Metal Water Finder

Metal and Water Finder

WF 202 PRO +

USER MANUAL

GROUND TRANSMITTER
LINE TRACKER
HANDHELD LRL
WF 202 PRO+
Main Menu
Search
Settings
Detection Technology

The WF 202 PRO + is the latest device to detect

.the different types of water in the ground

Metal and Water Finder

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- HandHeld LRL System .... Page 24

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The operating in high voltage areas would limit the results and performance

The cell signal interferes with the device signal, so turn off the cell while operating

Don't operate two devices with same method of search at the same place

Don't store in high temperature or high humidity

Disconnect the batteries before long time storage

The operator Must remove any metals that might affect the opreatin e.g.: Rings,watch, belt....

Any attempt to tamper the device or unapproved maintenance would void the warranty

For devices that work on replaceable batteries, use good quality batteries to work longer hours.

WARNING

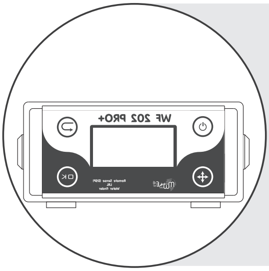
- The user must practice before starting the detecting operations and discoveries
- Store in Cool and dry place 15-40 C 5%-75% humidity

Read & Understand
The User's manual
before using this device

Search System:	Multiple Search Systems: 1- Long Range Locator (Hand-held) 2- Long Range Locator (Line Tracking)
Search Principle:	1- Digital Frequency Signal Processing (DFSP) To receive the electrostatic fields of target.
Operating Processor:	MICROCONTLLER PIC18 & ARM 7
Operating Frequency:	1- From 9 KHz to 11 KHz for LRL system
Power Rating:	7.4 V / 3000 mAh
Power Consumption:	Max power 150 mAh
Battery Endurance:	15 Working hours
Charger	5.1 V DC / 3 Amps
Display:	3.2 " TFT LCD Display, 16 bit color depth CDMA GPU @ 48 MHz
Targets	Natural water - Mineral water - Salt water - All types of water.
Target Discrimination:	YES
Selective Target Mode:	YES, The water type of the interface can also be selected before The research began.
Search Depth	450 Mt with Selective Depth control system in the depth menu.

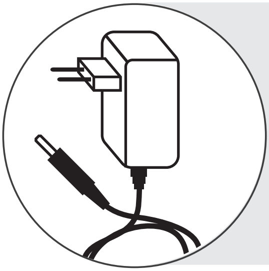
Search Distance:	2000 m, with a system to control the front search distance levels through the distance control interface
Search Results:	By signals and routing data to the water site in addition to the results of voice alerts
Bluetooth:	NO
Wireless communications:	YES
Smart Auto guiding System:	NO
Audio notifications:	YES
Vibration notifications:	NO
Operating Temperature:	From (5° F) to (140° F) / From (-15 °C) to (60 °C)
Storing Temperature	From (5° F) to (95° F) / From (-15 °C) to (40 °C)
Humidity:	Store and operate within 90% humidity ratio
Weight:	7.75 Lbs (3.5Kg) with all the Accessories, 12.25 Lbs (5.5 Kg) for the case.
Dimensions:	mm 185X135X53
Case Dimensions:	mm 450x330x150

Device parts



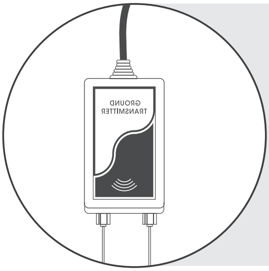
The main unite

The device's main controller determines the search criteria and settings of the device and communicates with the attached search units via wireless connection.



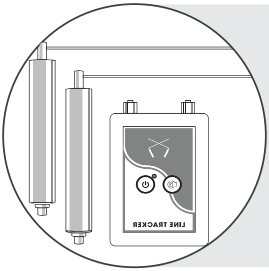
The charger

Electric charger to recharge the device battery
Values: Input: 100 - 240 V Alternate / 50 - 60 Hz / 0.4 Amps
Output: 5 volts continuous / 3 amp / 15 watts.



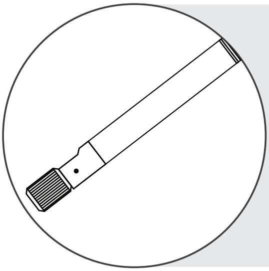
Soil Support Unit (Ground Transmitter)

This unit is connected to the main unit of the device and then connected to the soil to be responsible for transmitting and transmitting the frequency waves coming out of the device to the ground.



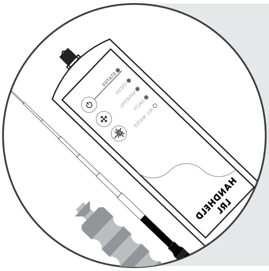
Receiver + Receiver Antennas

The reciver antennas connect to the receiver through special wires. These antenna missions follow the waveform that is connected to the target with the intercept system and the visual effect



Wireless antenna

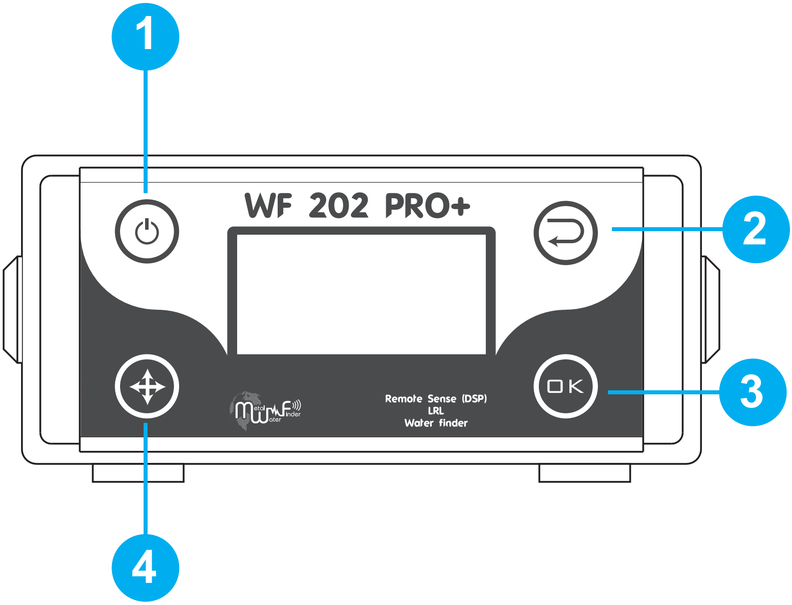
The wireless communication antenna is responsible for sending commands and settings entered from the main console to the search units and systems that are attached to the device.



Hand Held Locator

The unit is based on remote detection and search technology to locate and monitor targets from long distances, directs the user and leads him directly to the water site, with the laser steering system, receiving commands and seizures from the main unit wirelessly.

