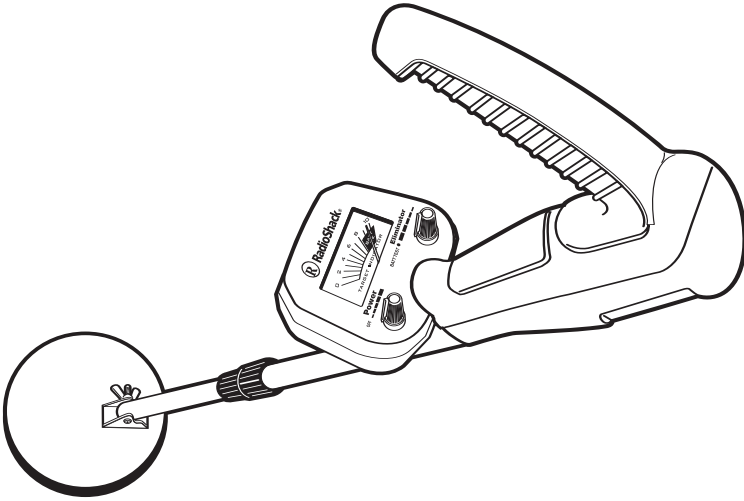


# User's Manual

## RadioShack® Discovery Jr. Metal Detector

from Bounty Hunter®



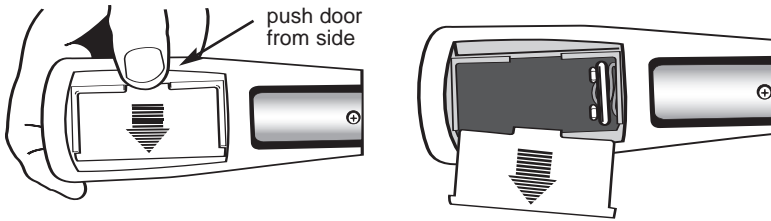
To get the most enjoyment from your Metal Detector, we suggest you do the following:

1. Use 9-volt **ALKALINE** batteries only.
  - Do not use Heavy Duty batteries.
  - Do not use ordinary Zinc-Carbon Batteries.
2. Make sure the right knob is clicked on (i.e. not in battery-test position).
3. Use your detector **OUTDOORS** only
  - Large metal objects inside the home may interfere with the detector's operation. Floors and walls of most homes contain metal.
  - Electrical appliances inside the home, like microwave ovens, televisions, and some light fixtures, emit electromagnetic energy which can interfere with the detector's operation.
  - Do not place coins on the floor of your home and try to detect. Try this test outside only.
  - If conducting an indoor demonstration, hold search coil off ground and wave coins over search coil.

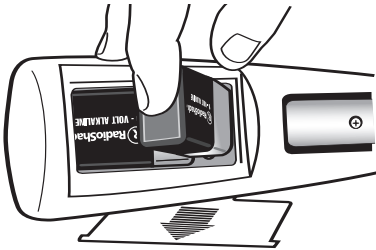
# Installing Batteries

Use 9-volt **ALKALINE** batteries only!

1. Remove the battery door from the underside of the detector.



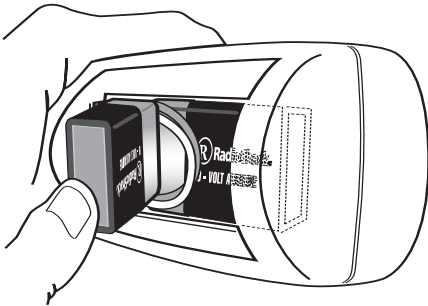
2. Pull out the two battery connectors.
3. Snap on two 9-volt **ALKALINE** batteries.  
Do not use Heavy Duty or ordinary Zinc Carbon batteries.
4. Place batteries into compartment one on top of the other.



5. Replace the battery door.  
Slide over until it shuts securely in place.

All battery brands differ slightly in size.

If you want to **secure the batteries more tightly** in the compartment, feed the battery wires underneath and between the batteries.



**If batteries fit too tightly**, causing battery door to bulge, move battery wires toward front of compartment, not between the batteries.

# Quick-Start Demo

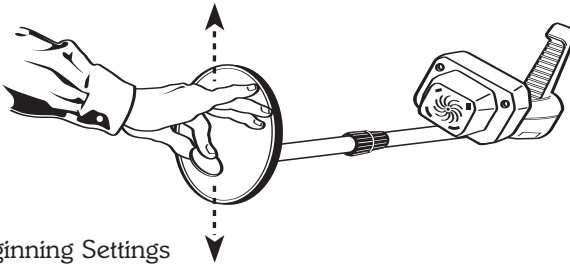
Try this quick way to demonstrate the basic features of your metal detector:

## I. Supplies Needed

- a. A nail
- b. A zinc penny (pennies dated after 1982 are made of zinc)
- c. A quarter

## II. Position Your Detector

Keep the detector away from floors, walls, and metal objects. One person holds the detector still, so that another can sweep coins under the coil. Sweep coins under the bottom of the search coil.



