

MINELAB 3303-0102

Minelab Excalibur II 800 Garden Metal Detector

Official Instruction Manual

1. INTRODUCTION

The Minelab Excalibur II is an advanced metal detector designed for both land and underwater use. Utilizing Minelab's unique Broad Band Spectrum (BBS) technology, this amphibious machine offers superior ground rejection, making it highly effective in various environments, including salt water. It is engineered to provide reliable performance for detecting targets in diverse conditions, from dry land to depths of up to 200 feet (66 meters).

2. SAFETY INFORMATION

- Always ensure the detector is properly sealed before submerging it in water to prevent damage to internal components.
- Use only the specified NiMH rechargeable battery pack. Incorrect battery types may cause damage or pose a safety risk.
- Avoid operating the detector near strong electromagnetic fields, which can interfere with its performance.
- When detecting near power lines or buried cables, exercise extreme caution.
- Store the detector in a cool, dry place away from direct sunlight and extreme temperatures.
- Keep out of reach of children.

3. PRODUCT OVERVIEW

The Minelab Excalibur II is comprised of several key components designed for optimal performance and durability. Understanding these parts is essential for proper assembly and operation.



Figure 1: Minelab Excalibur II Metal Detector Assembly. This image displays the complete Minelab Excalibur II metal detector, featuring its main control unit (green and blue with four black adjustment knobs), the adjustable shaft, the circular black search coil, and a pair of yellow and black headphones. The design includes a comfortable foam grip and an armrest for user comfort during operation.

Key Features:

- **Broad Band Spectrum (BBS) Technology:** Utilizes multiple frequencies (1.5kHz - 25.5kHz) for enhanced target detection and discrimination.
- **RCB Amplification:** Receiver Coil Booster amplifies weak target signals directly inside the coil, reducing noise and boosting faint, deep objects.
- **High Visibility (Hi-Vis) Design:** Features fluorescent bodywork for improved visibility, especially in low-light or underwater conditions.
- **NiMH Rechargeable Battery Pack:** Provides up to 12 hours of operation on a single charge.
- **Amphibious Capability:** Designed for seamless transition and effective use in land, beach, wet sand, and underwater environments up to 200ft (66m).
- **Hi-Vis Skid Plate:** Protects the search coil during use.
- **Side-Mount Shaft:** Available as an optional accessory for shallow and surf-wading.

4. SETUP

4.1 Assembly

1. Carefully unpack all components from the packaging.
2. Attach the search coil to the lower shaft using the provided bolt and wing nut. Ensure it is securely fastened but do not overtighten.
3. Connect the lower shaft to the middle shaft, and then the middle shaft to the upper shaft, adjusting the length to a

comfortable operating position.

4. Mount the control unit to the upper shaft. Ensure all cables are routed neatly and secured to the shaft to prevent snagging.
5. Connect the search coil cable to the control unit. Ensure the connection is tight and waterproof if using in wet conditions.
6. Connect the headphones to the designated port on the control unit.

4.2 Battery Installation and Charging

- The Excalibur II uses a NiMH rechargeable battery pack. Ensure the battery pack is fully charged before first use.
- To install the battery, locate the battery compartment on the control unit. Follow the instructions in the battery compartment for correct polarity.
- Use the provided charger to recharge the battery pack. Connect the charger to the charging port on the control unit and plug it into a suitable power outlet.
- A full charge typically takes several hours. Refer to the charger's indicator lights for charging status.
- Always ensure the battery compartment is sealed properly, especially before underwater use.

5. OPERATING INSTRUCTIONS

5.1 Basic Operation

1. **Power On:** Turn the Power/Volume knob clockwise to switch on the detector and adjust the volume.
2. **Sensitivity Adjustment:** Use the Sensitivity knob to adjust the detector's sensitivity. Higher sensitivity increases detection depth but may also increase false signals in mineralized ground. Start with a moderate setting and adjust as needed.
3. **Discrimination:** The Discrimination knob allows you to filter out unwanted targets (e.g., iron). Turn the knob to increase the level of discrimination. Experiment with settings to find the optimal balance for your search environment.
4. **Ground Balance:** The Excalibur II features automatic ground cancelling, making it highly effective in various ground conditions, including salt water, without manual ground balance adjustments.

5.2 Search Techniques

- **Sweeping:** Hold the search coil parallel to the ground and sweep it from side to side in a slow, overlapping motion. Keep the coil as close to the ground as possible without touching it.
- **Target Pinpointing:** Once a target is detected, narrow down its location by sweeping the coil in a cross-pattern over the signal. The strongest signal indicates the center of the target.
- **Underwater Use:** Ensure all seals are secure before submerging. The detector is designed to operate effectively in fresh and salt water up to 200 feet (66 meters). The Hi-Vis bodywork aids visibility underwater.

6. MAINTENANCE

- **Cleaning:** After each use, especially in saltwater, rinse the detector thoroughly with fresh water. Wipe down all surfaces with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Battery Care:** Recharge the NiMH battery pack regularly, even if not in use, to maintain its life. Avoid completely draining the battery. Store the battery in a cool, dry place.
- **Storage:** Store the detector in a clean, dry environment. If storing for extended periods, remove the battery pack.

- **Inspection:** Periodically inspect all cables, connections, and seals for any signs of wear or damage. Replace worn parts as necessary.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Battery discharged or not properly connected.	Recharge battery. Check battery connection and ensure compartment is sealed.
False signals / Erratic behavior	High sensitivity setting, electromagnetic interference, or highly mineralized ground.	Reduce sensitivity. Move away from power lines or other electronic devices. The Excalibur II has excellent ground cancelling, but extreme mineralization can still affect performance.
Poor detection depth	Low sensitivity setting, incorrect sweep speed, or coil not parallel to ground.	Increase sensitivity. Ensure slow, even sweeps with the coil parallel to the ground.
No audio from headphones	Headphones not connected, volume too low, or faulty headphones.	Check headphone connection. Increase volume. Test with another pair of headphones if available.

8. SPECIFICATIONS

Brand	MINELAB
Model Number	3303-0102
Material	Metal
Power Source	Battery
Item Weight	8.25 Pounds (3.74 kg)
Battery Life	Up to 12 Hours
Adjustable Length	Yes
International Protection Rating	IP66 (Note: Product description states 200ft/66m depth, which implies higher than IP66 for full submersion. IP66 is dust tight and protected against powerful water jets. For underwater use, refer to product specific depth rating.)
Operating Frequency	1.5kHz - 25.5kHz (BBS Technology)
Product Dimensions	33.75 x 12.25 x 5.25 inches (85.7 x 31.1 x 13.3 cm)
UPC	689076356541

9. WARRANTY AND SUPPORT

For detailed warranty information, product registration, and technical support, please refer to the official Minelab website or contact Minelab customer service directly. Warranty terms and conditions may vary by region and purchase date.

You can visit the official MINELAB store for more information:[MINELAB Store on Amazon](#)

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