

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

22h

GORDON™

HIGH PRECISION METAL DETECTOR



58892

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.






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⚠ WARNING

Read this material before using this product. Failure to do so can result in serious injury. **SAVE THIS MANUAL.**

WARNING SYMBOLS AND DEFINITIONS

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Addresses practices not related to personal injury.

General Power Tool Safety Warnings



WARNING Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your battery-operated (cordless) power tool.

1. Electrical safety

Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

2. Personal safety

a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

b. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

3. Power tool use and care

- Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Remove the batteries from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

4. Service

- Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Metal Detector Safety Warnings

- Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- Handle Tool carefully at all times. Dropping Tool can cause damage to circuit boards and housing, which can cause the tool malfunction or failure.

- Do not mix old and new batteries. Do not mix alkaline, standard (carbon-zinc), or rechargeable (nickel-cadmium) batteries. Position batteries in proper polarity. Do not use swollen or leaking batteries.
- Wear ANSI-approved safety goggles and heavy-duty work gloves when assembling and digging holes.

5. **Consult local regulations before using detector, digging, or taking any findings.** Obtain property owner's permission before detecting on their property.
6. **Only use and store in normal temperature environments.** Extremes in temperature can shorten effectiveness of electronic devices and melt or damage plastic parts.
7. **Avoid electrical shock.** Any metal detector may discover underground power lines, explosives or other items which when struck could cause personal injury. Do not use this product in areas where there might be underground electric lines or pipes buried at shallow depths. Never search in military zones where bombs or other explosives may be buried. Avoid striking any line known or suspected to be carrying electric power. Do not search any pipeline, particularly if it could contain a flammable gas or liquid. In areas of uncertain conditions, use reasonable caution before using the Tool. If there is any question about a condition being safe or unsafe, do not operate the Tool.
8. **Keep the Metal Detector away from any lights, TVs, computers, and mobile telephones.** These can all cause electromagnetic interference.
9. **Only the Search Coil is waterproof.** Do not immerse the unit beyond Search Coil.
10. **Keep the Tool clean.** Wipe the housing after each use. The search coil is washable and can be fully submerged. Never submerge the control housing. Protect the control housing from rain, blowing surf and heavy mist. Disassemble the Leg and wipe it clean after use in sandy areas.
11. **Use the right tool for the job.** There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
12. **This product is not a toy.** Keep it out of reach of children.
13. **People with pacemakers should consult their physician(s) before use.** Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Properly maintain and inspect to avoid electrical shock.
14. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

SPECIFICATIONS

Battery Type	2x 9V
Headphone Jack	3.5 mm
Length	41" - 51"
Max Target Depth	200mm under soil ground

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

SETUP - BEFORE USE



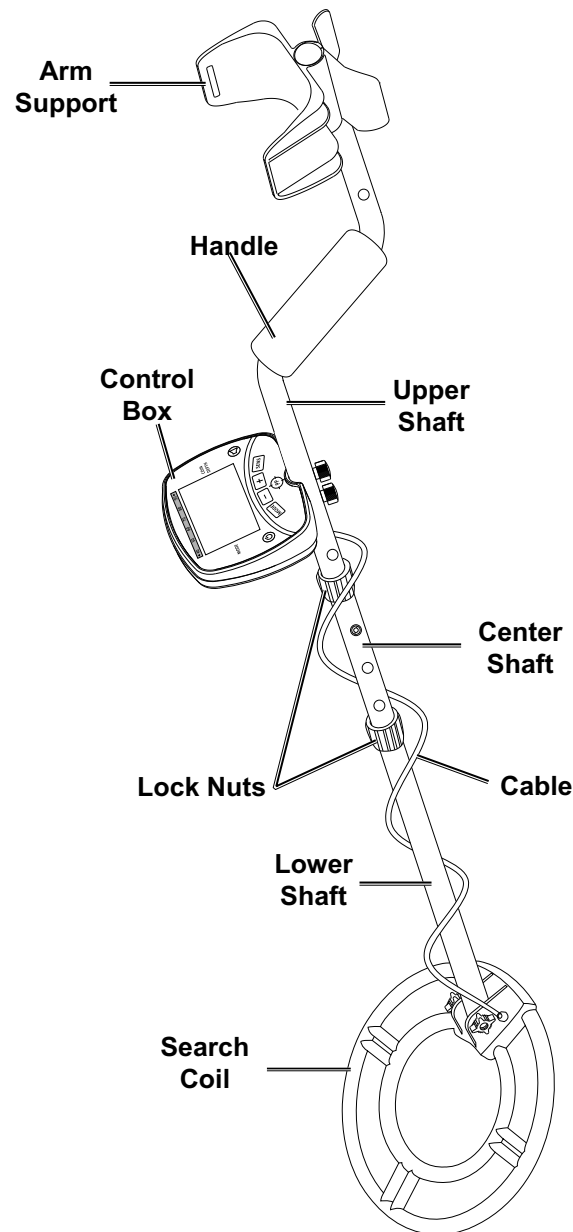
Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn the Power Switch of the tool off and remove the batteries before assembling or making any adjustments to the tool.