Front elevation


1
2
3
4
WF 202 PRO+
OK
Metal Water Finder
Remote Sense (DSP)
LRL
Water finder

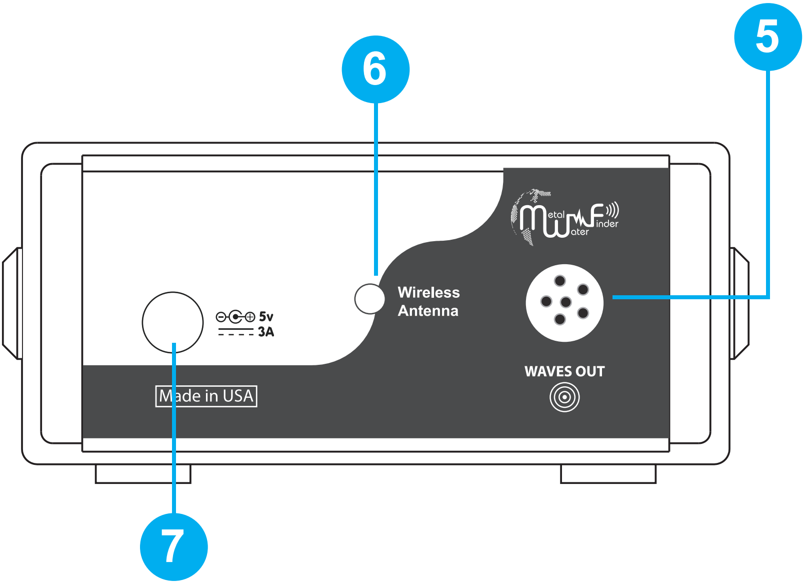
1 Power ON/OF

2 (Back) button

3 (Enter) button

4 (Move) button

Back elevation

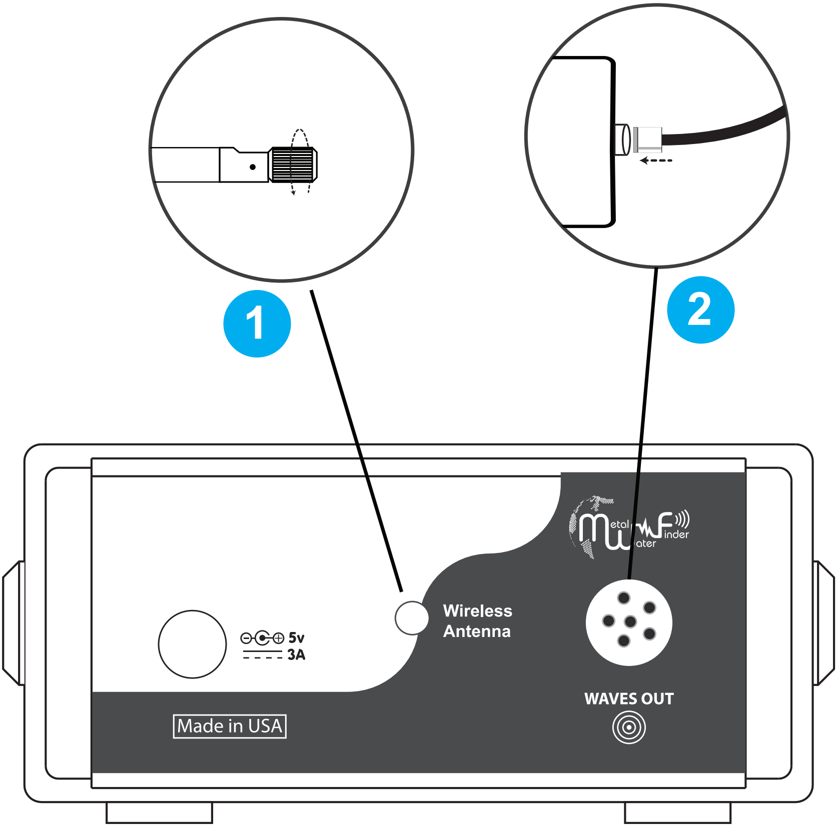

6
5
Wireless
Antenna
5v
3A
WAVES OUT
Made in USA
Metal Water Finder
7

5 Socket connecting the soil support unit

6 Wireless antenna jack

7 Plug the charger

Connection method


1
2
5v
3A
Wireless
Antenna
Metal Water Finder
WAVES OUT
Made in USA

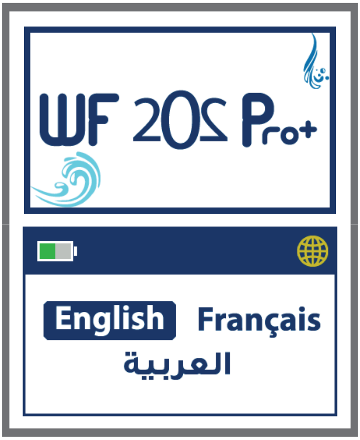
1. Connect the wireless antennas to the designated area as shown on the graphic.

2. Connect the soil support unit to the machine with its input and then connect it to the ground as shown in the diagram.

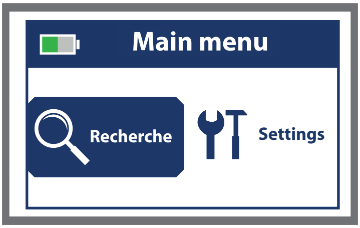
- Turn on the device by pressing the power switch

- Will appear on the screen after the definition of the name of the device, will appear in the list of languages the user must choose the language control device, by going to the language to be selected by pressing the MOVE key.

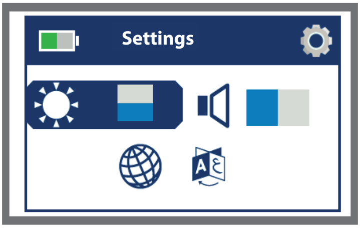
- Language is emphasized by pressing the ENTER key.


WF 20S Pro+
English
Français
العربية

- After selecting the required language and pressing Enter, the main menu is moved.


Main menu
Recherche
Settings

❖ We choose the settings from the main menu to go to the main settings menu:



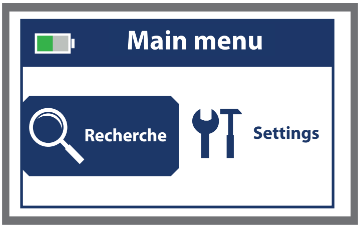
- Brightness options: To control the brightness of the screen, select the Brightness option and press the Enter button. Change the value from 10% to 100%.
- Audio Options: To set the sound alarm values, select the option and press the Enter button to change the volume from 1 to 5 or you can hide the sound completely.
- Language Options: To change the system language, select the language option, press the Enter button, and select the required language and confirmation.

❖ After completing the main settings, press the Back button to return to the main menu.

