Quantum VX 900



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 **Quantum VX900** detector 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 **Quantum VX900** detector has been meticulously designed to provide an outstanding user experience that meets and surpasses expectations. We hope it becomes your ideal partner in exploring precious metals.

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

Vertex Team

Vertex

Introduction

The **Quantum VX900** is an advanced scientific innovation that marks a groundbreaking leap in the field of exploration, achieving a global milestone for Vertex Detectors. This cutting-edge detector integrates pioneering technologies with precision, making it one of the most powerful tools for detecting gold, hidden treasures, metals, and cavities.

With the advanced **Active Sensing Unit (ASU V35),** the detector offers exceptional accuracy in identifying both modern and ancient metals. It also supports dual and three-dimensional ground imaging, allowing users to obtain a detailed visual representation of buried targets. This technology can be easily tested on new metals without requiring them to be buried, demonstrating the detector's precision in real-world conditions.

The detector is equipped with SFX advanced detection technology, ensuring stable performance and ultra-fast target acquisition. It is compatible with **V10 and V25 search coils,** which are meticulously designed to adapt to various environments while providing enhanced depth penetration and extended detection range.

Additionally, the **Quantum VX900** features an advanced **Remote Signal Processing Unit (RSPU),** enhancing its ability to detect targets from long distances. It also includes the **VX100 PinPointer unit,** enabling precise pinpointing of small targets during excavation.

The **Quantum VX900** represents a technological revolution in metal detection, delivering high-precision, professional-grade performance that meets the expectations of expert and ambitious explorers alike. It is designed for efficient and reliable operation in diverse environmental conditions.

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Overview

Warranty:
The detector 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 **Quantum VX900** detector 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 detectors efficiency and continue enjoying warranty services, please follow the instructions outlined in the user manual.

Overview | Why Choose the Quantum VX900

- ✓ **Multiple Detection Technologies:** Combines advanced ground imaging, precise SFX technology, and long-distance detection, providing maximum flexibility and reliability in exploration.

- ✓ **Exceptional Accuracy:** Delivers highly reliable target identification with enhanced metal differentiation, helping to avoid unwanted signals.

- ✓ **Durable and Ergonomic Design:** Built from lightweight yet durable materials, featuring an ergonomic design that allows extended use without fatigue, making it ideal for various environmental conditions.

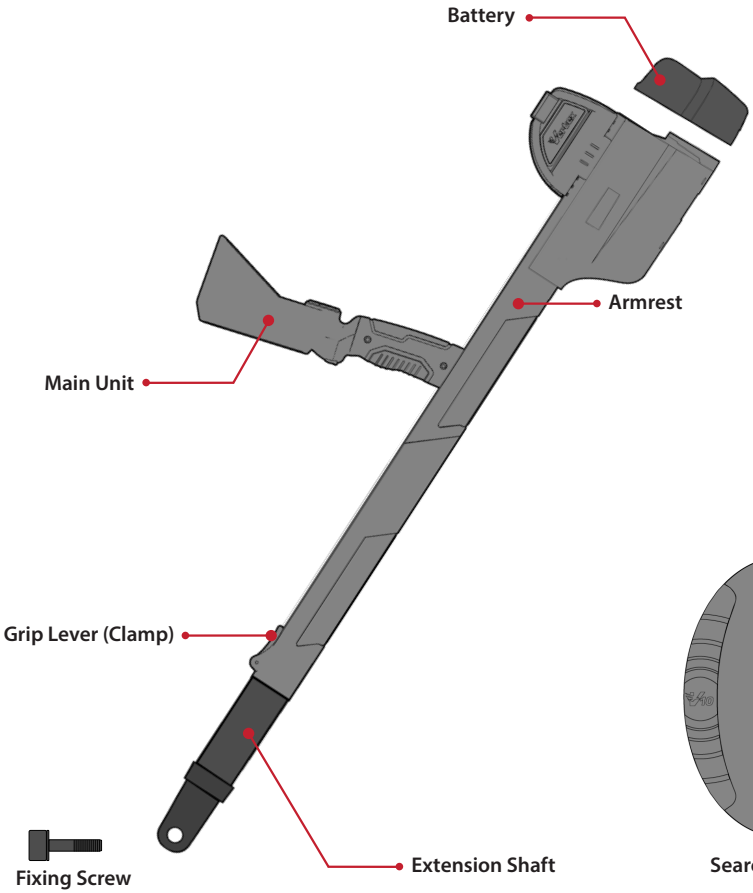
- ✓ **Smart Operating Systems:** Fully customizable search settings, including detection sensitivity, different search modes, and discrimination settings, enabling users to achieve optimal results with unmatched precision.

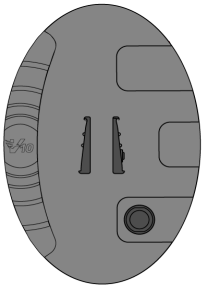
- ✓ **Advanced Search Tools:** Equipped with multiple search coils, allowing efficient targeting of both small and large objects at varying depths and distances, making it highly effective across different terrains.

- ✓ **Powerful and Replaceable Battery:** Operates on a rechargeable battery lasting up to 6 hours, with fast charging via Type-C, and allows easy battery replacement with spare batteries to ensure uninterrupted operation.

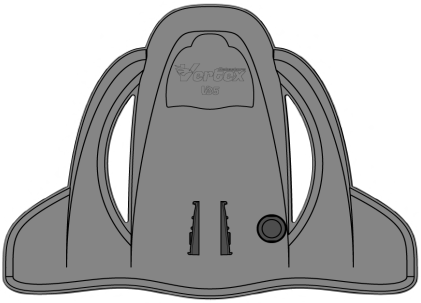
- ✓ **Smart and User-Friendly Interface:** Features a multi-language color display, providing smooth control over settings and effortless search mode adjustments during field operations.

The Quantum VX900 is the ultimate choice for professional explorers and ambitious researchers seeking precise and efficient performance in all exploration conditions.





Search Coil (V10)



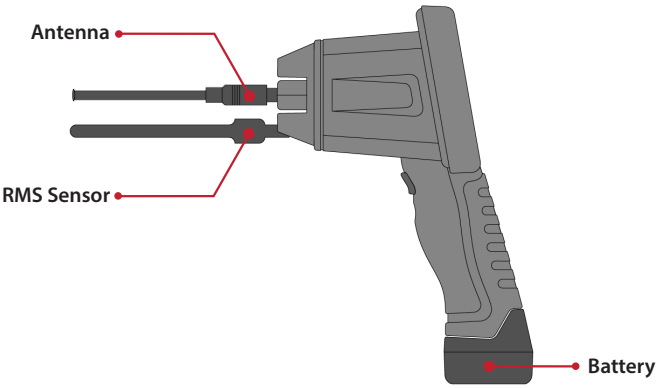
Active Sensing Unit (ASU V35)



Search Coil (V25)



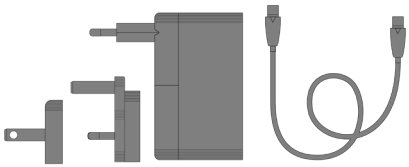
PinPointer (VX100)



Remote Signal Processing Unit (RSPU)



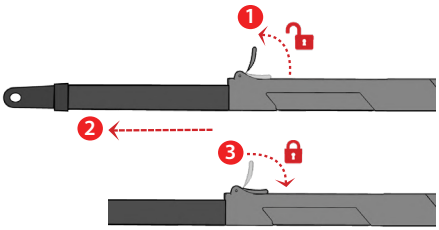
Headphones



Type-C PD 65W Charger

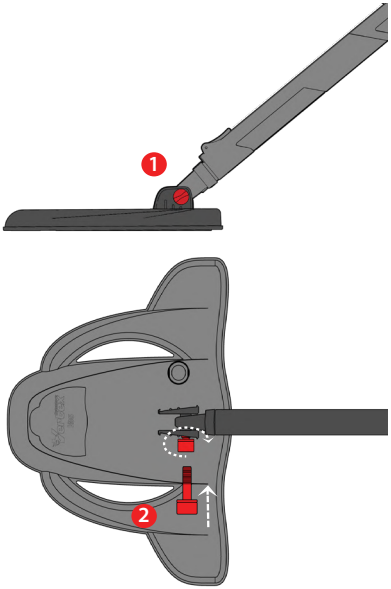
Extending the Arm:

1. Move the grip lever (clamp) to the open position as shown in the image. This will allow you to freely adjust the arm's length.
2. Pull the arm outward or push it inward according to the direction indicated by the red arrows. Adjust the length to a comfortable position for use.
3. Move the lever back to the closed position and ensure the lock is securely fastened to prevent any slipping during use.



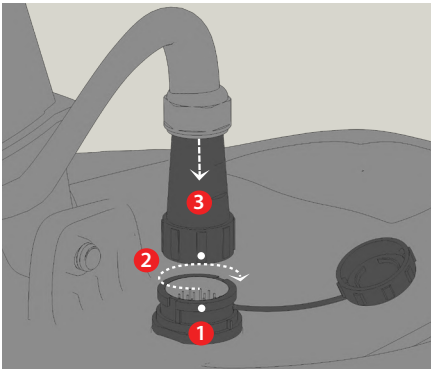
Attaching the Search Coil:

1. Place the detector on a flat surface so that the search coil is parallel to the ground, as shown in the image. Position the arm's end into the designated slot on the coil, ensuring that the side holes of the arm align with the holes on the coil.
2. Insert the screw through the aligned holes from the left side of the arm and coil. Turn it clockwise until it is firmly secured. Ensure it is tight enough to hold the coil in place, but avoid over-tightening to prevent damage to plastic parts.

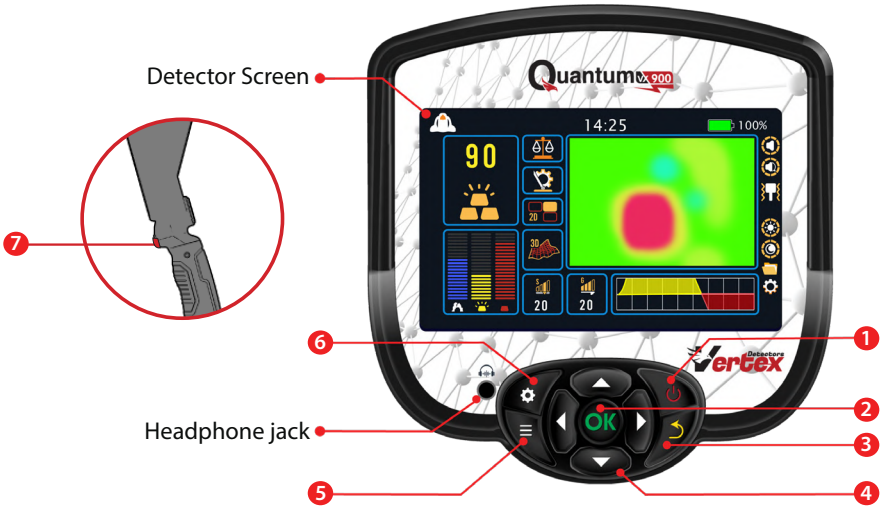


Connecting the Search Coil:

1. Locate the connector port on the coil. Align the white marks on both the plug and socket before inserting to ensure a proper connection, as shown in the image.
2. Gently insert the plug into the socket, ensuring it is oriented correctly. Push it in gradually while applying slight downward pressure to secure it along the correct path.
3. Once the plug is partially inserted, rotate the locking nut while continuing to apply pressure until the plug is fully inserted. Tighten the locking nut securely to ensure a stable and firm connection



Overview | Controls



1 Power On/Off	Press and hold for 3 seconds to turn the detector on or off.
2 Confirmation Button	Used to confirm and enter the selected option.
3 Back Button	Returns to the previous menu or cancels the current operation.
4 Navigation Arrows	Navigate through the user interface and control search options.
5 Tab Button	Switches to quick settings on the right side of the main interface and navigates between them.
6 Settings Button	Pressing it once temporarily pauses the search technology, and pressing it again resumes the search. Displays a yellow frame around one of the search technologies or the device settings icons at the bottom of the main interface. Using the arrow keys and the confirmation button, the user can select the desired search technology or any icon for device adjustment.
7 Handle Button	The handle button performs multiple functions depending on the type of search coil being used. When switching coils, the button's interaction with settings and search features may vary. Refer to the detector's settings for each coil to ensure optimal use and performance.

Overview | Technical Specifications

Operation Principle	Signal analysis, data processing, and conversion into visual and audible results.
Processing Type	High-Performance ARM CORTEX M7.
Display Screen	TFT Color Display, 5 inches, 480 x 800 WVGA.
Battery	Lithium-ion, detachable, 12.6V / 3500 mAh.
Power Consumption	600 mA (average).
Battery Runtime	Over 6 hours of continuous operation.
Charger	Type-C – PD 65W.
Detection Audio	Interactive frequency sound technology.
Control Audio	High-quality mono sound.
Languages Supported	English, French, German, Spanish, Italian, Russian, Arabic.
Weight (Device + Accessories)	10 kg.
Weight (Device + V10)	2.5 kg.
Weight (Device + V25)	2.9 kg.
Weight (Device + V35)	3.0 kg.
Dimensions (With Packaging)	92cm x 23cm x 55cm.
Dimensions (Without Search Tools)	82cm x 39cm x 13.5cm.
Active Sensing Unit ASU	V35 ground imaging sensor, dimensions: 13 x 17.5 inches.
Supported Search Coils	V10: 8 x 12 inches V25: 12 x 12 inches
RSPU Unit	Multi-detection technology from long distances
VX100 Unit	Designed for precise searches
Operating Temperature	10°C to 60°C.
Storage Temperature	10°C to 80°C

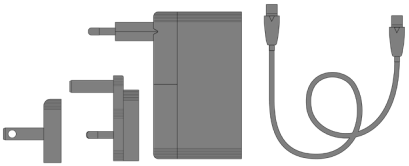
Overview | Battery & Charging

The **Quantum VX900** utilizes a removable and rechargeable lithium-ion battery with a capacity of 12.6V / 3500mAh, providing over 6 hours of continuous operation under normal search conditions. The detector supports fast charging via a Type-C PD 65W port, ensuring quick and efficient charging to maintain uninterrupted operation.



