



DIGITAL METAL DETECTOR

INSTRUCTION MANUAL

 **WARNING:**
CHOKING HAZARD – Small parts.
Not for children under 3 years.



x2
NOT INCLUDED

Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc), or rechargeable (ni-cad, ni-mh, etc.) batteries. Non-rechargeable batteries are not to be recharged. Please recycle batteries responsibly.

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

The detector's features include:

LCD Display—shows the probable type of metal with an arrow, the depth of the target, DISC range, the level of SENS with segment, the operating mode, and battery indication.

Three Tone Audio Discrimination—sounds distinctive tones for different types of metal.

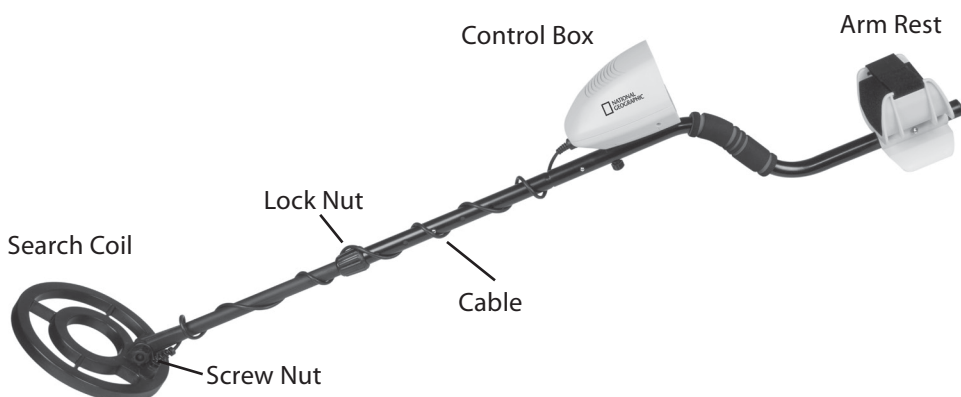
DISC—ignores junk metal and finds valuable items by setting the discrimination range.

P/P—pinpoints the accurate location of the target detected.

Headphone Jack (3.5mm)—lets you connect headphones (supplied) and operate without trouble.

Power—requires two 9V alkaline batteries(not supplied).

Waterproof Search Coil—lets you use the detector even if you must put it under water.

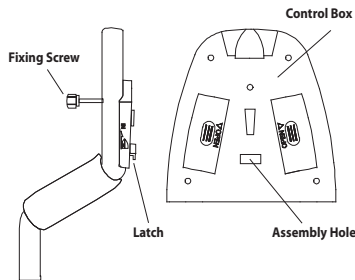


PREPARATION

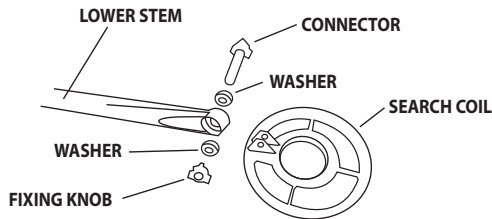
Assembling the Detector

Assembling your detector is easy and requires no special tools. Just follow these steps.

1. Insert the latch on the top of the handle into the assembly hole on the bottom of the control box. Then slightly push the control box in the direction of IN marked on the handle to fix the latch in place. Secure the control box with fixing screw properly.



2. Unscrew the fixing knob on the search coil and remove the knob connector. Place the washers into the groove of the lower stem. Then insert the stem and align the holes on the search coil bracket and the stem. Push the connector through the holes and tighten the knob.

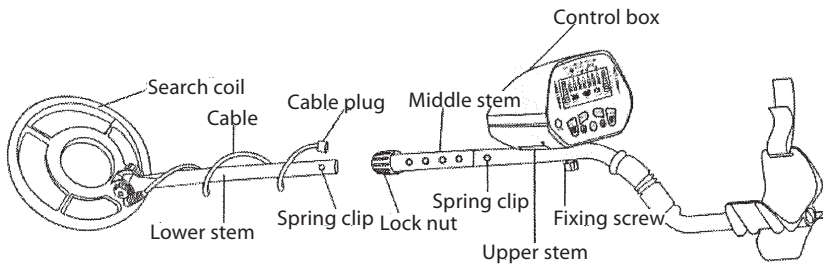


3. Press the silver button in the middle stem, and slide the stem into the upper stem.

4. Press the silver button in the lower stem, and slide the stem into the middle stem.

5. Wind the search coil cable around the stem. Leave enough slack in the cable. Insert the search coil cable plug into the five pin jack on the front control box's housing.

