Adroit

User Manual

A Message of Gratitude

With great pride and appreciation, we extend our heartfelt thanks to everyone who placed their trust in us and chose the **«Adroit»** device as their tool for detecting metals and gold. Your trust is our greatest motivator to continue advancing our technologies and providing the best solutions to meet your needs.

The **«Adroit»** device has been carefully designed to offer you an exceptional experience that exceeds your expectations. We hope it becomes your ideal partner in exploring treasures and precious metals.

Thank you for choosing us. We hope the device fulfills your aspirations and that this user manual serves as a helpful guide to maximize its benefits.

Vertex Team

Vertex

Introduction

We are pleased to introduce the **«Adroit»** device, an advanced tool specifically designed for metal detection. This equipment has been developed to offer high precision and excellent performance in detecting precious metals such as gold, silver, and gemstones, making it the ideal choice for use in various environmental conditions.

The **«Adroit»** device features state-of-the-art technologies that enable it to explore great depths, with a compact design that combines lightweight construction and reduced size, making it easy to transport and use in all types of terrain.

The **«Adroit»** device provides users with a comprehensive and effective exploration experience, thanks to its perfect balance of high performance, durability, and advanced technology.

This manual will guide you through the correct steps to use the device and familiarize you with its technical features, ensuring the best results in your search activities.

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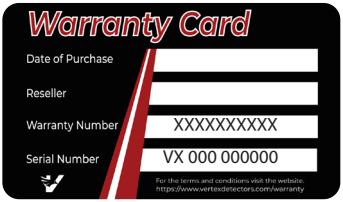
Overview

Warranty:
The device also includes a warranty card containing important details, such as the serial number and warranty number. Please keep this card safe, as it will be required for registration or when requesting warranty services.



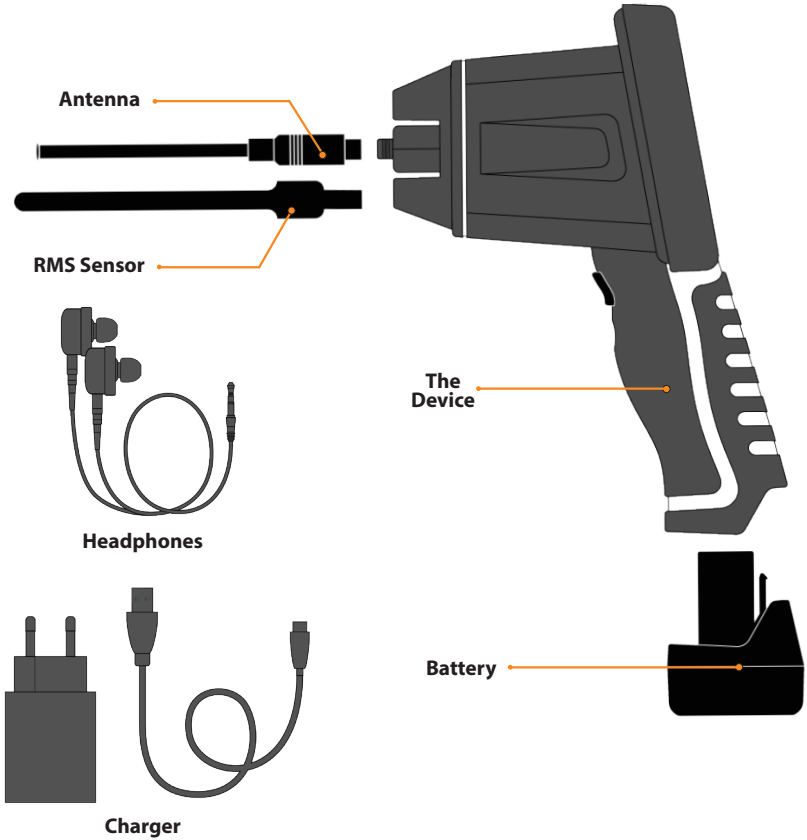
The «**Adroit**» device comes with a two-year warranty from the date of purchase, covering manufacturing defects and material issues. To activate the warranty and enjoy full support, please register your product warranty online at:
www.vertexdetectors.com/product-registration

Warranty Terms:
The warranty will not be extended, nor will services be provided in the following cases:
If the product is repaired, modified, or altered without prior written consent from Vertex. If the product's serial number is damaged or missing.

