Quantum Lite

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 Lite** 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 Lite** 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 Lite** is one of the latest innovations in exploration technology, combining advanced technology and high precision, making it an ideal choice for metal and treasure hunters. The detector is designed to deliver exceptional performance using the V35 Active Sensor, enabling highly accurate detection of buried targets with advanced signal analysis for reliable results.

Equipped with 2D and 3D ground scanning technology, the detector provides a detailed visual representation of targets, helping users determine their nature and depth with precision. Additionally, it operates on advanced SFX detection technology, ensuring fast response and high stability during searches, enhancing the exploration experience across various environments.

Although the **Quantum Lite** comes with only the **Active Sensing Unit (ASU V35),** it supports upgrades with additional advanced search tools, including the **V10 search coil, V25 search coil, Remote Signal Processing Unit (RSPU), and Pinpointer.** These upgrades allow users to expand their search capabilities and maximize the detector's potential.

The **Quantum Lite** offers a professional and versatile search experience, featuring a modern design suitable for use in various environmental conditions. It is the ideal choice for researchers seeking high performance and advanced accuracy, making it a powerful and efficient tool for metal detection.

Detector Upgrade

The **Quantum Lite** is an advanced model that operates with the **Active Sensing Unit (ASU V35)**, making it a powerful choice for detecting metals and voids. However, users who wish to expand their search capabilities and maximize the detector's potential can upgrade their **Quantum Lite** by purchasing additional accessories. These upgrades provide access to more diverse and precise detection technologies.
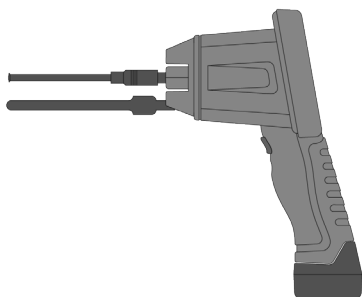
Available Upgrade Options for Quantum Lite
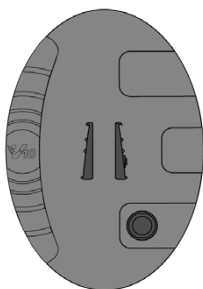
Search Coil (V10)

Search Coil (V25)

Remote Signal Processing Unit (RSPU)

PinPointer (VX100)

Contents

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.

Warranty Card

Date of Purchase	
Reseller	
Warranty Number	XXXXXXXXXX
Serial Number	VX 000 000000

For the terms and conditions visit the website.
https://www.vertexdetectors.com/warranty