6. Turn the stem's lock nut on the middle stem clockwise until it loosens. Adjust the stem to a length that you feel comfortable when you stand upright with the detector in your hand, and the search coil is level with the ground with your arm relaxed at your side. Then counter-clockwise rotate the tighten the lock nut.



Caution:

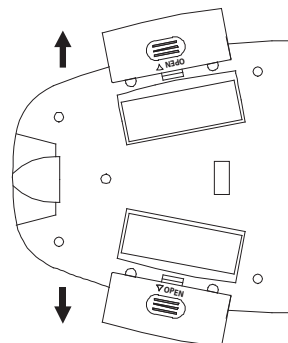
- The search coil plug fits into the connector only one way. Do not force the plug or you could damage it.
- Do not over tighten the search coil or use tools such as pliers to tighten.

Installing Batteries

1. Turn off the power before installing the batteries.
2. Slide the left and right battery covers off in the direction of the arrow.
3. Place two 9V batteries into the battery compartment matching the polarity symbols (+ and -) marked inside.

Caution:

- Use only new alkaline batteries of required size.
- Do not mix the old and new batteries or different types of batteries.
- Dispose of old batteries promptly and properly. Never bury or burn them.
- If you don't plan to use the unit for a week or more time, remove the batteries. Batteries can leak chemicals that can destory electronic parts.



USING HEADPHONES

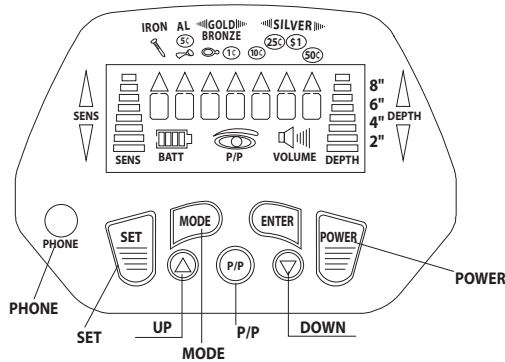
1. Insert the headphones' 3.5mm plug into the PHONE jack. At this time the internal speaker disconnects.
2. Set the VOLUME to the desired setting.

Listening Safely

- To protect your hearing, set the volume to the lowest setting before you begin listening, adjust the volume to a comfortable level.
- Do not wear headphones while operating your detector near high-traffic areas. Pay attention to traffic safety.

FUNCTIONS AND INDICATIONS

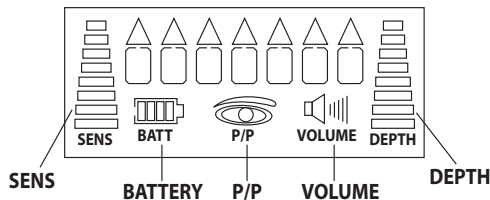
1. A Quick Look at the Detector



2. Displays

The LCD displays the detection mode, sensitivity level, battery condition, volume level and the depth of target.

When the detector finds an object, an arrow appears below the target icon. Also displays the depth of the target.




Target Denomination

IRON NAIL – indicates that the target is probably iron or nail. Some oxidized iron might register somewhere within the SILVER range.

AL/5¢/PULL TAB – indicates that the target is probably 5¢, aluminum can, or pull tab.

GOLD RANGE

 – indicates that the target is probably a gold ring. Some bronze objects might register within this range.

1¢ – indicates that the target might be a coin of 1¢ or zinc penny or a copper coin. Some large rough gold items or bronze objects might register within the range.

SILVER RANGE














10¢ – indicates that the target is probably 10¢ coin.

25¢/\$1 – indicates that the target is probably silver coin, 25¢ or \$1. Some large aluminum coin might register within this range.

50¢ – indicates that the target is probably 50¢ or a silver coin.

TONES

There are three tones for different kinds of metal type. This makes it easier to identify the metal being detected. When the detector finds iron, nail, bottle caps, it sounds a low tone. A medium tone is for 5¢, 1¢, 10¢, some gold rings, aluminum pull tabs, zinc or copper items. A high tone is for 25¢, 50¢, \$1 or silver items.

IRON 	AL  GOLD  BRONZE     	 SILVER    
LOW TONE	MEDIUM TONE	HIGH TONE

OPERATION

1. Press POWER button to turn on the detector. Press POWER again to power off. LCD displays all symbols.

2. SETTING SENSITIVITY

Press SET, sensitivity level bar flashes. Then press UP button to increase the sensitivity or press DOWN button to decrease it. After that, press ENTER to confirm the setting.