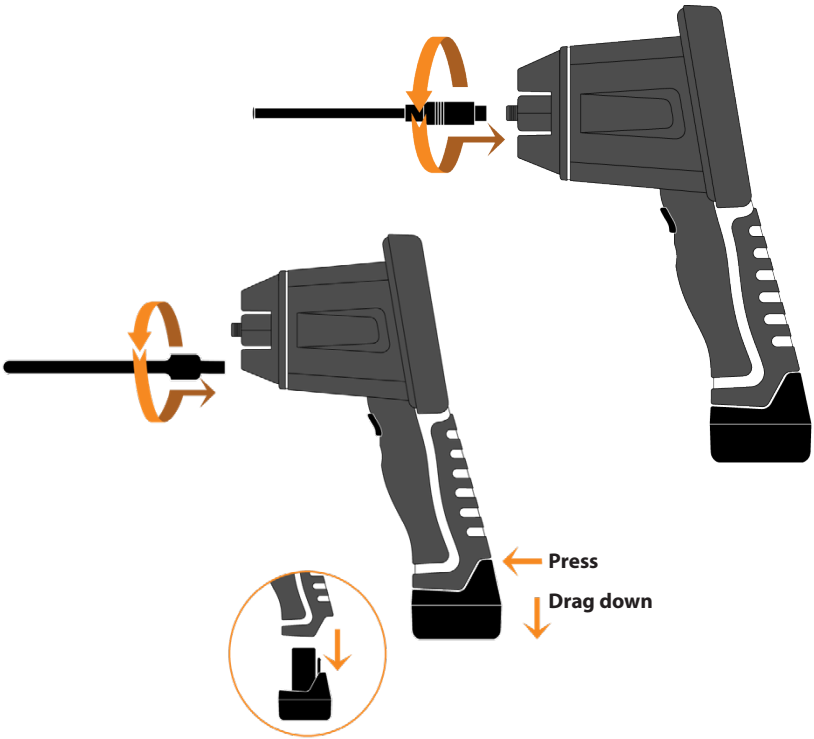
For the full terms and conditions of the warranty, please visit:
www.vertexdetectors.com/warranty-policy

To maintain the devices efficiency and continue enjoying warranty services, please follow the instructions outlined in the user manual.

Overview | Detector parts



Place the RMS sensor in its designated position by turning it clockwise. The antenna is installed in the same manner.
Instructions for Installing and Removing the Battery: (See the image)



1 **Confirmation/ Power On/Off** OK	Press and hold for several seconds to turn the device on or off. While the device is operating, use this button to confirm and select the desired option.
2 **Tab**	Used to navigate through the device›s user interface.
3 **Back**	Return to the previous menu or cancel the operation.
4 **Control Arrows**	Used to increase or decrease and control the system options.

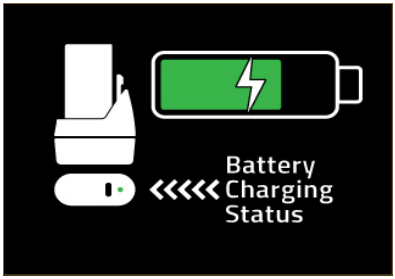
External speaker
Handle Button
Headphone jack
Battery charging

Operating Principle	Signal analysis, data processing, and conversion to visual and audio results
Display Type	2.8-inch color TFT screen with a resolution of 320 x 280 QVGA, 24-bit color depth.
Battery	Independent unit - 4.2V lithium-ion, 3500mAh.
Consumption Power	Average: 280 mAh.
Battery Life	More than 12 hours of continuous playback (varies depending on screen and sound settings).
Charger	100-240V AC / Output power: 5V-1.5A.
Audio	High-quality mono sound.
Supported Languages	English, French, German, Italian, Russian, Arabic.
Device Dimensions	21 x 12 x 8.5 cm.
Device Weight	435 g.
Packaging Weight	1.115 kg.
External Packaging Dimensions	10 x 16 x 24 cm.
Outer Package Dimensions	19.5 x 27.5 x 11.5 cm.
Operating Temperature	From 10°C to 60°C (50°F to 140°F).
Storage Temperature	From -10°C to 80°C (14°F to 176°F).

Overview | Battery & Charger

- Use the charger and cable provided by the company (VERTEX).
- The battery can be charged both inside the device and independently.
- Connect the charger to the electrical outlet and then plug the charging cable into the designated place under the battery, as shown in the image.
- When charging starts, the charging signal light turns red, and when charging is complete, it turns green.
- The device can be used temporarily while charging, but this increases the charging time.