Battery Charging:

- Use only the included charger to ensure optimal performance and battery longevity.
- Charge the battery through the Type-C port located on the battery itself.
- Battery charge level is indicated by the number of illuminated LED indicators on the battery:

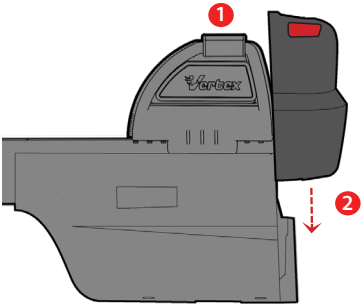


● One light on → Battery is 25% or less charged.
● ● Two light on → Battery is 50% charged.
● ● ● Three light on → Battery is 75% charged.
● ● ● ● Four light on → Battery is fully charged (100%).
The charging status can be easily monitored using the integrated LED indicators.

Installing and Removing the Battery

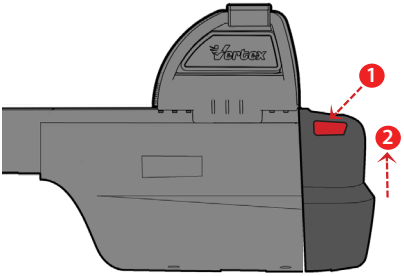
To install the battery:

1. Align the rear groove of the battery with the wide notch on the back of the main unit, ensuring that the red battery lock is facing upward.
2. Push the battery downward until you hear a click, indicating that the lock has secured it in place.



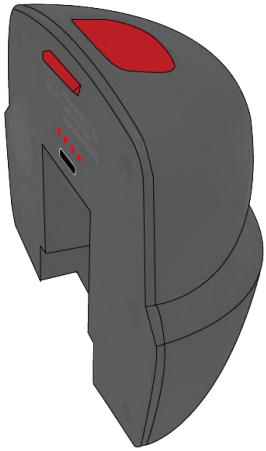
To remove the battery:

1. Pull the red lock backward to release the latch.
2. Lift the battery upward to remove it from the detector.

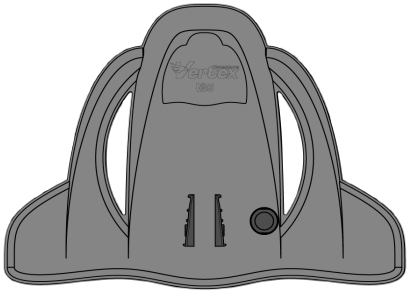


Tips for Extending Battery Life:

- Avoid using non-original or low-quality chargers, as they may damage the battery or the detector.
- Do not leave the battery connected to the charger for extended periods after it is fully charged.
- Turn off the detector when not in use to preserve battery life.
- Store the battery in a cool, dry place, away from direct sunlight and humidity to maintain its efficiency.



1. Analytical Ground Imaging Technologies

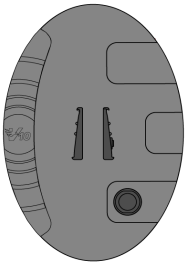


Utilizing the Active Sensing Unit (ASU V35), this technology delivers 2D and 3D imaging, providing precise target analysis and accurate depth measurement, ensuring a comprehensive view of the scanned area.

- **Pioneering Technology:** The first of its kind worldwide, integrating multiple scientific innovations for highly precise subsurface analysis, effectively detecting both modern and ancient metals.
- **Advanced Ground Imaging:** Supports direct imaging and dual/triple-dimensional scanning, offering detailed target visualization.
- **Customizable Scanning Features:** Allows users to adjust search area dimensions and scanning methods according to their needs.
- **High-Precision Analysis:** Generates detailed reports on target type and depth measurements with exceptional accuracy.
- **3D Object Control:** Enables multi-angle visualization for a clearer understanding of target details.
- **Instant Verification:** New metals can be tested directly without requiring pre-buried targets, unlike conventional detectors.

2. Modern SFX Detection Technology

Designed with advanced sensing techniques, this system ensures ultra-fast target detection and precise metal differentiation.





Compatible Search Coils

- **V10 Search Coil (30 × 20 cm)**
  - » Ideal for detecting small to medium-sized targets with high accuracy.
  - » Provides precise differentiation between objects, including natural gold nuggets.

- **V25 Search Coil (33.5 × 33.5 cm)**
  - » Designed for greater depth detection, optimizing the performance for precious metals and larger targets.
  - » Equipped with the D2 Layered Analysis System for deeper target evaluation.

SFX Technology Features

- **Exceptional Stability:** Ensures balanced performance across all terrains, including sandy, mountainous, and wet soils.
- **Advanced Calibration System:** Offers multiple detection modes to maximize depth penetration in different landscapes.

How the Detector Works with V10 & V25

The device operates using advanced SFX technology. When either the V10 or V25 search coil is connected, the coil emits waves that penetrate the ground layers without losing energy.

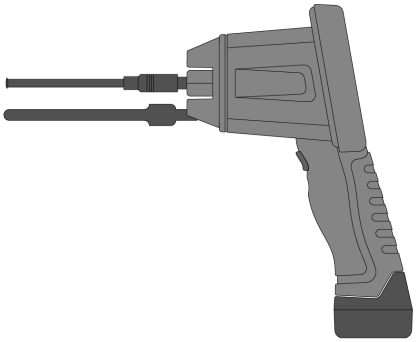
When these waves encounter a buried metallic target, they undergo a change in their reflected signal properties depending on the type, size, and physical characteristics of the metal.

These reflected signals are then received by the search coil and processed using advanced digital filters, allowing precise target differentiation and eliminating unwanted signals for highly reliable results. The signal is further analyzed and interpreted through mathematical processing, providing insights into target type and depth beneath the surface.



3. Remote Signal Processing Unit (RSPU) Technologies

The RSPU unit is designed for exceptional accuracy in detecting targets from long distances. It features a compact design, user-friendly interface, and a removable battery with fast charging via Type-C, making it ideal for field exploration.



Supported Technologies:

- **RMS Technology**

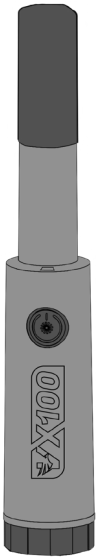
  Analyzes electrostatic fields using advanced mathematical algorithms, operating in two modes.
  - » **Passive Mode:** Receives active signals to analyze the site and reduce interference.
  - » **Active Mode:** Uses high frequencies to enhance detection efficiency in dry and desert soils.

- **ADRI Technology**
  - » Simulates physical resonance to stimulate electrostatic fields, enabling precise detection of buried metals and treasures.
  - » Supports comprehensive area analysis using AI algorithms.
  - » Includes a target-tracking feature for easy final positioning.

- **MDRI Technology**
  - » Allows users to manually input search parameters, such as metal type, depth, and target distance.
  - » Uses guided frequencies for focused target detection, supporting searches at depths of up to 25 meters and distances of up to 2500 meters.

4. PinPointer VX100 Technologies

- Supports multiple detection modes, including sound-only, sound + vibration, or vibration-only.
- Equipped with an LED flashlight for nighttime searches.
- Provides precise sensitivity control, allowing users to adjust the detection range.
- Ensures fast and accurate pinpointing of small targets during excavation, reducing search time and effort.
- Features a durable, shock-resistant, and waterproof design, ensuring easy handling and field usability.
- Rechargeable built-in battery lasting up to 10 hours, with fast charging support via Type-C



Applications & Uses of the Quantum VX900 Detector

- **Buried Metal and Treasure Detection:** Provides high-precision detection of gold, precious metals, cavities, and buried treasures, even at great depths and distances, making it an ideal tool for professional exploration and prospecting.

- **Archaeological Applications:** Assists archaeologists and researchers in accurately identifying ancient sites and buried relics.

- **Geological Surveys:** Enables detailed analysis of soil and rock layers, providing accurate data for geological studies and underground exploration, enhancing mineral prospecting and natural resource investigations.

- **Construction and Infrastructure Applications:** Used to locate underground pipes, sewage systems, and infrastructure, helping to ensure construction site safety and minimize excavation risks.

- **Forensic Investigations:** Supports criminal investigations and forensic searches by detecting hidden or buried objects in open fields, aiding in security operations and advanced search techniques.

- **Long-Distance Detection Technologies:** Allows for wide-area scanning using advanced remote detection techniques, enabling the identification of potential target locations before detailed excavation begins.

- **Scientific Exploration and Environmental Studies:** Utilized in natural resource detection, soil assessment, and geological layer analysis, supporting sustainable environmental planning and scientific research.

Targets

The following table displays the numeric values associated with different types of detected targets:

Numeric Value	Target Type
From -90 To 0	Non-Precious Metals – Aluminum Foil – Tin Sheets
From 0 To 40	Copper – Bronze – Precious Metal Alloys
From 40 To 75	Gold – Gold Nuggets – Zinc – Precious Metal Alloys
From 75 To 90	Chromium – Silver – Large Aluminum Pieces

Cavity Detection: A cavity is one of the detectable targets of the Quantum VX 900. It is identified through color indicators on the device interface, appearing in blue, which helps users accurately locate potential underground cavities.

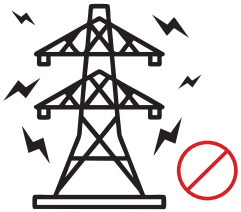
Note: The numeric value of a detected target may vary depending on the metal type, alloy composition, and size.

Tips Before Starting the Search

- **Keep metal objects away:** Ensure that phones, watches, necklaces, bracelets, and other metal items are kept at a safe distance from the search area. This prevents interference with the detected signals, which could lead to inaccurate or false readings.

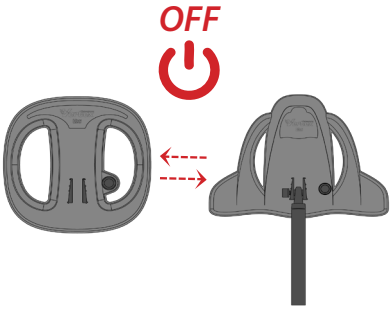


- **Avoid high-voltage lines and industrial areas:** Stay away from power lines, industrial facilities, and iron debris. If searching in such areas is necessary, it is recommended to reduce the sensitivity level to minimize interference.



- **Maintain distance between detectors:** When using multiple metal detectors simultaneously, ensure a minimum distance of 100 meters between them to prevent signal interference.

- Avoid switching the search coil while the detector is powered on, as this may cause calibration errors or damage to the electronic system. It is recommended to turn off the detector completely before replacing the coil, then restart it after the swap to ensure optimal performance and accuracy.



Main User Interface



Quick Settings:
Accessible via the Tab button ☰ allowing rapid adjustments:

1 General Sound	
2 Search Sounds	
3 Vibration Mode	

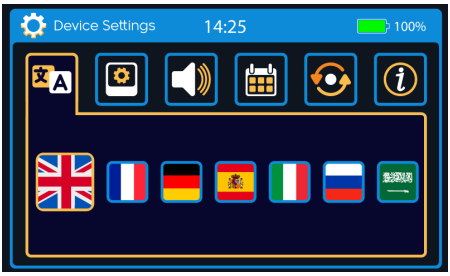
4 Brightness	
5 Idle Mode	
6 Setting	

● **Archives Menu:** Available exclusively when using the V35 search module. 

Each option can be adjusted using the up and down arrows ▲▼ or by pressing the **OK** button to access the Settings or Archives Menu.

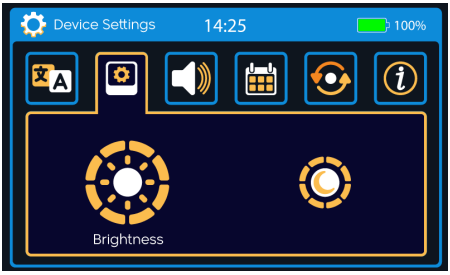
General Settings

Languages:
Select language using the arrow keys and confirm with the **OK** button Available languages: English, French, German, Spanish, Russian, Italian, Arabic.



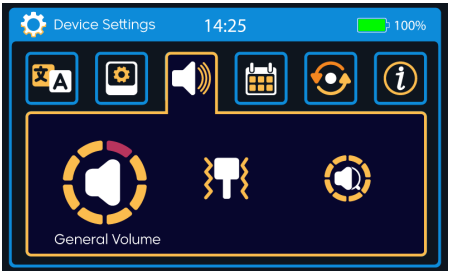
Display Settings:

- **Brightness:** Adjust brightness levels using the up and down arrows
- **Sleep Mode**: Enables automatic dimming to save power. Access this setting using the right arrow and adjust via the up and down arrows

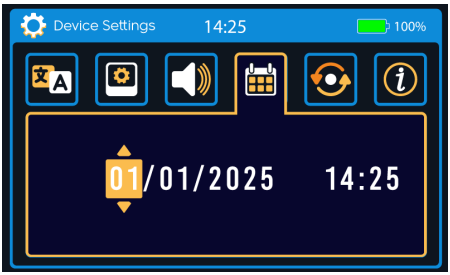


Sound Settings:

- **General Sound:** The detector emits sound signals during operation. This can be completely muted or adjusted using the up and down arrows
- **Vibration Mode:** Accessible via the right arrow, enabling or disabling vibration when pressing buttons for additional alerts. Adjustable via up and down arrows
- **Search Sound:** The detector produces search signals. This setting can be accessed via the right arrow, and volume levels can be adjusted using the up and down arrows

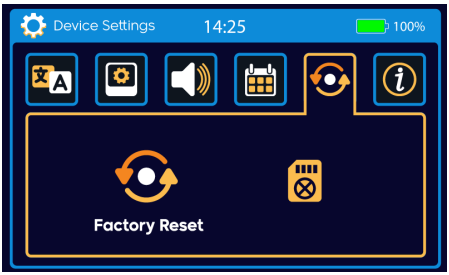


Setting Date and Time:
To set the date and time, select the Date & Time icon and press the **OK** button. Use the arrow buttons to adjust the day, month, year, and time accurately. Once the settings are adjusted, press the Back button to save the changes.



