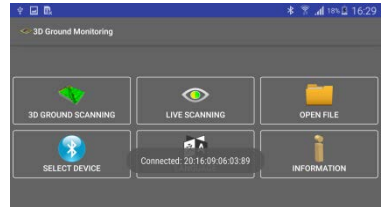


4- OPERATION MODES

First, you must establish a wireless connection between the device and the mobile device. On the application main screen, select the device selection section. Select the EVO device from the screen that appears. If a connection password is required during wireless connection, enter 1234. After connection is established, you will see "connected" on



EVO
20:16:09:06:03:89



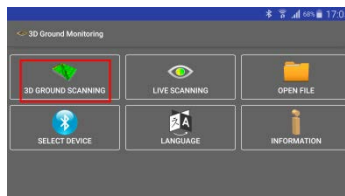
the main screen.

SEARCH

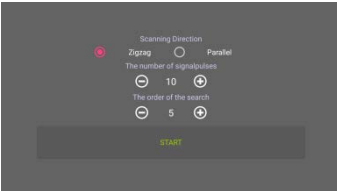
After connecting, you can select and use the appropriate search mode.

4.1 – 3D GROUND SEARCH

3D Ground Search allows you to scan a specific area and create 3D graphics. Select 3D Ground Search mode from your application.



Enter the measurement number (Signal pulse number) that you will cover forwards and the measurement sequence number (order of search) that you will cover towards left according to the size of your search area. Select your scanning direction as zig-zag or parallel.



Once you have made your selection, select the START button. You will access to search screen.

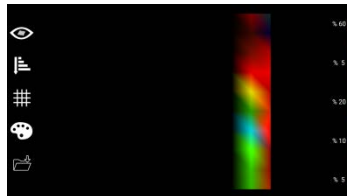


The search screen will be ready for you.

The 3D Ground Search screen is ready for data transfer. You can select the appropriate device search mode and start data transfer.

4.1.1 – Automatic search

When you press the Auto button on the main body, the blue LED on the button will be activated and the data transfer will start automatically. You do not need to press any buttons.



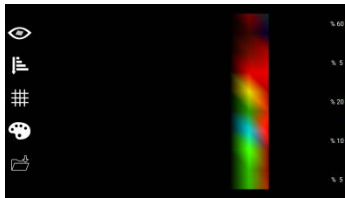
When the number of signal pulses you have input is complete for the first row (e.g. 10 signal pulses), start the second row search by sliding to the left. In this way, the number of signal pulses you enter is valid for each sequence. When the number of pulses for each row is completed, move to the left to pass to another row.

Once the total search sequence you have entered is completed, the 3D graphic will be reflected on the screen. You will be asked if you want to save the graph you received when the search is finished. If you select yes, you can save your work by typing a name.



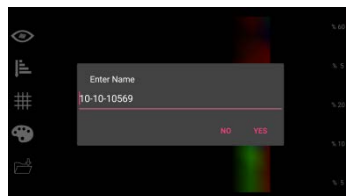
4.1.2 – Manual search

When you press the Man. button on the main body, the data transfer will be ready. When the blue LED on the button is active, you can start data transfer. To perform manual data transmission, you must press the START button on the front during each signal. You must do this for each signal.



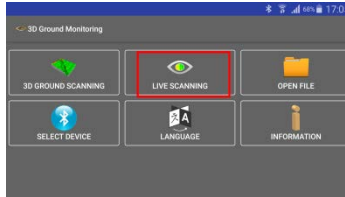
When the number of signal pulses you have input is complete for the first row (e.g. 10 signal pulses), start the second row search by sliding to the left. In this way, the number of signal pulses you enter is valid for each sequence. When the number of pulses for each row is completed, move to the left to pass to another row.

Once the total search sequence you have entered is completed, the 3D graphic will be reflected on the screen. You will be asked if you want to save the graph you received when the search is finished. If you select yes, you can save your work by typing a name.

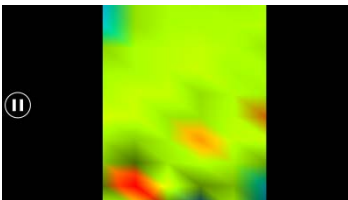


4.2 – LIVE SEARCH

Live search provides simultaneous data transfer in 2D. You can see underground metals, gaps, and structures faster. To use live search mode, select Live Search mode on the application.



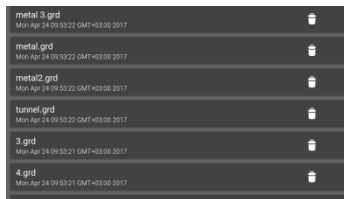
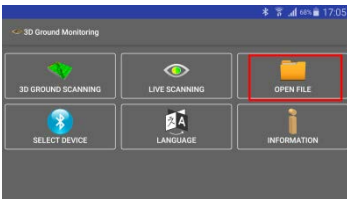
When you press the Live button on the main body, data transfer will begin. When the blue LED on the button is active, you can start data transfer. You cannot record the data that you received in live search. Data will be transferred in 2 dimensions.



In live search; you can see all the metals in red color, the gaps in blue color, and the earth in green color. You can see mineral soils in yellow and orange.

4.3 – OPENING A SAVED FILE






You can save the data you received on your mobile device and then open it again. To reopen the saved data, select the Open file button in the main menu.



The stored data will appear in a list. Select the data you want to review.

5- DATA GRAPHICS ANALYSIS

The functions of the bars and buttons on the right and left side of the search screen of the 3D Ground Monitoring application are listed below. In this section, the meanings and analysis of the received data in the graphic will be explained. You should take lots of measurements and practice with your product. The more you practice, the more accurate measurements you can get.