During operation of the device, when the battery is very low, the device will sound an alarm and then automatically stop.



Overview | Main interface

It features advanced detection technologies, which are:

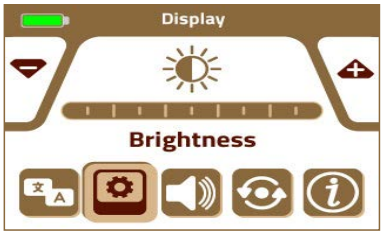
1. **RMS Technology**
   Multi-Response Search Technology.
2. **ADRI Technology**
   Intelligent Dynamic Search Technology.
3. **MDRI Technology**
   Targeted Search Technology with Pre-Specification.

Settings:
Navigate through the settings using the Tab key

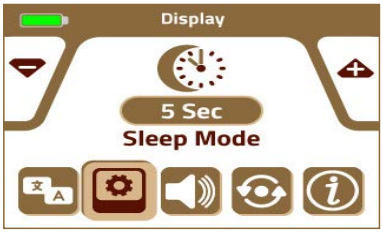
General Settings

Languages:
The device supports 6 languages for the user interface: (English, French, German, Spanish, Russian, Arabic). Select the desired language using the arrows and press OK A confirmation message will appear, select Yes to install the chosen language.

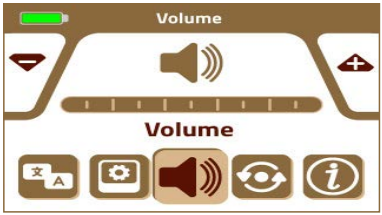
Display (Brightness):
Adjust the brightness level by changing the values using the arrow keys ▲▼ The brightness level can be adjusted from 10% to 100%, with a maximum brightness value of 450 nits.



Idle Mode:
Adjust the automatic dimming of the brightness level to save energy. This time can be set to 15, 30, 45, 60, 75, 90, 105, or 120 seconds, and the idle mode can also be completely disabled.



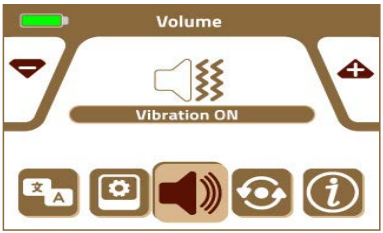
General Sound(Volume):
Adjust the volume of the startup tone, key sounds, and other sounds by changing the values using the arrow keys ▲▼



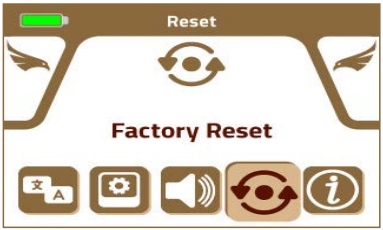
General Settings

Search Sounds:
Adjust the search sound level by changing the values using the arrow keys

Vibration Mode:
Select to enable or disable using the arrow keys



Factory Settings:
This option restores all settings to their default values.



About the Device:

Includes basic information about the device:

- Serial Number
- Software Version
- Software Date
- Electronic Board Version
- Device Operating Hours

Multi-Response Search Technology

Active Search:

This technology works by sending specialized frequencies aimed at stimulating the electrostatic fields that form around buried metals due to their prolonged presence underground over long periods of time. These fields are generated by the continuous interaction between metals and the surrounding environmental conditions over the years. This interaction causes the accumulation of electrostatic charges around the metals, allowing the device to detect them. This system is used in open areas or deserts where radio transmission waves do not reach.

Passive Search:

This technology works by detecting changes in the active electrostatic fields around metallic objects. This system allows for increased sensitivity to a higher level than active search, enabling greater accuracy in locating metallic objects. For this reason, it is known for its high capacity to detect targets.

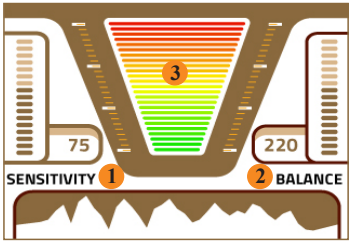
RMS Detection Mode

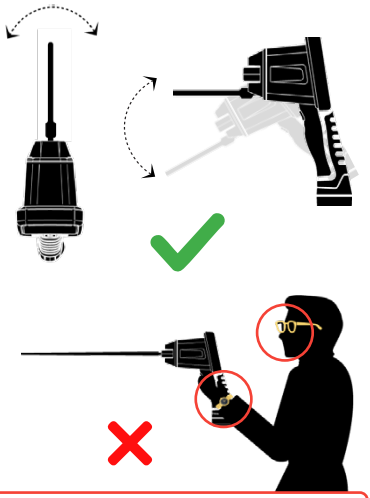
1 Sensitivity Indicator:
Adjust the sensitivity indicator to a low value for general search and increase the number to locate the target when searching for specific objects.