Note: For additional information regarding the parts listed in the following pages, refer to *Parts List and Diagram* on page 11.

Components



Tool Set Up

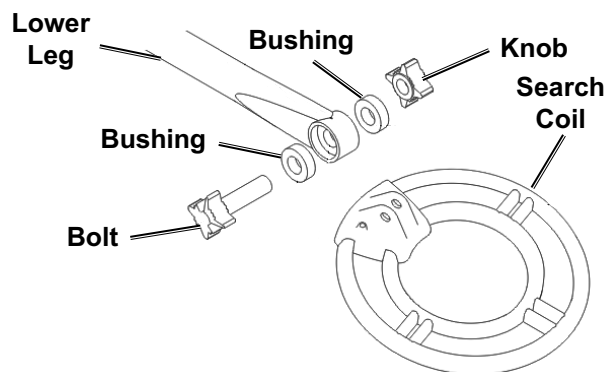
⚠ WARNING TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn the Power Switch of the tool off and remove the batteries before adjusting tool or installing accessories.

Assembling Shaft

1. Press button on Lower Shaft, then slide into Center Shaft until button pops out of hole.
2. Press button on Center Shaft, then slide into Upper Shaft until button pops out of hole.
3. Tighten Lock Nuts securely.

Attaching Search Coil

1. Remove Knob, Washers and Bolt.
2. Place Bushings inside both sides of hole on Lower Shaft.
3. Place Search Coil over hole on Lower Leg. Thread Bolt through assembly. Finger tighten Knob.
4. Hold the unit in a comfortable position, and adjust the Shaft sections until the overall Shaft is at the desired length. Adjust Search Coil until it is parallel with the ground. Tighten Knob securely, but do not overtighten.

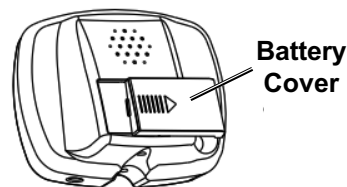


Installing Batteries

1. Turn power off, then remove Battery Cover from the back of the Control Box.
2. Insert batteries and replace the Battery Cover.

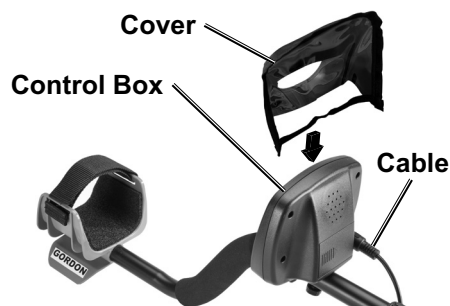
Notice: Do not install old and new batteries together. Do not install alkaline, carbon-zinc or rechargeable batteries together. Position batteries in proper polarity. Do not use swollen or leaking batteries.

Note: When storing the unit for a week or more, remove the batteries. Extend battery life by using Headphones, as they require less power than the built-in speaker.



Attaching Control Box

1. Attach Control Box to Upper Shaft and secure with Control Knob Screws.
2. Loosely wrap Search Coil's Cable around Shaft and connect it to the back of the Control Box. Rotate the plug counter-clockwise to lock it into place.
3. **Optional:** Unplug the Cable and slip the Cover over the Control Box with the elastic band underneath. Plug the Cable back in.



Using Headphones

WARNING! TO PREVENT SERIOUS INJURY: Do not wear headphones while operating your detector near high traffic areas. Pay attention to traffic safety.

Insert Headphone Plug into Headphone Jack on the bottom of the Control Box.

Note: Speaker disables when Headphones are plugged in.

CAUTION! TO PREVENT HEARING LOSS: set the volume level to minimum before using the Headphones, then adjust the level up to a comfortable listening level. **Extended high volume listening can lead to permanent hearing loss.**

Control Panel Buttons

LCD Display - Displays operating information/data.

