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> VIHELM MD-5030 Metal Detector User Manual

## VIHELM MD-5030

# VIHELM MD-5030 Metal Detector User Manual

Model: MD-5030

## 1. INTRODUCTION

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Thank you for choosing the VIHELM MD-5030 Metal Detector. This device is designed for detecting various types of metal objects underground, making it suitable for treasure hunting, archaeological exploration, and finding lost items. This manual provides comprehensive instructions for the proper assembly, operation, and maintenance of your metal detector to ensure optimal performance and longevity.

## 2. PRODUCT OVERVIEW

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### 2.1 Components

Familiarize yourself with the main components of your MD-5030 metal detector:



**Figure 2.1: Main Components of the MD-5030 Metal Detector**

This diagram illustrates the key parts: Search Coil, Control Box, LCD Screen, Knob, Stem Lock Nut, Handle Grip, and Padded Armrest. The battery holder and 3.5mm headphone jack are also shown in detail.

- **Search Coil:** The primary sensor that detects metal objects. It is 8 inches and waterproof.
- **Control Box:** Houses the electronics, LCD screen, and control buttons. *Note: The control box is NOT waterproof.*
- **LCD Screen:** Displays target information, depth, sensitivity, and battery status.
- **Knob:** Used for adjusting the stem length.
- **Stem Lock Nut:** Secures the adjustable stem in place.
- **Handle Grip:** Provides a comfortable hold during operation.
- **Padded Armrest:** Supports the forearm for extended use.
- **Battery Holder:** Located at the bottom of the control box, for battery installation.
- **3.5mm Headphone Jack:** For connecting headphones (not supplied) to hear detection signals, especially useful in noisy environments.

## 2.2 Control Panel

The control panel provides access to all operational settings and displays detection feedback.



Figure 2.2: Control Panel Layout

This image details the control panel, showing the Power On/Off button, Earphone jack, Pinpoint button, Mode button, and Sensitivity adjustment buttons (+/-).

- **POWER ON/OFF Button:** Press to turn the detector on or off.
- **EARPHONE Jack:** Connect 3.5mm headphones here.
- **PIN POINT Button:** Narrows the target location range for precise pinpointing.
- **MODE Button:** Selects between ALL METAL and DISC (Discrimination) modes, or adjusts sensitivity.
- **+/- Buttons:** Adjust metal detection type or sensitivity depending on the selected mode.

The LCD screen displays: Target Depth (5 levels), Target ID (shows the target when detected), Coin Depth, SENS (Sensitivity), DISC (Discrimination), and icons for various metal types (e.g., 25¢, 50¢, 1¢, 5¢, Fe for Iron).

