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## Teknetics Omega 8500

# Teknetics Omega 8500 Metal Detector User Manual

Model: Omega 8500

Brand: Teknetics

## 1. INTRODUCTION

### Welcome

Thank you for choosing the Teknetics Omega 8500 Metal Detector. This manual provides detailed instructions for the proper assembly, operation, maintenance, and troubleshooting of your new metal detector. Please read this manual thoroughly before using the device to ensure optimal performance and safety.

### Safety Information

It is crucial to operate your metal detector responsibly. Always use the device in safe and appropriate areas, avoiding sensitive equipment and adhering to all local laws and regulations regarding metal detecting. Be aware of potential hazards in your search area, such as buried utilities or dangerous terrain, and take necessary precautions to ensure your safety and the safety of others.

The Teknetics Omega 8500 features a Frequency Shift function designed to eliminate Electromagnetic Interference (EMI). While this feature helps in noisy environments, always be mindful of strong electromagnetic fields that could affect detector performance or pose a risk.

## 2. PRODUCT OVERVIEW

### Key Features

- **Advanced Target Identification:** Features a three-digit numerical target ID system for precise identification of buried objects, helping users distinguish between valuable finds and unwanted materials. The intuitive LCD display provides clear feedback.
- **10" Concentric Searchcoil:** Equipped with a high-performance 10" concentric coil for exceptional detection depth and accuracy, locating a wide variety of metal objects including coins, relics, and small treasures.
- **Computerized Ground Balancing:** The Ground Grab automatic ground balancing system eliminates interference from soil mineralization, allowing smooth operation across different terrains. Manual adjustment is also available.
- **Pinpoint Mode and Depth Indicator:** Provides an audio signal and depth readout for precise target location, reducing the need for extensive digging. The depth indicator is calibrated for coin-sized objects.
- **Customizable Settings:** Offers adjustable sensitivity, discrimination levels, and threshold settings, enabling users to tailor the detector's performance to suit specific hunting conditions. Includes multiple audio tones and frequency shifting.
- **Ergonomic and Durable Design:** Designed for comfort during extended use with an adjustable armrest and lightweight construction. Durable build for various outdoor environments, with a backlit LCD screen for low-light visibility.

## Components

The Teknetics Omega 8500 Metal Detector consists of several key components designed for ease of use and effective metal detection.



Figure 2.1: Fully assembled Teknetics Omega 8500 Metal Detector, showing the control housing, shaft, and searchcoil.



Figure 2.2: Close-up view of the Omega 8500 control panel, highlighting the LCD display, gain and threshold knobs, and pinpoint button.

The main components include the control housing with its intuitive LCD display and control knobs, the adjustable shaft for comfortable handling, and the 10-inch concentric searchcoil for detecting targets. An adjustable armrest is also integrated for ergonomic support during extended use.

## 3. SETUP

### Assembly

1. Attach the searchcoil to the lower stem using the provided bolt and wing nut. Ensure it is securely fastened but allows for slight angle adjustment.
2. Connect the lower stem to the middle stem, and then connect the middle stem to the upper stem (which includes the control housing and armrest).
3. Wrap the searchcoil cable snugly around the stem, securing it with the integrated cable clips. This prevents tangling and false signals.
4. Plug the searchcoil connector into the corresponding port on the control housing. Ensure the connection is firm.
5. Adjust the length of the stem to a comfortable height that allows you to swing the searchcoil parallel

to the ground without bending excessively.

6. Adjust the armrest for comfortable support of your forearm.

## Battery Installation

The Teknetics Omega 8500 requires one 9V battery for operation. For best performance, use a high-quality alkaline or rechargeable 9V battery.

1. Locate the battery compartment on the back of the control housing.
2. Slide the battery compartment cover off.
3. Insert one 9V battery, ensuring the positive (+) and negative (-) terminals are correctly aligned with the markings inside the compartment.
4. Replace the battery compartment cover, ensuring it clicks securely into place.

**Note:** Remove the battery if the detector will not be used for an extended period to prevent battery leakage and potential damage to the unit.

## 4. OPERATING INSTRUCTIONS

### Powering On/Off

To power on the Omega 8500, rotate the GAIN knob clockwise until you hear a click and the LCD screen illuminates. To power off, rotate the GAIN knob counter-clockwise until it clicks off.

### Basic Operation

Once powered on, the detector will typically default to a general search mode. Begin by setting the GAIN (sensitivity) to a moderate level, usually around 60-70, and adjust the THRESHOLD for a faint, continuous hum. Swing the searchcoil slowly and steadily from side to side, keeping it parallel to the ground and approximately 1-2 inches above the surface.

### Advanced Target Identification

The Omega 8500 features a sophisticated 3-digit numerical Target ID system. When a target is detected, a number will appear on the LCD screen, indicating the probable conductivity of the object. Higher numbers generally correspond to more conductive metals like silver, while lower numbers indicate iron or foil. Familiarize yourself with common target IDs for various metals.

### Ground Balancing

Ground balancing is crucial for eliminating false signals caused by mineralized soil. The Omega 8500 offers two methods:

- **Ground Grab (Automatic):** Press and hold the GND GRAB button while pumping the searchcoil up and down over a clear patch of ground. Release the button when the detector emits a smooth, consistent tone. This automatically sets the ground balance.
- **Manual Ground Balance:** For fine-tuning in challenging conditions, you can manually adjust the ground balance using the menu system. Refer to the on-screen prompts for precise adjustments.

### Pinpoint Mode and Depth Indicator

Once a target is detected, press the PINPOINT button. Hold the searchcoil steady over the target area. The detector will emit an audio signal that increases in pitch and volume as you move closer to the center of the target. The LCD will also display a depth reading, calibrated for coin-sized objects, to help you estimate how deep the target is buried.

