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## OWNER'S MANUAL

Please read before using this equipment

# Metal Detector

# Seben Allround

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## FEATURES

With your Metal Detector, you can hunt for coins, relics, jewelry, gold, and silver just about anywhere. This metal detector is very versatile and easy to use.

The detector's features include:

**Earphone Jack** – lets you connect earphones (not supplied) to the detector for privacy.

**View Meter and Pointer** – shows the probable type of metal being detected and lets you know when it is time to replace the batteries.

**Waterproof Search Coil** – lets you use the detector's search coil even if you must put it under water.

**Note:** The search coil is waterproof, but the control housing is not waterproof.

**Adjustable stem** – lets you adjust the detector's length for comfortable use.

**Note:** Your metal detector requires six AA alkaline batteries (not supplied)

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

All treasure hunters might be judged by the example you set. Here are a few basic rules you should follow while using your detector.

- Always get permission before searching any site.
- Respect the rights and property of others.
- Observe all national, state, and local laws while treasure hunting.
- Never destroy historical or archaeological treasures. If you are not sure about an object you have found, contact a museum or historical society in your area.
- Leave the land and vegetation as it was. Fill in any holes you dig.
- Use your detector only in safe areas.
- Dispose of any junk you find, only in approved areas. Do not leave it for the next treasure hunter to find.

## PREPARATION

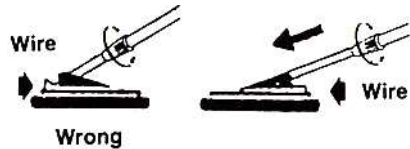
### ADJUSTING THE STEM

Follow these steps to adjust the metal detector's stem.

1. Turn the stem's lock nut clockwise until it loosens.



2. Lengthen or shorten the stem so when you stand upright with the detector in your hand, the search coil is level with and about 1/2 to 2 inches above the ground with your arm relaxed at your side.

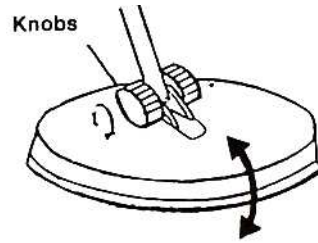


3. Turn the stem's lock nut counter clockwise to lock it in place.



### ADJUSTING THE SEARCH COIL

Loosen the knobs at the search coil's end, then adjust the search coil to the desired angle. (The search coil should be parallel with the ground.) Tighten the knobs just enough to keep the search coil from rotating or wobbling.



### INSTALLING BATTERIES

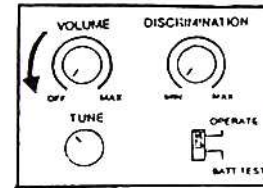
You need six AA batteries to power your detector.

#### Cautions:

- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries, different types of batteries (standard, alkaline, or rechargeable), or rechargeable batteries of different capacities.

## PREPARATION

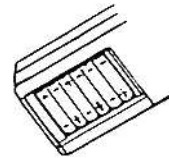
1. If the detector is on, turn VOLUME on the control housing) to OFF. (The control clicks.)



2. Press on the battery compartment cover and slide the cover off in the direction of the arrow.



3. Insert the batteries into the compartment as indicated by the polarity symbols (+ and -) marked inside the compartment.



4. Replace the cover.

#### Cautions:

- Always remove old or weak batteries; batteries can leak chemicals that can destroy electronic parts.

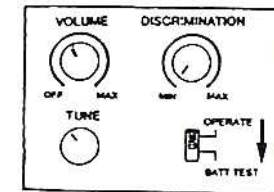
- If you do not plan to use the detector for a week or more, remove the batteries.
- Dispose of old batteries promptly and properly.

You can extend battery life by using earphones, which require less power than the built-in speakers. See "Using Earphones"

### TESTING THE BATTERIES

If the detector does not turn on, has weak volume, will not tune properly, or has erratic operation, or drifts, test the battery power.

Rotate **VOLUME** away from OFF and set **OPERATE/BATT TEST** to **BATT TEST**.



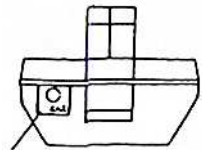
If the pointer on the view meter is between 3 and 6 (green area), the batteries have enough power to operate the detector. If the pointer is not in the green area, replace the batteries.

## PREPARATION

### USING EARPHONES

You can connect a pair of stereo earphones (not supplied) to the detector so you can listen to it privately. Using earphones also saves battery power and makes it easier to identify subtle changes in the sounds you hear, for better detection results. Your local electronics store has a wide selection of earphones.

To connect earphones to the detector, insert the earphones' 1/8-inch plug into the EAR jack on the side of the control housing.