## 3. SETUP

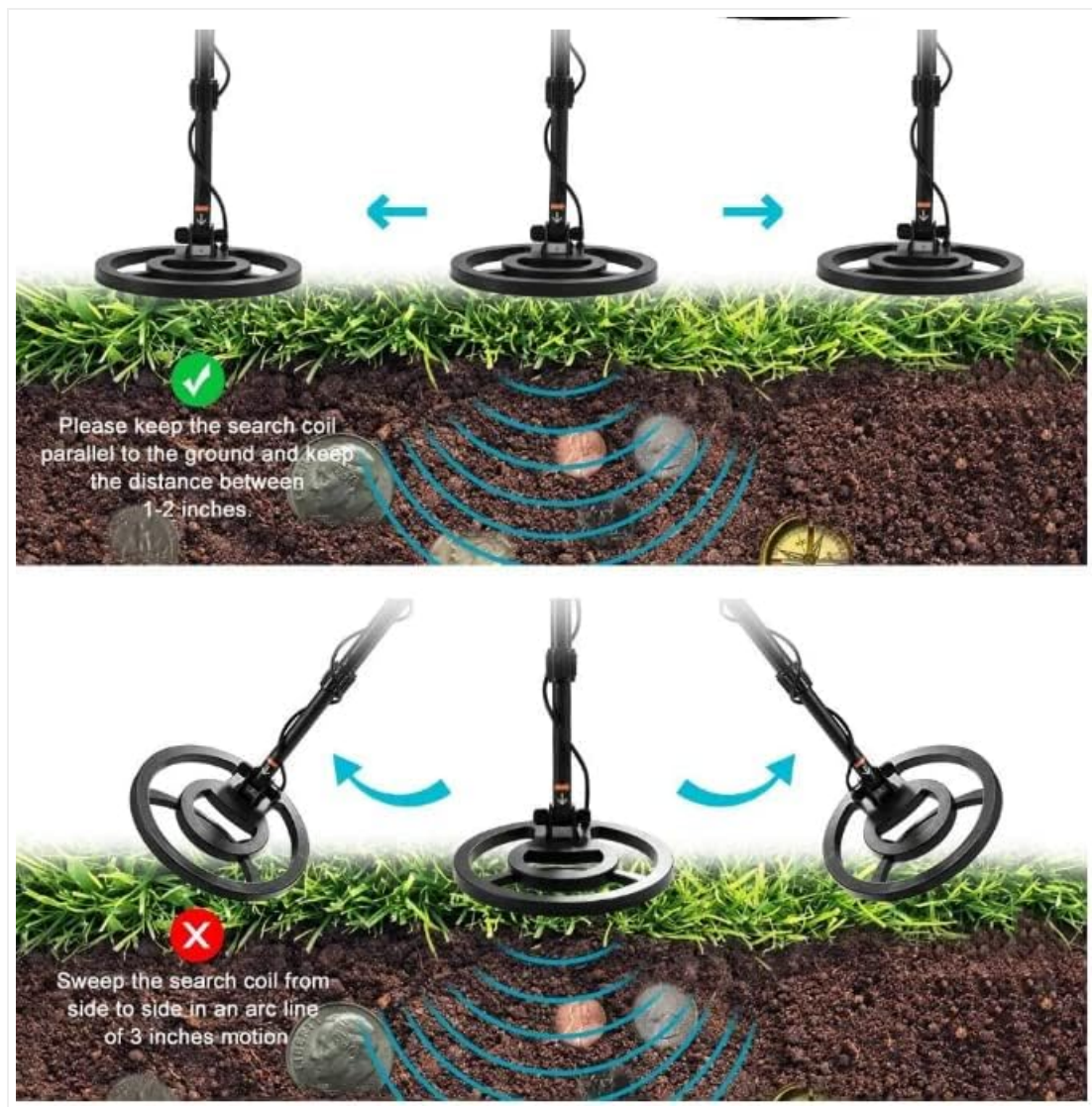
### 3.1 Assembly

Assemble the metal detector by connecting the search coil to the lower stem, then attaching the lower stem to the middle stem, and finally connecting the middle stem to the control box assembly. Ensure all connections are secure.

### 3.2 Battery Installation

The MD-5030 requires two 9V DC batteries (not supplied).

1. Locate the battery holder compartment on the underside of the control box.
2. Open the battery compartment cover.
3. Insert two 9V batteries, ensuring correct polarity (+ and -).
4. Close the battery compartment cover securely.



**Figure 3.1: Battery Holder**

This image shows the location of the battery holder on the underside of the control box.

### 3.3 Adjusting Length and Armrest

Adjust the detector's length for comfortable use, suitable for users between 107cm and 132cm (approximately 42 to 52 inches).

1. Loosen the Stem Lock Nut.
2. Extend or retract the stem to your desired length.
3. Tighten the Stem Lock Nut to secure the stem.
4. Ensure the padded armrest comfortably supports your forearm.

## 4. OPERATING INSTRUCTIONS

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### 4.1 Powering On/Off

Press the **POWER ON/OFF** button on the control panel to turn the detector on or off.

### 4.2 Operating Modes

The MD-5030 offers three operation modes: ALL METAL, DISC (Discrimination), and Pinpoint.

- **ALL METAL Mode:** Detects all types of metal objects. This mode offers the greatest depth sensitivity.

- **DISC (Discrimination) Mode:** Allows you to discriminate against certain types of metals, such as iron, to avoid unwanted targets. Use the +/- buttons to adjust the discrimination level.
- **PIN POINT Mode:** Used to narrow down the exact location of a detected target. Press the **PIN POINT** button to activate.

