

Vitrano vx10



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 «**Vitran**» 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 «**Vitran**» 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

We proudly present the «**Vitran**» device from Vertex, a technologically advanced innovation in the field of precious metal detection. It is built on cutting-edge scientific technologies that provide exceptional capabilities in accurately detecting targets at significant depths, utilizing the modern (SFX) detection technology.

The «**Vitran**» detector delivers outstanding performance across different environmental conditions, making it an excellent choice for both professionals and hobbyists..

It features a modern design and lightweight construction, ensuring maximum comfort during use while reducing fatigue. Manufactured from high-durability materials, the detector ensures long-lasting performance and withstands various working environments. Additionally, it is equipped with a full-color display that clearly presents data and results, enhancing the user experience and providing added convenience.

The Vitran is a reliable and highly efficient choice for those searching for precious metals in various conditions. Combining outstanding performance with cutting-edge technology, it serves as the perfect tool for achieving accurate and dependable results.

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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 «**Vitran**» 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.

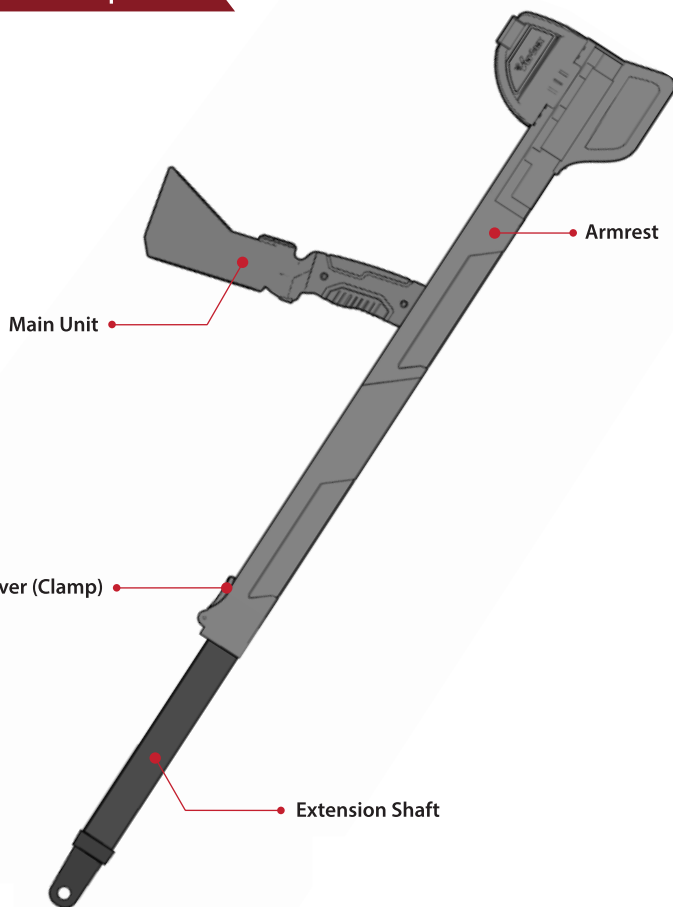
Overview | Advantages of the Vitran Detector

- ✓ **Detects All Types of Metals:** Allows detection of all metal types within the designated area, making it ideal for comprehensive scanning before focusing on a specific target.
- ✓ **Advanced SFX Technology:** Enhances the efficiency of detecting precious metals and small gold nuggets.
- ✓ **Metal Differentiation:** Distinguishes between valuable metals and unwanted metals.
- ✓ **Deep Detection Capability:** Engineered to detect buried targets at significant depths, depending on soil composition and target size.
- ✓ **Field-Tested Performance:** The detector has undergone extensive real-world testing across multiple soil types, including desert, clay, and mountainous terrains.
- ✓ **High Operational Efficiency:** Ensures exceptional field performance, even in the most challenging environments.
- ✓ **Ergonomic & Streamlined Design:** Lightweight structure for easy handling and reduced fatigue during prolonged search sessions.
- ✓ **Long-Lasting Battery:** Built-in battery providing up to 6 hours of continuous operation with fast charging capability.
- ✓ **High-Resolution Color Display:** Ensures clear and precise visualization of detection results.