❖ After you have finished setting the main device settings and return to the main menu, we select a search from the menu to show us the search settings list:

- Search criteria (specify values for distance and depth)
- Type of target (through this option we specify the type of water to be searched for)
- Start your search

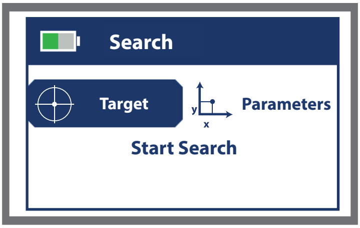
❖ Note :
The user must set up all search options before pressing Start Search.



Start search

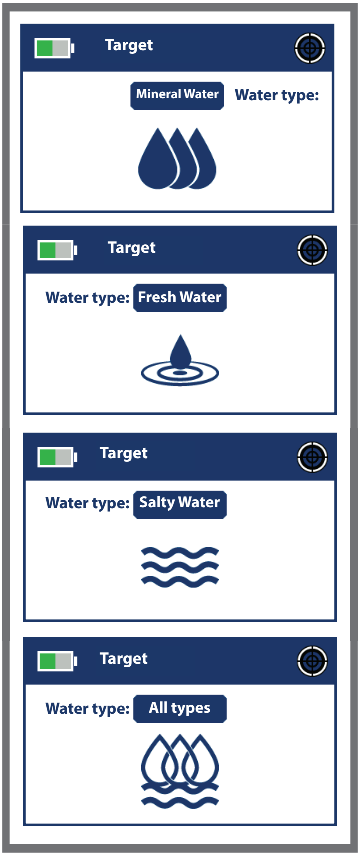
The first operation

Select the water type: by going to the target settings by pressing the scroll key (MOVE) and enter the list of types of water by pressing ENTER and the list of water types will appear on the screen that can be searched:
Fresh water, salt water, mineral water, all kinds of water
And select the water to be searched by pressing the MOVE button. If the water type is pressed, the ENTER key is pressed,



❖ Types of water:

- Mineral water
- fresh water
- Saltwater
- All types of water



Target

Water type: Mineral Water

Target

Water type: Fresh Water

Target

Water type: Salty Water

Target

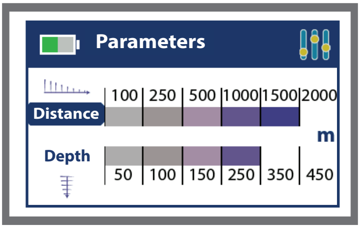
Water type: All types

❖When you select the water type and press the Enter button, it will automatically exit to the main menu of the search settings.

Start search Second operation

Here you must go to the second setting of the settings menu, which is the search criteria

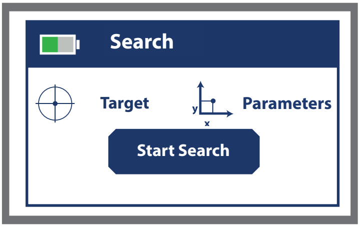
Then set the distance and depth parameters by using the Move button to move between the distance and depth values.


Parameters
Distance
100
250
500
1000
1500
2000
m
Depth
50
100
150
250
350
450

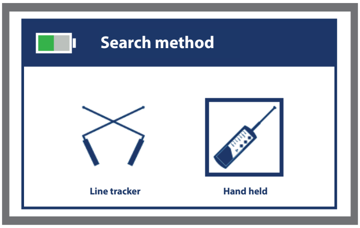
❖The search and depth distance is then confirmed by pressing the ENTER key to exit automatically to the search settings menu again.

Start search

When you have finished selecting the search options go to the start option and press the Enter button to select the search method.


Search
Target
y
x
Parameters
Start Search

❖ In the meantime, the device is ready and ready to search,
You can start searching through one of the tracking systems available with your device.

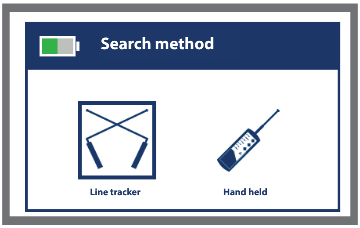

Search method
Line tracker
Hand held

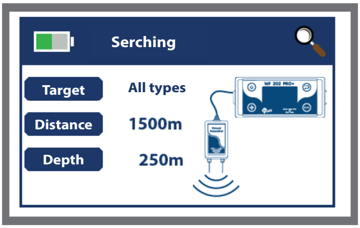
Important Not:

To reset the device settings again or to change the type of water, distance or depth, you can press the ESC key to restart the device and start the settings again.

Line tracking system
(Line Tracker)
Remote Sensing

❖ We choose to search via the line tracking system by pressing the "Move" button and selecting "Track the line" from the menu and then pressing "Enter"


Search method
Line tracker
Hand held



Target: All types
Distance: 1500m
Depth: 250m

① Power Switch

Slide down to switch ON
Make sure the Tracker is off before storage.

② Status LED

Indicates the Line Tracker connectivity with the main unit.
Red = Disconnected
Green = Connected

③ Volume Button

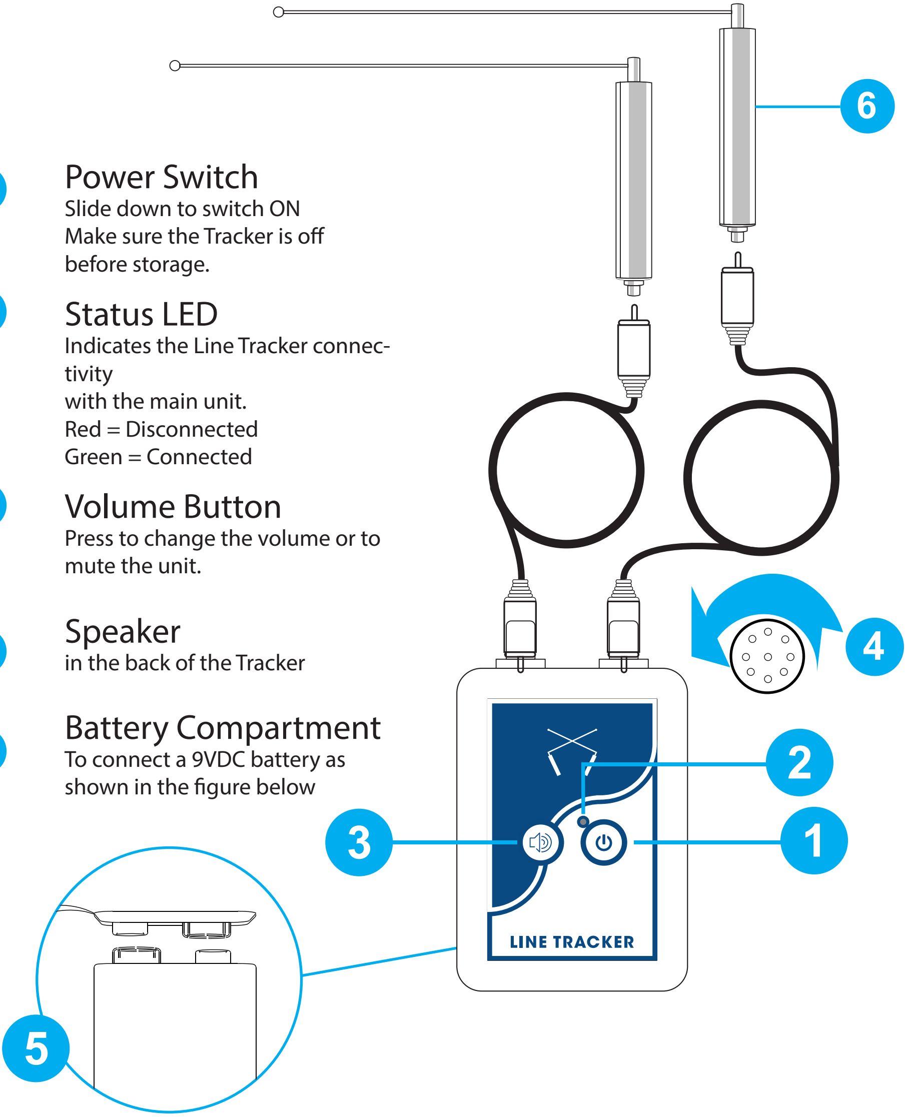
Press to change the volume or to mute the unit.