The **Quantum Lite** 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:
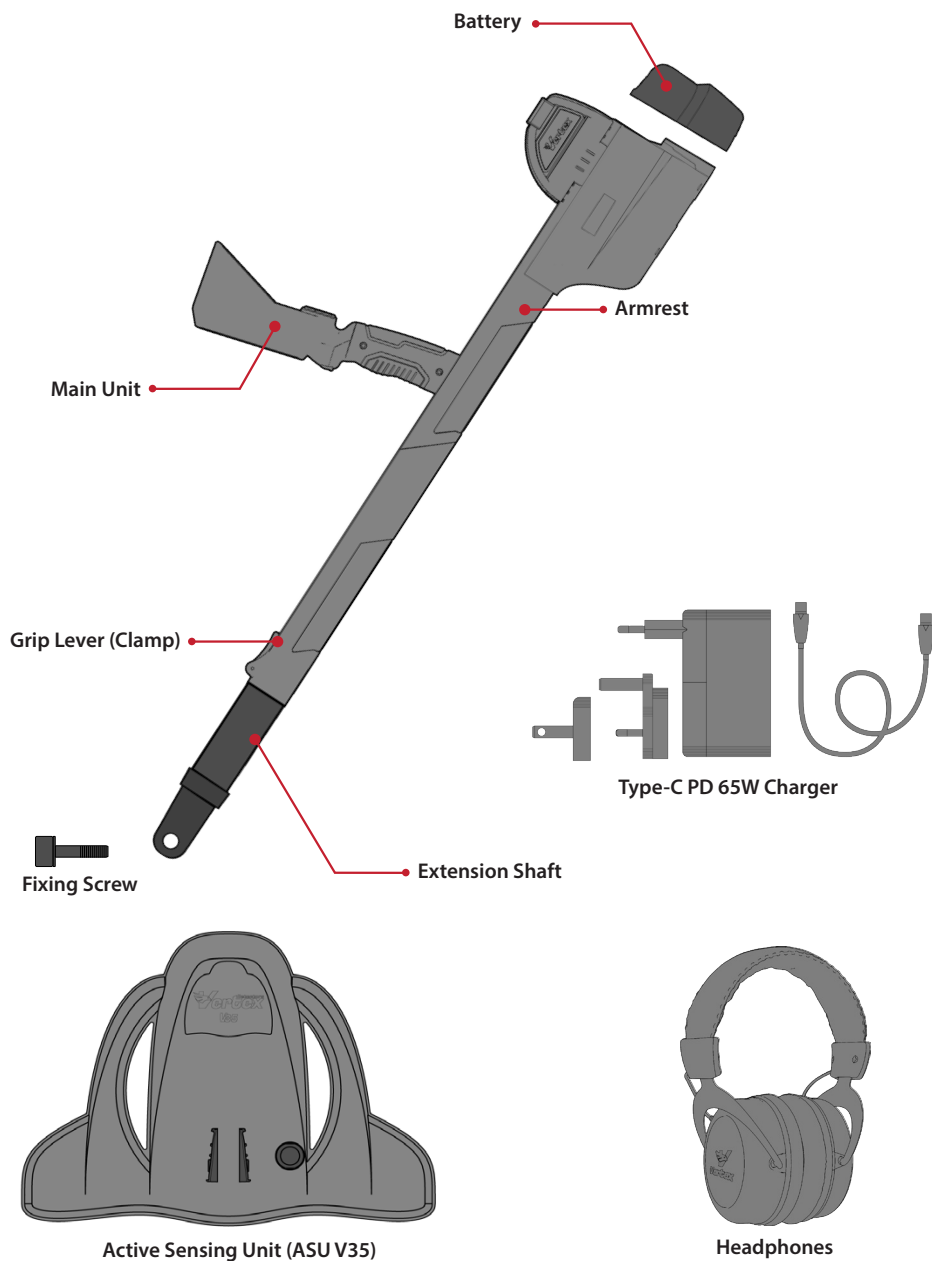www.vertexdetectors.com/warranty-policy

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

✔ **Detection technology:** Advanced ground imaging and long-distance detection, providing the highest levels of 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 Lite is the ultimate choice for professional explorers and ambitious researchers seeking precise and efficient performance in all exploration conditions.

Battery

Armrest

Main Unit

Grip Lever (Clamp)

Type-C PD 65W Charger

Fixing Screw

Extension Shaft

**Active Sensing Unit (ASU V35)**

Headphones

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.
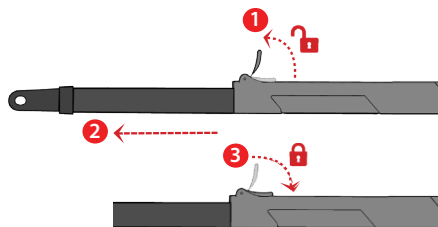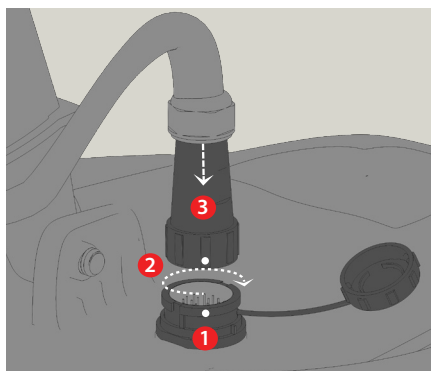
Attaching the Search Coil:

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.
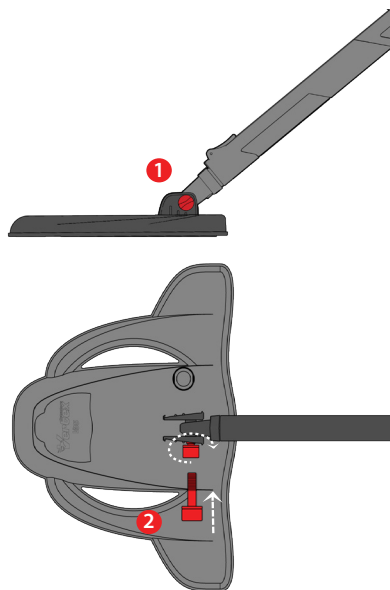
Connecting the Search Coil:

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

Detector Screen

Headphone jack

1 Power On/Off		Press and hold for 3 seconds to turn the detector on or off.
2 Confirmation Button	(OK)	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.

