

C-Scope CS880

C.Scope CS880 Metal Detector User Manual

Model: CS880 | Brand: C-Scope

1. INTRODUCTION

The C.Scope CS880 is a professional-grade metal detector specifically engineered for locating large metallic objects buried underground or beneath asphalt. Its unique induction balance feature allows for the detection of significant targets, such as manhole covers, pipes, and utility boxes, even at considerable depths, while effectively ignoring smaller metallic debris like coins or nails. This manual provides essential information for the proper setup, operation, and maintenance of your CS880 detector.

2. KEY FEATURES

- **Induction Balance Technology:** Designed to detect large objects (minimum 10x10 cm) at significant depths, ignoring small surface clutter.
- **Automatic Ground Balance:** Ensures optimal performance across various ground conditions without manual adjustment.
- **Water-Resistant Search Coil:** The 8-inch search coil is fully waterproof for use in wet environments.
- **IP65 Rated Control Box:** Provides protection against dust and water ingress, ensuring durability in challenging outdoor conditions.
- **Simple Operation:** Features only two controls for power on/off, making it user-friendly.
- **Compact and Robust Design:** Built for professional use with a durable control box and fully sealed battery compartment.
- **Adjustable Stem:** Allows for comfortable use by operators of different heights.
- **Audio Output:** Integrated loudspeaker with a headphone jack for clear target signals.
- **LED Indicators:** Visual feedback for operational status.



Figure 2.1: The C.Scope CS880 Metal Detector, showing the main control unit, adjustable stem, and search coil.

3. SETUP AND ASSEMBLY

The CS880 is designed for quick and straightforward assembly. Follow these steps to prepare your detector for use:

1. **Unpack Components:** Carefully remove all components from the packaging. You should have the control box assembly, the adjustable stem, the search coil, and the necessary fasteners.
2. **Attach Search Coil:** Secure the 8-inch waterproof search coil to the lower end of the adjustable stem using the provided non-metallic bolt and wing nut. Ensure it is firmly attached but not overtightened.
3. **Connect Coil Cable:** Route the search coil cable along the stem and securely plug it into the connector on the control box. Ensure the connection is tight to prevent signal loss or water ingress.
4. **Adjust Stem Length:** Loosen the locking collar on the adjustable stem and extend or retract the stem to a comfortable length. The search coil should be parallel to the ground when you are standing upright and holding the detector. Tighten the locking collar to secure the stem.
5. **Install Batteries:** The CS880 requires 8 x 1.5V batteries. Locate the fully sealed battery compartment, open it, and insert the batteries, observing the correct polarity. Close the compartment securely to maintain its IP65 rating.



Figure 3.1: Close-up view of the CS880 control box and the connection point for the search coil cable.

4. OPERATING INSTRUCTIONS

The CS880 is designed for simplicity, with minimal controls for efficient operation.

4.1 Powering On/Off

- To power on the detector, locate the power switch (typically a rotary knob) on the control box and turn it to the 'ON' position.
- To power off, turn the switch to the 'OFF' position.

4.2 Ground Balancing (Automatic)

The CS880 features automatic ground balancing. This means the detector continuously adjusts itself to the ground conditions, eliminating the need for manual tuning. Simply turn the unit on, and it will be ready to detect.

4.3 Sweeping Technique

- Hold the detector with the search coil parallel to the ground, approximately 1-2 inches above the surface.
- Sweep the search coil from side to side in a slow, steady motion, overlapping each sweep slightly.
- Listen for changes in the audio tone. A distinct, clear tone indicates the presence of a large metallic object.
- The CS880 is designed for non-motion detection, meaning it can detect targets even when the coil is stationary over them. However, sweeping helps cover a larger area efficiently.



Figure 4.1: An operator demonstrating the proper sweeping technique with the CS880 metal detector on an asphalt surface.



Figure 4.2: The CS880 in operation, highlighting its use in locating buried utilities on paved surfaces.

4.4 Interpreting Signals

The CS880 provides an audio signal when a large metallic object is detected. The strength and clarity of the signal will generally correspond to the size and proximity of the target. The detector is specifically designed to ignore small metallic items, focusing only on larger objects (approximately 10 x 10 cm and larger).

5. MAINTENANCE

Proper maintenance will ensure the longevity and optimal performance of your C.Scope CS880.

- **Cleaning:** After each use, wipe down the search coil and stem with a damp cloth to remove dirt and debris. The control box can also be wiped clean. Do not use abrasive cleaners or solvents.
- **Battery Care:** Always remove batteries if the detector will not be used for an extended period to prevent leakage and damage. Store batteries in a cool, dry place.
- **Storage:** Store the detector in a dry, temperate environment. Avoid extreme temperatures and high humidity.
- **Cable Inspection:** Periodically inspect the search coil cable for any signs of wear, cuts, or damage. Ensure the cable connection to the control box remains secure.
- **Avoid Impact:** While robust, avoid dropping the detector or subjecting it to severe impacts, which could damage internal components.

6. TROUBLESHOOTING

If you encounter issues with your CS880, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No power/No sound	Batteries are dead or incorrectly installed. Power switch is off.	Replace batteries with fresh 1.5V batteries, ensuring correct polarity. Turn the power switch to the 'ON' position.

Problem	Possible Cause	Solution
Weak or inconsistent signal	Loose search coil cable connection. Batteries are low. Search coil not parallel to the ground.	Check and tighten the search coil cable connector. Replace batteries. Adjust your sweeping technique to keep the coil flat.
False signals/Chatter	Electromagnetic interference (EMI) from power lines, other electronics. Damaged search coil cable.	Move away from sources of EMI. Inspect cable for damage; contact support if damaged.

If the problem persists after attempting these solutions, please contact C.Scope customer support for further assistance.

7. SPECIFICATIONS

Feature	Detail
Model	CS880
Detection Principle	Induction Balance (designed for large objects)
Minimum Object Size for Detection	Approximately 10 x 10 cm
Typical Detection Depth (Manhole Cover in mineralized soil)	Up to 60 cm (23.6 inches)
Ground Balance	Automatic
Search Coil	8-inch, Waterproof
Control Box Rating	IP65 (Dust and Water Resistant)
Controls	Power On/Off (Two-button operation)
Power Source	8 x 1.5V Batteries
Audio Output	Loudspeaker, Headphone Jack
Material	Metal
Color	Black

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official C.Scope website. Keep your proof of purchase for warranty claims.

Manufacturer: C.Scope

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