④ Speaker

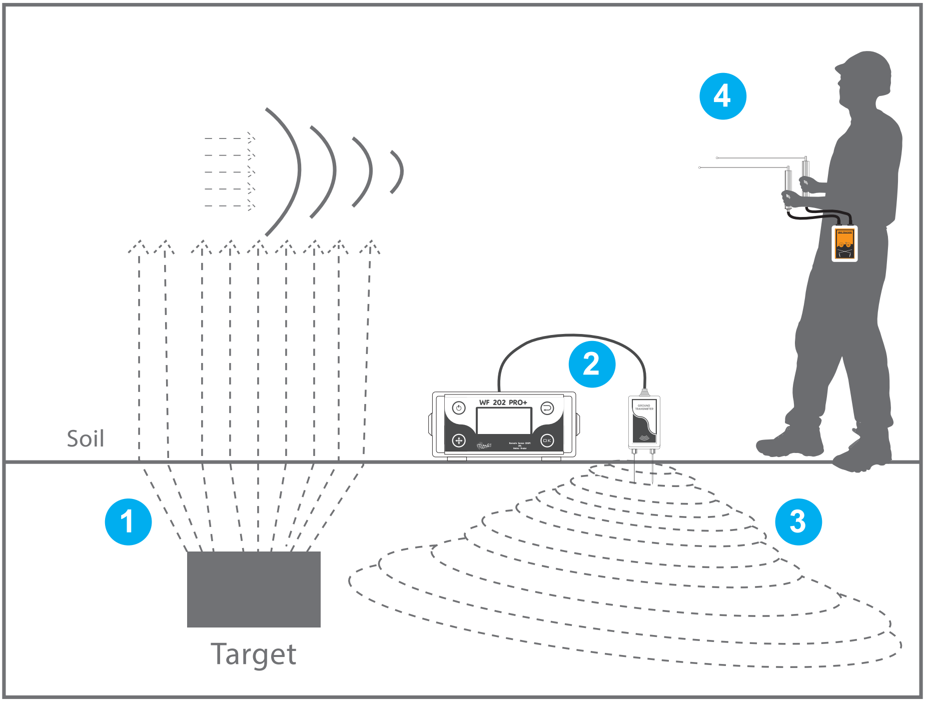
in the back of the Tracker

⑤ Battery Compartment

To connect a 9VDC battery as shown in the figure below



⑥ Connect the rods to the antennas then connect the unit in the top to the antennas by the attached cable.



1 The Target is affected by the earth electrostatic and magnetic fields

2 The tuning and transmitting unit transmits a electro-frequency waves to determine target location

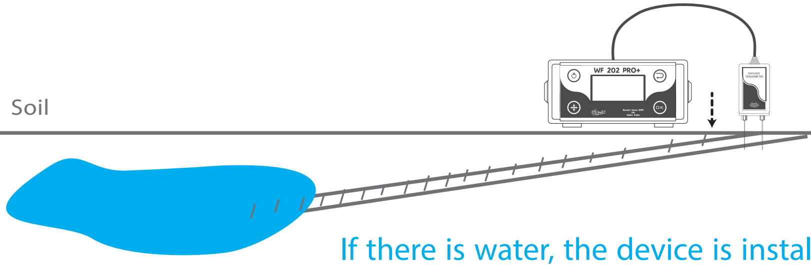
3 The out waves spread through the earth which stimulate the formed fields around the target identify it and forming a power lines

4 The line Tracker device receives the power lines that connected to the target to determine the location

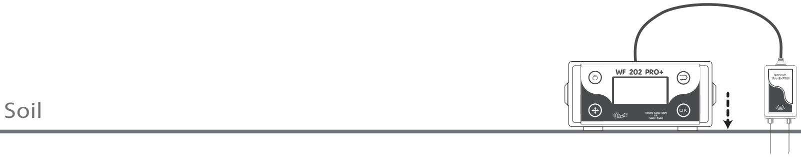
To start the search and check for water, we can use the visual tracking system through the receiver and reception antennas.

Note:

If there is water in the search area, the device has formed a frequency line between the device and the water location. In the absence of water in the search area, there will be no contact of the device waves with the water to be searched.