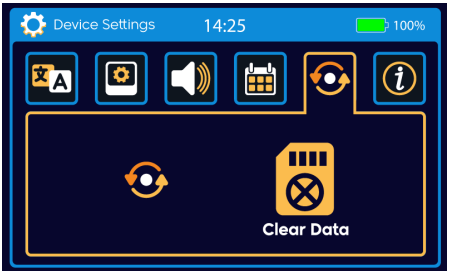
General Settings

Factory Reset:
This option restores all settings to their default values. When selected, a confirmation message appears: Are you sure you want to proceed with this operation? (✔/✘)



Clear Saved Data:
Through the device settings, the user can access the Clear Data option to delete all saved files related to previous search operations.

When this option is selected, a deletion confirmation message will appear:
«Are you sure you want to proceed with this operation? (✔/✘)



This action will permanently delete all saved files from the device's memory.

Detector Information:
Displays essential data, including:

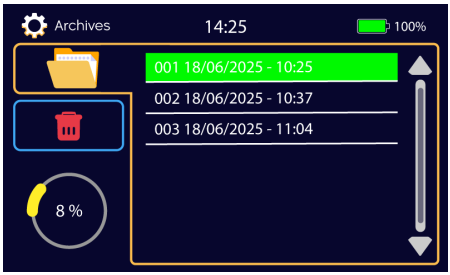
- Serial Number
- Software Version
- Total Operating Hours



General Settings

Archives Menu:
When using the V35 Active Detection Coil, search operations can be saved for later review or to compare different scans.

Accessing the Archives Interface:
The user can access the Archives interface by pressing the file icon located in the quick settings bar when the V35 coil is connected. This interface allows for full management of saved files.

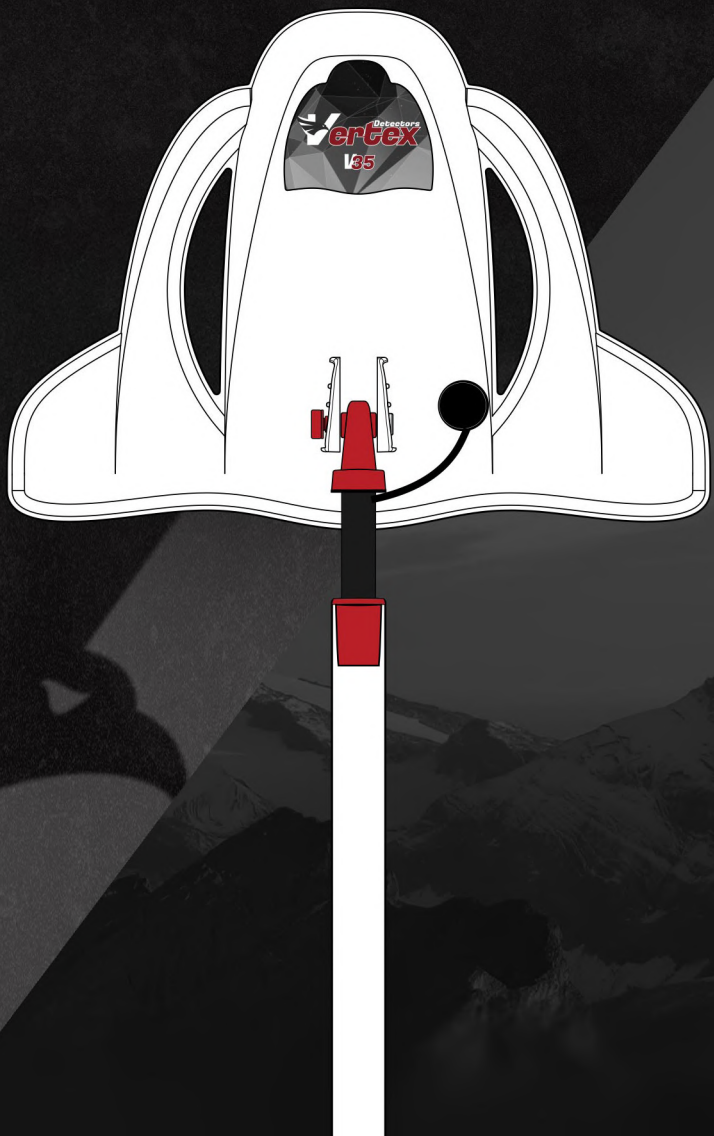


Interface Components and Functions:

- **File List:** Displays all saved search operations, sorted by date and time.
- **Open File:** Upon entering the Archives interface, the (Open File) option is selected by default. Any file can be selected from the list and opened to view its detailed results.
- **Delete File:** To access the delete option, press the Back button, then use the arrow keys to select Delete, and press **OK** to confirm.
- **Storage Capacity Indicator:** Appears at the bottom of the interface, showing the percentage of memory used for storing files.

Note: The save feature is only available when using the V35 coil. It is not supported with other search tools.

ACTIVE SENSING UNIT V35



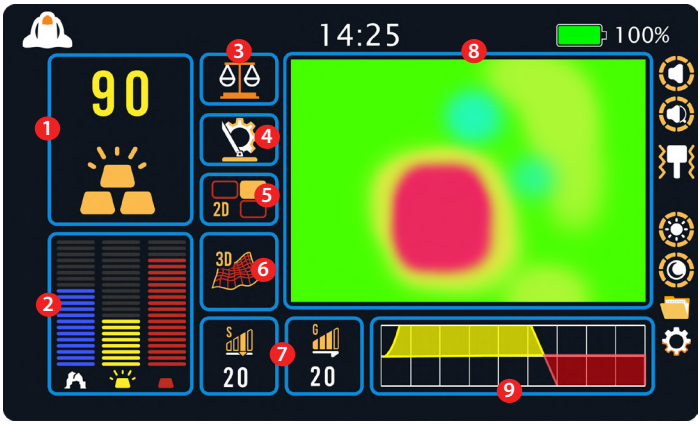
Active Sensing Unit V35

The **Active Sensing Unit V35** is an advanced search tool that employs modern technologies to detect various targets and precisely analyze their nature. This unit utilizes 2D scanning and 3D searching to accurately determine target locations. Additionally, it provides visual indicators and graphical analysis, allowing the user to identify the type of target, including precious metals, non-precious metals, cavities, and natural ground.

The V35 features an interactive user interface, enabling adjustments to sensitivity and gain settings, as well as ground calibration according to the soil type. This makes it an ideal tool for geological surveying and detecting metals and cavities. The unit also offers both manual and automatic search options, granting the user significant flexibility in defining the search area and accurately analyzing results through controllable 3D models.

With its advanced technology and user-friendly operation, the V35 unit provides an effective exploration experience for both professionals and hobbyists, making it a reliable choice for searching in various geographical environments.

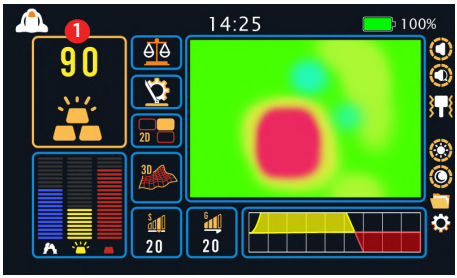
User Interface with the Active Sensing Unit V35



1. **Target ID**
2. **Target Indicators**
3. **Ground Calibration**
4. **Search Settings**
5. **2D Scanning Technology**
6. **3D Scanning Technology**
7. **Sensitivity & Gain**
8. **Live Scanning**
9. **Graphical Display**

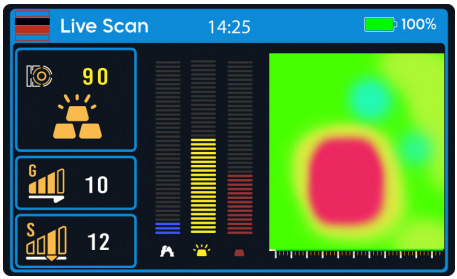
1. Target ID

Target ID is a numerical value displayed on the screen during a search, representing the metallic properties of the detected target. It helps distinguish different metal types by displaying specific numbers that indicate the composition of the detected material. This assists the user in making an informed decision before digging or analyzing the site.



How Target ID Works

- When the search unit passes over a metallic object, the detector analyzes the reflected signals and assigns a numeric Target ID based on its metallic composition.
- This value is displayed in the upper-left corner of the main interface.
- Pressing the **OK** button while identifying the Target ID switches to Live Scanning mode for a more detailed real-time target analysis.



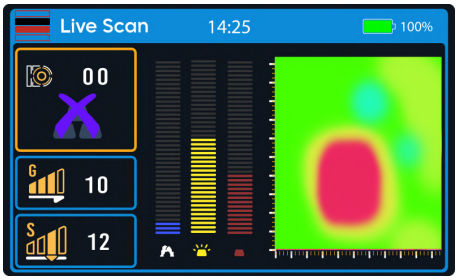
Target ID Interpretation

- **High Target ID values:** Typically indicate precious metals such as gold or silver.
- **Medium and low Target ID values:** May indicate non-precious metals like iron, copper, or aluminum.
- Cavities do not have a numerical Target ID, but they can be identified through blue color indicators and graphical scanning properties.

Note: The numerical values for precious and non-precious targets appear based on the Target ID value table (Refer to page 19 for details).

Deep Search Activation

This mode allows the user to enhance the detector's ability to focus solely on deep targets, while ignoring signals generated by shallow objects.



Activation Steps:

- Press the Settings button.
- Select the Target ID window.
- Enter the Live Scan interface.
- Press the Settings button again.
- Choose Target ID from the list.
- Press the **OK** button.

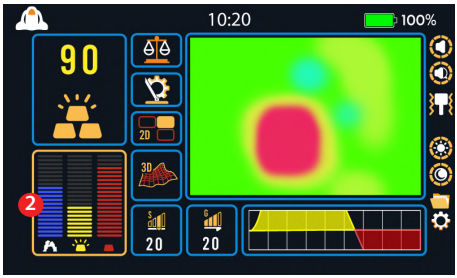
When this mode is activated, a purple icon appears on the screen, indicating that the device will now ignore shallow targets and concentrate only on deep metallic objects and cavities.

Deactivation:

To disable Deep Search mode, repeat the same steps. This will remove the purple icon and return the device to its normal detection mode for all depth levels.

2. Target Indicators

Target indicators are color-coded symbols displayed on the detector's screen during a search. They help identify the type of detected target based on its response to signals transmitted by the sensing unit. These indicators provide instant visual analysis of the target's nature, making it easier for the user to interpret results without requiring complex data analysis.



Color Indicators and Their Meanings

Blue Indicator: Represents cavities, such as caves, tunnels, or underground cavities.

Yellow Indicator: Represents precious metals, such as gold and silver.

Red Indicator: Represents non-precious metals, such as iron, aluminum, or copper.

Target ID Interpretation

- **High Target ID values:** Typically indicate precious metals such as gold or silver.
- **Medium and low Target ID values:** May indicate non-precious metals like iron, copper, or aluminum.
- Cavities do not have a numerical Target ID, but they can be identified through blue color indicators and graphical scanning properties.

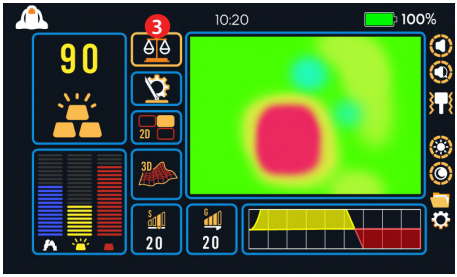
Note: When analyzing results, compare the color indicators with other data such as Target ID and Live Scanning to confirm the detected object's nature.

3. Ground Calibration

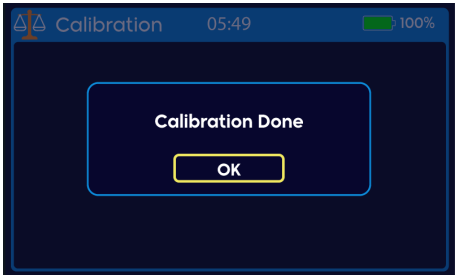
Ground calibration is the process of adjusting the detector based on the soil type to ensure accurate searching and reduce interference caused by naturally occurring ground minerals. This process enhances the detector's ability to distinguish real targets from false signals generated by mineralized soil, making the search more efficient and precise.

Steps for Ground Calibration

1. Access the calibration mode by pressing the calibration icon in the main interface.
2. Select the soil type from the displayed list.
3. Raise the search unit approximately 10 cm above the ground to maintain accurate readings.
4. Press the **OK** button to start calibration; a percentage counter will appear on the screen.
5. Wait until the counter reaches 100%, then a confirmation message will appear, indicating that calibration has been successfully completed.

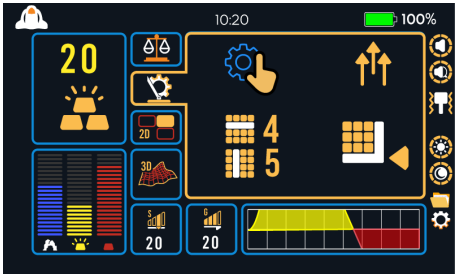


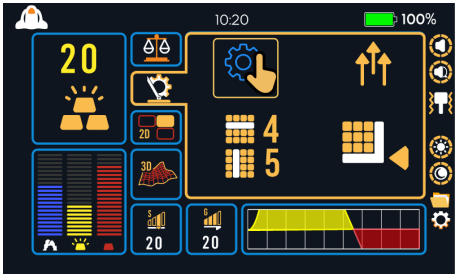




4. Search Settings

Search settings allow users to customize the scanning process based on their specific needs and site conditions. These settings include various options such as search mode (manual or automatic), search paths, grid dimensions, and starting point selection





Search Settings Options:

1. Search Mode

- **Manual Search:** Allows full user control over the scanning process. The user must press the handle button at each step during the scan.
- **Automatic Search:** Is performed column by column, with the system automatically transitioning to the next column. The user must press the handle button to continue scanning each column. This mode operates exclusively in a zigzag scanning pattern only.

