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› DSF MMD02 Metal Detector User Manual

## DSF MMD02

# DSF MMD02 Metal Detector User Manual

Model: MMD02 | Brand: DSF

## 1. INTRODUCTION

Thank you for choosing the DSF MMD02 Metal Detector. This device is designed for both adults and children, offering an engaging way to discover various metals. Featuring adjustable length, a waterproof search coil, and an intuitive LCD display, the MMD02 provides three distinct audio tones and a Discrimination (DISC) mode to help identify different types of metals. Please read this manual thoroughly before operation to ensure proper use and longevity of your metal detector.



Figure 1: The DSF MMD02 Metal Detector, including the main unit, search coil, carrying bag, and two 9V batteries.

## 2. IMPORTANT SAFETY INFORMATION

- **Control Panel Water Resistance:** The control panel of the MMD02 is *not waterproof*. Do not submerge the control unit in water. Only the search coil is designed for shallow water use.
- **Battery Safety:** Use only specified 9V batteries. Ensure correct polarity when inserting. Remove batteries if the detector will not be used for an extended period to prevent leakage.
- **Operating Environment:** Use the detector only in normal temperature environments. Avoid extreme heat or cold.
- **Handling:** Handle the detector carefully to prevent damage to components, especially the display and coil.
- **Underground Utilities:** Before digging, always verify that there are no underground electrical cables, gas lines, or water pipes in the area to prevent injury or damage.

## 3. PACKAGE CONTENTS

Upon opening the package, please verify that all the following items are included:

- 1 x DSF MMD02 Metal Detector

- 1 × Carrying Bag
- 2 × 9V Batteries
- 1 × User Manual (this document)

## 4. PRODUCT OVERVIEW AND COMPONENTS

The DSF MMD02 Metal Detector consists of several key components designed for optimal performance and user comfort.



Figure 2: Labeled components of the MMD02 Metal Detector.

### 4.1 Key Features

- **Adjustable Length:** The detection rod can be adjusted from 24 inches (61cm) to 45 inches (90cm), making it suitable for both adults and children.
- **7.8-inch Waterproof Search Coil:** Allows for detection in shallow water and saltwater. *Note: The control unit is not waterproof.*

- **Large Back-lit LCD Display:** Provides clear visual feedback on detected targets, depth, and battery status.
- **Comfort Armrest:** Ergonomically designed for comfortable use during extended periods.
- **Ultra-Lightweight:** Weighing only 4 lbs, it is portable and easy to carry.



Figure 3: Key physical features of the MMD02: waterproof coil, ergonomic armrest, and lightweight design.

## 5. SETUP AND ASSEMBLY

Follow these steps to assemble your DSF MMD02 Metal Detector:

1. **Attach the Search Coil:** Connect the search coil to the lower stem using the provided fixing knob and connector. Ensure it is securely tightened.
2. **Assemble the Stem:** Insert the lower stem into the adjustable stem, and then connect the adjustable stem to the control box assembly. Use the lock nut to secure the desired length.
3. **Install Batteries:** Open the battery compartment on the control box. Insert the two 9V batteries, ensuring correct polarity (+/-). Close the compartment securely.

4. **Adjust Length:** Adjust the length of the detector rod to a comfortable height for your use. The rod can be adjusted from 24 inches to 45 inches.
5. **Coil Cable Management:** Wrap the coil cable neatly around the stem, ensuring it is not tangled or pinched, and plug the connector into the control box.

## 6. OPERATING INSTRUCTIONS

Familiarize yourself with the control panel and display before beginning your search.