	<p>The Acceptance Chart provides you with a look at the different angles. You can make selections like right top, left top and bird's-eye view.</p>
	<p>It allows you to measure the depth of the measurement. You should choose the soil type to get the measurement. The depth information gives the average measurement depth. Depth numbers are not exact results.</p>
	<p>It allows you to view numerical data values of the measurements. You can examine graphically and numerically.</p>
	<p>It allows you to review the graphic in different options of color. You can examine with different color tones.</p>
	<p>It helps you to save your measurements. During recording, you can record your work by typing a name.</p>

The bar on the right side gives you information about the soil structure.

Red color ratio; gives the ratio of metallic structures with high magnetic field.

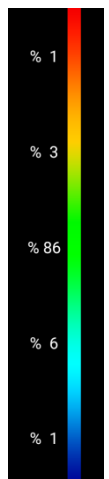
Yellow-Orange color ratio; gives the ratio of mineral soil structure.

Green color ratio; gives the ratio of soil in normal structure.

Light blue; gives the proportion of soil that is dug-filled or has loose structure.

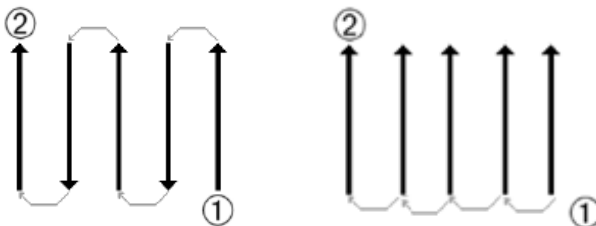
Blue; gives ratio of data such as gap and water.

The ratios in this bar can vary according to the soil structure, depending on the objects with magnetic effect in the environment. These figures provide you with an idea of your soil structure.



Before the measurement begins, you should have information about what you are looking for (gap, water, or metal) and the area you are scanning over. Errors that you will make in the measurements will cause you to get different graphics. Please read carefully the following articles to avoid making mistakes and get accurate data in your measurements;

- You should have information about the area being searched. You should take into account the history of the area being searched, such as the structure of the soil.
- If there is any energy line in the area being searched, this will cause you to be in the wrong regarding the data. You should search at least 50 meters away from the elements that will affect your searches, such as power lines.
- When an unknown area is being searched, it is usually necessary to make a wide measurement. For example; search must be conducted in 20 signals and 20 rows.
- If you are looking for a large object (grave, room and large objects); you can increase the signal pulse spacing (such as 50 cm between each signal). If you are looking for small objects, you should keep the signal pulse intervals more frequently (such as 20 cm, 30 cm).
- Performing your measurements in the northern and southern axis provides you with healthier data. You should pay attention to this situation whenever possible.
- That a buried object has stayed underground for a long time means that it creates a bigger magnetic field and can be detected more easily.
- You should check by doing the same search at least twice. The extra measurements you make will help you to eliminate minerals and correct mistakes, if any.
- In measurements taken, the object or gap data should be in the middle of the graph. If the gap data is at the edges in the graphic, you should measure it again by centering this data.
- During the search, you should check the battery and charge status of your product. You should search with a fully charged product. A low battery level is one of the factors that affect your measurements.
- As you can see in the graphic below, you have to start from the beginning (1) and finish at the end (2). You can make your searches zigzag or parallel. If you have finished a searching line, the next one should be on its left. The device must not be rotated. The north direction is recommended.

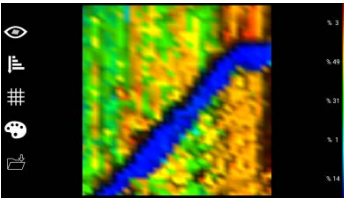


The more you repeat your scan on a prospective object (control scan), the better you decide whether or not it is a real object. Heat, other radio transmitters, solar energy, earth minerals, loose soil, salt, water ... etc. can adversely affect measurement results. The sensor should be held upright and not shaken. The height should be 8 to 9 cm above the ground.

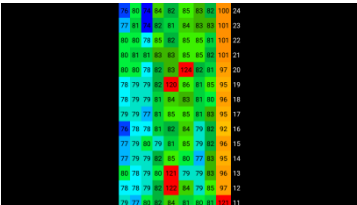
The Meanings of Colors on the Graph when Standard Color is Used;

- Red; Metal**
- Blue; Gap**
- Green; Soil**
- Orange and Yellow; Mineral.**

This information changes in different color options. At first glance it can be difficult to distinguish between metal and mineral. In some measurements, you can also get minerals in reddish color. Rotate the graph with your finger to see it from different angles. So as to enlarge the graph; use two fingers to enlarge the graph.



Touch the data button in the left hand bar to numerically examine the data received.

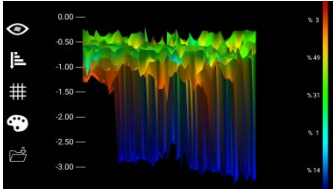


On this screen, you can see the numeric ratios of the received data. At least 10-15 figures should increase between soil data and metal data. At least 10-15 figures should be decreased in the gap data. These values vary according to each soil structure.



Touch the Depth button on the left hand bar to view the depth information of the received data.

Select the appropriate option for the soil structure from the opened page. If you do not know the soil structure, take a depth measurement at different options.



On this page you will see the depth values. These values give the estimated depth of the search signals.

You can view the data in more detail in the Windows version of the 3D Ground Monitoring program. For this, contact the manufacturer and obtain the Windows program.

To transfer the data on the mobile device to Windows, first connect your mobile device to the PC via USB cable. Open the GroundMonitoring folder in the Downloads folder on your mobile device's home directory. The data you have saved is stored in this folder. You can copy the data to your pc and open it in Windows program.

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