2. Search Paths

- **One-directional scanning:** Conducts a linear scan in one direction per column.
- **Zigzag scanning:** Uses a back-and-forth pattern for more efficient area coverage.

3. Search Grid

- Users can adjust the search grid by selecting the number of rows and columns, ranging from 3 to 9, allowing for precise area coverage.

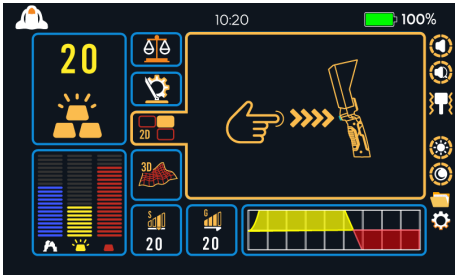
4. Search Starting Point

- Users can choose to start scanning from the right or left, depending on site conditions and movement preferences.

Note: Properly configuring the search settings ensures maximum area coverage and accurate results during scanning.

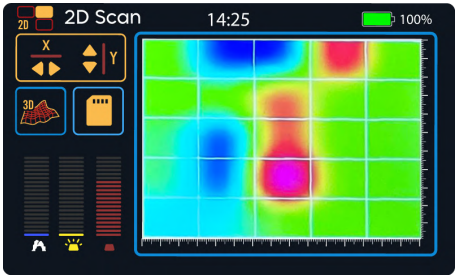
5. 2D Scanning Technology

2D scanning technology is an advanced method for detecting underground targets by mapping an analytical scan grid based on signals received from the search unit. The resulting data is displayed on the screen as a color-coded analytical map, representing the buried object's nature according to their response to transmitted signals. This technology is activated by pressing the handle button, as indicated on the screen.



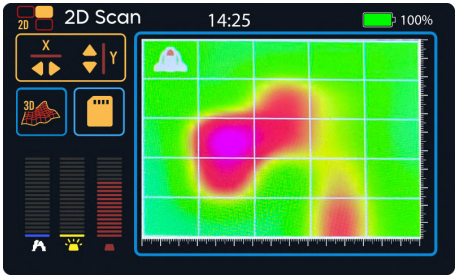
How 2D Scanning Works

- The search grid is determined by setting the number of rows and columns based on the target area size.
- The user moves over the defined area following the selected search mode (manual or automatic).
- Data is recorded at each grid point, and potential targets appear on the screen in different colors representing their nature.



2D Scanning Modes

- **Manual Mode:** Requires the user to press the handle button at each scanning step to record points within the grid.
- **Automatic Mode:** Records points automatically while moving, maintaining a consistent speed for accurate data collection.

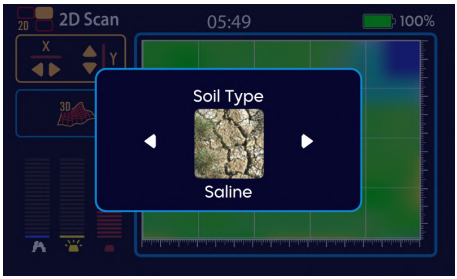


Color Interpretation in the Scan Grid

Blue: Represents Cavities (caves, tunnels, cavities).
Purple: Indicates precious metals (gold, silver).
Red: Represents general metals (iron, copper).
Green: Represents natural ground (no buried targets).

How to Use 2D Scanning Technology

1. Calibrate the detector to adjust settings based on soil type.
2. Select the search mode (manual or automatic).
3. Set the number of rows and columns in the search grid.
4. Start the scan by pressing the handle button while following the selected pattern (one-directional paths or zigzag pattern).Analyze the results on the screen and compare colors to determine the target type.



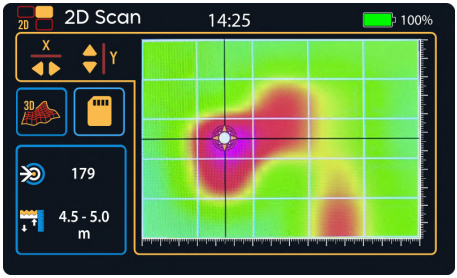
Note: For optimal accuracy, automatic scanning is recommended for large areas, while manual scanning is ideal for narrow or uneven terrains.

Saving a Scan Operation

After completing a ground scan using the 2D Scan mode, the user can save the scan results for future reference or review.

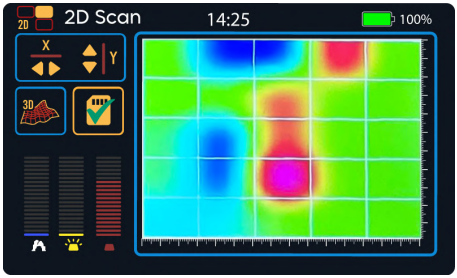
Saving Steps:

Once the scan is complete and the results are displayed on the screen, press the Save icon located next to the 3D icon on the left side of the screen.



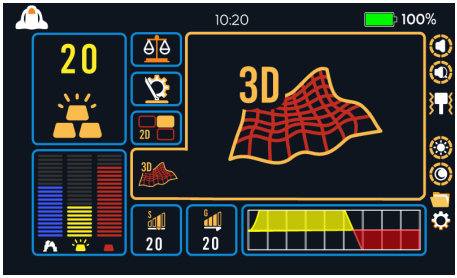
The scan will be automatically saved to the Archives Menu, along with the date and time of the operation.

Note: Saved files can later be opened or deleted through the Archives Interface available in the Quick Settings Bar (when using the V35 coil).



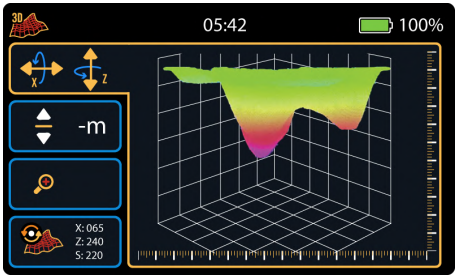
6. 3D Scanning Technology

3D scanning technology is an advanced feature that allows users to view and analyze detected targets in a three-dimensional representation from all angles. This helps in accurately determining the shape, size, and depth of buried objects. The technology relies on data collected from the 2D scanning process, which is then converted into a fully interactive 3D model that can be manipulated on the detector's screen.



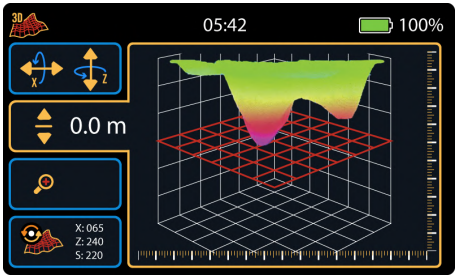
How 3D Scanning Works

- Initial scanning is performed using 2D scanning technology, where data is collected based on the defined search grid.
- Once the scan is complete, the data is analyzed and converted into a 3D model that represents the distribution of targets underground.
- The model can be rotated and viewed from different angles using the control buttons, helping to accurately determine the target's shape and its position relative to the surface.



How to Use 3D Scanning Technology

1. Perform a 2D scan according to the required settings.
2. Once the scan is complete, press the 3D View icon.
3. Use the arrow buttons to rotate the model and explore the target from different perspectives.
4. Press the Depth Analysis icon to determine the precise depth of each point within the model.
5. If necessary, use the zoom in/out icon to examine details more clearly.



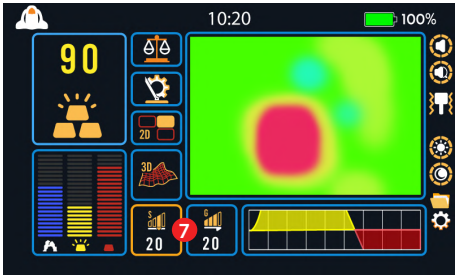
Importance of 3D Scanning Technology

- ✓ Provides a clearer understanding of buried targets compared to traditional scanning.
- ✓ Reduces estimation errors by offering a more detailed visualization of the object.
- ✓ Facilitates accurate excavation by pinpointing the exact digging location based on the target's dimensions and depth.

Note: 3D scanning technology is ideal for treasure hunters and archaeologists, as it provides detailed insights into the shape and position of objects before beginning excavation or exploration.

7. Sensitivity & Gain

Sensitivity and Gain are two essential settings that influence the detector›s ability to capture signals and analyze buried targets. These settings help improve detection accuracy while reducing interference caused by environmental conditions or naturally occurring ground minerals.



Sensitivity

- Determines the detector's response level to signals received from detected targets.
- Increasing sensitivity enhances the ability to detect small or deep objects.
- Decreasing sensitivity reduces false signals caused by ground minerals, preventing unwanted interference.



Gain

- Controls the amplification level of the signal received from the target, improving readings at various depths.
- Increasing gain enhances signal reception from deep objects, but may also increase interference.
- Decreasing gain improves stability, particularly in areas with high natural metal content.

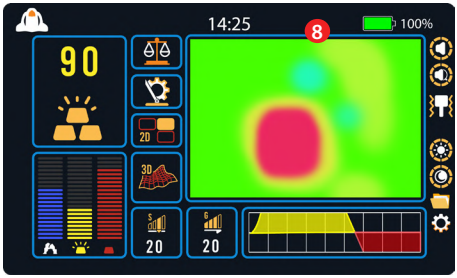


How to Adjust Sensitivity & Gain in the V35

1. Navigate to the Sensitivity & Gain Calibration icon at the bottom of the interface.
2. Press **OK** to enable adjustment.
3. Use the arrow buttons to increase or decrease the values as needed.
4. Press **OK** to save the settings and continue searching.

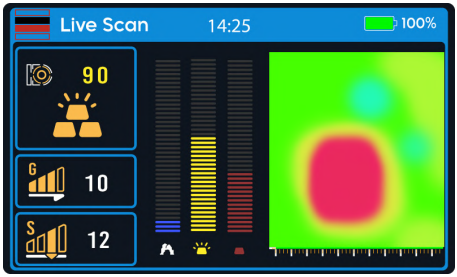
8. Live Scanning

Live Scanning is an advanced feature in the V35 Active Sensing Unit that allows real-time target display on the screen, eliminating the need for additional analysis or data storage in a scan grid. This mode operates by receiving and processing signals in real-time, enabling users to obtain instant results about the nature of buried objects while moving over the target area.



How Live Scanning Works

- When Live Scanning Mode is activated, the detector immediately starts detecting signals without requiring a predefined search grid.
- The Target ID is displayed on the screen as a numerical value, reflecting the type of detected metal.
- Color-coded indicators appear to classify the type of detected target (precious metals, non-precious metals, or Cavities).
- The user can adjust the search angle or re-scan quickly for a more accurate target analysis.



Color Indicators in Live Scanning Window

Blue: Indicates Cavities.
Red: Indicates metals in general.
Green: Represents natural ground with no buried targets.

How to Activate Live Scanning

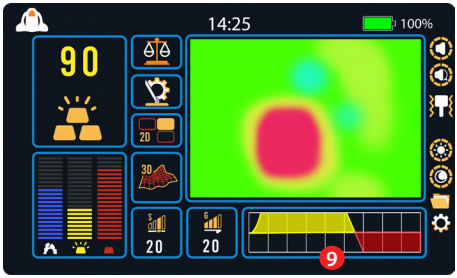
1. Select the Target ID from the upper-left interface of the detector.
2. Press the **OK** button to enter Live Scanning Mode.
3. Move over the target area while monitoring the color indicators and Target ID on the screen.
4. If an interesting target is detected, switch to 2D or 3D scanning for a more detailed analysis.

Note: Live Scanning is ideal for quick searches and initial exploration. However, for precise depth and size analysis, it is recommended to use 2D or 3D scanning after identifying potential targets.

Note: For a detailed explanation of color indicators, refer to the Target Indicators section (Refer to page 29 for details).

9. Graphical Display

The Graphical Display is a visual representation of signals received from the search unit, used to analyze the nature of buried targets during the scanning process. This feature helps determine the type of detected object by displaying signal trends and intensity on the screen, making it easier to distinguish between precious metals, and non-precious metals.



How the Graphical Display Works

- During a search, the detector analyzes reflected signals from buried objects and displays them as a dynamic line graph.
- The zero line represents the natural ground level, and any deviation above or below this line indicates the presence of a target.

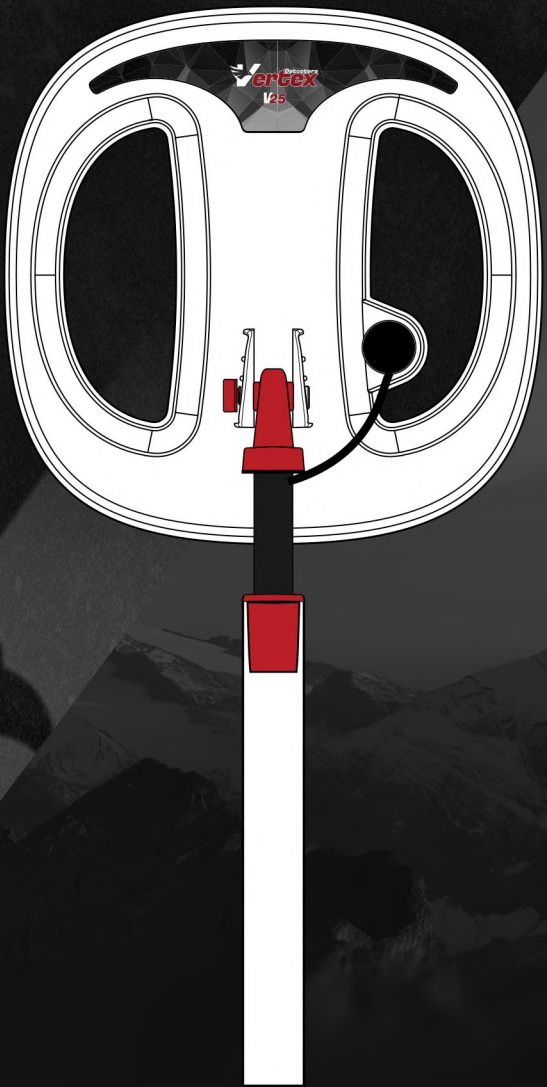
Graphical Display Indicators



Yellow above the zero line: Indicates precious metals such as gold and silver.