Operating Principle	Signal analysis and data processing, transforming them into visual and auditory results.
Processing Type	High Performance ARM CORTEX M7 processor.
Display Type	5-inch color TFT screen, WVGA resolution (480×800).
Battery	Detachable lithium-ion battery, 12.6V / 3500 mAh, rechargeable.
Power Consumption	600 mAh (average consumption).
Battery Life	More than 6 hours of continuous operation.
Charger	Type-C – PD 65 W charger.
Audio System	Interactive frequency-based audio.
Supported Languages	7 languages: English, French, German, Spanish, Italian, Russian, Arabic.
Device Weight	3 kg.
Packaging Dimensions	18 x 42 x 82 cm.
Device Dimensions	82 x 39 x 13.5 cm.
Primary Search Sensor	Active sensing unit (ASU V35).
Additional Search Coils	Compatible with V10 and V25 models.
Operating Temperature	From 10℃ to 60℃.
Storage Temperature	From 10℃ to 80℃.

Overview | Battery & Charging

The **Quantum Lite** 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.
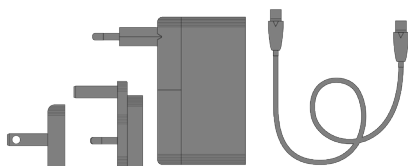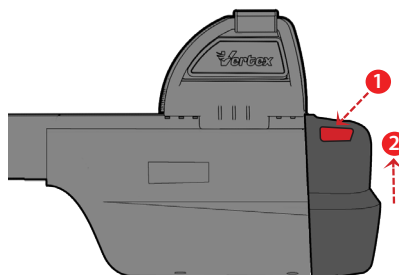
Installing and Removing the Battery
To install the battery:
❶ Align the rear groove of the battery with the wide notch on the back of the main unit, ensuring that the red battery lock is facing upward.
❷ Push the battery downward until you hear a click, indicating that the lock has secured it in place.
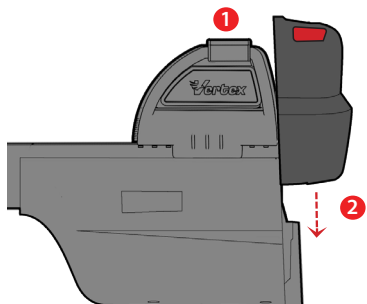
To remove the battery:
❶ Pull the red lock backward to release the latch.
❷ Lift the battery upward to remove it from the detector.

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.
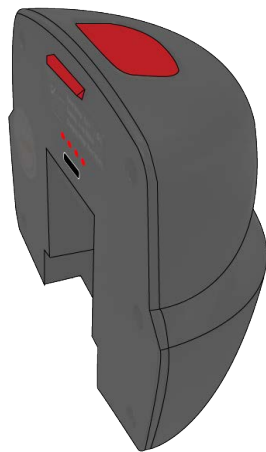
Analytical Ground Imaging Technologies

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.
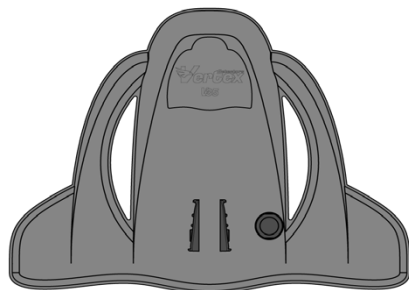
Applications & Uses of the Quantum Lite Detector

- **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 Lite. 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.

Main User Interface

Search Coil Type

Battery Indicator

14:25   100%

90

① ② ③ ④ ⑤ ⑥
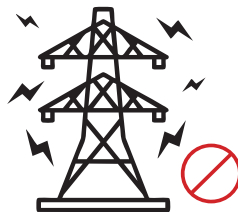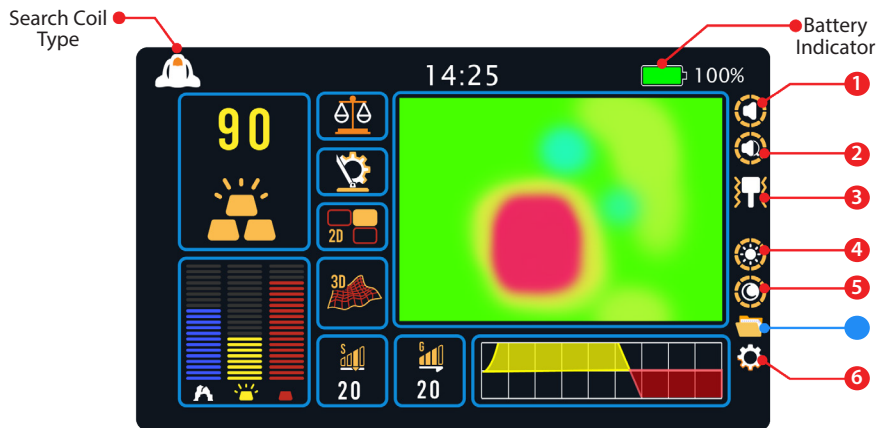
Quick Settings:
Accessible via the Tab button ☰ allowing rapid adjustments:

❶ General Sound		❹ Brightness	
❷ Search Sounds		❺ Idle Mode	
❸ Vibration Mode		❻ 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.
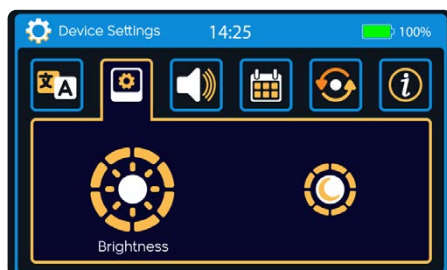
General Settings

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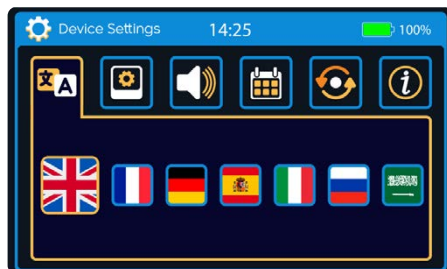

Display Settings:
- **Brightness:** Adjust brightness levels using the up and down arrows ▲▼
- **Sleep Mode:** Enables automatic dimming to save power. Access this setting using the right arrow ◀︎ and adjust via the up and down arrows ▲▼

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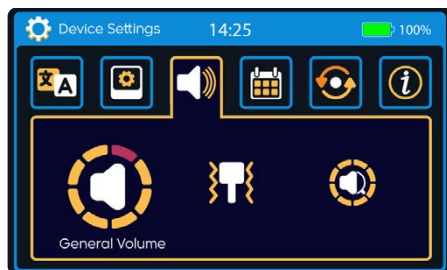
Setting Date and Time:
To set the date and time, select the Date & Time icon and press the **OK** button. Use the arrow buttons to adjust the day, month, year, and time accurately. Once the settings are adjusted, press the Back button to save the changes.
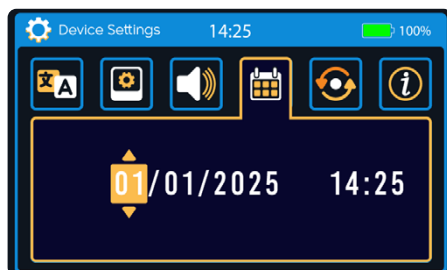
General Settings

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? (✔/✘)
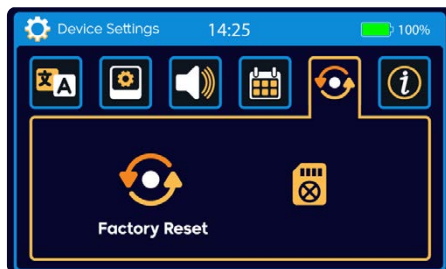
Clear Saved Data:
Through the device settings, the user can access the Clear Data option to delete all saved files related to previous search operations.

When this option is selected, a deletion confirmation message will appear:
«Are you sure you want to proceed with this operation? (✔/✘)
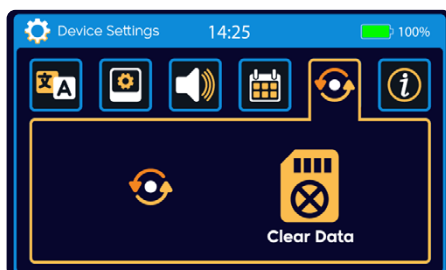
> ⚠ This action will permanently delete all saved files from the device's memory.