3. SETTING VOLUME

Press SET three times, the volume icon flashes. Press UP button or DOWN button to increase or decrease the volume level. Then press ENTER to confirm the setting.

4. SETTING THE OPERATION MODE

The detector comes with three operating modes of ALL METAL, DISC, PINPOINT.

a. ALL METAL – used for detecting all types of metal.

Press SET twice, then ENTER to get ALL METAL. In this mode, the unit can detect all kinds of metal.

b. DISC – used for target discrimination. You can set the target range or eliminate the target you don't want by pressing SET and MODE buttons. Press SET twice, the blank frame flashes, press UP or DOWN to choose the target you don't want. Then press MODE. You can choose several targets to be eliminated. After that, press ENTER to confirm the selected target to be eliminated. To pick up the eliminated items, simply press MODE before pressing ENTER. Or repress SET twice and UP or DOWN to move the flashing frame to the target you want to pick. Then press MODE or ENTER.

NOTE: A crossed frame is for items eliminated.

5. PINPOINT

After you find a metal object, you can use P/P to pinpoint the target. Hold down P/P button. LCD will display P/P and an icon of an eye. Slowly move the search coil above the sound area. The detector sounds and the depth indicator on the LCD displays the probable depth of the target. Then release the button. Sweep the search coil again, keeping the same distance of search coil, sound disappears. Hold down P/P again, closer the search coil to the sounds area, the detector sounds again. Repeat the above steps until the detector displays the stronger signal where the location of the target is.

TESTING AND USING THE DETECTOR

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

Indoor Testing and Use

1. Press POWER to power on the detector.
2. Follow the instructions described in OPERATION to set SENSITIVITY, VOLUME and operation mode.
3. Place the detector on a wooden or plastic table, then remove any watches, rings, or metal jewelry you are wearing.
4. Adjust the search coil so the flat part points towards 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're testing or mask the signal completely.

5. Slowly sweep a sample of materials you want to detector to find (such as a gold ring or a coin) 2-3 inches or more above the face of the search coil. When the detector detects any metal, it sounds a tone and an arrow appears below the target icon. Also LCD displays the depth of the target.

NOTE: If you are using a coin, the detector will detect it more easily if you hold it so a flat side is parallel with the flat side of the search coil. A sweep with the side of coin over the search coil might cause false indication and unstable display of arrows.

Outdoor Testing and Use

1. Slide POWER to power on the detector.
2. Follow the instructions described in OPERATION to set SENSITIVITY, VOLUME and operation mode.
3. Find an area on the ground outside where there is no metal.
4. Place a sample of the material you want the detector to find (such as a gold ring or a coin) on the ground.

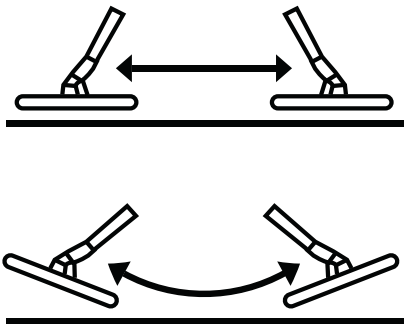
NOTE:

If you are using valuable metal such as gold to test the detector, mark the area where you place the item, to help you find it later. Do not place it in tall grass or weeds.

Hold the search coil level to the ground about 1~2 inches above the surface, slowly move the search coil over the area where you placed the sample, sweeping the search coil in a side-to-side motion.

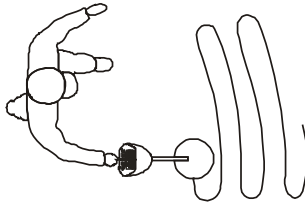
Search Coil Sweeping Hints:

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



- Sweep slowly. Hurrying will cause you to miss targets.

- It's better you sweep the search coil from side to side in an arc line of 3 inches motion and keep the search coil parallel with the ground.



The detector can detect the metal type with blank frame below the target name. And an arrow displays below the target if it is found. Meanwhile the detector rejects or does not respond to other metal types with cross mark in the frame displaying below the target name.

When the detector finds any metal, it sounds a tone. A low tone is for iron, nail, bottle caps. A medium tone is for 5¢, 1¢, 10¢, some gold rings, aluminum pull tabs, zinc or copper items. A high tone is for 25¢, 50¢, \$1 or silver items.

If the detector does not detect the item, make sure that the target mode is set correctly for the type of metal you're searching for. Also make sure that you're moving the search coil correctly.

NOTES:

- The detector responds with a signal 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 piece of junk metal.
- False signals are usually broken or non-repeatable.
- In order to detect the target deeply buried, you can adjust the SENS to a high position. But not to set the level of SENS to Max position, or the detector will receive interference and false signal from broadcast antenna and other electronic lines. The detector will have unstable arrow and irregular tone indications.

