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# GEOGROUND MEASURING

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#### 2. Introduction

Based on "changing the concept of technology in the world" principle, it was imperative to work hard and develop years of expertise and experiences in the field of metal detectors.

The main objective was to develop a product that meets the highest quality standards so this product has to be the top in detectors technology to stop years of faults in this field.

Cobra products were developed by Geo Ground, the leading German company in geophysical measurement and underground detection technologies with a clear goal of accessing this technology to all prospectors, by developing easy-to-use technologies at an affordable price for all prospectors and those looking to reach their golden dreams.

#### Introduction about COBRA GX 8000

COBRA GX 8000 is the most integrated device for detecting gold and metals. It is used for detecting metals, hunting treasures and excavation of archaeological treasures.

This device meets the professional prospectors' needs who search for treasures and the professional prospectors all over the world.

COBRA GX 8000 includes for the first time in one device for detecting metals, six search systems accompanied with various detecting technologies which offer all the tools and functions needed by professional prospectors and beginners for different applications and tasks related to search activities for treasures and metals detection.

COBRA GX 8000 is a cutting-edge German technology manufactured by Geoground a German based company located in Hamburg - Germany. This technology is known for detecting metals and gold prospecting all over the world.

This is achieved by the virtue of its high performance, the accurate results and trusted equipment which propose the best solutions.

This is to unleash your passion for the discovery of the treasures by using COBRA GX 8000, which is the best and most reliable device for detecting the deepest buried treasures easily.



# 3. Warnings

COBRA GX 8000 is an is a state-of-the-art electronic device. Don't assemble or operate the device before you read the user's manual and don't store the device and its components under extreme low or high temperatures for long periods.

- The suitable temperature for storage is from 20 to 60 Celsius (about 4 to 140 Fahrenheit degrees)
- Don't immerse the device or its attached parts in water. Don't expose the equipment to extremely humid environments.
- Protect the main unit of the device from the impacts during the normal use .
- For shipping, put the detector carefully and safely in the original carton inside shock-resistant packaging.
- It isn't allowed to disassemble or repair COBRA GX 8000 except by Geoground company or their authorized service centers.
- Unauthorized disassembly/ intrusion into the internal components of the main device unit or other units for any reason, will cancel the warranty.

#### **Notice**

Do not use the device indoors. The device may constantly give target signals indoors where there are many metals present.

- Use the device outdoors and open fields.
- -Do not leave another detector or electromagnetic device close to the device within a distance of less than 10 meters 30 feet-
- -Do not carry any metallic objects while using the device. Keep the device away off your shoes while walking. The device may detect the metals attached to you or to your shoes as targets.