If there is water, the device is installed
Power lines with water

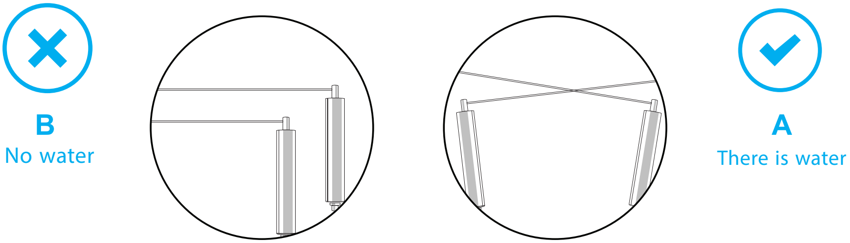


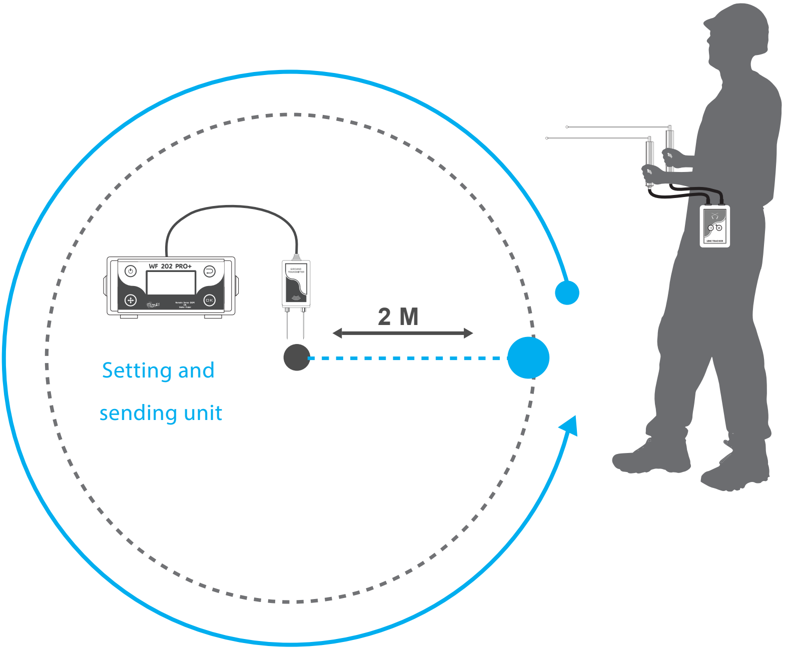
In the absence of water does not constitute
The device has no contiguous lines

Then rotate around the transmitter unit in a circular way,

A - If there is water in the search area, you will receive a signal from the antenna receiver, that signal is the intersection of receiving antennas above a point, the point of direction of the power line connecting between the device and the location of water

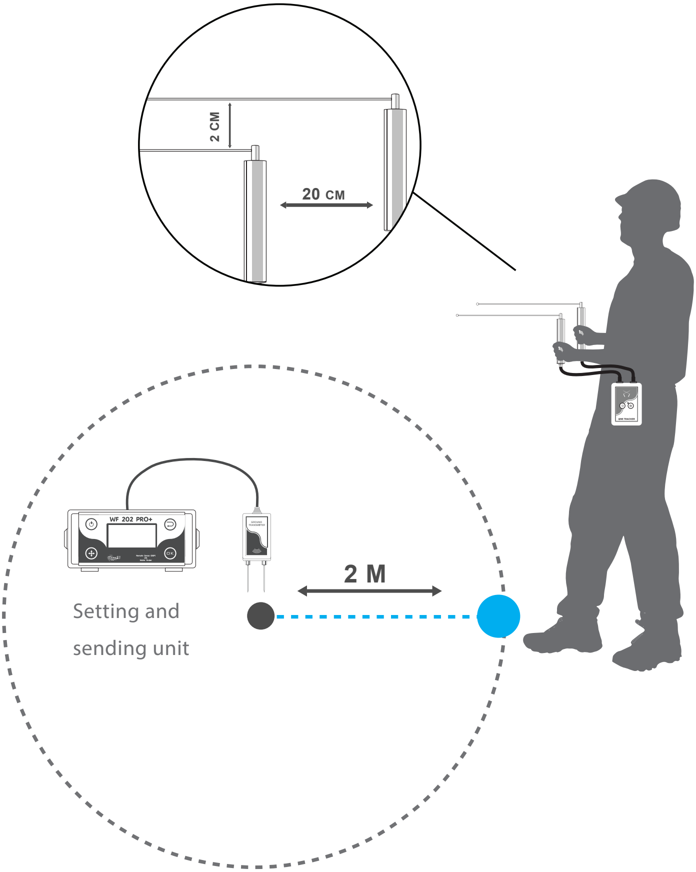
B- In the case of rotors around the transmitter unit 360 degrees and we did not get any intersection, indicating that there is no water to be searched in the search area.