Detector Information:
Displays essential data, including:
• Serial Number
• Software Version
• Total Operating Hours

General Settings

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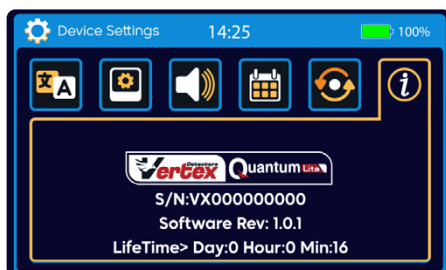When using the V35 Active Detection Coil, search operations can be saved for later review or to compare different scans.

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

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
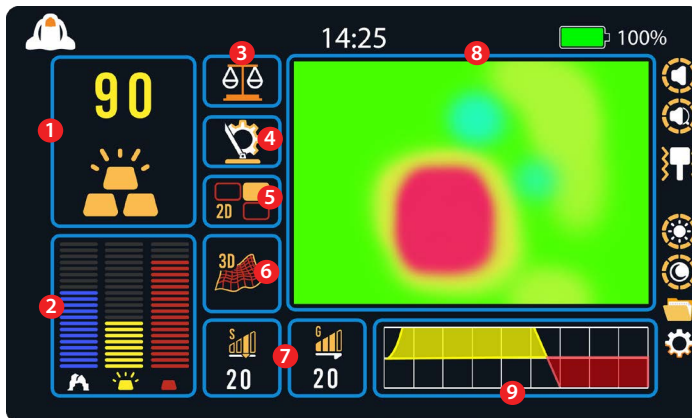
❶ **Target ID**
❷ **Target Indicators**
❸ **Ground Calibration**
❹ **Search Settings**
❺ **2D Scanning Technology**
❻ **3D Scanning Technology**
❼ **Sensitivity & Gain**
❽ **Live Scanning**
❾ **Graphical Display**

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.
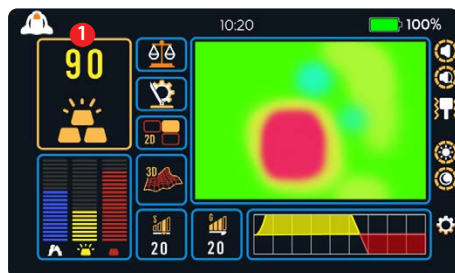
Note: The numerical values for precious and non-precious targets appear based on the Target ID value table (Refer to page 15 for details).

V35 User Interface

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.
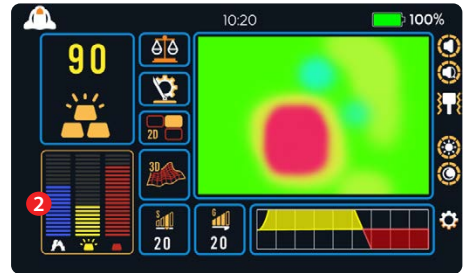
3. Ground Calibration

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.
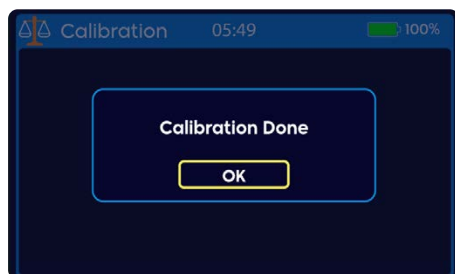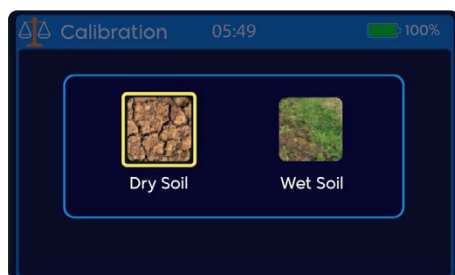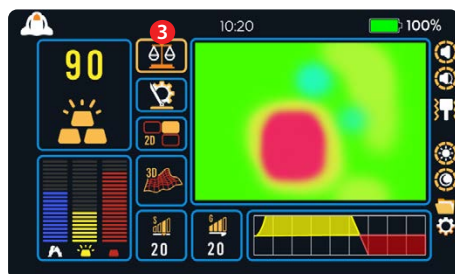
4. Search Settings

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.