Red below the zero line: Indicates non-precious metals such as iron and aluminum.

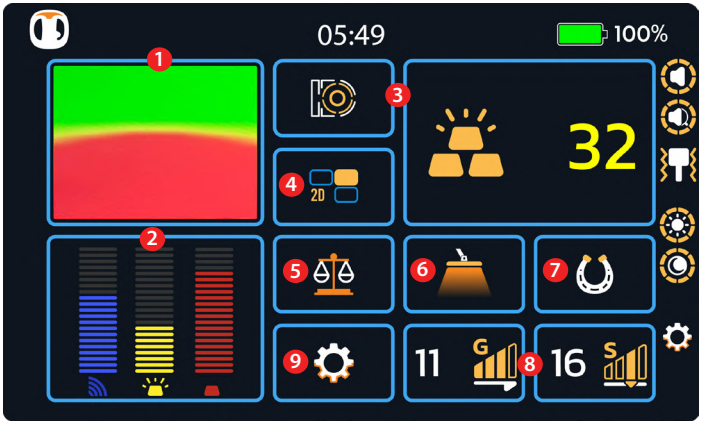
SEARCH COIL V25



V25 Search Coil

The **V25 Search Coil** is one of the advanced search tools included with the Quantum VX900 detector, designed to detect various metals using Live Scanning and 2D Scanning technologies. This coil excels in accurate analysis of underground metallic targets, making it an ideal tool for treasure hunters and precious metal seekers in different environments.

User Interface with the V25 Search Coil



1. **Live Scanning**
2. **Target Indicators**
3. **Target ID**
4. **2D Scanning Technology**
5. **Ground Calibration**
6. **Turbo Mode**
7. **Iron Rejection**
8. **Sensitivity & Gain**
9. **Detector Settings**

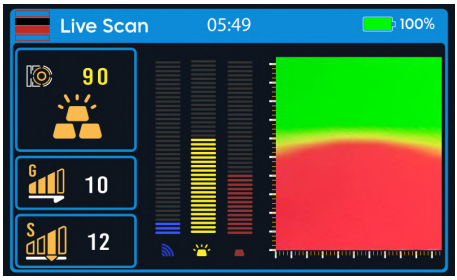
1. Live Scanning

Live scanning in the V25 search coil is an advanced technology that allows instant metal detection while moving the coil over the target area, without the need to store data or create a scanning grid. This technology relies on real-time signal analysis, enabling users to quickly and easily determine the nature of metallic targets.



How Live Scanning Works in the V25 Coil

- When Live Scan mode is activated, the detector immediately analyzes signals from buried metals and displays the data on the screen in real time.
- Metallic targets are classified based on their properties and signal strength.
- The Target ID is displayed on the screen to help users identify the type of detected metal.
- Color indicators appear, reflecting the nature of the target according to signal strength.



Color Indicators in Live Scan Mode for the V25 Coil

Blue: Indicates non-precious metals.
Red: Indicates precious metals.
Green: Represents natural ground with no buried targets.

Note: The V25 coil does not detect cavities or cavities, so there are no indicators for such anomalies in Live Scan mode.

How To Use Live Scanning in the V25 Coil

- Adjust sensitivity, gain, and iron rejection according to soil conditions.
- Activate the Turbo Mode if searching for deep targets in clean soil.
- Select Live Scan mode from the search menu and press **OK**.
- The Live Scan Interface will appear, displaying the Target ID and color indicators.
- Hold the detector parallel to the ground and maintain a 10 cm height above the surface.
- Move back and forth in a straight line over the target area to ensure full coverage.
- When the coil passes over a metallic target, the numerical Target ID will appear, indicating the metal type.
- Based on color indicators, users can determine whether the target is valuable or non-precious.

2. Target Indicators

Target indicators in the V25 search coil are visual symbols displayed on the screen during detection. These indicators help identify the type of detected metal based on the signal response, providing a quick and instant analysis to assist users in recognizing the nature of metallic targets without requiring an in-depth examination.



Types of Target Indicators in the V25 Coil

Blue Indicator: Represents the target's signal strength and its response level to the detector.

Yellow Indicator: Indicates valuable metals such as gold and silver.

Red Indicator: Indicates non-precious metals such as iron and copper.

Note: To achieve the best reading for target indicators, ensure steady coil movement during scanning and avoid excessive speed or improper angles.

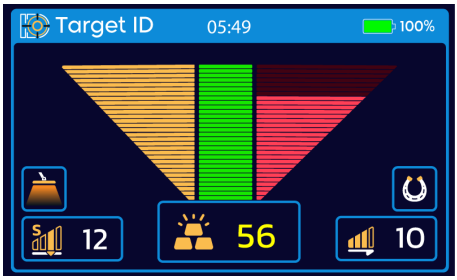
3. Target ID

Target ID is a numerical value displayed on the detector's screen when searching with the V25 coil. This value represents the metallic properties of the detected target, helping users accurately distinguish between different metal types, which simplifies target identification before digging.



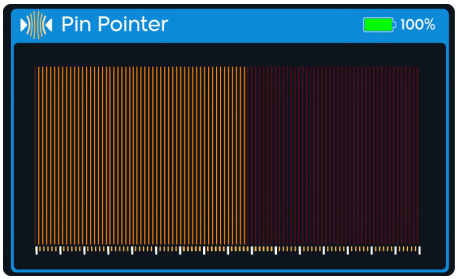
How Target ID Works

- When the search coil passes over a metallic object, the detector analyzes the reflected signals and assigns a numerical value based on the metal›s composition.
- This value is displayed in the upper-right corner of the screen within the main interface.
- Pressing the **OK** button while viewing the Target ID allows access to the Target ID screen, where a more detailed analysis of the target data is available.



Pinpointer Mode in V25

Activated during scanning to precisely locate the target. Remains active as long as the handle button is pressed.



Color Indicators in the Target ID Screen

Green Indicator: Represents all types of metals.
Yellow Indicator: Represents valuable metals such as gold and silver.
Red Indicator: Represents non-precious metals such as iron or aluminum.

Interpretation of Target ID Values **High Target ID values:** Typically indicate valuable metals such as gold or silver.
Medium to low Target ID values: May indicate non-precious metals such as iron, copper, or aluminum.

Note: The numerical values for both valuable and non-precious targets are displayed according to the Target ID Value Chart (Refer to page 19 for details).

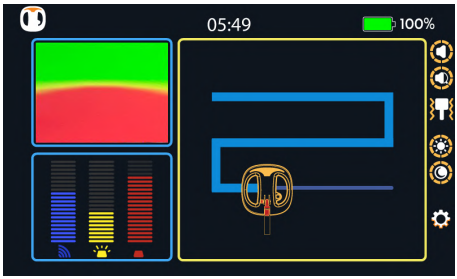
4. 2D Scanning Technology

2D scanning is an advanced technology in the V25 search coil that allows users to create an accurate analytical map of buried metallic targets. This scanning method relies on signal collection and analysis to generate a two-dimensional graphical representation that helps determine the location, type, and extent of targets within the soil.



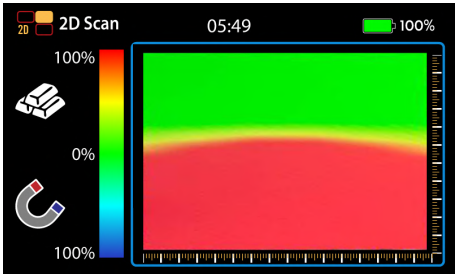
How 2D Scanning Works in the V25 Coil

- After selecting the 2D scanning mode, the detector guides the user to move according to a specific scanning pattern.
- Signals are collected as the coil moves, recording depth data, signal strength, and the type of detected metal.
- The results are displayed as a 2D grid on the screen, where metallic targets are represented with different colors reflecting their properties.



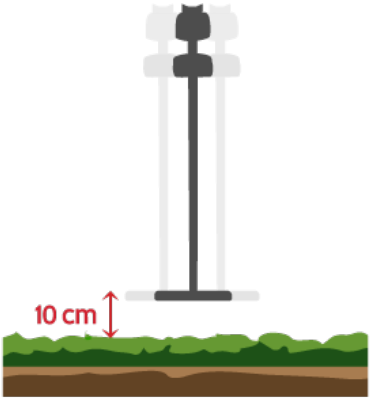
Color Indicators in 2D Scanning for the V25 Coil

- **Green:** Indicates natural soil with no metal presence.
- **Green transitioning to yellow, orange, and then red:** Indicates valuable metals such as gold and silver.
- **Green transitioning to light blue and then dark blue:** Indicates non-precious metals such as iron and copper.

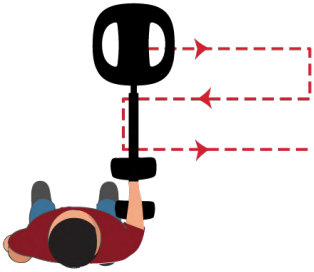


How to Use 2D Scanning in the V25 Coil

- Select the 2D scanning mode from the search menu.
- Start scanning while continuously pressing the handle button during movement.
- Follow the on-screen instructions to adjust scanning speed and direction according to the target area.
- Maintain a height of 10 cm above the ground to ensure accurate results.
- Analyze the results using the color-coded grid displayed on the right side of the screen.



Note: The movement, path, and speed of the coil must strictly follow the guidance displayed on the user interface. The actual scanning pattern should match the one shown on the screen to ensure precise results.



5. Ground Calibration

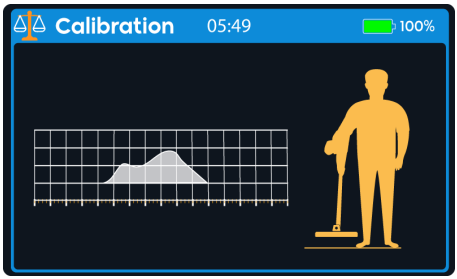
Ground calibration is the process of adjusting the V25 search coil to adapt to the soil conditions, enhancing metal detection accuracy and reducing false signals caused by naturally occurring ground minerals. This procedure follows on-screen instructions to ensure proper detector calibration before starting the search.



Steps for Performing Ground Calibration

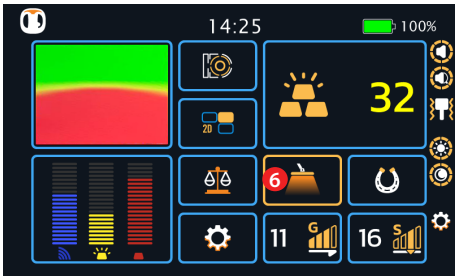
- Access the calibration mode by selecting the calibration icon from the main interface.
- Follow the on-screen instructions during the calibration process.
- Select the soil type from the displayed list.
- Press the **OK** button to start calibration.
- Raise the search coil to a height of 35 cm above the ground.
- Lower the search coil until it reaches a height of 10 cm above the ground.
- Repeat this movement multiple times as directed on the screen until calibration is complete.
- The calibration process takes between 10 to 30 seconds, during which a graph is displayed on the screen.
- If the graph variations are minimal and close to the zero line, it means the search coil is now properly calibrated to the soil conditions. Once the calibration is complete, a confirmation message will appear on the screen.





Note: Ground calibration must be performed in clean, metal-free soil to ensure precise detector adjustment.

6. Turbo Mode



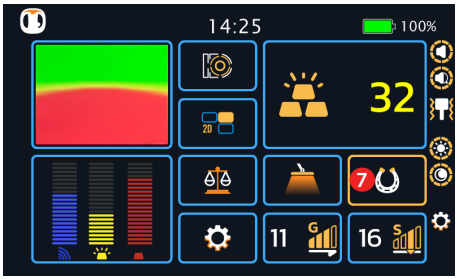
Turbo Mode is an advanced feature in the V25 search coil designed to enhance signal strength, allowing for the detection of metallic targets at greater depths, especially in clean, mineral-free soil. When activated, this mode increases the detector's reception capability and improves the coil's response, enabling the discovery of metallic objects that are difficult to detect under normal conditions.

Features of Turbo Mode

- Increased detection depth, allowing the discovery of deeply buried metals.
- Improved detector response when searching in clean soil free from surface mineral interference.
- Enhanced weak signal detection, making the coil more sensitive to small or deep targets.

Note: Turbo Mode is not recommended in highly mineralized soil, as it may increase false signals.

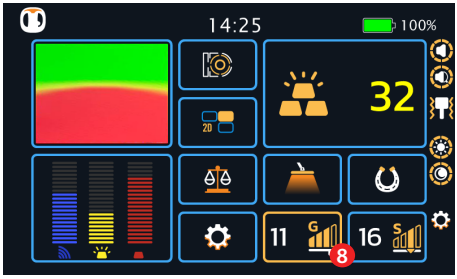
7. Iron Discrimination



Iron Discrimination is an advanced feature in the V25 search coil that allows users to ignore signals from ferrous metals during detection. This helps focus on valuable metals such as gold and silver while reducing interference from unwanted iron objects like nails and scrap metal.