B
No water
A
There is water

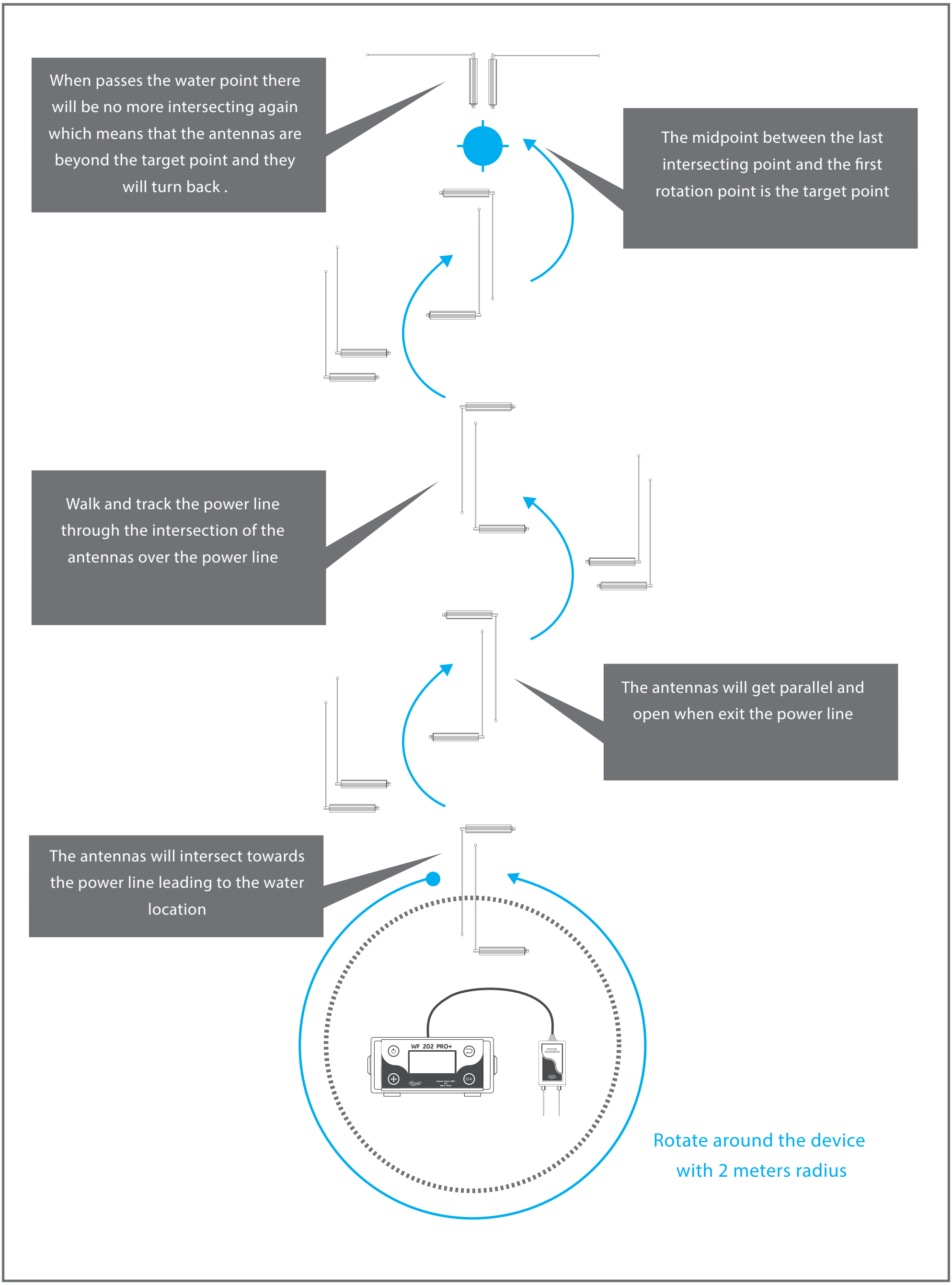

WF 202 PRO+
2 M
Setting and
sending unit

Method of locating water (Phase1) :

After preparing and processing the receiver for the research, install the receiver unit on the belt or put it in the pocket and then measure the distance of two meters from the location of the soil support unit (transmitter) responsible for transmitting waves, and then carry antennas in the form of a horizontal and horizontal with the ground, A 25-cm antenna, with the right antenna rising from the left antenna 1 cm or 1.5 cm as shown in the diagram.



Start work



When passes the water point there will be no more intersecting again which means that the antennas are beyond the target point and they will turn back .

The midpoint between the last intersecting point and the first rotation point is the target point

Walk and track the power line through the intersection of the antennas over the power line

The antennas will get parallel and open when exit the power line

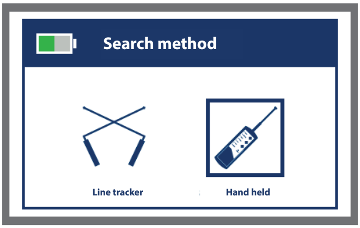
The antennas will intersect towards the power line leading to the water location

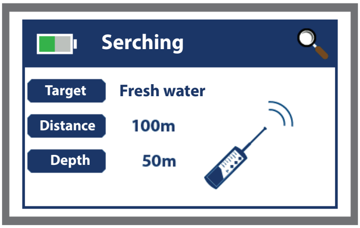
Rotate around the device with 2 meters radius

(Handheld LRL)

Long Range Locator

❖ We select the search by the mobile researcher system by pressing the "Move" button and selecting the mobile unit from the list and then press the "Enter"