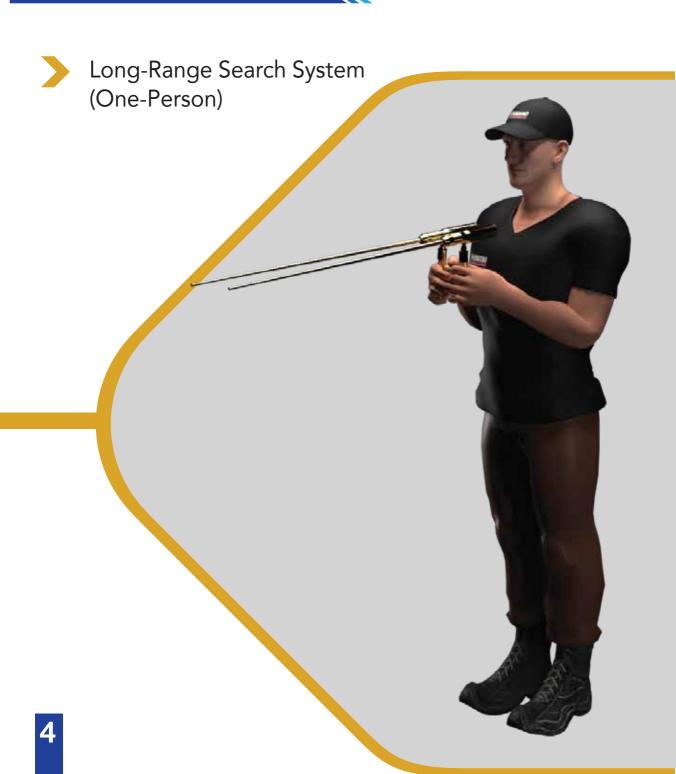




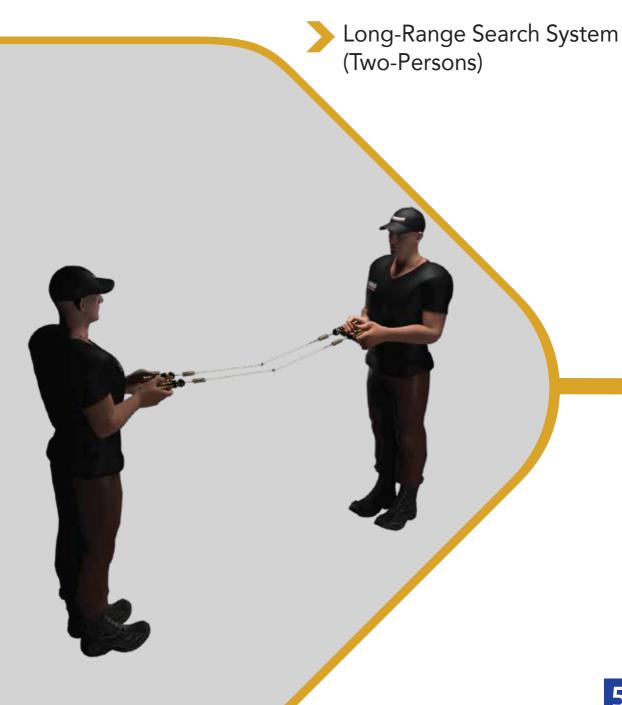
For Consumers within the European Union: Do not dispose of this equipment in general household waste. The crossed wheeled bin symbol on this equipment indicates this unit should not be disposed of in general household waste, but recycled in compliance with local government regulations and environmental requirements



# 4. Technical Features of the Device















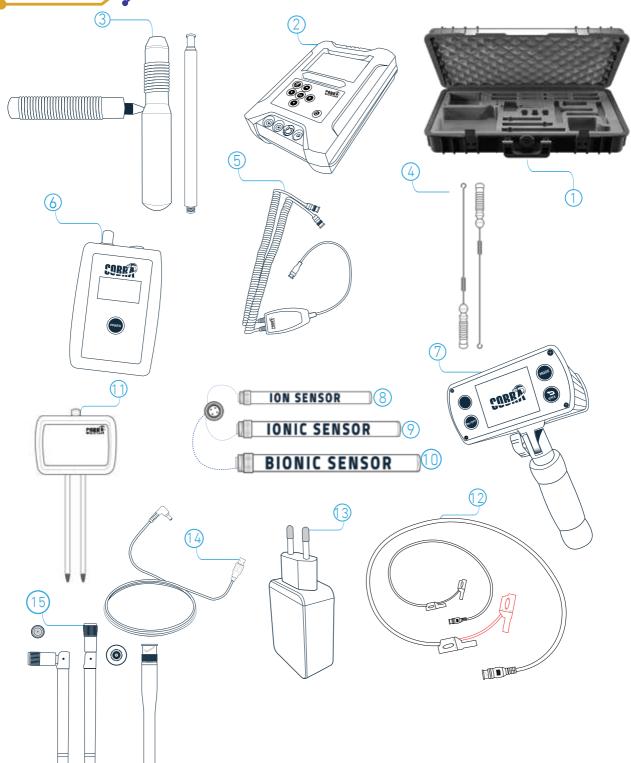














# 5. Package Contents

1	<	Waterproof and shock resistant baggage
2	•	Main Unit
3	•	Skewers for one-person long-range system (2 items)
4	<	Skewers for two-person long range system (2 items)
5	•	Long-Range Linking Unit with the transmitter and receiver modules
6	•	Data transmitter and receiver for long-range system
7	•	The main unit of Bionic system
8		lon sensor
9		lonic sensor
10	•	Bionic sensor
11	•	Grounding signal transmission unit
12		Connection cable between the main unit and the grounding unit
13		Charger (3 items)
14		Charger Cable (3 items)
15		Bionic Systems Antennas (one plugged in main unit, the other in Bionic Systems Unit
16		Warranty Certificate
17	`	User Manual



# 6. Explanation of the Main Unit Components

The main unit of the device have been designed according to modern ergonomic design and a technical model to meet the user's need, in addition to a control panel equipped with different buttons to facilitate its operation and using.