8. Sensitivity and Gain

Sensitivity and Gain are two fundamental settings that influence the detector's ability to capture signals and analyze buried targets. These settings help improve detection accuracy and reduce interference caused by environmental conditions or natural minerals in the soil



Sensitivity

- Determines the detector's responsiveness to signals from detected targets.
- Increasing sensitivity enhances the ability to detect small or deep objects.
- Reducing sensitivity minimizes interference from ground minerals or environmental noise, preventing false signals.



Gain

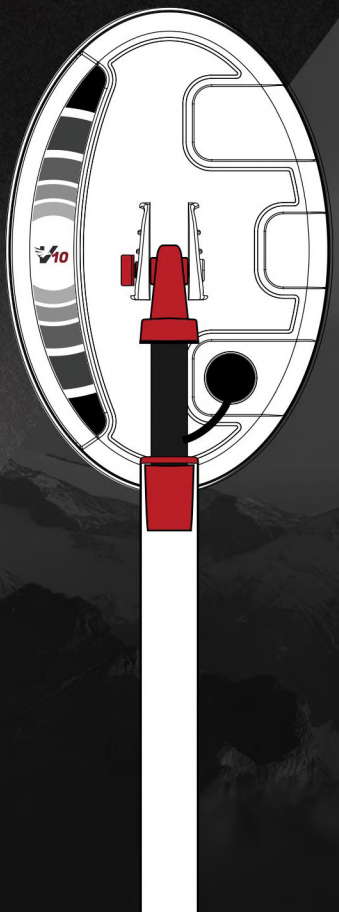
- Controls the amplification level of the signal received from the target, helping improve target detection at different depths.
- Increasing gain enhances signals from deep objects, but may also increase interference.
- Decreasing gain stabilizes the detector in areas with high natural mineralization.



How to Adjust Sensitivity and Gain

- Navigate to the Sensitivity and Gain Calibration icon at the bottom of the interface.
- Press **OK** to enable adjustment mode.
- Use the arrow buttons to increase or decrease the values as needed.
- Press **OK** to save the settings and continue searching.

SEARCH COIL V10



V10 Search Coil

The V10 search coil is one of the professional detection tools included with the **Quantum VX900** detector, specifically designed for high-precision detection of both valuable and non-precious metals. This coil operates using Target ID technology, Pinpointer mode, and a graphical signal analysis system, making it ideal for searching in various soil types. It relies on real-time signal analysis from detected metallic targets.

User Interface with the V10 Search Coil



1 Graph Display

2 Pinpointer Mode: Activated during scanning to precisely locate the target. Remains active as long as the handle button is pressed.

3 Turbo Mode : Activated before searching to enhance signal strength and reach greater depths in pure and debris-free soil.

4 Iron Rejection: Allows users to ignore signals from ferrous metals, helping to focus on precious metal detection and improving accuracy.

5 Ground Calibration: Used to determine the ground type before conducting a search.

6 Target ID

7 Sensitivity Indicator: Enables users to adjust sensitivity levels according to search conditions, improving detection accuracy while reducing environmental interference.

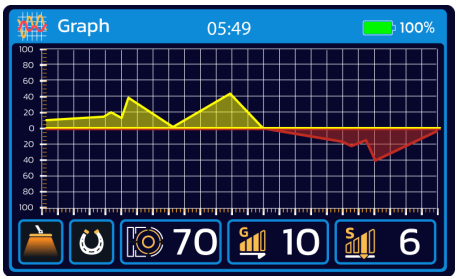
8 Gain Indicator (Amplification): Allows users to increase or decrease the transmitted signal strength, optimizing search coil compatibility with different ground conditions.

9 Detector Settings: The settings menu includes customization and control options for your detector.

V10 User Interface

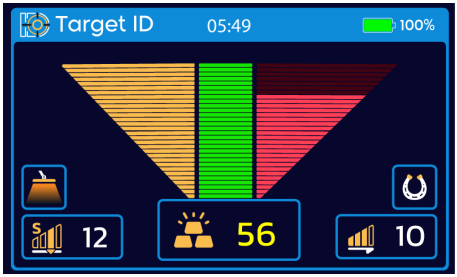
Graph Display:

» Non-ferrous metals appear yellow above the zero signal strength line.
» Ferrous metals appear red below the zero line.
» All relevant controls are displayed below the graph.



Target ID (Target Identification):

» A green indicator appears in the center, representing all types of metals.
» A red indicator appears on the right, denoting ordinary or non-precious metals.
» A yellow indicator appears on the left, signifying precious metals.
» The specific metal type value is displayed in the bottom center of the interface.



How to search with V10 Coil

Detector Calibration:

To ensure accurate calibration, perform the process away from external interference by following these steps:

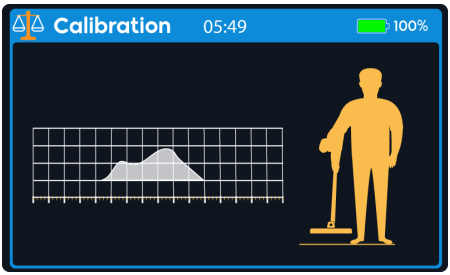
- Navigate to the calibration icon using the arrow keys and press **OK** to enter the calibration interface.
- Select the soil type (dry or wet) as long as it is free of metals, then press **OK**



The calibration interface will appear, and you can proceed as follows:

- Raise and lower the detector several times while keeping the search coil parallel to the ground.
- Maintain a minimum coil height of 10 cm from the ground and a maximum height of 35 cm, as shown in the on-screen guidance image.
- Calibration takes 10 to 30 seconds. During this process, a graph appears on the screen.
- If the graph fluctuations remain low and close to the zero line, it means that the search coil is successfully calibrated to the ground conditions.
- Once calibration is complete, a confirmation message will appear.





How to search with V10 Coil

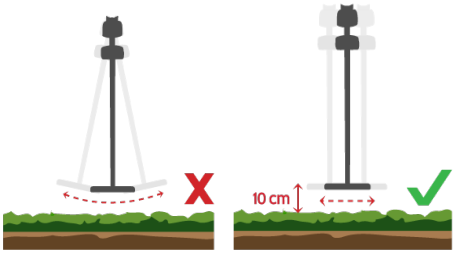
Starting the Search:

- Press Back then navigate to the Gain (Amplification) icon using the arrow keys and press **OK**
- Adjust Gain and Sensitivity using the up and down arrows according to the ground conditions.
- Press the Settings button to start searching via the main interface, or press **OK** to search using the Graph Interface or Target Identification Interface.



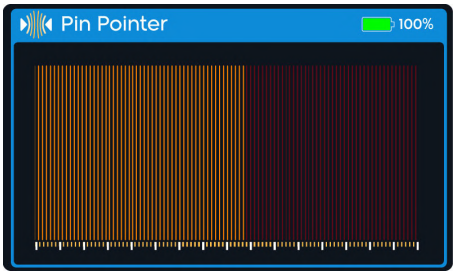
During the Search:

- Keep the search coil approximately 10 cm above the ground.
- Move the coil side to side while keeping it parallel to the ground.
- Monitor the screen when a target is detected.



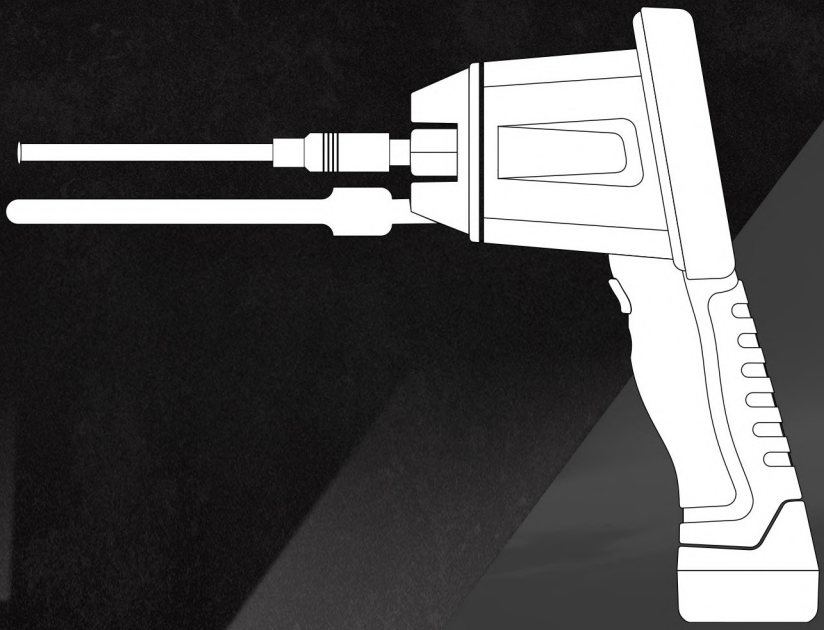
Pinpointing the Target:

- When a target is detected, press and hold the handle button to activate Pinpoint Mode.
- Keep holding the button to monitor the data, and upon releasing it, the interface returns to the previous search mode.

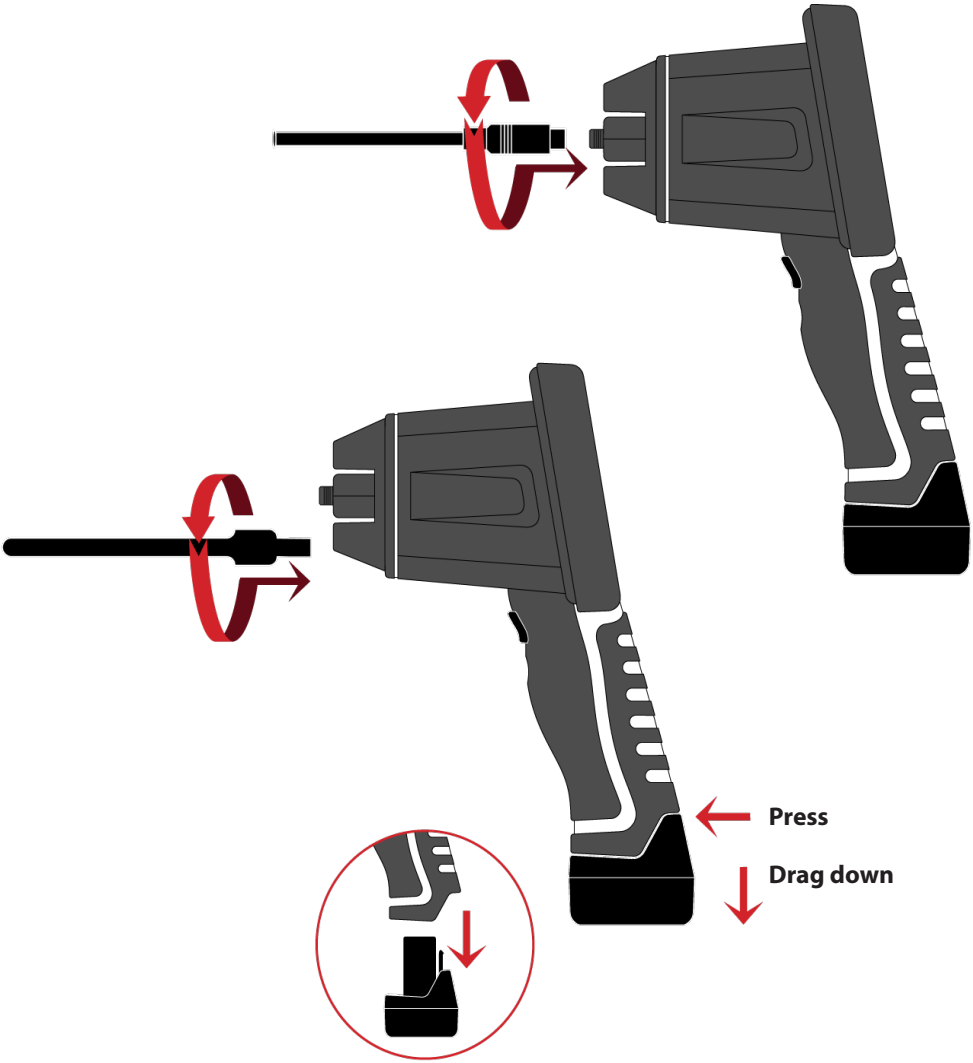


Note: If ground conditions change during the search, press the handle button briefly to initiate a quick recalibration.

RSPU REMOTE SIGNAL PROCESSING UNIT

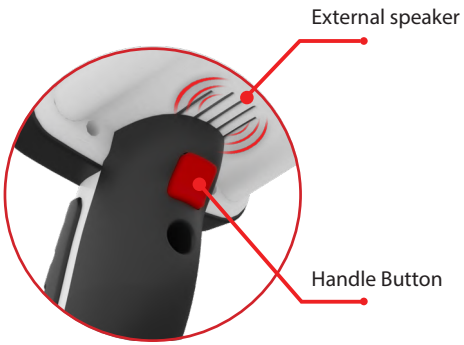


Place the RMS sensor in its designated position by turning it clockwise. The antenna is installed in the same manner.
Instructions for Installing and Removing the Battery: (See the image)



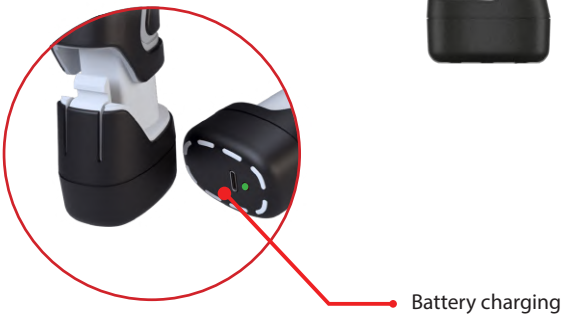


1 Power On/Off OK	Press and hold for several seconds to turn the detector on or off. While the detector is operating, use this button to confirm and select the desired option.
2 Control Arrows	Used to navigate through the Detector user interface.
3 Tab	Return to the previous menu or cancel the operation.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


External speaker
Handle Button


Headphone jack




Battery charging

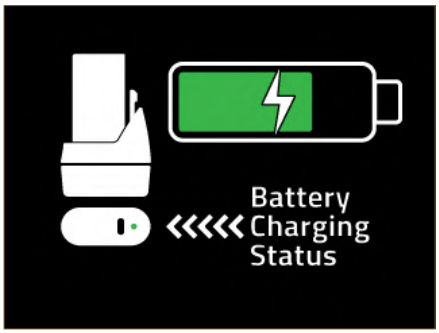
Technical Specifications

Operating Principle	Signal analysis, data processing, and conversion to visual and audio results.
Display Type	2.8-inch TFT color screen (320 x 280 QVGA, 24-bit color depth).
Battery	Independent unit - 4.2V lithium-ion, 3500 mAh.
Power Consumption	Average consumption of 280 mAh.
Battery Operating Hours	More than 12 continuous hours (operating hours may vary depending on screen brightness, sound levels, and search operations).
Sound	High-quality mono sound.
Languages	Equipped with 6 languages.
Detector Dimensions	21 x 12 x 8.5 cm.
Complete Detector Weight	435 g.
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).