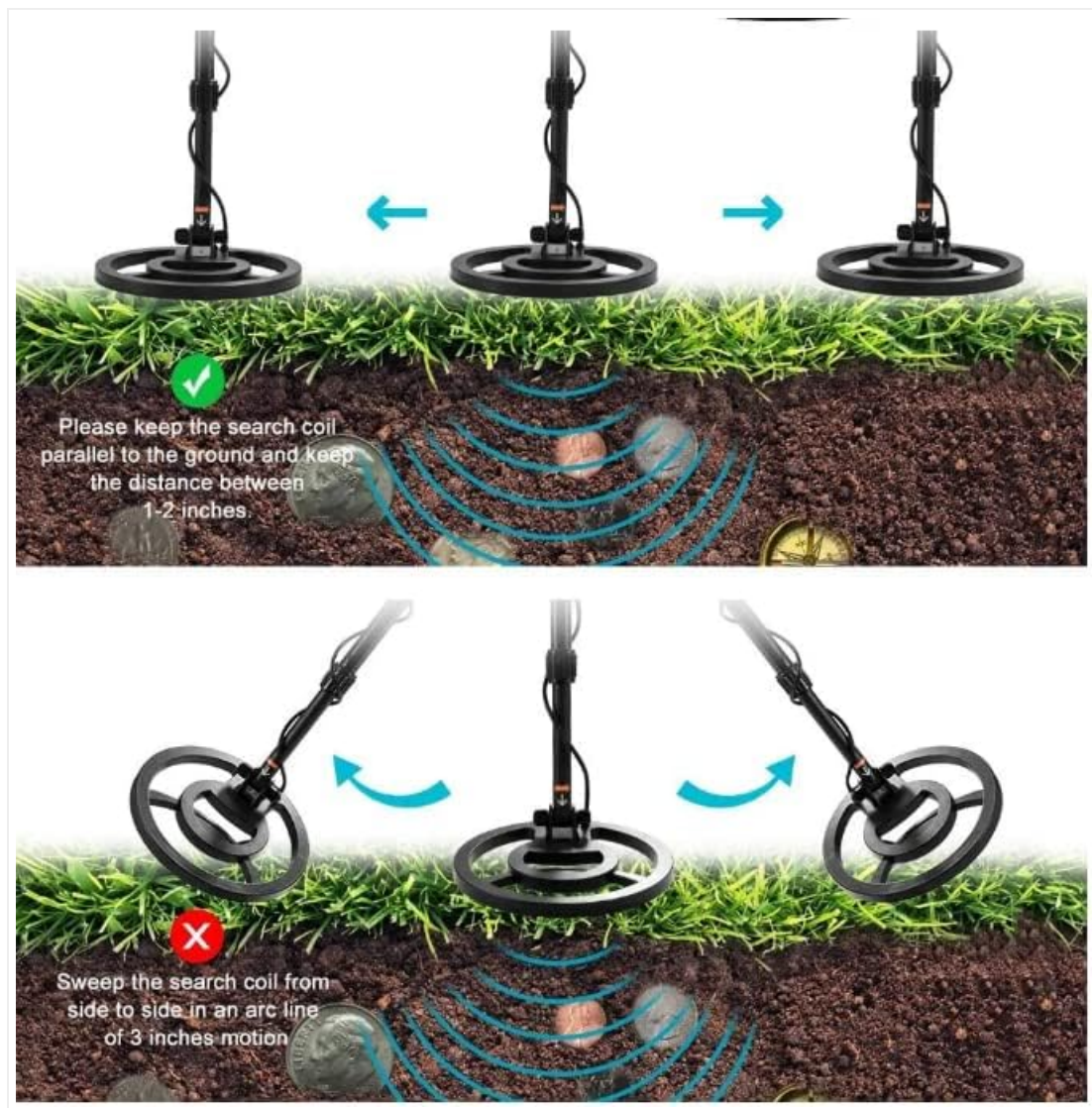
Press the **MODE** button to cycle through the available detection modes or to adjust sensitivity.