Power - Switches Control Box power ON or OFF.

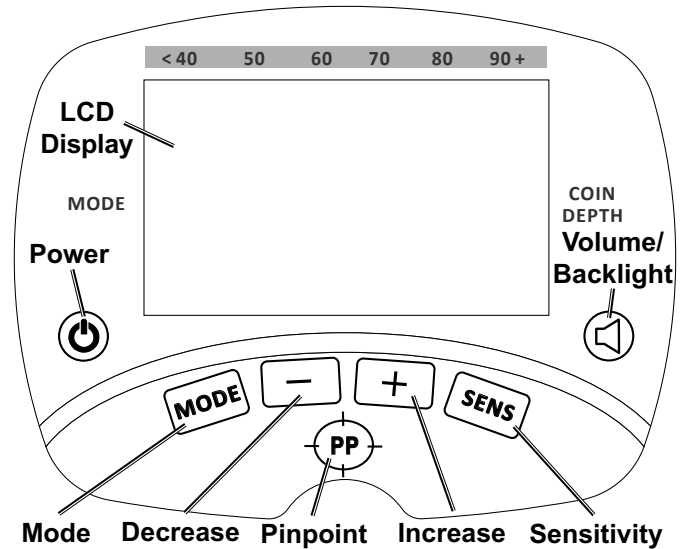
MODE - Selects detection Mode.

PP - Used to accurately pinpoint / locate an object underground.

SENS - Adjust sensitivity level; used in conjunction with the **Decrease/Increase** buttons.

Volume/Backlight - Quick press allows volume level to be adjusted; used in conjunction with the **Decrease/Increase** buttons. Two second press will turn backlight ON or OFF.

Decrease (-) / Increase (+) - Increases (+) or decreases (-) range for volume, sensitivity, and **DISC** Mode.



LCD Display Icons

Target ID Digital Scale - Visual reference scale for **Target ID** and **Target Digital Value Range**.

Target ID - Displays target types.

Target Depth - Displays approximate depth of underground objects.

Battery - Displays battery level.

Target Digital Value - Displays digital value of the detected target.

Sensitivity Level - Displays current detection sensitivity level setting.

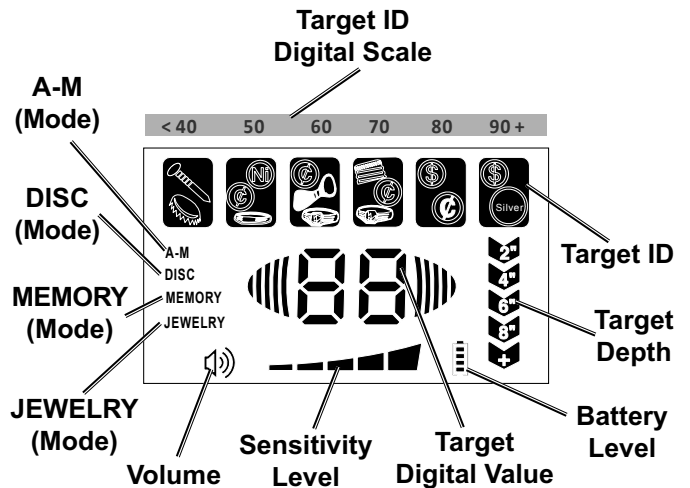
Volume - Displays volume level.

JEWELRY (Mode) - Mode is for detecting non-ferrous (non-iron) metals.

MEMORY (Mode) - Mode is for detecting metal with the same **Target ID** as the metal example in its memory.

DISC (Mode) - Mode allows the operator to selectively eliminate certain categories (**Target ID**) from detection.

A-M (Mode) - Mode is for detection of all metal types.



Modes and Testing

- Press **Power** and after a few seconds the Display will show the four Modes, **Sensitivity Level**, and **Battery Level**.
After 15 minutes if no button is pressed or object is detected, the unit will power off automatically.
- Before beginning a search outside, test the unit with samples of metal. Use the following:
 - an iron nail
 - a Nickel
 - a Penny (zinc coin, after 1982)
 - a silver Quarter

- Place the Metal Detector on a non-metal surface with the Search Coil face up. Make sure the unit is away from TVs, computers, or any device that can cause electromagnetic interference.

NOTE: Remove any watches, rings, or other metal objects on your fingers and hands.