Battery & Charging

- Use the charger and cable provided by the company (VERTEX).
- The battery can be charged both inside the detector 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 detector can be used temporarily while charging, but this increases the charging time.

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





RSPU User Interface

Detection Modes:
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

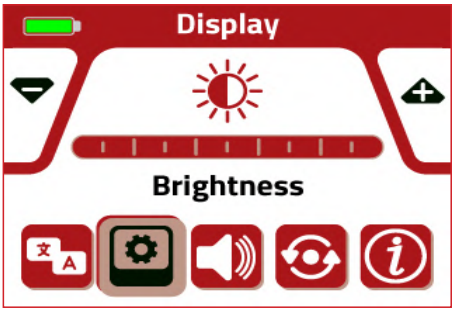


General Settings

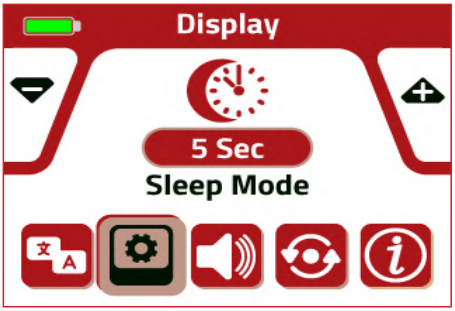
Languages:
The detector supports 6 languages for the user interface: (English, French, German, Spanish, Russian, Arabic). Select the desired language using the arrows and press **OK** A confirmation message will appear, select Yes to install the chosen language.



Display (Brightness):
Use the arrow keys ▲▼ to adjust the brightness level 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:
Adjust the volume of the startup tone, key sounds, and other sounds by changing the values using the arrow keys ▲▼

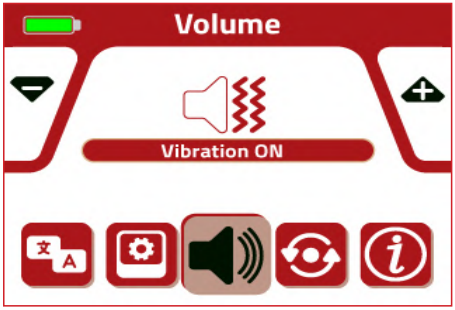


General Settings

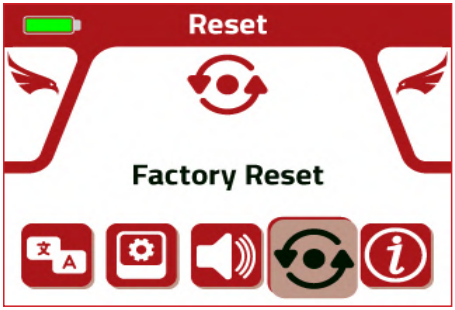
Search Volume:
Adjust the search sound level by changing the values using the arrow key ▲▼



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



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



About the Detector:
Includes basic information about the detector:

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



Multi-Response Search Modes

RMS 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 detector to detect them. This system is used in open areas or deserts where radio transmission waves do not reach.



RMS 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:

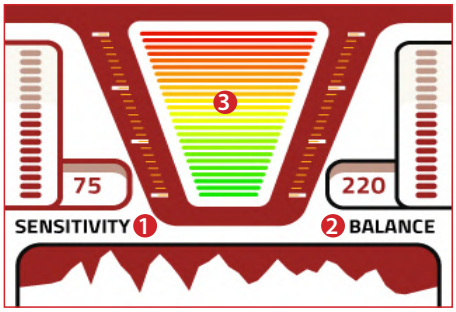
Adjust the sensitivity indicator to a low value for general search and increase the number to locate the target when searching for specific objects.

2 Balance Indicator:

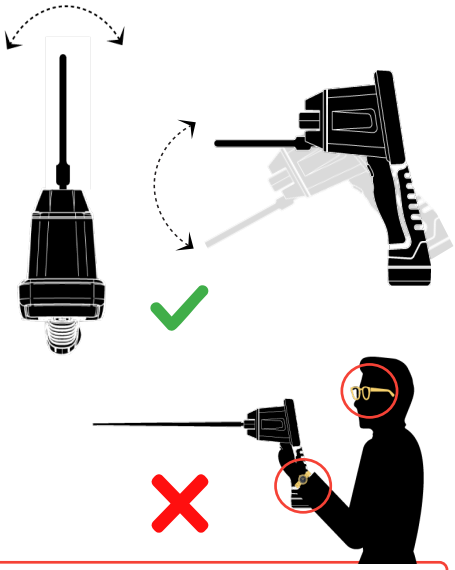
It can be adjusted automatically using the handle button or manually using the arrows.

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 detector 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.

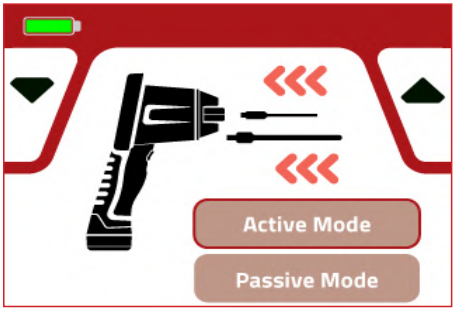
How to Use RMS Detection Mode

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

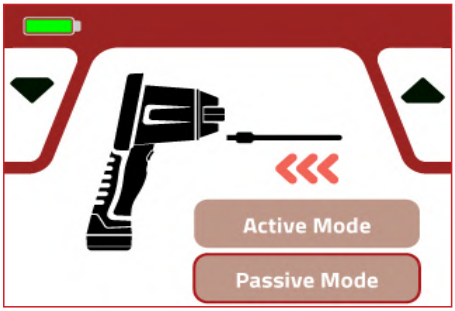
From the main interface, select the RMS detection technology. An interface will appear with two options for conducting the search using this technique.



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.



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



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

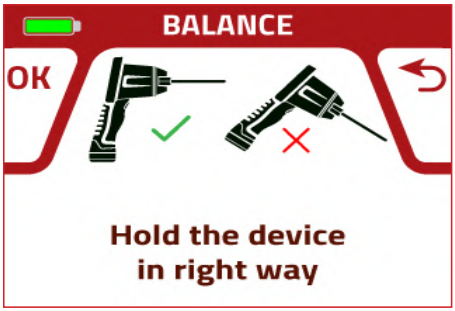
The target signal is followed through the sound and the indicators on the screen that indicate the detection of a target in the area. The user begins to walk with the detector towards the signal, and this signal increases as they approach the target, until reaching the target point and stopping over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

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



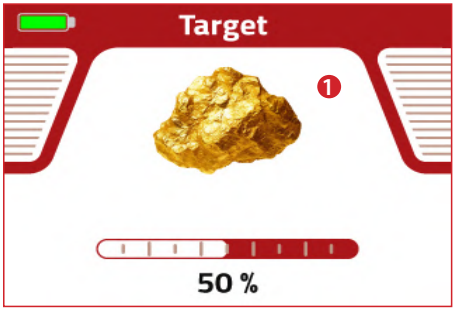
ADRI Active Search:

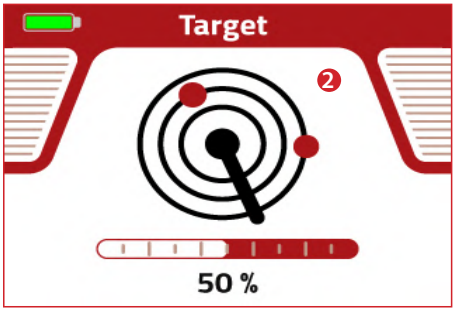
- In this technique, only the antenna should be installed.
- The detector should be held properly, so that the antenna is parallel to the ground.
- It should be oriented towards the area to be explored.
- The work should start in a fixed position, without movement, during the first stage.
- By pressing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





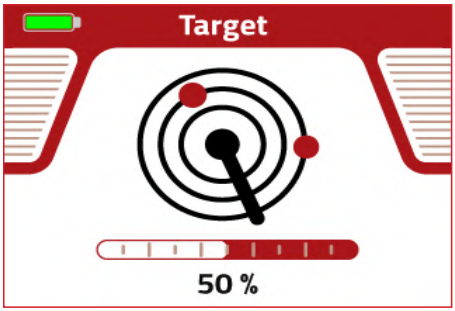
How to Use ADRI Detection Mode

RSPU

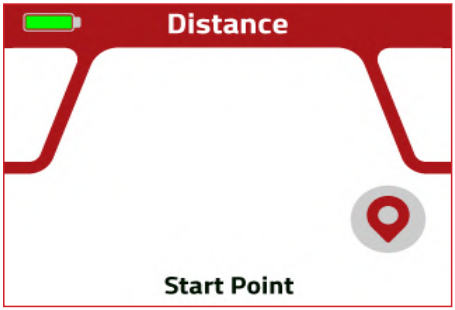
Hold the detector and move towards the target search area. Then, wait for the signal indicated by the movement of the antenna. When a target is detected, the detector will display this target on the screen for a few seconds with an interactive sound, and then continue searching for all targets.



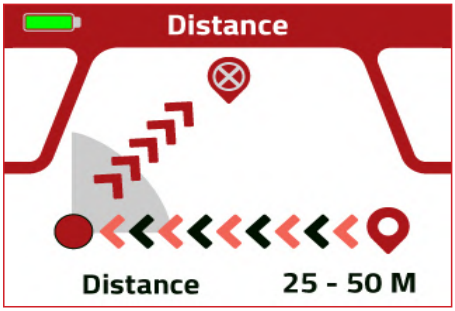
Note: During the search, if the indicator moves and stays at the far right or left, the search should be restarted in the direction where the antenna was fixed in order to perform a complete sweep of all targets.



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.



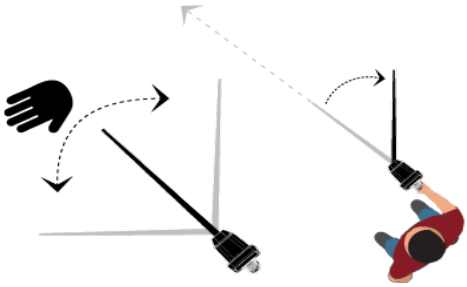
The following interface will appear:
Starting point of the search. In this case, the detector will emit an audible signal.



How to Use ADRI Detection Mode

RSPU

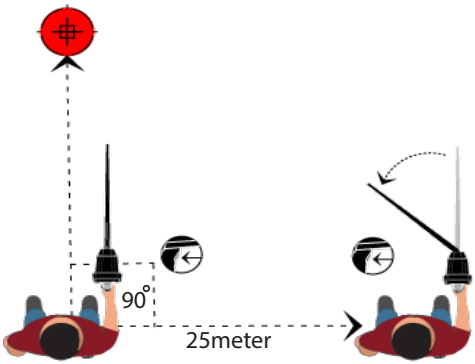
The antenna should be manually rotated with a slow movement, keeping the position and angle of the detector in the same search area until a distinctive sound is heard and the vibration of the detector is felt. In this case, the direction of the antenna indicates the direction of the target. Then, rotate the detector 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 angle** with the direction of the target

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

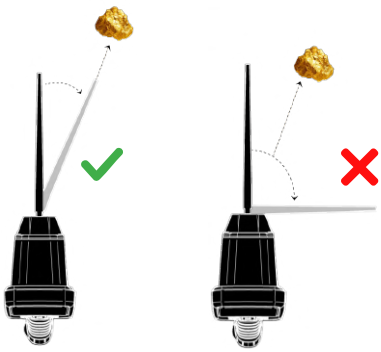
- If the antenna detects the target, press the handle button. The distance to the target will be calculated, and an interactive map of the area where the target is located will be displayed. The detector will then automatically proceed to the route tracking phase.
- If the antenna does not detect the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

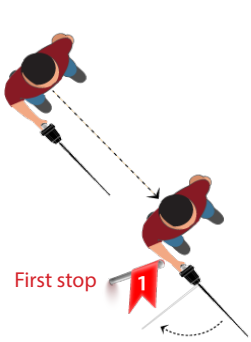


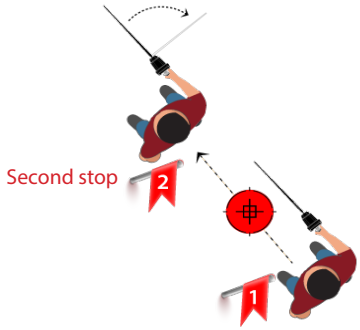
How to Use ADRI Detection Mode

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.