2 Balance Indicator:
It can be adjusted automatically using the handle button or manually using the arrows.

3 Signal Strength Indicator:
The higher the indicator, the closer the target is. You can navigate between the balance setting and the sensitivity setting using the Tab key

It is not necessary for the device to be in a fixed position for this type of search, the user can move it to the right or left depending on the target location and the nature of the terrain.



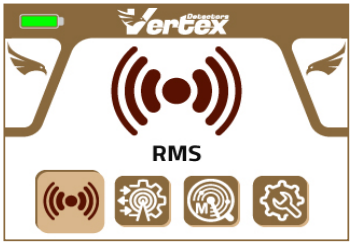


Note: All external influences should be avoided, such as (electric cables, highvoltage lines, mobile phone use, rings, watches, among others) that may affect the accuracy and validity of the results.

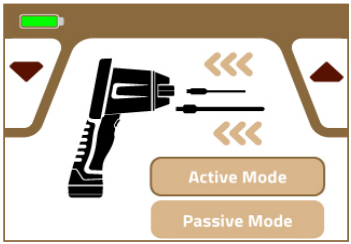
How to Use RMS Detection Mode

Install the RMS sensor and antenna as indicated above to perform the search using this technique.

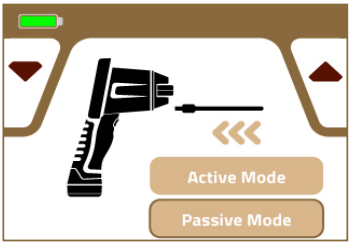
From the main interface, select the RMS detection technology. An interface will appear with two options for conducting the search using this technique.



1. RMS Active Search:
The RMS sensor must be installed in its designated position at the front of the detector, and the transmitting antenna should be placed on the movable part.



2. RMS Passive Search:
Only the RMS sensor should be installed in its designated position. Then, select what you wish to detect and press OK



How to Use RMS Detection Mode

The detection technology will start working immediately. Press the handle button in a location away from the external influences mentioned earlier, and believed to be free of targets, so the detector can begin automatic balancing. This balance can also be done manually using the arrows.

The sensitivity can also be adjusted according to the noise present in the area and external factors before you begin walking and following the signal. The detector must be in a stable condition

When using the detector in active search mode, the movement of the antenna does not indicate the direction of the target.

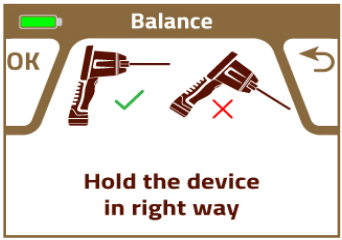
The target signal is followed through the sound and the indicators on the screen that indicate the detection of a target in the area. The user begins to walk with the detector towards the signal, and this signal increases as they approach the target, until reaching the target point and stopping over it.

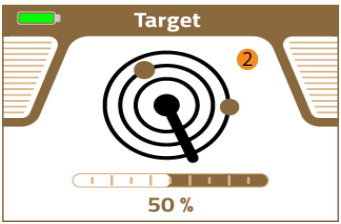
Intelligent Dynamic Search Technology
The following conditions must be considered during the search:
ADRI Active Search:

- In this technique, only the antenna should be installed.
- The detector should be held properly, so that the antenna is parallel to the ground.
- It should be oriented towards the area to be explored.
- The work should start in a fixed position, without movement, during the first stage.
- By pressing the handle button, the detector will start searching immediately.

The search technology interface will appear with the following elements:

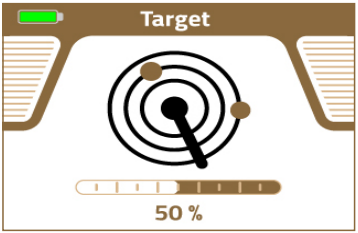
1. General search indicator for all targets.
2. Specific search indicator for each target.