# 1.6. Control Panel

- [1] ON / OFF Button
- [2] OK Button
- [3] Arrows Buttons for Navigation in Four Directions
- [4] Back Button
- [5] Frequency generator (grounding unit) ports
- [6] Charging port
- [7] Super antenna port
- [8] Manufacturer Brand

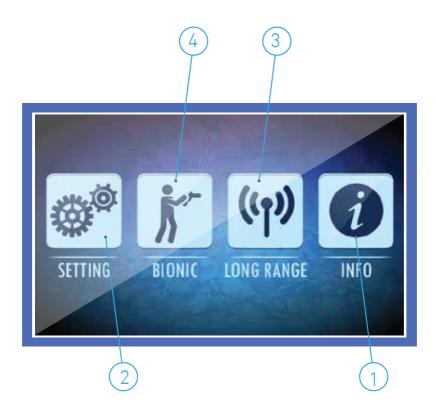




# 6.2. Screen Details

When the device started up, the following screens will be shown to the user

#### Main Menu



# [1] Information

This menu item includes general information about the device, the manufacturer information,

firmware version and the device serial number.





# [2] Settings

Contains options to control sound, lighting, and language.

The device program available in 6 languages to provide device using around the world.















# [3] Long Range

This sub-menu includes two items:

- 1. Single [ for Single-Person System]
- 2. Dual [ for Two-Persons System]



#### [4] Bionic

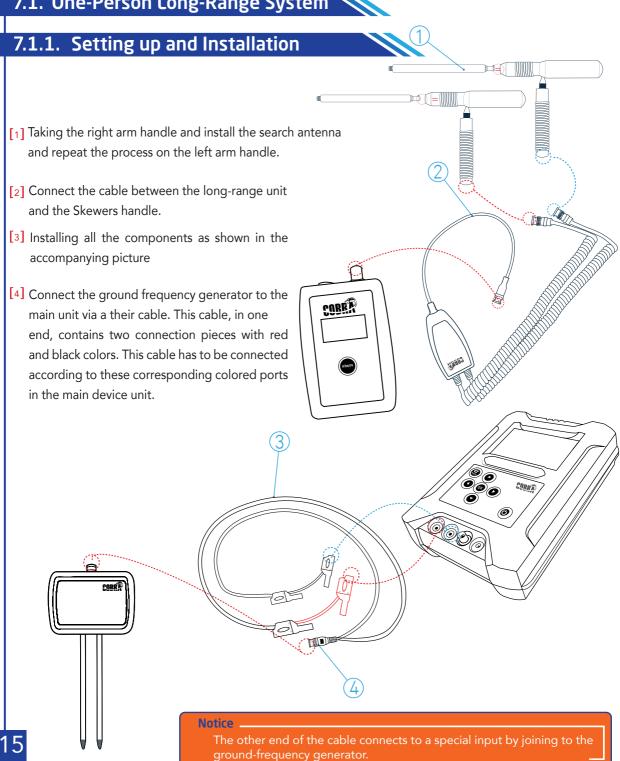
This sub-menu includes:

- 1. Ion system
- 2. Ionic system
- 3. Bionic system





# 7.1. One-Person Long-Range System 💙





# 7.1.2. Programming Procedure of the Main Unit

- Turn on the main unit of the device
- Turn on Long-Range unit by pressing the POWER button.
- Select : Long Range system from main menu.
- Select : Single system [one person system]
- A menu of four icons appears, as below Target Type- Soil - Distance - Depth
- Select the target type you want to detect from targets list , then OK
- Select soil type from the soil type list, then OK
- Select front distance by pressing Distance icon then set the distance
   In 0 2000 m range by using Left and Right arrow buttons in control panel
- Select search depth range by pressing Depth icon then set the depth Value between 0 – 50 m range by using Left and Right arrow buttons in control panel then OK
- After all the settings is completed, the user presses the start button, a menu appears on the main unit screen containing all the chosen settings.
  - The settings also appear on the Long-Range unit screen















#### 7.1.3. How to use

- [1] The frequency generator is planted on the ground at an unspecified point inside the search area and the main unit is connected to the frequency generator.
- [2] The search antennas are fully opened and the antennas is oriented perpendicular to the ground and in contact with the soil for 15 seconds.
- [3] Next, the user person heads towards the south line and waits for two minutes for the search antennas to pick up the target signals and head towards it.
- [4] When the search antennas are moving toward the target, the user starts moving in its direction.
- [5] Track the antenna movement, when the antennas reach the buried target field, the state of the antennas change into crossing state X shape.
- [6] User determine the two antennas intersection point by marking a straight line on the ground
- [7] The user should search from the other three directions North-East-West and repeat the same steps
- [8] After the four directions intersecting lines are determined by the user in the ground, the depth is calculated by using the following method