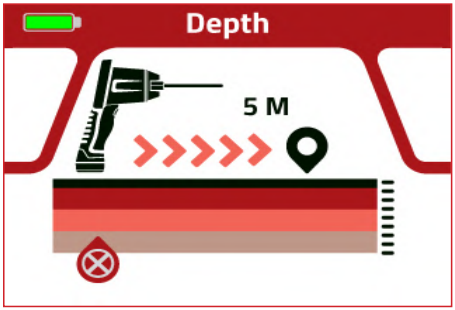


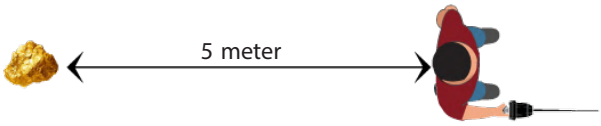
How to Use ADRI Detection Mode

RSPU

Depth Measurement:

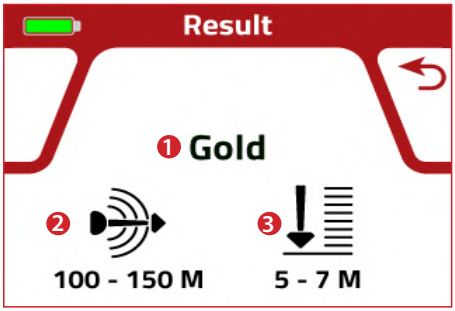
The user should move approximately 5 meters away from the target, then pressAccept **OK** Or press the handle button and wait until the depth determination is complete, and the result will automatically appear on the screen.



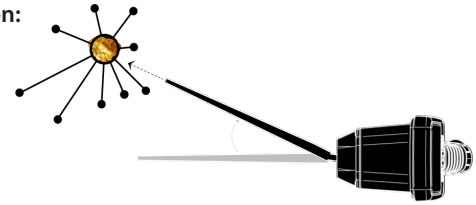


When you press Accept **OK** the following result will be displayed:

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



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 detector 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


Cavity


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



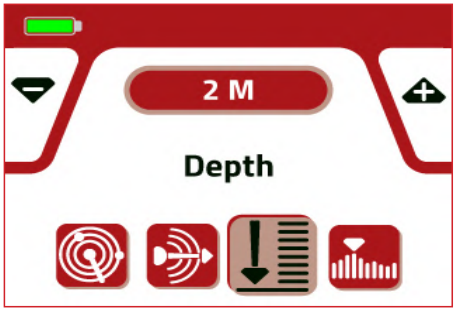
Press the Tab key to move to the distance selection and choose the search distance within which you want to conduct the search.



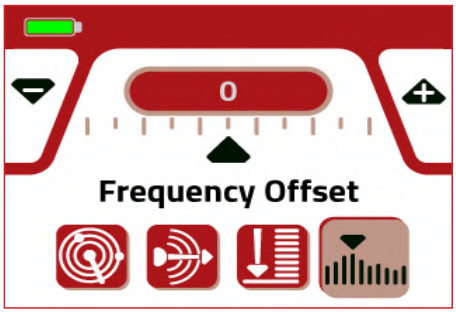
How to Use MDRI Detection Mode

RSPU

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.



When you press the handle key, a message will appear indicating that you should hold the detector 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.



How to Use MDRI Detection Mode

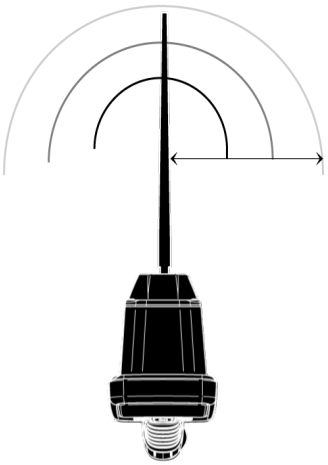
RSPU

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

The detector 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.

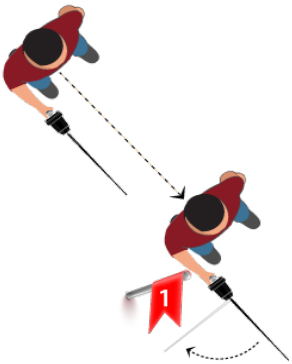
The detector emits a sound indicating that the search process is in progress, and the speed of sound increases when the antenna is oriented towards the target.



Methods for determining target location

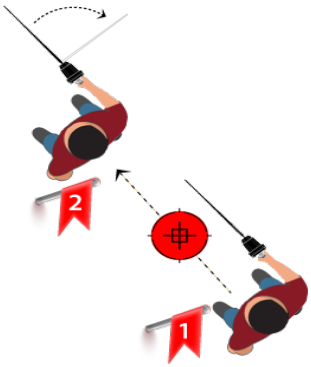
1. Line between two points method

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.



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.

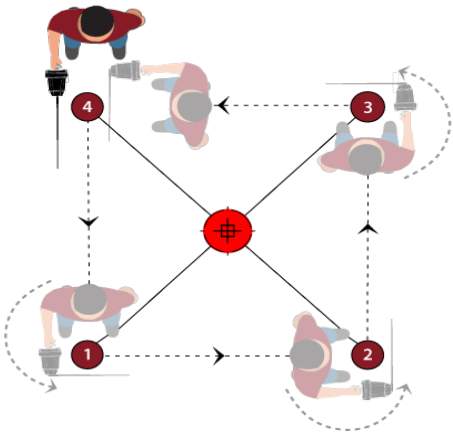
Then, turn in the direction of the antenna and walk until the antenna turns again in the same direction as before. This will be **stop point** 2

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

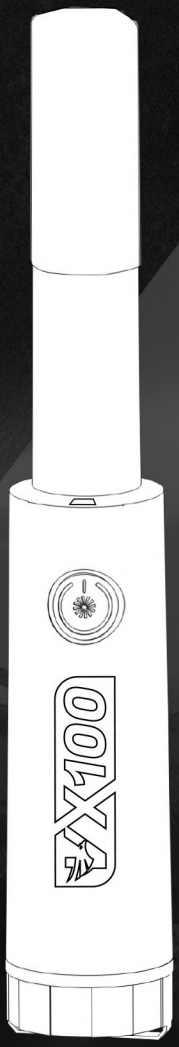
After these steps have been completed, the target location can be determined by drawing lines between **stop point** 1 and **stop point** 3 , and between **stop point** 2 and **stop point** 4 The place where the two lines intersect will be the **target point** The closer the points are, the more accurate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

Start Point

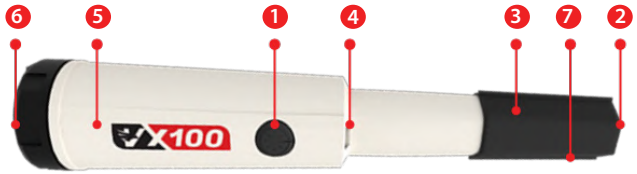


PINPOINTER VX100

WATERPROOF SUBMERSIBLE UP TO 10 FEET



Controls



1. ON/OFF, Adjust Button.
2. Exchangeable protecting sleeve.
3. 360° full detection tip.
4. Adjustable LED lights.
5. Comfortable non-slip handle.
6. Seal waterproof cover (charging plug, speaker).
7. Exclusive Scraping Blade.

Powering On

Press and release the button 1 while keeping the detector away from any metal object, then you will hear 2 beep and the LED 4 will remain on.

Powering Off

Press and hold the button for 2 seconds until a beep indicates the power is off.

Changing Settings

The Detector has three Sensitivity settings and two detection settings: Audio-plus-Vibrate or Vibrate-only (silent).

To enter adjustment mode, press and hold the button 1 for 2 seconds-indicated by a single beep followed by a dual-tone beep and flashing LED. (Note: In Silent Mode, beeps are replaced by vibration pulses.)

The first button press after entering adjustment mode indicates the current setting. Repeatedly press the button to cycle through the 6 settings:
1 beep= minimum Sensitivity, with audio
2 beeps= medium Sensitivity, with audio
3 beeps= maximum Sensitivity, with audio(Default setting)
1 vibrate = minimum Sensitivity/Silent
2 vibrate = medium Sensitivity/Silent
3 vibrate = maximum Sensitivity/Silent

To know the current mode is set mode or exit adjustment mode, hold the button for 2 seconds-indicated by a single beep, or wait for 5 seconds to exit automatically

Notes:

- Lower Sensitivity settings are recommended to prevent detection of highly mineralized grounds.
- Settings will be remembered when the unit is switched off and back on.

Rapid adjustment to eliminate the mineralization reaction

To adjust the detection of saline, wet sand, or high mineralization ground, keep the positioning end of the front on the water, sand, or soil, and then press the ❶ boot button to automatically read and eliminate mineralization. Note: Another way to eliminate the ground response is to reduce the sensitivity.

Precisely Pinpointing Large Targets

Slowly scan toward the object until the response increases to full/constant alarm. Then quick-press the button to instantly adjustment and narrow the detection field. Continue scanning toward the object to find its precise location.

Repeat this Fast adjustment to further narrow detection field as needed.



Features

VX100

✓ **Anti-loss Alert**
After power on, the detector gradually emits faster warning calls for 10 minutes without pressing a button or probe in 5 minutes. The alarm will stop when a metal detection or a button is triggered during this process.

✓ **Auto-Off Feature**
The VX100 closes automatically after 10 minutes of ringing.

✓ **Scraping Blade**
Used to discover a target. This strong edge pushes away the soil near the target.

✓ **Spring Lanyard & Belt Case**
Can protect your device.Fit to different belt in any size.

✓ **Protective sleeve**
The detector has a removable sleeve that can be replaced after the probe is worn.

✓ **Low-power Alarm**
When the battery is low, the detector emits a double tone alarm. Charge it as soon as possible.

Charging mode: Simply rotate the battery cover counter-clockwise to remove it and insert the charging line correctly. The indicator lights will keep flashing quickly during charging. The indicator stop flashing means charging completed.

Usage Information & Tips

- The operation is fully automated. All metals, including both the ferrous and non-ferrous metals, will be detected.
- When the target is detected, the detector generates audio and / or vibration alarms. The rate of the pointer is close to the metal target.
- Do not exceed 10 feet (3 m) in depth when wading. Make sure the battery cover threads are free of sand, sediment etc. and the 0 rings need be regularly lubricated with silicone grease to keep sealed.
- To remove dry dirt, dirt or other debris from the equipment, simply wash with soap, water and soft cloth.Do not clean with any object or chemical cleaner that may scratch or erode its surface.

Product Parameters

Model name	VX100
Waterproof grade	maximum depth of 10 feet (3 m) IP68
Adjustment	Automatic or manual adjustment
Indicator	proportional audio / vibration pulse rate
Control switch	power supply, tuning, and adjustment
Dimensions	Length: 25 cm - Diameter: 3.9 cm
Weight	200 grams
Battery	Built-in lithium battery

Wired Headphones

The wired headphones are specifically designed for use with metal detectors, providing a clear and precise listening experience for audio signals. This enhances the user's ability to focus and accurately analyze sounds during the search process.



Specifications:

- **Direct Wired Connection:** Ensures zero delay and no interference in sound transmission, providing an instant response to detected signals.
- **High-Quality Audio:** Delivers superior sound clarity, allowing users to hear even the faintest signals emitted by the device.
- **Comfortable Design:** Features soft ear cushions and a padded headband for extended usage comfort.
- **Noise Isolation:** Helps reduce ambient noise, enhancing user concentration during the search process.
- **High Durability:** Constructed from robust materials, making them resistant to various outdoor conditions.

Connection Method:

› Insert the headphone cable into the device's audio port.
› Ensure the cable is securely connected for optimal sound quality.
› Use the device's volume control buttons to adjust the sound level to your preference.
› Listen carefully to the audio signals during the search, as sound variations indicate different detected targets.

Note: Always disconnect the headphones gently after use. Avoid pulling the cable forcefully to maintain its integrity and ensure longevity.

Tips & Warnings

- The included items and available accessories may be subject to change based on Vertex company decisions.
- The included accessories and available attachments may be subject to change by Vertex only.
- The included components are designed exclusively for this detector and may not be compatible with other detectors.
- The external appearance and specifications may be subject to change without prior notice.
- Additional accessories or replacement parts can be purchased from Vertex distributors. Ensure compatibility with your detector before purchasing.
- Only Vertex-approved accessories should be used.
- Using non-approved accessories may result in detector damage or performance degradation and may cavity the warranty due to improper use.
- All accessories are subject to change based on manufacturer decisions. Visit the Vertex website for the latest updates on available accessories.

Tips for Achieving Optimal Results:

Avoid sources of interference: Stay away from high-voltage power lines, electrical wiring, or nearby electronic detectors 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 detector 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 detector near flammable materials or close to high-voltage power lines.
Be cautious of extreme weather: Refrain from using the detector in harsh weather conditions, such as heavy rain or excessively high temperatures.
Carry the detector securely: Always handle the detector properly and securely to prevent it from falling or being damaged.
Handle components with care: Do not disassemble or modify the detector's internal components without consulting technical support.

Detector Storage Conditions :

Dry and moderate-temperature environments: Store the detector in a dry place away from humidity and extreme heat or cold
Ensure the detector is fully powered off: Always switch off the detector completely before storing it to avoid unnecessary power consumption.
Protect from dust and impact: Keep the detector 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 detector before reading and understanding the user manual, as this could cause harm to the operator or the detector.

The components used in the detector 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 detector.
Store the detector in an environment free of negative charges when not in use.

Keep the detector away from moisture.
Always turn off the detector completely before storing it.

Follow these instructions to ensure the detector 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 detector are securely connected. Loose connections may cause parts to not be recognized or the detector to malfunction.
  Hold the detector 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 in the user manual and on the detector must be followed.

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

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

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

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

1. Vertex Website

The Vertex website provides up-to-date information on equipment, detectors, 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 electronic equipment) 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.

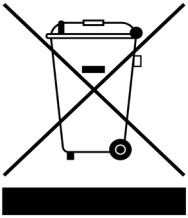


Taiwan: 廢電池請回收

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



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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Notes

Notes

Contact Information & Support

Vertex Detectors

Scan the QR code or visit the website:
www.vertexdetectors.com/user-manuals
to download the user manual and explore other languages.

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