- Power on the Metal Detector and:
 - Press **Volume/Backlight** and then **Decrease (-)** to set volume to low.
 - Press **MODE** and select the desired Mode.

A-M Mode

Use this Mode to detect all metal types.

1. Press **MODE** and select **A-M** so that the Metal Detector will respond to all metal types.
Sweep the metal samples 2 to 3 inches or more above the center of the Search Coil. Once detected, a tone should sound, along with its **Target Digital Value** displayed and its **Target ID icon** flashing.

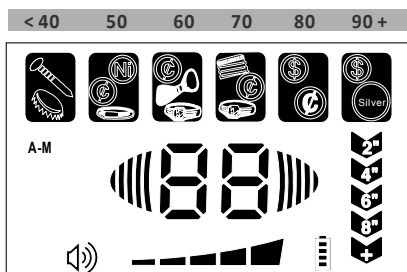


Figure A: A-M Mode - All Metals

NOTE: Be sure to move the samples over the Search Coil otherwise the Detector will not respond.

NOTE: If needed, press **SENS** and then **Increase (+)** to increase the Metal Detector's sensitivity.

DISC Mode

Use this Mode to discriminate between metal types.

1. Press **MODE** and select **DISC** so that the Metal Detector will only respond to specific metals.
When all **Target ID** icons are seen then all metal types will be detected. Press **Increase (+)** to eliminate an icon from left to right. Once an icon is removed all metals within that range will not be detected. Restore icons by pressing **Decrease (-)**.
When the Detector is set to detect all metals it will signal a specific metal differently from the others. As a test:
 - a. Sweep the iron nail 2 to 3 inches above the Search Coil. Once detected, a tone will sound, its **Target Digital Value** will display, and the **Target ID icon** will flash.
 - Sweep the Nickel and once detected, its tone will sound, its **Target Digital Value** will display, and its **Target ID icon** will flash.
 - Repeat for the Penny and silver Quarter. Their tones should sound, **Target Digital Values** will be displayed and their **Target ID icons** flashing.

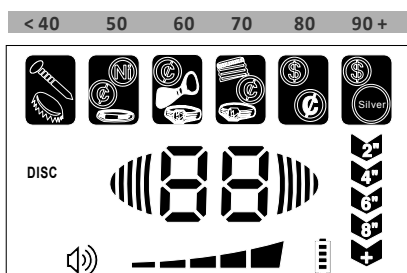


Figure B: DISC Mode - All Metals

- b. Eliminate the **Target ID** "Iron" icon by pressing **Increase (+)** once and it should disappear. Sweep the iron nail above the search coil and the unit should NOT respond. Sweeping the other samples should produce a tone and reading on the Display as before.

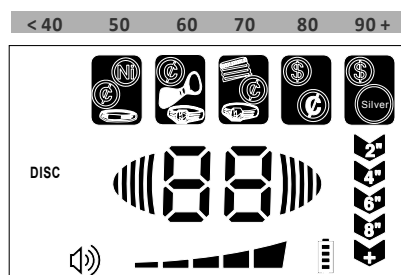


Figure C: DISC Mode - "Iron" Not Detected

- c. Eliminate **Target ID** "Nickel" icon by pressing **Increase (+)** once again. Sweep the nickel in front of the Search Coil. The unit should NOT respond to the Nickel or to the iron nail but should respond to the Penny and silver Quarter.

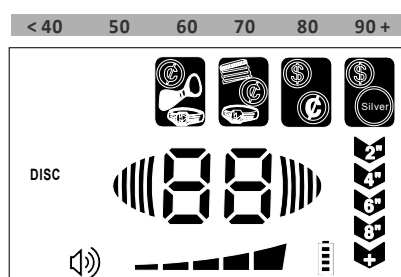


Figure D: DISC Mode - "Iron, Nickel" Not Detected

- d. Eliminate **Target ID** "Pull Tab" and "Penny" icons by pressing **Increase (+)** two more times. Sweep the samples in front of the Search Coil. The unit should NOT respond to the nail, Nickel, or Penny but should respond to the silver Quarter.

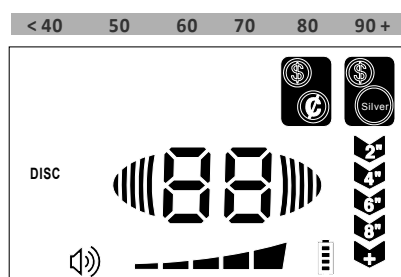


Figure E: DISC Mode - "Quarter" Detected Only

NOTE: The **Target ID** "silver Quarter" Icon cannot be eliminated.