Overview | Detector parts



Headphones

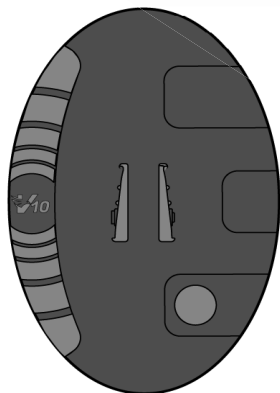


Main Unit

Armrest

Grip Lever (Clamp)

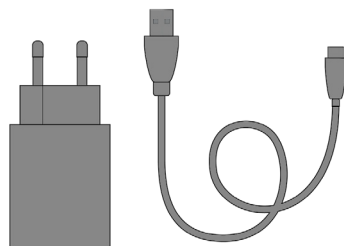
Extension Shaft



Search Coil (V10)



Fixing Screw

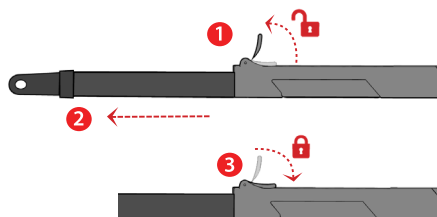


Charger

Overview | Assembling the Detector

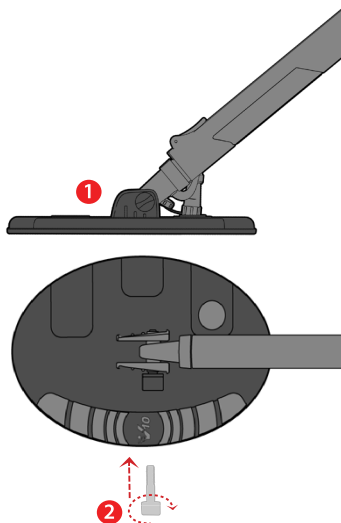
Extending the Arm:

- 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.



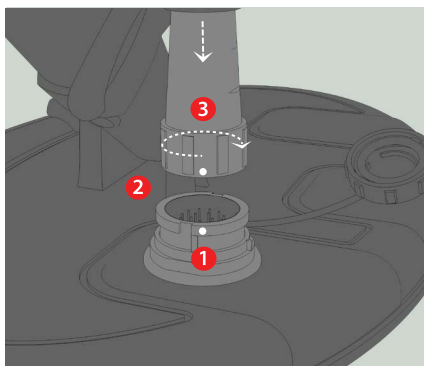
Attaching the Search Coil:

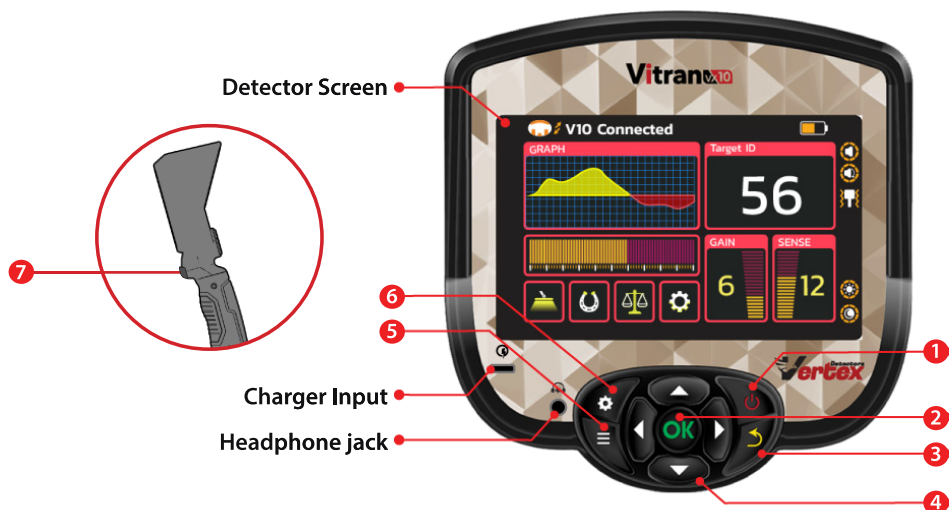
- 1 Place the detector on a flat surface so that the search coil is parallel to the ground, as shown in the image. Position the arm's end into the designated slot on the coil, ensuring that the side holes of the arm align with the holes on the coil.
- 2 Insert the screw through the aligned holes from 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.





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 white 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		It is used to recalibrate the device when pressed momentarily. When pressed and held, it switches to Pinpointer Mode for precise target localization, based on the active search technology.