EAR

**Note:** The detector's internal speaker disconnects when you connect earphones.

### Listening Safely

To protect your hearing, follow these guidelines when you use earphones.

- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level
- Do not listen at extremely high volume levels. Extended high volume listening

can lead to permanent hearing loss.

- Once you set the volume, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

### Traffic Safety

Do not wear earphones while operating your detector near high-traffic areas.

Even though some earphones are designed to let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.

## OPERATION

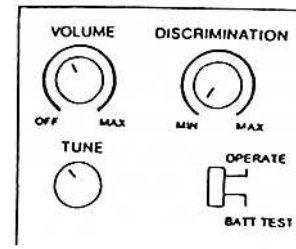
Your Metal Detector distinguishes between ferrous and nonferrous metals. Ferrous metals contain iron, while non-ferrous metals such as gold, silver, copper, platinum, aluminum, lead, and zinc do not.

When the detector senses a metallic object, the meter reading changes.

### PREPARING THE DETECTOR

#### Turning On the Detector

Hold the detector in a comfortable position, then rotate **VOLUME** away from **OFF** to the desired sound level. Set **OPERATE/BATT TEST** to **OPERATE** to detect.

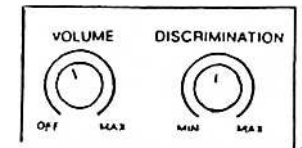


#### Tuning the Detector

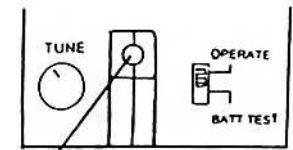
**TUNE** fine-tunes the balance between the detector's receiver and transmitter circuitry to provide consistent pointer and tone indications.

Follow these steps to set **TUNE**.

1. Rotate **VOLUME** to the 11 o'clock position.
2. Set **DISCRIMINATION** to its midpoint.



3. Hold the search coil about 1 foot away from the ground and any metal object, hold down the red button on the handle, and slowly rotate **TUNE** left and right until the pointer on the view meter rests at or near 0, then release the red button.



Red Button

As you search, you can fine-tune the detector using **DISCRIMINATION** (see "Fine-Tuning the Detector").

**Note:** Press the red button on the handle at any time during operation to automatically return the pointer to 0.

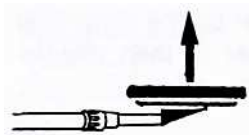
## TESTING AND USING THE DETECTOR

To learn how the detector reacts to different metals, you should test it before you use it the first time. You can test the detector indoors or outdoors.

### Indoor Testing

1. Remove any watches, rings, or other metal jewelry you are wearing, then place the detector on a wooden or plastic table.
2. Adjust the search coil's angle so the flat part faces the ceiling.

Note: Never test the detector on a floor inside a building. Most buildings have metal of some kind in the floor, which might interfere with the objects you are testing or mask the signal completely.

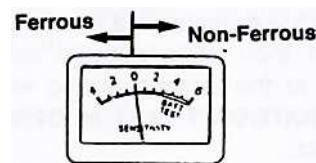


3. Rotate VOLUME to the 11 o'clock position.
4. Set DISCRIMINATION to its midpoint.
5. Move a sample of the material you want the detector to find (such as a gold ring or a coin) about 2 inches above the search coil.

### Notes:

- The search coil will not detect without motion. You must move the object since you are not sweeping with the detector at this time.
- If you are using a coin, the detector detects it more easily if you hold it so a flat side is parallel with the flat side of the search coil (not the edge).

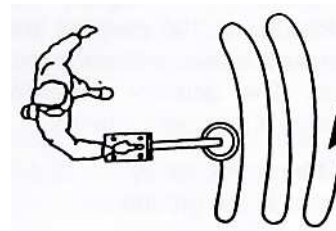
If the detector detects ferrous material, it will be silent and the meter pointer moves to the left. If it detects non-ferrous material, the unit will sound a tone and the meter pointer moves to the right.



If the detector does not detect the material, check the battery power and verify that the search coil is properly connected. Also, you might need to fine-tune the detector (see "Fine-Tuning the Detector").

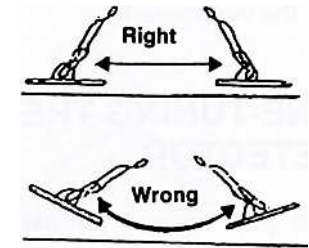
### Outdoor Testing and Use

1. Find an area on the ground outside where there is no metal.
2. Place a sample of the material you want the detector to find (such as a gold ring or a coin) on the ground. (If you are using valuable metal such as gold to test the detector, mark the area where you placed the item, to help you find it later. Do not place it in tall grass or weeds.)
3. Rotate **VOLUME** about two-thirds clockwise.
4. Press and release the red button on the handle. Slowly rotate TUNE until the pointer is at or near 0. You should hear a constant tone.
5. While holding the search coil level and about 1-2 inches above the ground, slowly move the search coil over the area where you placed the sample, sweeping the search coil in a side-to-side motion.