NOTE: The detection of aluminum is similar to silver, so both metals will be detected within the same **Target ID** Icon. The detection of gold is similar to the Nickel setting.

2. Restore **Target ID** Icons by pressing **Decrease (-)** until all desired icons reappear or press the **MODE** button to reset menu selections.

MEMORY Mode

Use this Mode to detect metal types similar to a saved metal object.

1. Once a metal object is recovered and you want to search for the same type metal object, press **MODE** and select **MEMORY**.

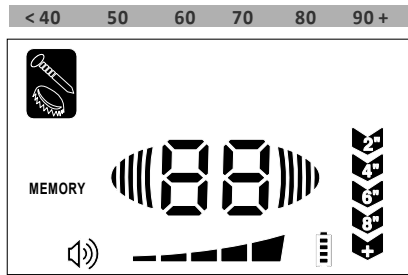


Figure F: MEMORY Mode - Object Saved In Memory

- a. Sweep over the metal object so that its **Target Digital Value** displays and its associated **Target ID** Icon flashes. The first metal object the unit identifies will be saved.
- b. Once saved, the **Target Digital Value** will disappear from the Display and the **Target ID** Icon will stop flashing. "MEMORY" will be seen on the Display. The unit will now only respond to the same type of metal that was saved.

Note: In the **MEMORY** Mode, the Detector will respond to all metals in the saved Target Icon range.

- c. When the same type of metal is detected, the tone will play, its **Target Digital Value** will display and the **Target ID** Icon will flash.
- d. Press **MODE** to clear the saved setting and exit the **MEMORY** Mode or select **MEMORY** to save a new metal object.

JEWELRY Mode

Use this Mode to detect non-ferrous (iron) metal types.

1. Press **MODE** then select **JEWELRY**. The **JEWELRY** Mode ignores most nails and small iron pieces but will detect jewelry, coins, and other metals in those **Target ID** Icon ranges.

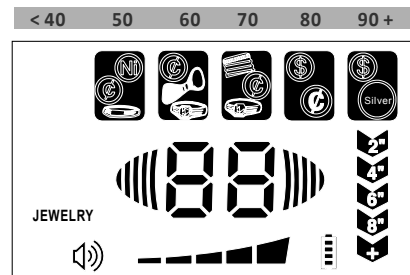


Figure G: JEWELRY Mode - Non-Ferrous Metals

GENERAL OPERATING INSTRUCTIONS

1. Once all the tests and adjustments have been made, the Metal Detector is ready for outdoor use.
2. Power the unit up, press **MODE** and select the desired Mode.

Note: When first searching, it is recommended to select **A-M** and set **Sensitivity Level** to maximum.

3. Adjust the **Volume** to minimum then put on the headphones (if used). Once tone is played while operating, adjust the **Volume** as desired.
4. If in a dark area, turn on the Display's **Backlight**. To save power, the **Backlight** will automatically turn off after 10 minutes.
5. Slowly walk the detection area and slowly sweep the Search Coil back and forth, keeping it level and about 1" to 3" from the ground. Tilting or raising the Search Coil during the sweep will produce false readings. If needed, adjust the **Sensitivity Level**.

8. Look at the flashing **Target ID** Icon to determine what kind of metal it is and whether you wish to dig it out.
9. To **Pinpoint** an object's location, press **PP**. When "PP" is seen on the Display, slowly move the Search Coil over the area that triggered the unit. The tone will sound when the Search Coil is near the object. The **Target Depth** indicator will show the approximate depth of the object.

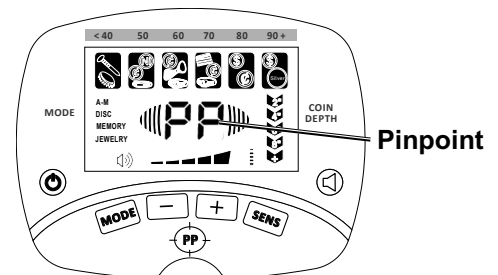








Figure H: Pinpoint Target Object

6. The Search Coil may be used under water. **Only the Search Coil is waterproof.**
7. When a metal object is detected, a tone will sound, the **Target Digital Value** will be seen on the Display, the associated **Target ID** Icon will flash, and the approximate **Target Depth** of the object will be displayed.