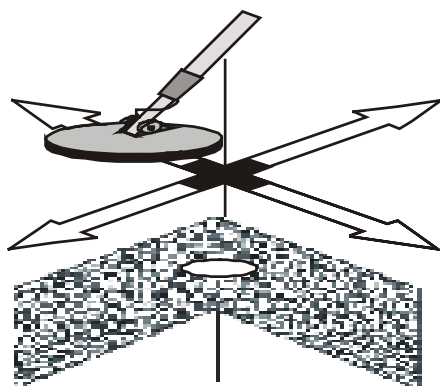
APPLICATION HINTS

Pinpointing The Target

Accurately pinpointing a target makes digging it up easier. But it takes practice. We suggest you practice finding samples on your own property before you search other locations.

Follow these steps to pinpoint a target.

1. When the detector detects a buried target, continue sweeping the search coil over the target in a narrowing side-to-side motion.
2. Make a visual note of exact spot on the ground where the detector beeps.
3. Stop the search coil directly over this point on the ground. Then move the search coil straight forward away from you and straight back towards you a couple of times.
4. Repeat steps 1-3 at a right angle to the original search line, make a mark of "X". The target will be directly below the "X" at the point of the beep response.



Factors That Affect The Detecting

It's difficult to have an accurate detecting result. Sometimes the detecting may be restricted by some factors.

- The angle of the target buried in the soil.
- The depth of the target.
- The level of oxidization of the target.
- The size of the target.
- Electro-magnetic and electrical interference surrounding the target.

If you detect patiently and correctly and practice more times, you'll get satisfactory result.

CARE AND MAINTENANCE

Your metal detector is an example of superior design and craftsmanship.

The following suggestions will help you care for your metal detector so you can enjoy it for years.


- Handle the detector gently and carefully. Dropping it can damage circuit boards and cases and can cause the detector to work improperly.
- Use the detector only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage the cases of the detector.
- Keep the detector away from dust and dirt, which can cause premature wear of parts.
- Wipe the detector with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the detector.

TROUBLESHOOTING GUIDE

Problem	Reason	Suggestion
The detector displays or sounds without detecting any target	<ol style="list-style-type: none"> 1. The detector may receive interference and false signal from broadcast antenna and other electronic lines 2. The humidity of environment may be extremely high 	<ol style="list-style-type: none"> 1. Change searching place 2. Wait for some time to check again
The detector sounds false signals.	<ol style="list-style-type: none"> 1. Sensitivity set too high/ environmental electromagnetic interference 2. Sweeping the detector's search coil too fast or at wrong angle 3. Using 2 detectors in close proximity 	<ol style="list-style-type: none"> 1. Reduce sensitivity 2. Sweep the search coil more slowly and hold the detector correctly 3. Keep two detectors at least 6 meters(20') apart
The detector does not detect anything	<ol style="list-style-type: none"> 1. Sensitivity set too low 2. Target range is eliminated 3. Search coil is not parallel with the ground 	<ol style="list-style-type: none"> 1. Increase sensitivity 2. Recover all target range 3. Adjust the search coil angel to be parallel with the ground
LCD display multiple target categories or emits several sounds at once	<ol style="list-style-type: none"> 1. There may be over one kind of metal targets 2. The detector can't identify the target. Sometimes, oxidized metal also causes the excursion of target arrow and tone. 	<ol style="list-style-type: none"> 1. Reduce the sensitivity to eliminate the detection of the deeper target 2. Sweep the search coil with different angles
The detector does not function	<ol style="list-style-type: none"> 1. Five-pin cable not connected well 2. Dead battery 	<ol style="list-style-type: none"> 1. Re-plug it properly 2. Replace batteries



NATIONAL
GEOGRAPHIC



- The WEEE symbol if present indicates that this item contains electrical or electronic components which must be collected and disposed of separately.
- Never dispose of electrical or electronic waste in general municipal waste. Collect and dispose of such waste separately.
- Make use of the return and collection systems available to you, or your local recycling program. Contact your local authority or place of purchase to find out what schemes are available.
- Electrical and electronic equipment contains hazardous substance which, when disposed of incorrectly, may leak into the ground. This can contribute to soil and water pollution which is hazardous to human health, and endanger wildlife.
- It is essential that consumers look to re-use or recycle electrical or electronic waste to avoid it going to landfill sites or incineration without treatment.

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CONFORMS TO THE SAFETY REQUIREMENTS OF ASTM F963