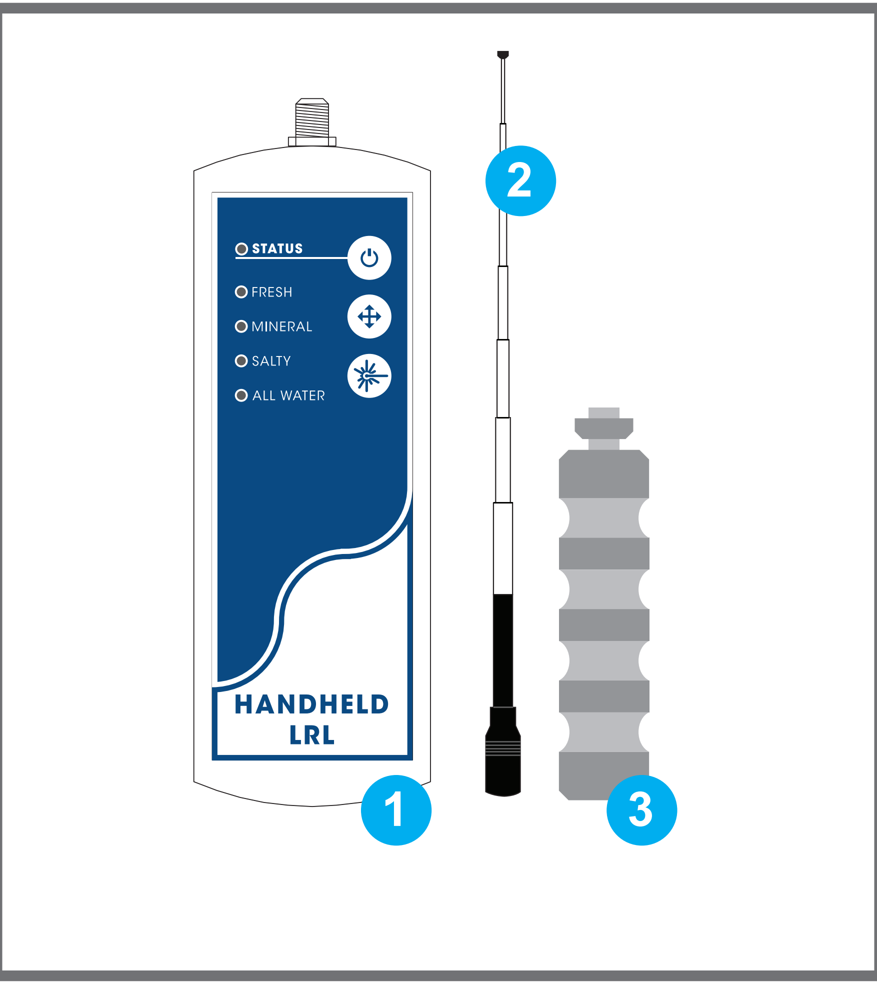

Search method
Line tracker
Hand held


Serching

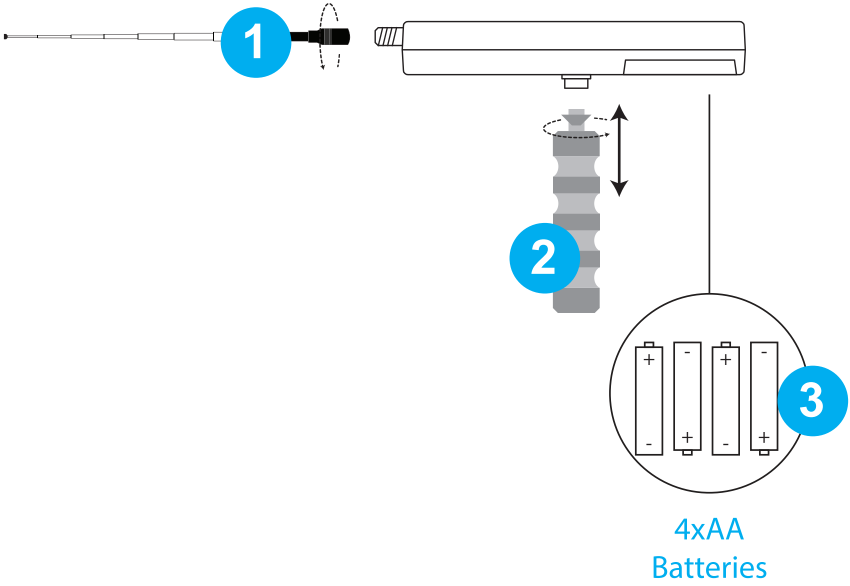
Target Fresh water

Distance 100m

Depth 50m


STATUS
FRESH
MINERAL
SALTY
ALL WATER
HANDHELD
LRL
1
2
3

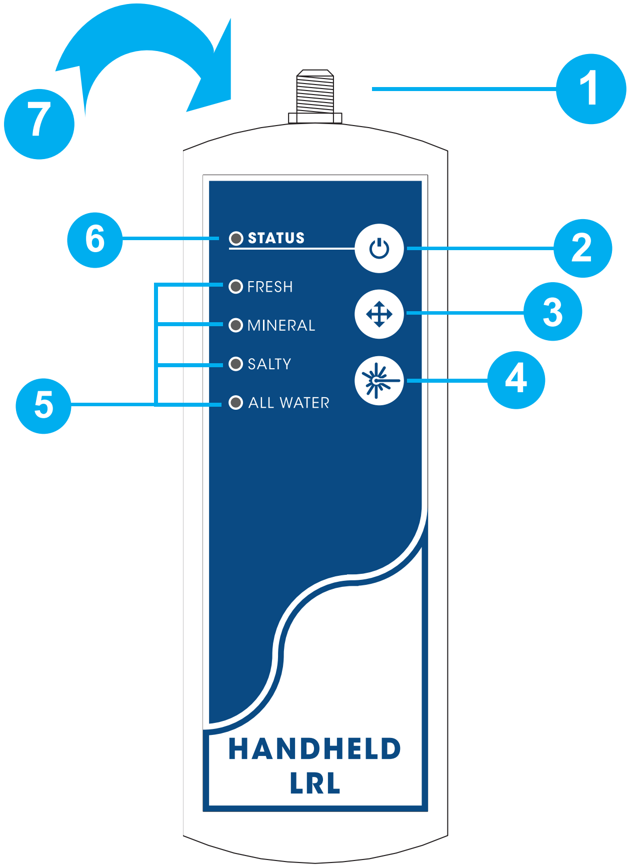
1	Hand-held LRL Unit
2	Transceiver Antenna
3	Handling Grip



1. Plug the antenna to the jack in front of the Handheld LRL Unit.
2. Connect the grip to the socket in the bottom of the Unit.
3. Put 4xAA Batteries in the battery compartment and pay attention to the polarity.

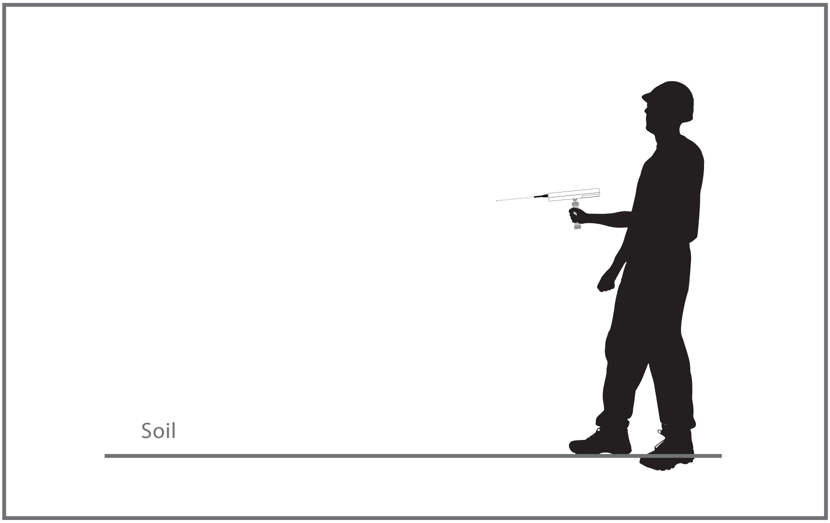
Note:

For the best product life use High quality batteries and remove them before storage.

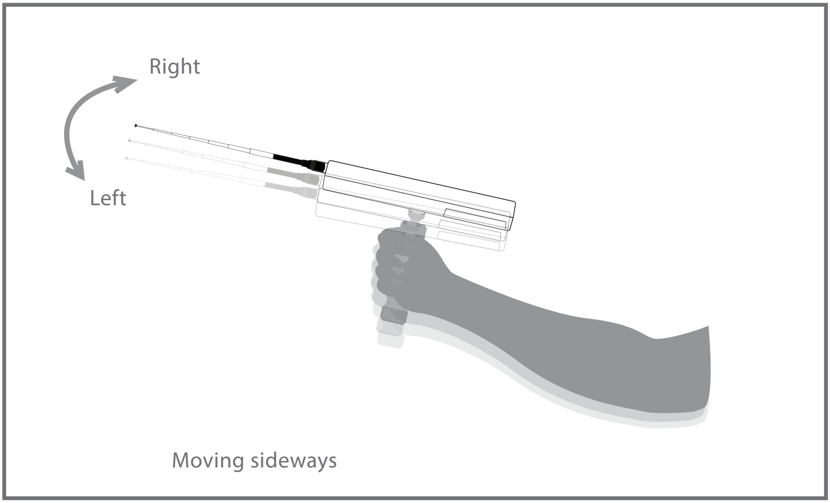

7
1
6
STATUS
2
FRESH
3
MINERAL
SALTY
4
5
ALL WATER
HANDHELD
LRL

1	Antenna Jack	5	Status indicator
2	Power Button	6	Target LEDs
3	Target Selection Button	7	Laser Pointer Out
4	Laser Button		

- The user must carry the device by grip horizontally slightly sloped towards ground as shown in the figure below



- Then stimulate the device’s waves and output fields by moving the device right and left slowly then stop the device.

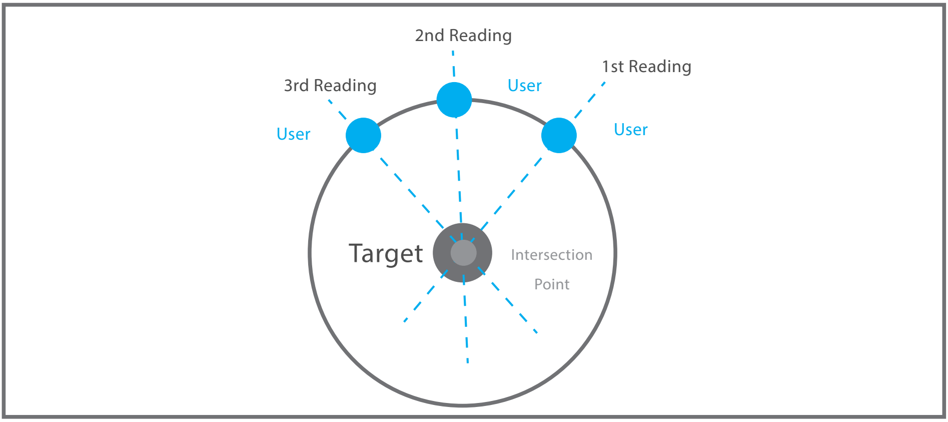

Right
Left
Moving sideways

In the case of a located target , the device will receive signal and a reading that will divert the device from the normal track to another track which is the water location track,

then the device will steady at the same direction ,in the meantime rotate fully around the direction that the device went toward until reaching the opposite and notice the track change once more and go toward the water.

then get 30 m sideway from the first reading point and stimulate the device's waves and steady the device and wait for the result if the water is legit the device will rotate towards the same point again therefore the water have been confirmed.