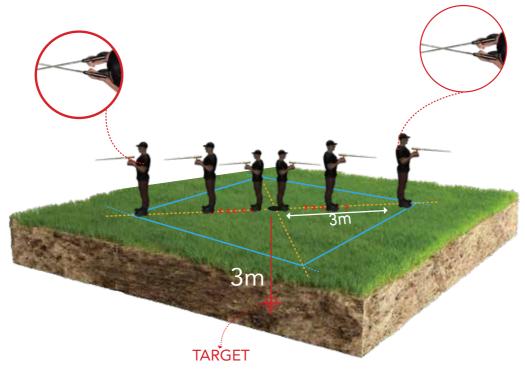






# 7.1.4. Target Depth Measurement

- [1] The user must cross the flat lines on the ground to form a specific area.
- [2] As a result of the intersection of the area diameters, the center of the area is determined to the user.
- [3] The user starts to measure the depth from the area center straight to one of the diameters of this area.
- [4] The user does not have to track the antenna movement in this case but adheres to the straight movement.
- [5] After reaching a certain distance, the antennas will go oppositely. At this point the user will mark a line on the ground and the distance between this line and the center of the area will be the depth of the target.
- [6] It is recommended for the user to measure the depth from two different diameters for accuracy.



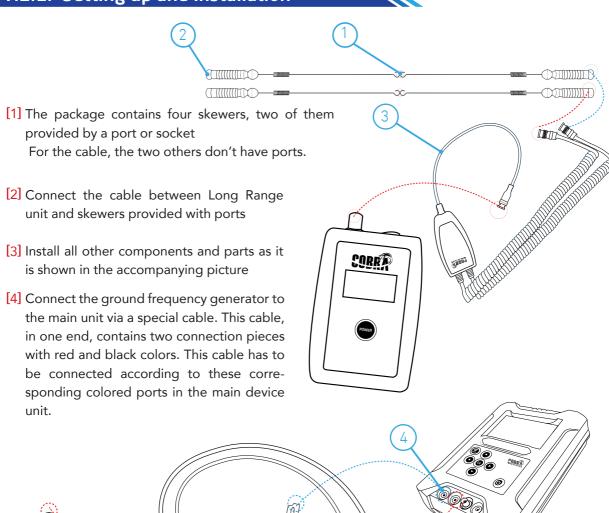
#### **Notice**

The distance traveled along the diameter direction is same as the target's depth Example: If the distance is between the center and the antenna intersection point 3 meters, this shows that the target depth is also 3 meters.



# 7.2. Two-Persons Long-Range System

# 7.2.1. Setting up and Installation



**Notice** 

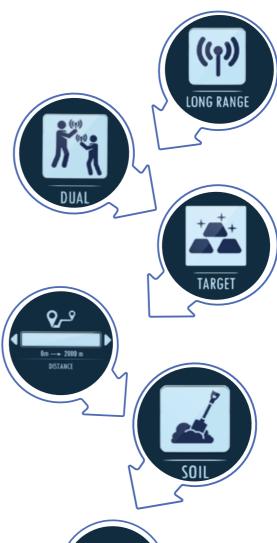
The other end of the wire connects to a special input by joining to the ground-frequency generator.



# 7.2.2. Programming Procedure of the Main Unit

- Turn on the main unit
- Turn on Long-Range unit by pressing the POWER button.
- Select : Long Range system from main menu.
  - Select : Dual system [two persons system]
- A menu of four icons appears, as below Target Type- Soil - Distance – Depth
- Select the target type you want to detect from Target Type list then press OK
- Select soil type from Soil list, then press OK
- Select front distance by pressing Distance icon then set the distance In 0 – 2000 m range by using Left and Right arrow buttons in control panel
- Select search depth range by pressing Depth icon then set the depth Value between 0 – 50 m range by using Left and Right arrow buttons in control panel then OK
- After all the settings is completed, the user presses the
- Start button on screen, a menu appears on the main unit screen containing all the chosen settings.
- The settings also appear on the Long-Range unit screen