How to Use ADRI Detection Mode

Hold the device and move towards the target search area. Then, wait for the signal indicated by the movement of the antenna. When a target is detected, the device will display this target on the screen for a few seconds with an interactive sound, and then continue searching for all targets.

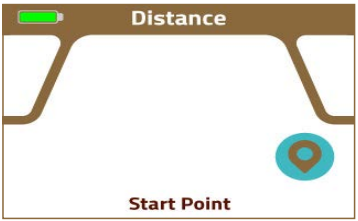


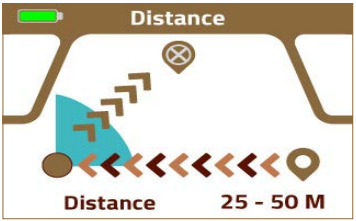
Note: During the search, if the indicator moves and stays at the far right or left, the search should be restarted in the direction where the antenna was fixed in order to perform a complete sweep of all targets.

At the end of the search process, the detected targets will appear. You can navigate between the targets using the arrows. Press Accept OK to begin tracking the desired target.

The following interface will appear:

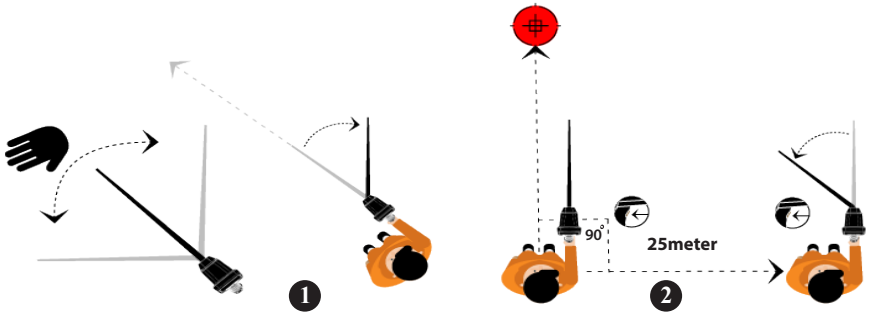
Starting point of the search. In this case, the device will emit an audible signal.





How to Use ADRI Detection Mode

The antenna should be manually rotated with a slow movement, keeping the position and angle of the device in the same search area until a distinctive sound is heard and the vibration of the device is felt. In this case, the direction of the antenna indicates the direction of the target. Then, rotate the device towards the target and press the handle button. Afterward, select the starting point with the arrows, either from the right or the left, depending on what the user deems appropriate, and then press Accept **OK**



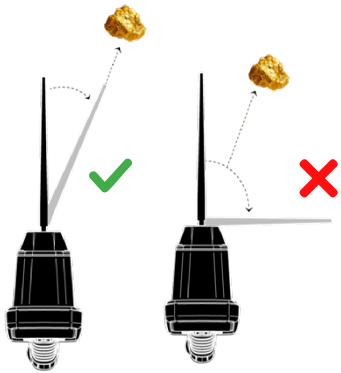
An interactive arrow will appear indicating that you need to move a distance of 25 meters in the direction of the arrow, either to the right or to the left, forming a 90 degree angle with the direction of the target

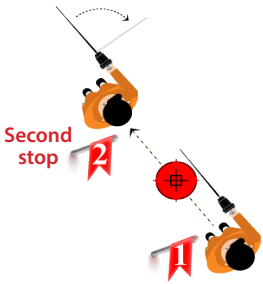
After walking 25 meters, hold the device and wait for the antenna reading:

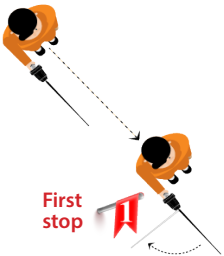
- If the antenna detects the target, press the handle button. The distance to the target will be calculated, and an interactive map of the area where the target is located will be displayed. The device will then automatically proceed to the route tracking phase.
- If the antenna does not detect the target signal, the device will ask you to walk another 25 meters.