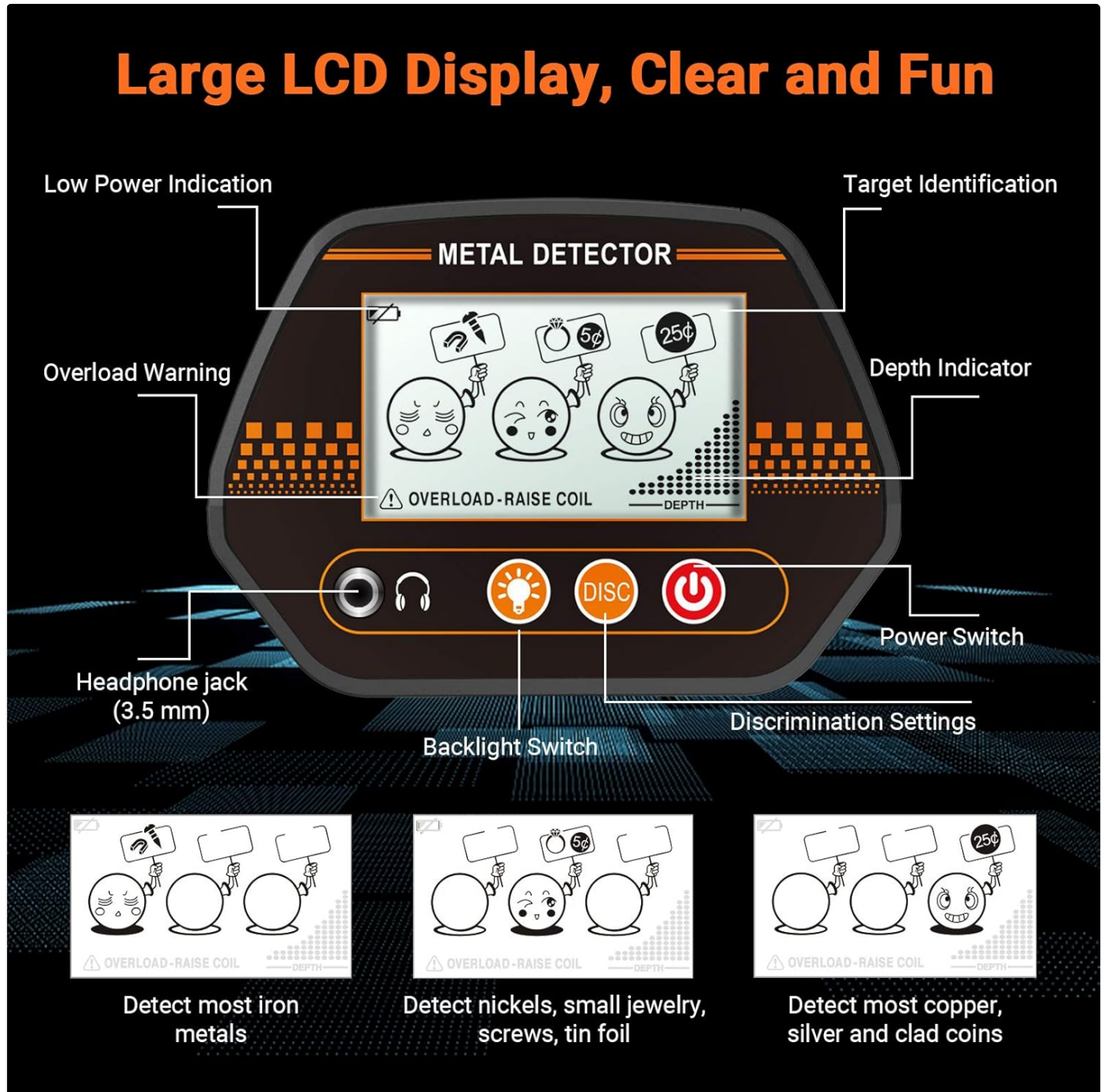


Figure 4: MMD02 LCD Display and Control Buttons.

### 6.1 Powering On/Off

Press the **Power Switch** button (red circle icon) to turn the detector on or off.