#### 7.2.3. How to use

- Plant the frequency generator into the ground at an unspecified point inside the search area and connect the main unit to the frequency generator.
- The two persons who use this system should stand opposite each other, keeping the distance according to the length of the skewers.
- One of the two persons hold the long-range unit, and grabs the skewers with the ports and the other person grabs the other skewers that don't contains ports.
- The two persons have to connect the skewers together as shown in the following picture

raise the skewers horizontally and evenly between the two persons

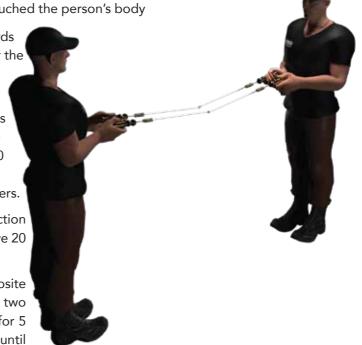
Ensure that tharms e are closed and touched the person's body

After that, the two persons head towards the south line and wait two minutes for the antenna to pick up the search target signals and heading to it

When the search skewers point towards the target, the two persons must move towards the signal with a distance of 50 meters, they must repeat the previous process and wait for the signal of skewers.

 If the skewers moved in the same direction as before, the two persons have to move 20 meters and repeat the process again

If the skewers moved in the opposite direction from the previous signal, the two persons must go in the new direction for 5 meters and repeat the search process until an anomaly is obtained in skewers (move down, skewers intersection, or skewers move away from each other)

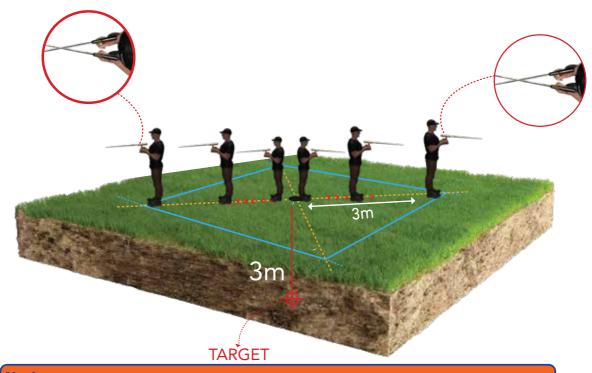


- When the anomaly is indicated, one of the two persons marks a line on the ground.
- The two persons should search from the other three directions (North-East-West) and take the same steps
- After the user determines the four directions of the cross lines in the ground, one of the two
   persons will calculate the depth of the target in the following way:



# 7.2.4. Target Depth Measurement

- [1] One person installs the single-persons system parts and proceeds with the depth measurement process as follows
- [2] The user must cross the marked lines on the ground to form a specific area.
- [3] As a result of the intersection of the area diameters, the center of the area is determined.
- [4] The frequency generator and the main unit must be put in the center of this area
- [5] The user starts to measure the depth from the area center straight across one of the diameters of this area.
- [6] The user does not have to track the antenna movement in this case but adheres to the straight movement.
- [7] After reaching a certain distance, the antennas will move oppositely. At this point the user will mark a line on the ground and the distance between this line and the center of the area will be the depth of the target.
- [8] ] It is recommended for the user to measure the depth from two different diameters for more accuracy.



#### **Notice**

The distance traveled along the diameter direction is same as the target's depth Example: If the distance is between the center and the antenna intersection point 3 meters, this mean that the target depth is also 3 meters.



# 7.3. Free Frequency Long Range System

A team of expert engineers has developed this special technology in COBRA GX 8000 device. It is a technology of choosing an accurate specific frequency that meets the needs of the user. Due to the long statistics conducted with treasure hunters, there has been a constant need for this technology.



# 7.4. Free Frequency Technology Usage

- [1] Turn the main unit of the device on and select Long Range system from the menu
- [2] Select Single or Dual system.
- [3] From Target sub-menu select Free Frequency from the list of targets by pressing OK button.
- [4] Select Soil type, depth and distance (explained previously)
- [5] After completing all the options, press Start button to begin the search.
- [6] When starting to search, it is noticed that the search process starts normally. Press Right or Left arrows buttons to change the frequency value (it is noticed that the value changes in the upper left corner on the screen). When the desired value is determined, press OK button.

#### **Notice**



















#### 8.Ion System

This system was designed according to the latest modern scientific standards, and the most recent studies were adopted related to active ion fields or currents around human which he can't realize. The ion system relies on detecting the active ionic currents in the user's surroundings for distances of up to about 80 meters.