## III. Beginning Settings

- a. Left Knob: At 6:00 position
- b. Right Knob: Click on, but keep counterclockwise



## IV. Detecting All Types of Metals

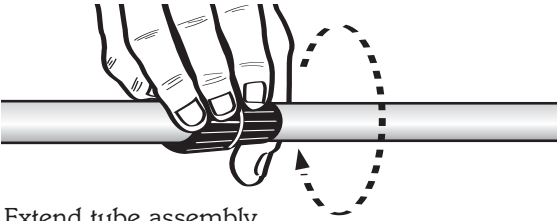
- a. Wave each object over the search coil. Notice the tone is loudest as the object passes over the center.
- b. Pass each object at varying distances from the search coil. Notice that the sound gets louder as the object moves closer to the search coil. Also notice that beyond a certain distance, the object is no longer detected.

## V. Eliminating Some Metals

- a. Wave the nail and slowly turn the right knob to the right.
  - Notice where the nail is eliminated from detection
- b. Wave the penny and keep turning the right knob until the penny is eliminated from detection
- c. Wave the quarter
  - Notice that the quarter is never eliminated from detection.

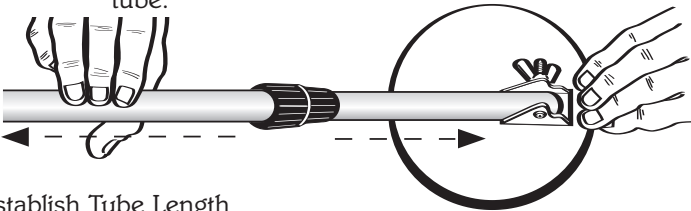
# Adjusting Length

Loosen the tube clamping nut 1/4 turn



Extend tube assembly

1. Grasp the top tube with one hand.
2. Grasp the search coil with the other hand.
3. Pull two sections apart to slide the bottom tube out of the top tube.



Establish Tube Length

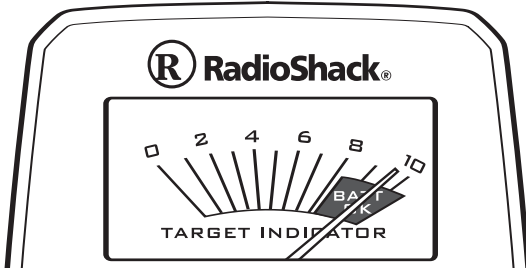
1. Pivot the search coil perpendicular to the tube.
2. Place detector in user's hand, with arm extended.
3. Adjust tube length so that search coil rests on the ground, close to the user's feet.
4. Align the coil to the detector body.
5. Tighten the tube clamping nut, while holding the search coil in place on the ground to prevent twisting of the tube assembly while tightening.



# Battery Test

Click the right knob fully counterclockwise (all the way to the left), in order to test the batteries.

If the batteries are good, the needle will move to the right and enter the green zone on the indicator label.



If the needle does not enter the green zone, replace the batteries.

## Practicing Outside

1. Turn the detector on
  - a. Rotate **left knob** clockwise to a high sensitivity setting.
  - b. Click **right knob** on to exit the "battery test" mode.
  - c. Maintain **right knob** in counterclockwise position, but do not click into the "battery test" mode.
2. Find a clear area in the grass

Sweep the search coil around the grass to find an area where the detector does not beep. In order to test your detector, you must first find an area free of metal objects.
3. Toss these metal objects on the ground
  - a. A nail or other iron object like a small screwdriver
  - b. A zinc penny (dated after 1982)
  - c. A quarter
4. Keep the objects spaced apart on the ground
5. Sweep the search coil over each of the objects
  - a. You must keep the search coil moving.
  - b. Notice that the sound is loudest when the metal object is under the center of the search coil.
  - c. While sweeping back and forth, slowly raise the search coil several inches off the ground.

Notice that the sound is louder when the search coil is closer to the objects.
6. Turn the **right knob** progressively to the right while passing the search coil over each of the objects

The nail (or small iron object) is eliminated from detection with the right knob in approximately the 3:00 position.  
The zinc penny (pre-1982) is eliminated from detection with the right knob in approximately the 6:00 position.

# Sensitivity and Target Elimination

## Adjusting Sensitivity

The **left knob** clicks on to power the detector on.

After turning on, the left knob is used to control the detector's sensitivity level. In the 100% clockwise position, the detector is at maximum sensitivity. At this level, the detector will detect a coin-sized object, like a quarter, up to 5" away from the coil. Very large metal objects will be detected up to one and one-half feet from the search coil at maximum sensitivity.

Reduce the sensitivity if the detector chatters or emits false signals; your detector is probably reacting to electromagnetic interference.