How to Use ADRI Detection Mode

Route Tracking of the Target:
Observe the target tracking indicators, sound alerts, and correction indicators. When the target is in the direction of the path, it will appear at the center of the screen, indicating you are on the right track.If the direction of the antenna changes significantly from the path before reaching the target›s distance, you will need to repeat the previous steps.If the antenna deviates slightly to the right or left, follow the correction indicators and continue walking until the antenna completely turns to the right or left. At that point, you must stop and mark this point as the **first stop** Then, continue walking in the direction of the antenna until it turns completely to the right or left again, and stop at that moment, marking it as the **second stop**. The **target** will be located at the center of the distance between these two stop points



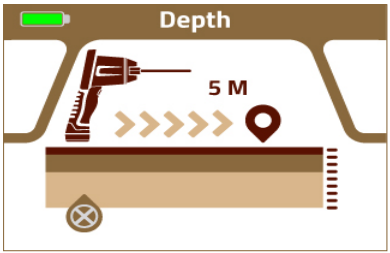


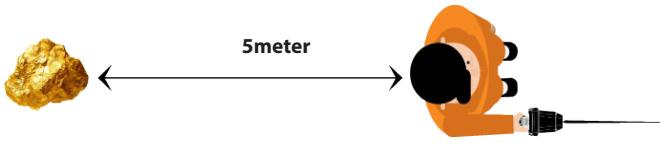


How to Use ADRI Detection Mode

Depth Measurement:

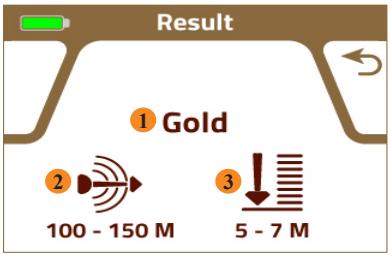
The user should move approximately 5 meters away from the target, then press Accept OK Or press the handle button and wait until the depth determination is complete, and the result will automatically appear on the screen.





When you press Accept OK the following result will be displayed:

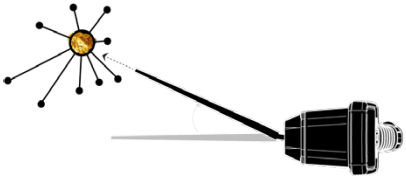
1. Type of target.
2. Distance from the starting search point.
3. Depth.



MDRI Detection Mode

Directed search technology with pre-localization:

This technology emits a frequency wave that activates the static electric field and captures the reaction generated by the collision of these waves with the targets through the antenna, which orients itself toward the target.The device emits a sound indicating that the search process is ongoing, and the speed of the sound increases as the antenna points toward the target.



Note: It is important to stay away from all external influences, such as electrical cables, high-voltage lines, use of mobile phones, rings, watches, and other similar items that may affect the accuracy and precision of the results, as mentioned earlier.

Types Of Targets:

Tin

Iron

Bronze

Copper

Silver

Gold Nugget

Gold

Void

Water

Emerald

Diamond

Meteorite

Aluminum

Lead

Distance: Up to 2500 meters.
Depth: Up to 25 meters (for metallic targets and gemstones).
Up to 200 meters (for water)
Frequency shift: From %1 to %10 of the selected target›s frequency.

Note: It is necessary to confirm what has been selected before starting the search process.

How to Use MDRI Detection Mode

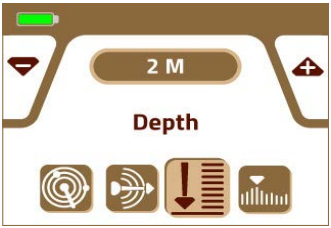
Make sure to install the antenna before starting the search process from the main menu, using the navigation key Then, select the MDRI technology and press Accept OK

Select the type of target you want to search for using the arrows

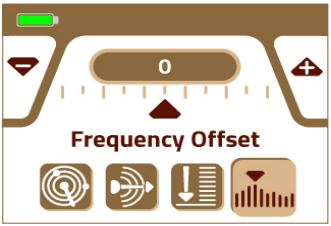
Press the Tab key to move to the distance selection and choose the search distance within which you want to conduct the search.

How to Use MDRI Detection Mode

Press the Tab key to move to the depth selection and choose the depth of the target you want to search for.



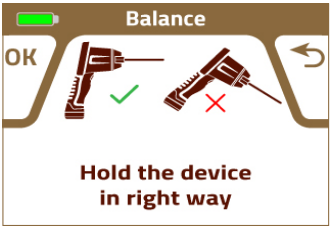
Press the Tab key to move to the frequency shift selection (optional). It is recommended to leave it at 0 when conducting a standard search.



Then press the Tab key and a screen will appear to confirm the selected information before starting the search.

How to Use MDRI Detection Mode

When you press the handle key, a message will appear indicating that you should hold the device in the correct position, making sure the antenna is parallel to the ground and your arm is in front of your chest. Press the handle key again when you are ready.