[3] Choose Ion System from the menu, then press OK.

[4] The connection between main unit and lonic unit is started, on the screen of Ionic unit it will display the signal indicator of Ion system.

When using this system, press MODE button, then move the Ionic Unit up and down slowly, or up and down at the same speed.

In the case of a close signal, an indicator appears in the lon system unit screen.

The indicator increases as the signal strength increases or as we get closer to the target, in conjunction with a progressive sound alert that increases as the signal strength increases

To confirm the correctness of the signal we do RESET by pressing MODE button once but in a different direction from the one from which the signal was first picked up, this step is repeated more than once, if the signal continues to appear, this means that the signal is completely correct.

#### Warning













#### 9. Ionic system

Using the Ionic system

sub-menu on main unit screen.

This search system has been formulated with the latest studies related to ionic and magnetic fields issued

from, metals, underground cavities and buried metal objects underground.

Ionic system relies on the detection of ionic and magnetic fields in the surrounding area around the user for distances that reach about 120 meters.

# IONIC SENSOR [1] Install Ionic system sensor which is available in the device bag, in its socket in Ionic Unit. This sensor labeled IONIC SENSOR. [2] Turn on the Ionic unit, its screen will display a waiting message indicating to the user that he must select operation mode from lonic

- [3] Choose Ionic System from the menu, then press OK.
- [4] The connection between main unit and Ionic unit is started, on the screen of lonic unit it will display the signal indicator of lonic system.
- [5] When using this system, press MODE button, then move the Ionic Unit up and down slowly, or up and down at the same speed considering move it slightly towards the ground In the case of a close signal, an indicator appears in the lon system unit screen.

The signal indicator increases with the increase in signal strength or with increasing proximity to the target, in conjunction with a progressive sound alert increases with signal strength increase, the indicator moves to the right if there are metals, the indicator appears in a yellowish red color and the indicator moves to the left if there are spaces or cavities, and appears in blue color.

To confirm the correctness of the signal we do RESET by pressing MODE button once but in a different direction from the one from which the signal was first picked up, this step is repeated more than once, if the signal continues to appear, this means that the signal is completely correct.













# 10. Bionic System

Bionic search system is one of the unique and sophisticated systems in the field of detecting ionic and magnetic signals that surround us in this world. It was developed to capture fields from buried underground objects.

Bionic system relies on capturing a field from a particular object and starting to search for another object that contains the same ionic field in the area around us. In other words, the device can be directed toward an object, then it searches for any signal in the surrounding area that bears the same ionic field of the object. If there is no similar object, the device will not give any indication or sound alert. This system can reach distances of up to 40 meters.

BIONIC SENSOR

#### **Using the Bionic System**

- [1] Install Bionic system sensor -which is available in the device bagin its socket in Ionic Unit. This sensor labeled BIONIC SENSOR.
- [2] Turn on the lonic unit, its screen will display a waiting message indicating to the user that he must select operation mode from lonic sub-menu on main unit screen.
- [3] Choose Bionic System from the menu, then press OK.
- [4] The connection between main unit and Ionic unit is started, on the screen of Ionic unit it will display the signal indicator of Bionic system.
- [5] When using this system, move the Ionic Unit slowly in all directions, in the case of near signal it will shown in indicator on Ionic Unit screen.
  - The indicator in this system appears consistently in the presence of the field similar to the field measured in conjunction with an audible alarm indicating the target existence.

To take the desired field signal, for searching for a similar ionic or magnetic field, the bionic sensor is directed towards the desired object and press OK button once only. If the signal appears, it can be confirmed by returning to the first object and the repeating the process.

To ease the directing or orientation process, hold on MODE button until the audio tone is heard 3 times, then the laser in the Ionic Unit will start to work. The laser can be used to find out the direction of the sensor accurately.

#### Warning

There is no RESET in this system. Therefore, any point pressing MODE button toward its direction will be the new field to be matched.









# 11. Laser

#### Switch Laser On

To operate the laser, press and hold MODE button until the tone is heard 3 times, thus, the laser is turned on.

#### **Switch Laser Off**

When the laser is switched on, press and hold MODE button again until hearing the tone 3 times, in this case the laser is turned off.



#### **Laser Usage**

The laser is used to set far or remote points from the user when using the Ion or Ionic or Bionic search systems and especially when setting the first target point in the Bionic system.