### 4.3 Sensitivity Adjustment

Adjust the detector's sensitivity using the +/- buttons. Higher sensitivity settings increase detection depth but may also increase false signals from ground mineralization or electrical interference. Start with a moderate sensitivity and adjust as needed.

### 4.4 Sweeping Technique

Proper sweeping technique is crucial for effective detection.



**Figure 4.1: Sweeping Technique**

The top illustration shows the correct method: keep the search coil parallel to the ground at a distance of 1-2 inches. The bottom illustration shows an incorrect method: sweeping in an arc or lifting the coil too high.

- Keep the search coil parallel to the ground at all times.
- Maintain a consistent distance of 1-2 inches (2.5-5 cm) from the ground.
- Sweep the search coil from side to side in a slow, overlapping motion.
- Avoid sweeping in an arc or lifting the coil at the ends of your sweep, as this can lead to missed targets or

inaccurate readings.

## 4.5 Interpreting Signals

The MD-5030 provides visual and auditory feedback:

- **LCD Screen:** Displays Target ID (indicating probable metal type), Target Depth (5 levels), and Coin Depth.
- **Audio Tones:** The detector produces three distinct tones to indicate different types of metals. Higher tones generally indicate more valuable metals, while lower tones often indicate iron or less valuable targets.
- **Headphone Use:** Connect 3.5mm headphones to the EARPHONE jack to hear signals more clearly, especially in noisy environments.

## 5. MAINTENANCE

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### 5.1 General Care

- Keep the detector clean. Wipe down the search coil and stem with a damp cloth after each use.
- Avoid exposing the control box to moisture, rain, or direct sunlight for extended periods. The control box is NOT waterproof.
- Store the detector in a dry, cool place when not in use.
- Do not use abrasive cleaners or solvents on any part of the detector.

### 5.2 Battery Care

- Remove batteries from the detector if it will not be used for an extended period to prevent leakage and damage.
- Replace batteries when the low battery indicator appears on the LCD screen.
- Always use fresh, high-quality 9V batteries.

### 5.3 Waterproof Search Coil

The 8-inch search coil is waterproof and can be used in shallow water. However, ensure the control box remains dry and away from water, as it is not waterproof.

## 6. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Detector does not power on.	<ul style="list-style-type: none"><li>• Batteries are dead or incorrectly installed.</li><li>• Loose connection.</li></ul>	<ul style="list-style-type: none"><li>• Replace batteries with fresh ones, ensuring correct polarity.</li><li>• Check all cable connections between the coil and control box.</li></ul>
Erratic signals or false alarms.	<ul style="list-style-type: none"><li>• High sensitivity setting.</li><li>• Electromagnetic interference (EMI) from power lines, cell phones, etc.</li><li>• Highly mineralized ground.</li></ul>	<ul style="list-style-type: none"><li>• Reduce sensitivity.</li><li>• Move away from sources of EMI.</li><li>• Try adjusting discrimination settings or reducing sensitivity further.</li></ul>
Poor detection depth.	<ul style="list-style-type: none"><li>• Low sensitivity setting.</li><li>• Incorrect sweeping technique.</li><li>• Low battery power.</li></ul>	<ul style="list-style-type: none"><li>• Increase sensitivity (if conditions allow).</li><li>• Ensure the search coil is parallel to the ground and swept slowly.</li><li>• Replace batteries.</li></ul>

## 7. SPECIFICATIONS

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Feature	Detail
Model	MD-5030
Brand	VIHELM
Power Source	2 x 9V DC batteries (not supplied)
Operating Frequency	6.6KHz ± 0.2KHz
Search Coil	8-inch, waterproof
Control Box	Not waterproof
Adjustable Length	107-132 cm (approx. 42-52 inches)
Headphone Jack	3.5mm
Operating Modes	All Metal, Discrimination, Pinpoint
Audio Tones	Three tones for different metal types
Sensitivity	≥ 18cm for a US Quarter
Item Weight	4 Pounds (approx. 1.8 kg)

## 8. WARRANTY AND SUPPORT

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Specific warranty information for the VIHELM MD-5030 Metal Detector is not provided in this manual. Please refer to the product packaging, your purchase receipt, or contact the retailer or manufacturer directly for details regarding warranty coverage and customer support.