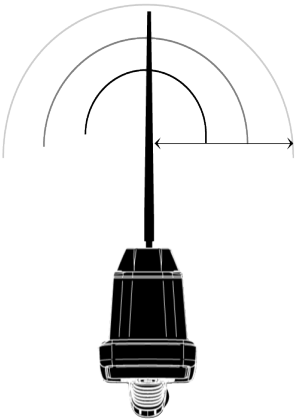


The user must walk southwards during the search, aligning himself with the Earth's magnetic fields.

The device will start emitting the signal over a radius of the distance defined by the user using the antenna.

This signal activates the static electric field within the search area, and when this field is activated, the antenna picks up the signal and automatically heads towards it, i.e. towards the target.

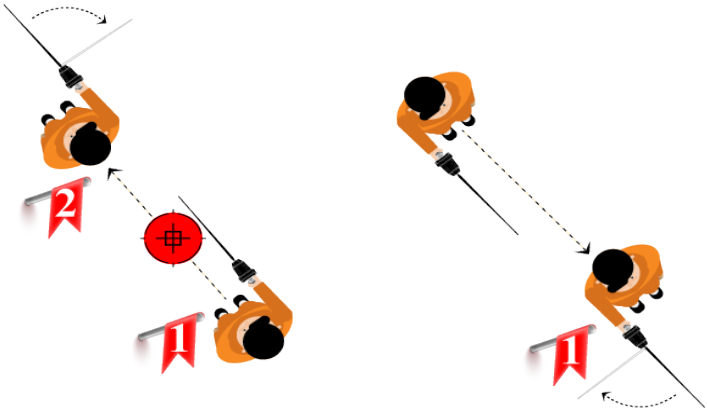
The device emits a sound indicating that the search process is in progress, and the speed of sound increases when the antenna is oriented towards the target.



How to Use MDRI Detection Mode

Methods for determining target location

1. Line between two points method



During the walk, if the antenna turns to the extreme right or left, it means that the target has been passed and you must stop at that point, which will be the **first stopping point**. This location must be marked.

Once the first location has been determined, you must turn back and wait until the antenna stabilizes again. Then, you must walk in the opposite direction to which you were walking until the antenna turns again to the extreme right or left. At this point, you must stop, which will be the second stopping point.

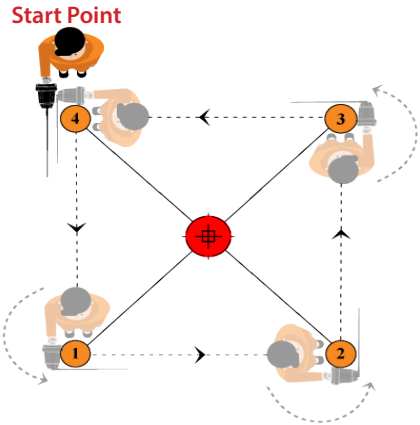
The target will be located at the **midpoint** between the **first** and **second stopping points.**

How to Use MDRI Detection Mode

2. Square method:

During the walk, if the antenna turns to the extreme right or left, it means that the target has been overtaken and you must stop at that point, which will be **stop point** 1 This place should be marked.

Then, turn in the direction of the antenna and walk until the antenna turns again in the same direction as before. This will be **stop point** 2



Turn again towards the antenna and walk until the antenna turns again in the same direction, and this will be **stop point** 3

Turn once more towards the antenna and walk until the antenna turns again in the same direction, and this will be **stop point** 4

After these steps have been completed, the target location can be determined by drawing lines between **stop point** 1 and **stop point** 3 , and between **stop point** 2 and **stop point** 4 The place where the two lines intersect will be the **target point** The closer the points are, the more accurate the target location will be.

Tips & Warnings

Tips for Achieving Optimal Results:

Avoid sources of interference: Stay away from high-voltage power lines, electrical wiring, or nearby electronic devices that may affect the accuracy of the results.

Choose the search location carefully: Ensuring it is far from influencing factors such as metals and environmental fields to guarantee accurate results.

Update device settings: Ensure that sensitivity and balance settings are adjusted according to the surrounding environment for optimal performance.

Use the battery correctly: Fully charge the battery before use to prevent power interruptions during operations.

Warnings for Ensuring Safety During Use:

Avoid hazardous areas: Do not operate the device near flammable materials or close to high-voltage power lines.

Be cautious of extreme weather: Refrain from using the device in harsh weather conditions, such as heavy rain or excessively high temperatures.