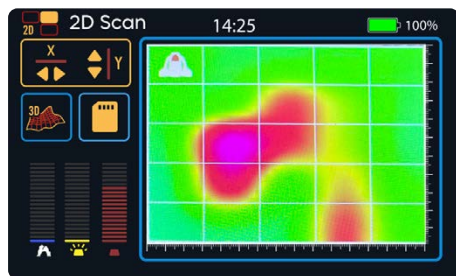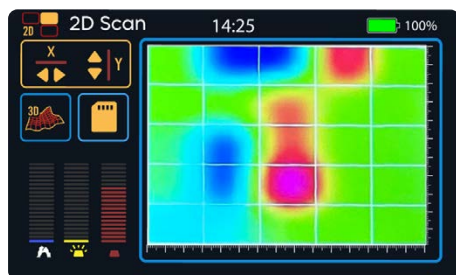### Color Interpretation in the Scan Grid
Blue: Represents Cavities (caves, tunnels, cavities).
Purple: Indicates precious metals (gold, silver).
Red: Represents general metals (iron, copper).
Green: Represents natural ground (no buried targets).

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).
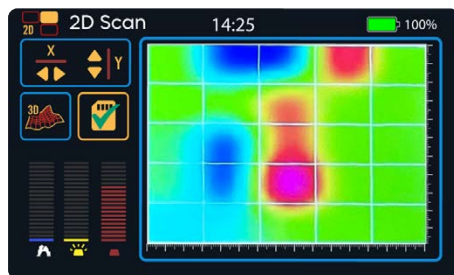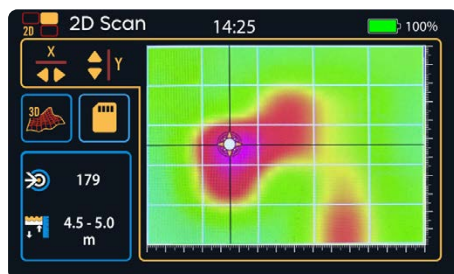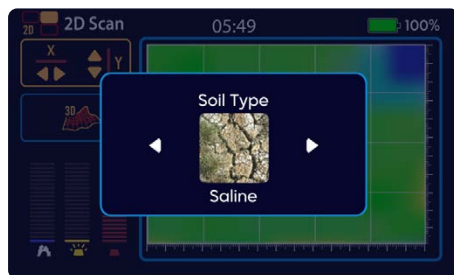
6. 3D Scanning Technology

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.

V35 User Interface
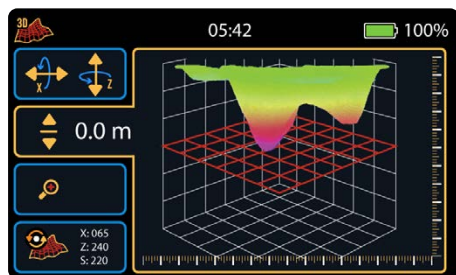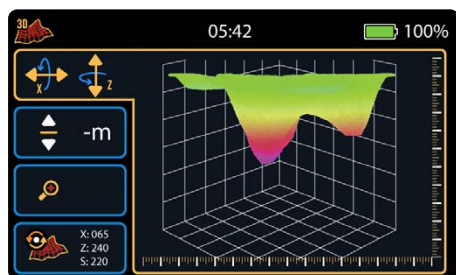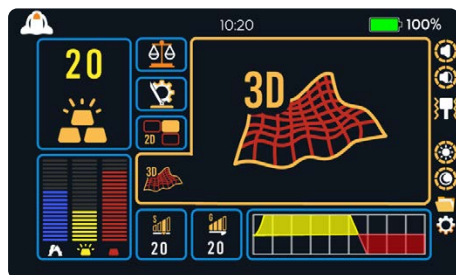
Importance of 3D Scanning Technology

✔ 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.
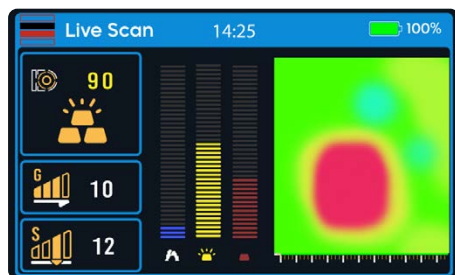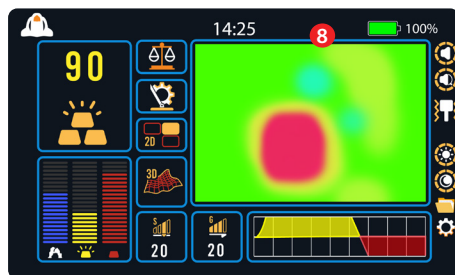
> **Note:** For a detailed explanation of color indicators, refer to the Target Indicators section (Refer to page 24 for details).

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.

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 °60C (°140F), 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.

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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