10. When finished and to prevent accidents, turn off the tool and remove the batteries. Clean, then store the tool indoors out of children's reach.

Tips for Searching in Different Environments

1. There are many factors which influence the sensitivity and accuracy of detecting and discriminating between metal objects, including the angle, depth, size and oxidation of the target object. Various soil or seawater conditions, and also electromagnetic and electrical interference surrounding the target can also affect readings. Other metal detectors in the area will also cause interference, so when there is more than one unit in use, be sure they are at least 10 yards apart.
2. Some ways to help increase success are:
 - a. If there is interference from similar metal detectors in your searching area, lower the **Sensitivity Level** setting to stop the interference.
 - b. If there is interference from electrical cables, TV, radio, or other electrical devices in your searching area, lower the **Sensitivity Level** setting.
 - c. When searching in highly mineralized areas, the unit may sound even if there is no metal. Lower the **Sensitivity Level** setting, eliminate some **Target ID** icons (eliminates detection of certain metal types) and increase the distance of the Search Coil from the ground until the false signal disappears. To set detection, place a test metal object in highly mineralized earth or wet sand and eliminate **Target ID** icons as needed to focus the detection range for the desired metal object.
 - d. When searching in a trash area, set the unit into the **JEWELRY** mode so that the unit can ignore most invaluable metals such as nails, bottle caps, cans, and small pieces of iron.
 - e. Generally, the higher the **Sensitivity Level**, the worse the detection of the selected metal object will be, as undesired, similar metals will be detected. If needed, lower the **Sensitivity Level** to have better discrimination and detection of the selected metal object without interference from other metals and mineralized earth.
 - f. Remove all metal digging tools when searching.
 - g. Reference the chart below for common examples of metal objects, their tone pitch, **Target ID** icons, and **Target Digital Value** ranges.

Target	Iron, Bottle Cap	Nickel, Jewelry	Pull-Tab, Jewelry	Zinc Penny, Bottle Cap, Jewelry	Quarter, Copper	Half Dollar, Silver
Tone Pitch	Low	Low	Medium	Medium	High	High
Target Icon						
Digital Value Range	0-40	41-55	56-65	66-75	76-85	86-99

Note: Table for general reference only. There are a wide variety of metals and no metal object can be identified for certain until unearthed.

MAINTENANCE AND SERVICING



Procedures not specifically explained in this manual must be performed only by a qualified technician.

⚠️ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Turn the Power Switch of the tool off and remove the batteries from the tool before performing any inspection, maintenance, or cleaning procedures.

Do not use damaged equipment. Have the problem corrected before further use.

CLEANING AND MAINTENANCE

- BEFORE EACH USE**, inspect the general condition of the tool. Check for loose hardware, misalignment or binding of parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
- Handle the Metal Detector gently and carefully. Dropping it can damage circuit boards and the case, and can cause the Metal Detector to malfunction.
- AFTER USE**, wipe external surfaces of the tool with a damp clean cloth, then dry. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the detector.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Unit displays or sounds without a target.	<ol style="list-style-type: none"> Metal Detector can receive interference from power lines and other electromagnetic sources. Environmental humidity is very high. Sensitivity Level is set too high. Sweeping the Search Coil to fast or at the wrong angle. Other Metal Detectors in close proximity. 	<ol style="list-style-type: none"> Change search location or removed source of interference. Wait for humidity level to lower. Adjust Sensitivity Level lower. Use correct operating techniques as described in <i>GENERAL OPERATING INSTRUCTIONS</i>.
Unit does not detect anything.	<ol style="list-style-type: none"> Sensitivity Level is set too low. Target ID range is eliminated (not selected). Search Coil not parallel with ground. 	<ol style="list-style-type: none"> Adjust Sensitivity Level higher. Select correct Target ID range. Use correct operating techniques as described in <i>GENERAL OPERATING INSTRUCTIONS</i>.
Unit displays multiple Target ID ranges, emits multiple tones, etc.	<ol style="list-style-type: none"> Multiple metal types in the search area. Target ID range cannot be determined (heavily oxidized metal, etc.) 	<ol style="list-style-type: none"> Adjust Sensitivity Level lower to increase discrimination between target objects. Sweep the Search Coil at differing angles.
Unit does not function.	<ol style="list-style-type: none"> Dead Battery. Cable connection is poor. 	<ol style="list-style-type: none"> Replace Batteries. Reconnect cable as described in <i>SETUP -BEFORE USE</i>.



Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS DOCUMENT AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

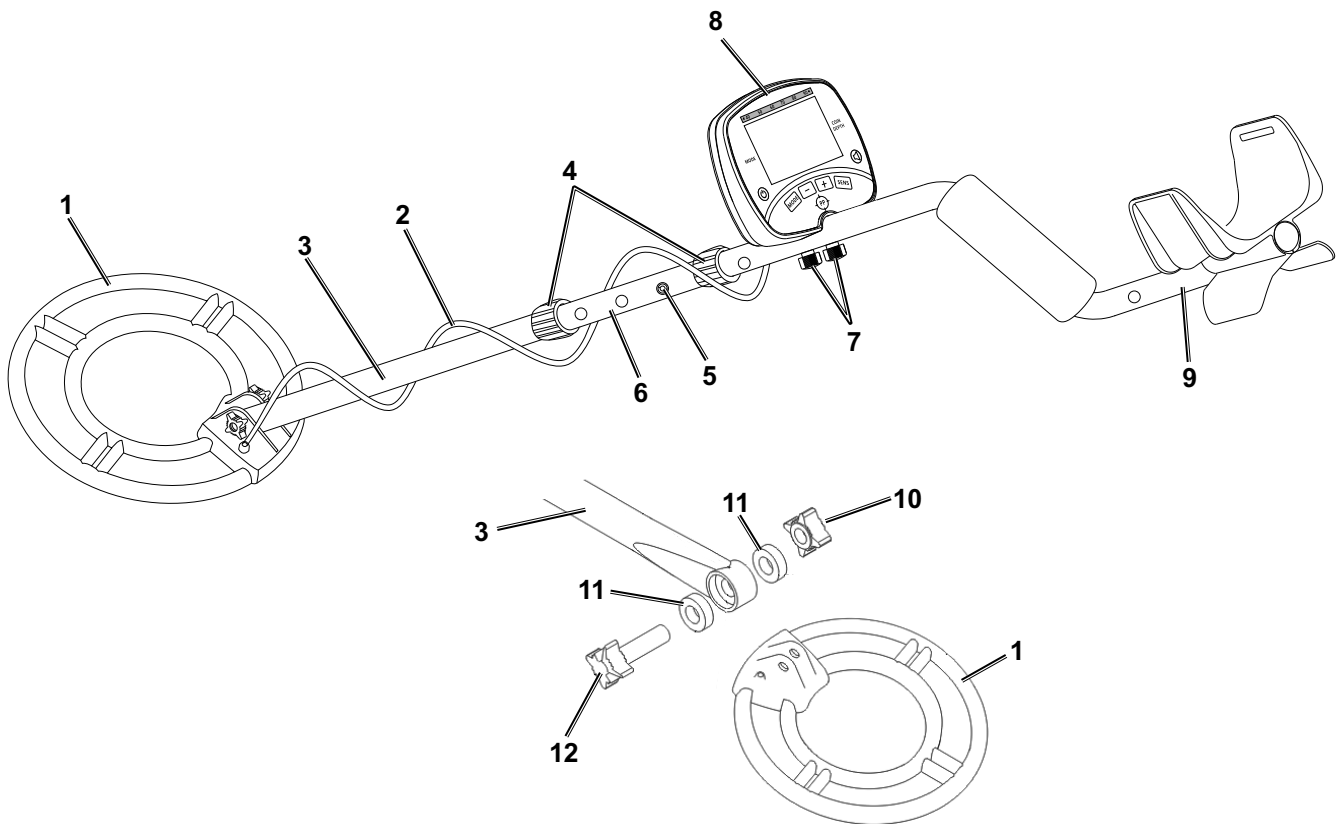
PARTS LIST AND DIAGRAM

Parts List

Part	Description	Qty
1	Search Coil	1
2	Cable	1
3	Lower Shaft	1
4	Lock Nut	2
5	Button	2
6	Center Shaft	1
7	Control Box Screw	2
8	Control Box	1

Part	Description	Qty
9	Upper Shaft	1
10	Knob	1
11	Bushing	2
12	Bolt	1
13	Control Box Cover (not shown)	1
14	Carrying Case (not shown)	1
15	Headphones (not shown)	1

Assembly Diagram



Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175448279 when ordering parts.

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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