## Target Elimination

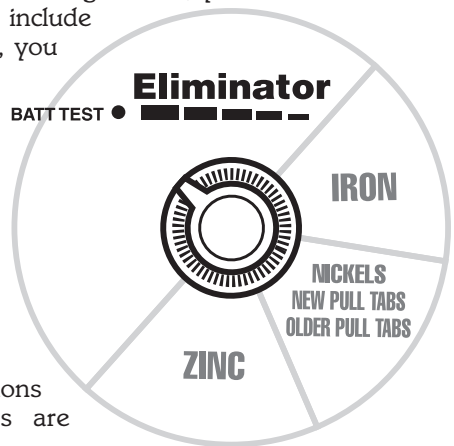
The **right knob** is used to eliminate unwanted metals from detection.

For instance, you may be searching for coins, and want to eliminate objects like nails, bolts, or pull-tabs from detection.

As you turn the right knob clockwise, you progressively eliminate different types of metals from detection. As you rotate the right knob, you first eliminate iron objects from detection. Iron objects include nails, bolts, old cans, and tools. Next, you eliminate nickels, pull-tabs, and finally zinc pennies.

Gold is also eliminated from detection with the right knob. First smaller gold objects are eliminated; as you rotate the knob further, larger gold objects are eliminated. Silver objects, like high-value coins, are not eliminated from detection.

Refer to this scale for the relative positions at which different types of metals are eliminated from detection:



## USING HEADPHONES

Using headphones (not supplied) improves battery life, and prevents the sounds from annoying bystanders.

It also allows you to hear subtle changes in the sound more clearly, particularly if searching in a noisy location. For safety reasons, do not use headphones near traffic or where other dangers are present. This device is to be used with interconnecting cables/headphone cables shorter than three meters

# Operation in the Field

Sweep the search coil from side to side, in slow, overlapping motions.

Keep the search coil parallel to the ground.

Keep search coil 1/2" off the ground and try not to make contact with the ground.

Try not to lift the search coil at the end of your sweeps. This may be difficult for younger children, but the closer the search coil is to the ground throughout the sweep, the more likely you are to find buried metal objects.

Keep the left knob in the maximum sensitivity setting possible.

Click the right knob on and start searching with it in the fully counterclockwise position.

You may want to move the right knob during your search, depending on what you find. For instance, if you start searching with the right knob to the left (but not in battery test mode), you will detect all types of metal objects. If you find that you are in a trashy area, and wish to eliminate unwanted objects from detection, sweep the search coil over an undesirable object while turning the knob. Find the knob setting at which certain types of metals are eliminated, and adjust your settings accordingly.

**CAUTION:** Gold rings can be eliminated from detection along with pull-tabs.

Be aware that some desirable objects, like nickels and gold, are eliminated from detection in the middle of the range. Gold rings have a metallic signature similar to pull-tabs; nickels have a metallic signature similar to some newer pull tabs. It requires practice and patience to understand what types of objects are eliminated at each setting.

## Pinpointing

*Accurate pinpointing takes practice and is best accomplished by "X-ing" the suspected target area.*

1. Once a buried target is identified by a good tone response, continue sweeping the coil over the target in a narrowing side to side pattern.
2. Take visual note of the place on the ground where the "beep" occurs as you move the coil slowly from side to side.
3. Stop the coil directly over this spot on the ground.
4. Now move the coil straight forward and straight back towards you a couple of times.
5. Again make visual note of the spot on the ground at which the "beep" occurs.
6. If needed, "X" the target at different angles to "zero in" on the exact spot on the ground at which the "beep" occurs.

**REMEMBER:** The detector will beep just as the search coil passes over the buried object.

If you have difficulty pinpointing very strong signals, try lifting the coil higher off the ground until a weaker, but more concise, signal is heard. For very weak signals, try moving the coil in short quick sweeps, closer to the ground.

## **Proportional Audio** -- Target Depth Indication

The speaker volume will vary depending on the depth of the buried object.

To understand this, pass a coin back and forth over the search coil.

First pass the coin close, and then pass the same coin farther away.

Notice that the speaker volume decreases the farther the coin is from the search coil.

Using this feature, and a little practice, you can estimate how deep you need to dig to unearth a buried object.

Notice that out on the fringes of detection, the detector emits a very short, low volume sound. Some of the most valuable objects are these more deeply buried ones, lost many years ago, so be patient and sweep slowly as you look for buried treasure!

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## **TREASURE HUNTER'S CODE OF ETHICS:**

- Always check Federal, State, County and local laws before searching.
- Respect private property and do not enter private property without the owner's permission.
- Take care to refill all holes and try not to leave any damage.
- Remove and dispose of any and all trash and litter found.
- Appreciate and protect our inheritance of natural resources, wildlife and private property.
- Act as an ambassador for the hobby, use thoughtfulness, consideration and courtesy at all times.
- Never destroy historical or archaeological treasures.
- All treasure hunters may be judged by the example you set; always conduct yourself with courtesy and consideration of others

## **Limited Ninety-Day Warranty**

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