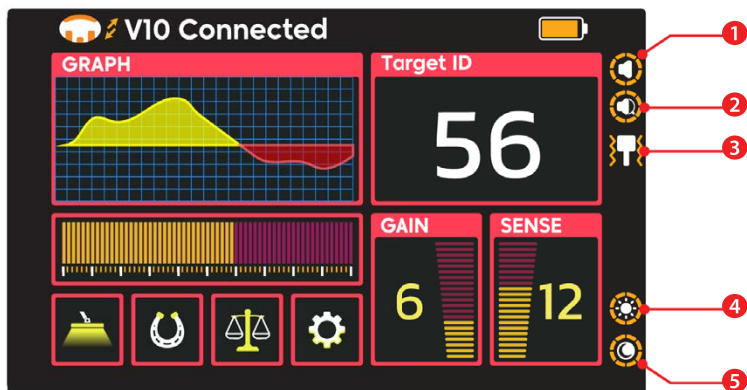
Overview | Technical Specifications

Operating Principle	Signal analysis with audio and visual output.
Processor	High-Performance ARM Cortex M7.
Display	5-inch Color TFT, WVGA 800×480 resolution.
Battery	Built-in Lithium-Ion 12.6V / 3500mAh.
Battery Life	Up to 6 hours of continuous use.
Charger	Type-C – PD 30W.
Sound Detection	Interactive frequency sound.
Languages	7 languages (English, French, German, Spanish, Italian, Russian, Arabic).
Device Weight	6 kg (packaged), 2 kg (assembled with coil).
Dimensions	86cm x 23cm x 45cm (packaged), 13.5cm x 39cm x 91cm (assembled).
Operating Temperature	-10°C to 60°C.
Storage Temperature	-10°C to 80°C.

Overview | Battery & Charging

- Use the charger and cable provided by the company (VERTEX).
- Connect the charger to the electrical outlet and then connect the charging cable to the designated place as shown in the picture.
- When the detector is connected to the charger, a charging interface appears, indicating that charging is in progress. This screen also displays the current battery percentage to keep the user informed of the charging status.
- The detector cannot be used while charging.
- During operation of the detector, when the battery is very low, the detector will sound an alarm and then automatically stop.



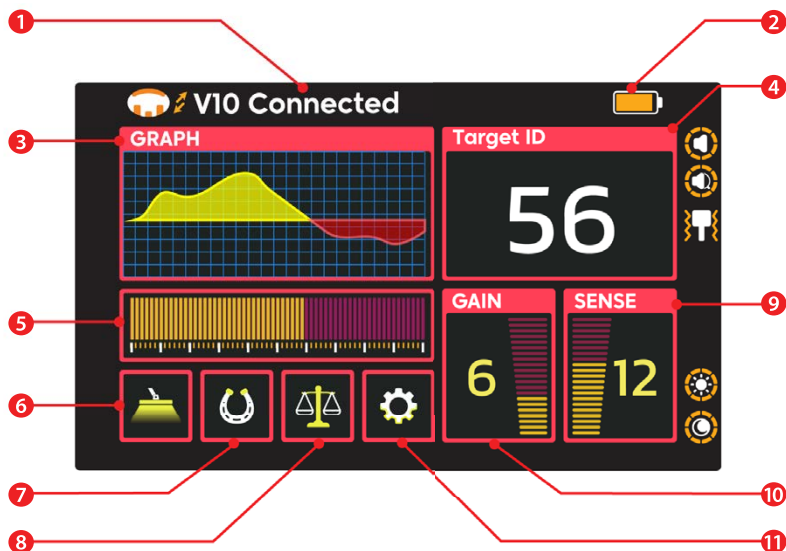


Quick Settings:

Accessible via the Tab button  allowing rapid adjustments:

1 General Sound		4 Brightness	
2 Search Sounds		5 Idle Mode	
3 Vibration Mode			

Each setting is adjusted using the up and down arrows 



1 Search Coil Status:

- » This feature displays the connection status of the search coil. If (Connected) appears with the coil icon, the coil is recognized and active. If (Disconnected) appears with the coil icon missing, it indicates that the coil is not detected, requiring a connection check.

2 Battery Indicator:

- » Displays the current battery level and charging status.

3 Graph Display

4 Target ID

5 Pinpointer Mode:

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

6 Turbo Mode :

- » Activated before searching to enhance signal strength and reach greater depths in pure and debris-free soil.

7 Iron Rejection:

- » Allows users to ignore signals from ferrous metals, helping to focus on precious metal detection and improving accuracy.

8 Ground Calibration:

- » Used to determine the ground type before conducting a search.

9 Sensitivity Indicator:

- » Enables users to adjust sensitivity levels according to search conditions, improving detection accuracy while reducing environmental interference.

10 Gain Indicator (Amplification):

- » Allows users to increase or decrease the transmitted signal strength, optimizing search coil compatibility with different ground conditions.

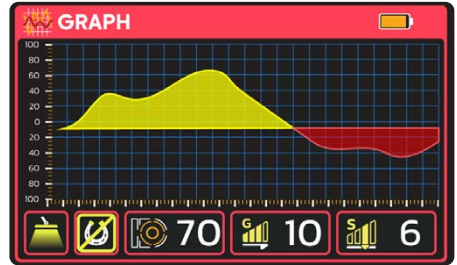
11 Detector Settings:

- » The settings menu includes customization and control options for your detector.