### 6.2 Audio Tone Identification

The MMD02 emits three distinct audio tones to help identify the type of metal detected:

- **Low Tone:** Indicates ferrous metals (e.g., iron, nails, screws).
- **Medium Tone:** Indicates medium conductivity metals (e.g., rings, blades, small jewelry).
- **High Tone:** Indicates highly conductive metals (e.g., copper, silver, clad coins).

### 6.3 Discrimination (DISC) Mode

The DISC button allows you to filter out unwanted metals. Press the **DISC** button (blue circle icon) to cycle through discrimination settings:

- **First Press:** Discriminates against ferrous metals.
- **Second Press:** Discriminates against ferrous metals and low conductivity non-ferrous metals.
- **Third Press:** Returns to normal (All-Metal) detection mode.



Figure 5: All-Metal vs. DISC Mode operation.

### 6.4 Display Indicators

- **Low Battery Indication:** A battery icon appears when the voltage is less than 4V. It starts flashing when the voltage

drops below 3.8V, indicating that batteries need replacement.

- **Depth Icon:** When a target is detected, icons will be displayed to indicate the approximate depth of the item.
- **Signal Overload Indication:** If the detector is too close to a highly mineralized target or ground, an "OVERLOAD-RAISE COIL" signal will be displayed. Lift the detector slightly to resume normal operation.

## 6.5 Backlight

Press the **Backlight Switch** button (light bulb icon) to turn the display backlight on or off. Note that the backlight consumes significant power; activate it only when necessary to conserve battery life.

## 6.6 Headphone Jack

The MMD02 includes a 3.5mm headphone jack for private listening and clearer audio signals in noisy environments.

# 7. MAINTENANCE AND CARE

- **Cleaning:** After each use, wipe down the search coil with a damp cloth, especially after use in wet or sandy conditions. Clean the control box with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the metal detector in a cool, dry place. If storing for an extended period, remove the batteries to prevent leakage and corrosion.
- **Protect the Control Panel:** As the control panel is not waterproof, protect it from rain, splashes, and submersion.
- **Coil Protection:** Avoid striking the search coil against hard objects, which could cause damage.

# 8. TROUBLESHOOTING

If you encounter issues with your MMD02 Metal Detector, refer to the following common problems and solutions:

## 8.1 No Power / Detector Not Turning On

- **Check Batteries:** Ensure batteries are correctly inserted with proper polarity. Replace with fresh 9V alkaline batteries if the low battery indicator is on or if the detector does not power on. The included carbon batteries have a shorter lifespan.

## 8.2 Constant Beeping or False Signals

- **Overload Warning:** If the screen is blank and only the "OVERLOAD-RAISE COIL" icon flashes, it indicates a very large metal object underground or strong ground mineralization. Lift the coil slightly away from the ground to clear the overload.
- **Electromagnetic Interference:** Move away from power lines, other electronic devices, or other metal detectors that might be causing interference.
- **Ground Conditions:** Highly mineralized ground can cause false signals. Try adjusting the sensitivity if available (MMD02 has fixed sensitivity, so rely on DISC mode).

## 8.3 Poor Detection Performance

Several factors can influence detection effectiveness:

- **Target Angle:** The angle at which the target is buried in the ground can affect detection.
- **Target Depth:** Deeper targets are harder to detect.
- **Oxidation Level:** Highly oxidized targets may produce weaker signals.
- **Target Size:** Smaller targets are generally more difficult to detect than larger ones.
- **Environmental Interference:** Electromagnetic and electrical interference around the target area can reduce

performance.

## 9. SPECIFICATIONS

Feature	Specification
Brand	DSF
Model	MMD02
Color	Black
Material	Metal
Power Source	Battery Powered (2 x 9V batteries)
Operating Frequency	7 KHz
Adjustable Length	24 - 45 inches (61 - 90 cm)
Search Coil Size	7.8 inches (Waterproof)
Item Weight	4 pounds
International Protection Rating	IP54 (for search coil)
UPC	788934190102

## 10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official DSF website. Keep your purchase receipt as proof of purchase for any warranty claims.