## Customizable Settings

The Omega 8500 allows for extensive customization:

- **Sensitivity (GAIN):** Adjusts the detector's ability to pick up faint signals. Higher sensitivity increases depth but can also increase susceptibility to electrical interference.
- **Discrimination (DISC):** Allows you to filter out unwanted metals (e.g., iron, foil). Adjust the discrimination level to accept or reject specific target IDs.
- **Threshold (THRESH):** Controls the background hum. A faint, audible hum is ideal for detecting the smallest targets.
- **Audio Tones:** The detector offers multiple audio tones to differentiate between various types of metals, providing an auditory cue for target identification.
- **Frequency Shifting:** Use this feature to shift the operating frequency slightly to minimize interference from other metal detectors or electrical sources.

## Searchcoil Usage

The 10" concentric searchcoil provides excellent target separation and depth. When sweeping, ensure the coil is kept level and close to the ground. Overlapping sweeps by about half the coil's width will ensure thorough coverage of the search area.

## 5. MAINTENANCE

### Cleaning and Care

- After each use, wipe down the searchcoil and shaft with a damp cloth to remove dirt, mud, or sand.
- Do not use abrasive cleaners or solvents on any part of the detector.
- Keep the control housing dry. If it gets wet, wipe it dry immediately.
- Inspect the searchcoil cable and connector regularly for any signs of wear or damage.

### Storage

Store your Teknetics Omega 8500 in a cool, dry place away from direct sunlight and extreme temperatures. If storing for an extended period, remove the 9V battery to prevent leakage.

## 6. TROUBLESHOOTING

### Common Issues and Solutions

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No power/Detector does not turn on	Dead or improperly installed battery	Check battery orientation; replace with a fresh 9V battery.
Excessive chatter/false signals	High sensitivity, mineralized ground, or Electromagnetic Interference (EMI)	Reduce GAIN (sensitivity). Perform Ground Grab. Use Frequency Shift to avoid EMI. Move away from power lines or other electronic devices.
Inaccurate target ID or depth reading	Improper ground balance, highly mineralized soil, or multiple targets	Re-ground balance the detector. Sweep slower and ensure the coil is level. Try pinpointing to isolate targets.
No audio or weak audio	Low volume setting, faulty headphones, or loose coil connection	Check volume setting. Test with different headphones. Ensure searchcoil cable is securely plugged in.

## 7. SPECIFICATIONS

### Technical Specifications

Feature	Specification
Brand	Teknetics
Model	OMEGA 8500
Operating Frequency	7.8 KHz
Searchcoil Size	10 Inches (Concentric)
Power Source	1 x 9V Battery
Battery Life	Approximately 25 Hours
Item Weight	2.5 Pounds
Product Dimensions (L x W x H)	52"L x 10"W x 5"H
Adjustable Length	Yes
Display Type	LCD (Backlit)
International Protection Rating	IP54
Country of Origin	USA

## 8. WARRANTY AND SUPPORT

### Warranty Information

The Teknetics Omega 8500 Metal Detector is backed by a manufacturer's warranty covering defects in materials and workmanship. Please refer to the warranty card included with your product for specific terms, conditions, and duration. Retain your proof of purchase for warranty claims.

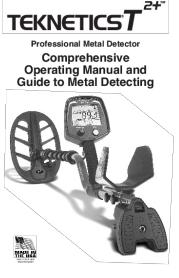
### Customer Support

For technical assistance, troubleshooting not covered in this manual, or warranty service, please contact Teknetics customer support. You can find contact information and additional resources by visiting the official Teknetics website or their store on Amazon: [Teknetics Amazon Store](#).

No official seller videos were found for this product that meet the specified criteria for inclusion in this manual.

### Related Documents - Omega 8500

	<p><a href="#">Teknetics Omega 8500 Metal Detector Owner's Manual</a></p> <p>Comprehensive owner's manual for the Teknetics Omega 8500 metal detector, covering assembly, operation, features, troubleshooting, and maintenance. Learn how to use your metal detector effectively for treasure hunting.</p>
	<p><a href="#">Teknetics Omega 8500 Metal Detector Owner's Manual</a></p> <p>This comprehensive owner's manual provides detailed instructions for the Teknetics Omega 8500 metal detector. It covers assembly, operation, features like discrimination and ground balancing, search techniques, target identification, warranty information, and available accessories. Learn to maximize your metal detecting experience with this guide.</p>
	<p><a href="#">Teknetics Omega 8000 Metal Detector Owner's Manual</a></p> <p>Comprehensive owner's manual for the Teknetics Omega 8000 metal detector. Covers assembly, operation, controls, features like Ground Balancing and Discrimination, search techniques, troubleshooting, warranty, and accessories. Learn how to use your metal detector effectively for treasure hunting.</p>

	<p><a href="#"><b>Teknetics T2 Special Edition Professional Metal Detector: Comprehensive Operating Manual</b></a></p> <p>Discover the Teknetics T2 Special Edition, a high-performance professional metal detector. This manual covers its advanced features, VLF Induction Balance technology, ease of use, and techniques for coinshooting, relic hunting, and gold prospecting.</p>
	<p><a href="#"><b>Teknetics Omega 8000 Metal Detector Owner's Manual and Guide</b></a></p> <p>Comprehensive owner's manual for the Teknetics Omega 8000 metal detector, covering setup, operation, controls, basic metal detecting principles, and warranty information.</p>
	<p><a href="#"><b>Teknetics T2+ Metal Detector: Comprehensive Operating Manual and Guide</b></a></p> <p>Detailed operating manual and guide for the Teknetics T2+ professional metal detector, covering assembly, features, controls, search techniques, and detecting activities. Learn how to use your metal detector for coinshooting, relic hunting, and gold prospecting.</p>