Overview | User Interface

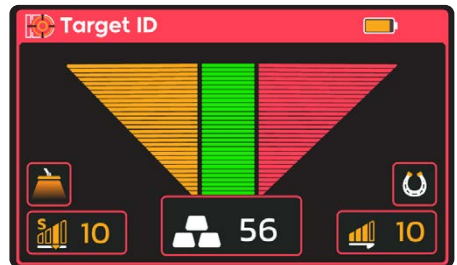
Graph Display:

- » 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.



General Settings

The settings menu includes customization and control options for your detector.

Languages:

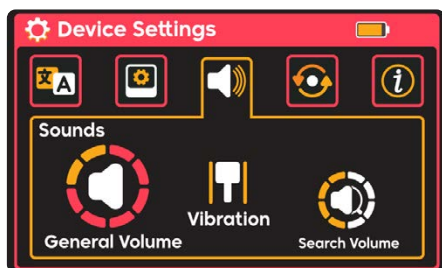
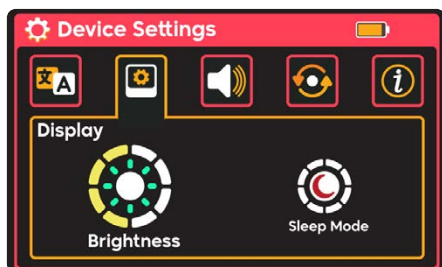
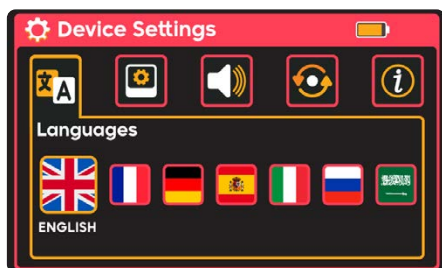
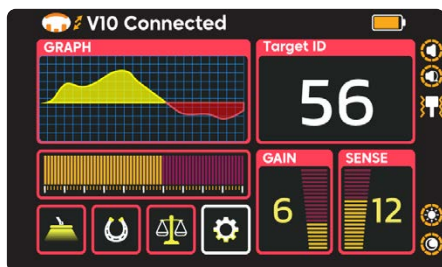
Select language using the arrow keys  and confirm with the **OK** button. Available languages: English, French, German, Spanish, Russian, Italian, Arabic.

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 .



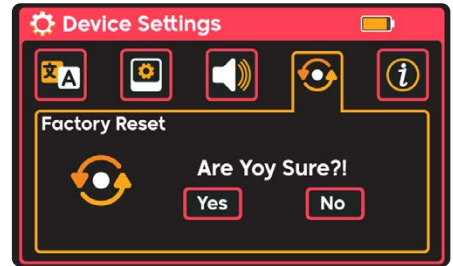
General Settings

Factory Reset :

Restores all settings to their default values.

When selected, a confirmation message appears:

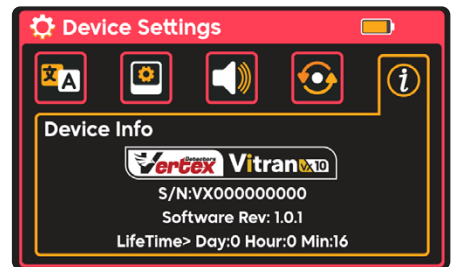
Are you sure you want to proceed? (Yes / No)



Detector Information:

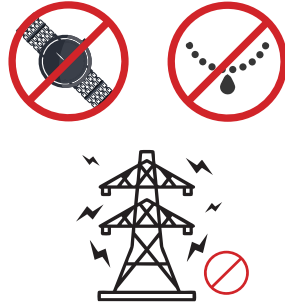
Displays essential data, including:

- Serial Number
- Software Version
- Total Operating Hours



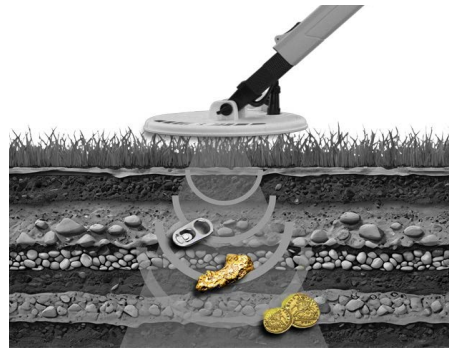
Tips Before Starting the Search

- **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.