Carry the device securely: Always handle the device properly and securely to prevent it from falling or being damaged.

Handle components with care: Do not disassemble or modify the device's internal components without consulting technical support.

Device Storage Conditions :

Dry and moderate-temperature environments: Store the device in a dry place away from humidity and extreme heat or cold

Ensure the device is fully powered off: Always switch off the device completely before storing it to avoid unnecessary power consumption.

Protect from dust and impact: Keep the device in its designated carrying case to prevent exposure to dust or damage during storage.

Safety Information

The components included in this package are prone to damage from electrostatic discharge [ESD]. Please adhere to the following instructions to ensure successful device assembly.

Ensure that all components are securely connected. Loose connections may cause the device to not recognize a component or fail to start. Hold the device firmly when assembling or operating. It is recommended to discharge yourself of static electricity by touching another metal object before handling the device. Store the device in an electrostatic free environment whenever the device is not in use.

Do not assemble or operate the device before reading and understanding the user manual, as this could cause harm to the operator or the device.

The components used in the device are susceptible to damage from static electricity discharge.

It is recommended to discharge static electricity by touching a ground metal surface before starting work with the device.

Store the device in an environment free of negative charges when not in use.

Keep the device away from moisture.

Always turn off the device completely before storing it.

Follow these instructions to ensure the device is assembled correctly:

Ensure that the power outlet supplies the same voltage indicated on the charger before connecting the charger to the outlet.

Make sure all components of the device are securely connected. Loose connections may cause parts to not be recognized or the device to malfunction.

Hold the device firmly while it is in operation.

If you need assistance during the assembly or adjustment process, contact technical support via phone or internet.

Keep the user manual for future reference.

All warnings and precautions on the device and in the user manual must be observed.

Safety Information

In the event of any of the following situations, have the device inspected at a service center:

- A liquid has penetrated the device.
- The device has been exposed to high humidity.
- The device does not operate properly or cannot be turned on as described in the user manual.
- The device has fallen or sustained damage.
- There are visible signs of damage or deterioration on the device.

Do not leave the device in an environment with a temperature above 60°C (140°F), as this could damage the device.

For more information and the latest updates on products and systems:

1. Vertex Website

The Vertex website provides up-to-date information on equipment, devices, and software. Refer to the contact information page for details.

2. Additional Document

The product may include additional documents, such as warranty papers or additional guarantees provided by the distributor. These documents are not included in the standard product package.

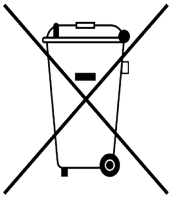
WEEE (Waste electrical and electronicequipment) statement

California, USA:

The button cell and Li-ion battery may contain perchlorate material and requires special handling when recycled or disposed of in California. For further information please visit: http://www.dtsc.ca.gov/hazardouswaste/perchlorate/

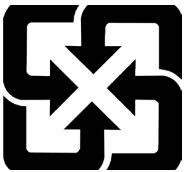
European union:

Batteries, battery packs, and accumulators should not be disposed of as unsorted household waste. Please use the public collection system to return, recycle, or treat them in compliance with the local regulations.

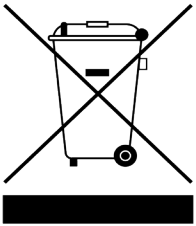


Taiwan: 廢電池請回收

For better environmental protection, waste batteries should be collected separately for recycling or special disposal.



WEEE (Waste electrical and electronicequipment) statement



To protect the global environment and as an environmentalist VERTEX must remind you that Under the European Union (" EU ") Directive on Waste Electrical and Electronic Equipment, Directive 2002/96/EC, which takes effect on August 13, 2005, products of»electrical and electronic equipment» cannot be discarded as municipal waste anymore, and manufacturers of covered electronic equipment will be obligated to take back such product at the end of their useful life. VERTEX will comply with the product take back requirements at the end of life of VERTEX branded products that are sold into the EU. You can return these products to local collection points.

Environmental Policy

The product has been designed to enable proper reuse of parts and recycling and should not be thrown away at its end of life.
Users should contact the local authorized pointof collection for recycling and disposing of theirend-of-life products.

Visit the VERTEX website

and locate a nearby distributor for further recycling information. Users may also reach us at info@vertexdetectors.com for information regarding proper Disposal,Take-back Recycling, and Disassembly of VERTEX products.

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