### Search Coil Sweeping Hints:

- Never sweep the search coil as if it were a pendulum. Raising the search coil while sweeping or at the end of a sweep causes false readings.



- Sweep slowly – hurrying makes you miss targets.

If the detector detects the material, it sounds or the meter reading changes.

If the detector does not detect the material, make sure you are moving the search coil correctly or try re-tuning your unit.

### Notes:

- The detector responds with a strong signal on the meter when it detects most valuable metal objects. If a signal does not repeat after you sweep the search coil over the target a few times, the target is probably junk metal.
- False signals can be caused by trashy ground, electrical interference, or large irregular pieces of junk metal. False signals are usually broken or non-repeatable.

- Try finding other metal in the area. When you find a metal item, wait a few seconds, to allow the detector time to reset (or, press the red button on the handle to return the pointer to the center of the view meter).

## FINE-TUNING THE DETECTOR

After you become familiar with how your detector works, you can fine-tune it to make it more selective in what it finds.

Discrimination is the detectors' ability to differentiate between types of metal. The detector's DISCRIMINATION setting determines whether the detector will distinguish between different types of ferrous and non-ferrous metals.



You can set DISCRIMINATION to minimum (fully counterclockwise), to maximum (fully clockwise), or anywhere in between. As you set DISCRIMINATION to higher levels, the detector first does not detect small pieces of silver paper, then thick foil, and finally metal objects like pull tabs from aluminum cans.

**Note:** Each time you use the detector in a different area, you must adjust DISCRIMINATION. Each search location presents new challenges.

## FALSE SIGNALS

Because your detector is extremely sensitive, trash-induced signals and other sources of interference might cause signals that seem confusing. The key to handling these types of signals is to dig for only those targets that generate a strong, repeatable signal. As you sweep the search coil back and forth over the ground, learn to recognize the difference between signals that occur at random and signals that are stable and repeatable.

To reduce false signals when searching very trashy ground, scan only a small area at a time using slow, short overlapping sweeps.

## DETECTION HINTS

No detector is 100 percent accurate. Various conditions influence metal detection. The detector's reaction depends on a number of things:

- The angle at which the object rests in the ground
- The depth of the object
- The amount of iron in the object
- The size of the object

## PINPOINTING A TARGET

Accurately pinpointing a target makes digging it up easier.

Accurate pinpointing takes practice, and we suggest you practice finding and digging up small metal objects on your own property before you search other locations.

Sometimes, targets are difficult to accurately locate due to the sweep direction. Try changing your sweep direction to pinpoint a target.

Follow these steps to pinpoint a target.

1. When the detector detects a buried target, continue sweeping the search coil over the target in narrowing side-to-side motion. Make a visual note of the exact spot on the ground where the detector beeps.
2. Stop the search coil directly over this spot on the ground. Then move the search coil straight forward away from you and straight back toward you a couple of times. Make a visual note of the exact spot on the ground where the detector beeps.

3. Repeat Steps 1-2 at a right angle to the original search line, making an "X" pattern. The target should be directly below the "X" at the point of the loudest response.



Note:

- If trash in an area is so heavy that you get false signals, slow your sweep speed and use shorter sweeps.
- Recently buried coins might not respond the same as coins buried for a long period of time because of oxidation.
- Some nails, nuts, bolts, and other iron objects (such as old bottle caps) oxidize and create a "halo" effect. A halo effect is caused by a mixture of natural elements in the ground and the oxidation created by different metals. Because of the metal mixtures, target signals might not be in a "fixed" position. This effect makes these objects very hard to detect accurately. (See "Fine-Tuning the Detector" )

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## **TROUBLESHOOTING**

If your detector is not working as it should, follow the suggestions below to see if you can eliminate the problem.

Problem	Suggestions
The detector displays false signals.	You might be sweeping the detector's search coil too fast or at the wrong angle. Sweep the search coil more slowly and hold the detector correctly. See "Testing and Using the Detector" and "Pinpointing a Target".
	The detector might show a false signal if it detects heavily oxidized metals. Try pinpointing the target from several different angles (See "Pinpointing a Target"). If the detector does not display the same signal each time, the target is probably heavily oxidized metal.
The display does not show the correct metal type when the detector finds a target.	There might be more than one target in the area you are searching.
	The target might be a type of metal that the detector does not recognize.
	If the target is heavily oxidized, the detector might not display the correct metal type. This is not a malfunction.
The detector makes a constant tone, then goes silent when it finds metal	This is a normal function of the metal detector.