For more accurate reading and determining repeat the step from different points , and if all the tracks intersect in a point then it is the water location.

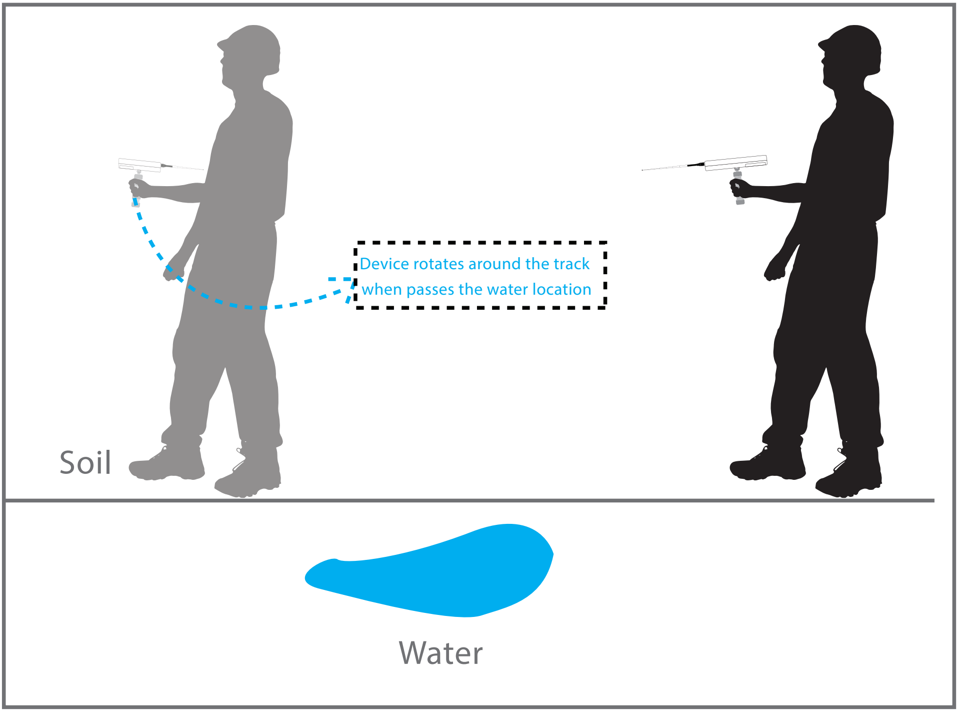


To confirm after the water location, select a lower space value and repeat the previous steps.

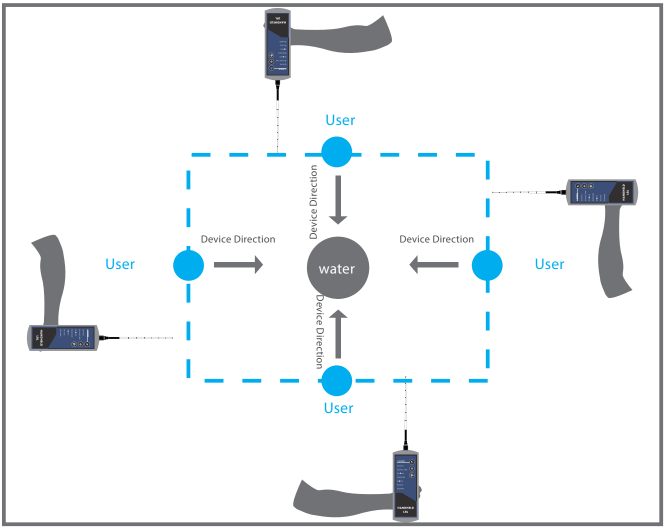
How to Locate Target

- Initially the user must direct the scanning antennas down slightly towards the ground.

- After ensuring multiple readings towards the target. Start walking in the same direction holding the device normally . until you reach the passing point you will notice that the device rotates around the normal track towards the point. Rotate with device slowly and start walking towards the target slowly until you reach the point where the device rotates right and left then you have located the target point.


Device rotates around the track
when passes the water location
Soil
Water

- There is another way to locate the water location more accurately, (Square method) take 4 different readings for the target from 4 angles forming a square 3 m from water location the intersection point of the for readings is the water location.



The user can see the approximate depth of the target by going back to the main menu, Select the search settings again, and changing the depth level through the depth list. For example, if the depth specified is the first time 5 meters we reduce the depth to 3 meters and enter the information, And we move away from the water location 20 meters and carry the device and wait for reading the water location, if there is a reading of the water location here we know that the depth may be between 3 meters, and we do this process to reduce the depth until we know the approximate depth of the water location.

- Second method of depth determination:

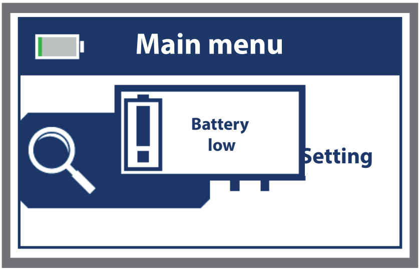
After confirming the point of the target, we reduce the search distance to the lowest level and maintain the depth of the search to the highest level and complete the steps of work, and stand in the detection unit specified above the water location directly and we go in a different direction of the transmission unit at medium speed until the unit circumvent the water location and measure the distance resulting from this The point to thewater location is the depth of the water.

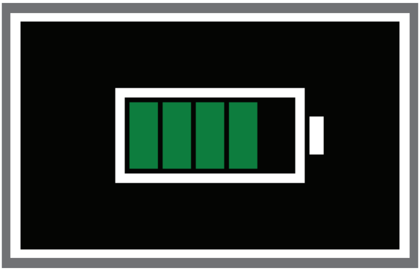
Notes:

-The device will make a beeping sound when the battery is full and the charging is done, so disconnect the charger when the notification is heard.

-An indicator will show the charging progress in the upper corner while the device is working.

-To ensure the performance of the device is kept in best state, Turn the device off and remove any batteries before storing.





Notes

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