Detector Operating Principle

- The SFX technology primarily works by transmitting electromagnetic waves through the search coil, allowing them to penetrate the ground layers without dissipation. These waves are then re-received by the coil.
- When a target is present, the received waves undergo specific changes depending on the type of target. The altered signals are then corrected using advanced digital filters to produce a clean electrical signal.
- This signal is subsequently interpreted through software processing and analyzed using mathematical operations to determine the type of target and its depth beneath the surface.



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



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

How to Use the Detector & Search Technique

1. Detector Setup:

- Unlock the extension shaft, pull it to the desired length, and then relock it securely ([Extending the Arm page7](#)).
- Press and hold the power button for 3 seconds, then select the desired settings.

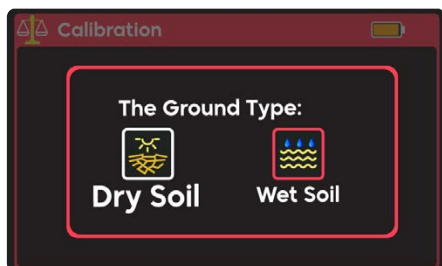
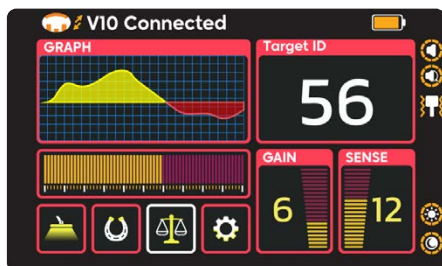
2. Detector Calibration:

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:

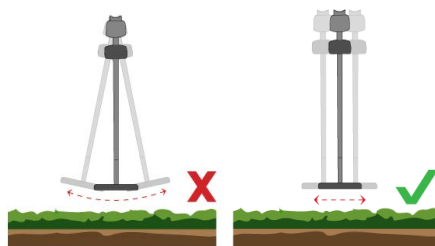
- Raise and lower the detector several times while keeping the search coil parallel to the ground.
- Maintain a minimum coil height of 10 cm from the ground and a maximum height of 35 cm, as shown in the on-screen guidance image.
- Calibration takes 10 to 30 seconds. During this process, a graph appears 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 Use the Detector & Search Technique

3. 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.



4. 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.

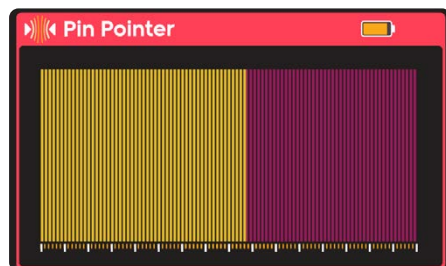


5. Pinpointing the Target:

- 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.



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 void 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 point of collection for recycling and disposing of their end-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.

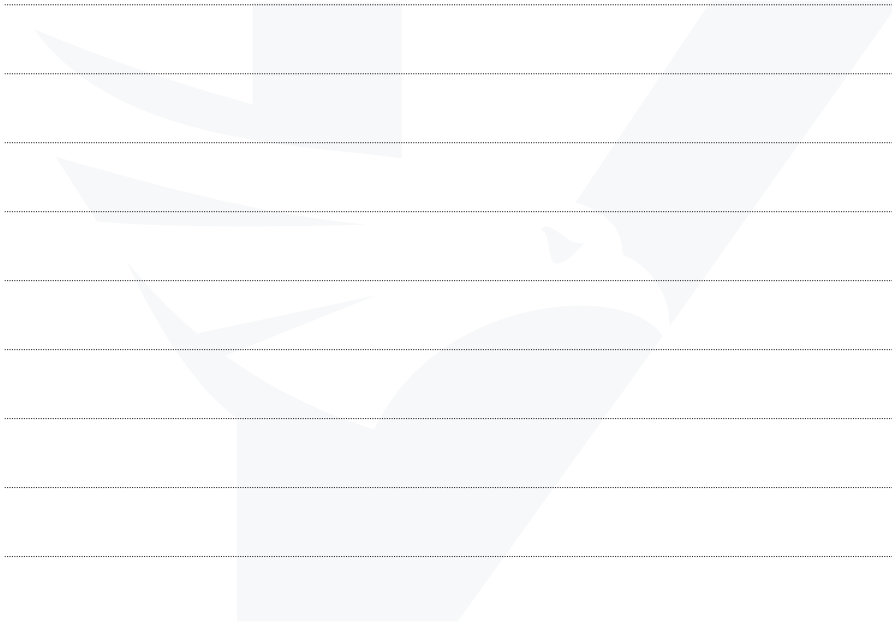
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Contact Information & Support



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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