

treasures.

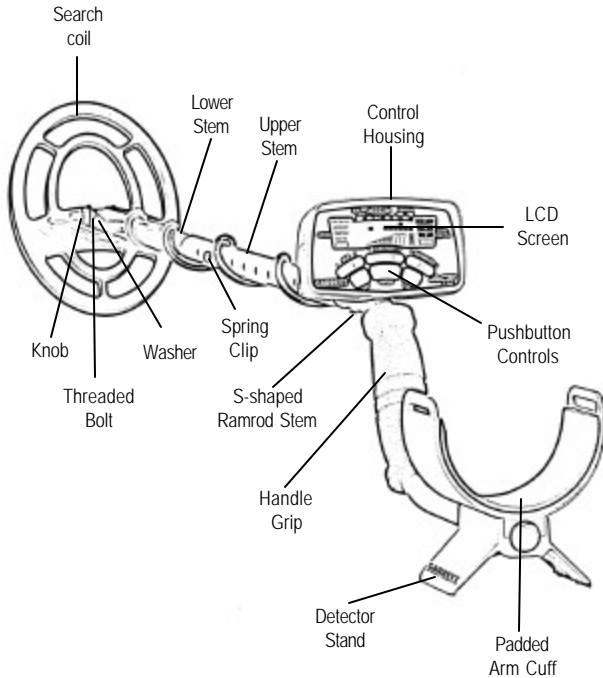
In order to take full advantage of the special features and functions of the Ace 150 and 250 metal detectors, carefully read this instruction manual in its entirety.

We also recommend you take time to read Garrett's *Treasure Tips and Hunting Hints* booklet for expert advice on successfully hunting, pinpointing and digging your targets.

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ACE Illustration



ACE Parts

No tools are required to assemble the ACE 250 or 150 enhanced metal detectors. 4 AA batteries are included with the detector.

Before assembling your ACE metal detector ensure you have the complete set of parts, which include:

- Control Housing with S-shaped Ramrod Stem
- Upper Stem
- Lower Stem
- Two (2) Knobs
- Two (2) Washers
- One (1) Threaded Bolt
- Searchcoil with Cable

If any part is missing, please contact your local dealer.

ACE Assembly

1. Attach the Lower Stem to the Searchcoil by first removing the paper liner from the two mounting washers and inserting them into the Stem (adhere to stem) then slip the Searchcoil onto the Stem.

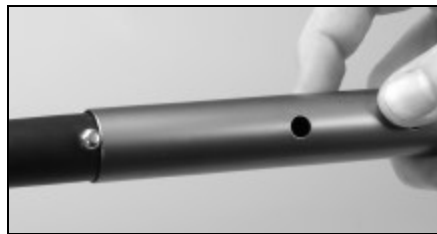


2. Insert the Threaded Bolt through the holes of the searchcoil and hand-tighten the two Knobs.



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3. Install the Upper Stem to the Lower Stem and then this assembly to the ACE Control Housing by depressing the two buttons and coupling the Stem to the Housing unit. Adjust for the most comfortable operating length.



4. Wrap the Searchcoil cable snugly about the stem with the first turn of the cable over the stem.



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5. Insert the cable connector into the connector on the housing and hand-tighten securely.

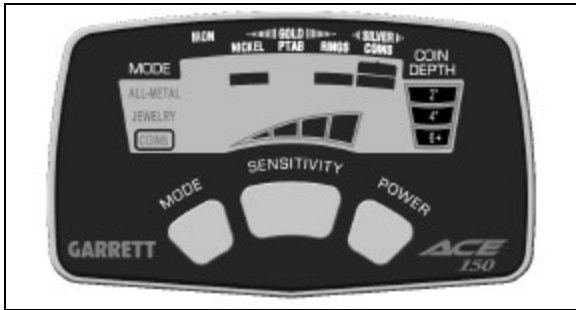


6. All ACE detectors come with batteries installed. Slide cover back to replace batteries.



7. The location of the arm cuff may be adjusted by removing the screw in the bottom of the arm rest and rotating the cuff 180°.





ACE 150 Controls

1. **POWER** Pushbutton - Press the **POWER** button once to turn the detector ON or OFF. **Note:** After turning detector off, wait 3 to 5 seconds before turning back ON.

2. **SENSITIVITY** Pushbutton - Push the **SENSITIVITY** button to step through the four (4) sensitivity levels, which are continuously shown on the LCD screen.

Use higher sensitivity levels when searching for very small or very deep targets.

Use lower sensitivity levels in locations where the detector is behaving erratically due to excessive metallic trash interference, high mineral soils, saltwater beaches, or other metal detectors are present.

3. **MODE** Pushbutton - Push the **MODE** button to select one of three desired detection Modes:

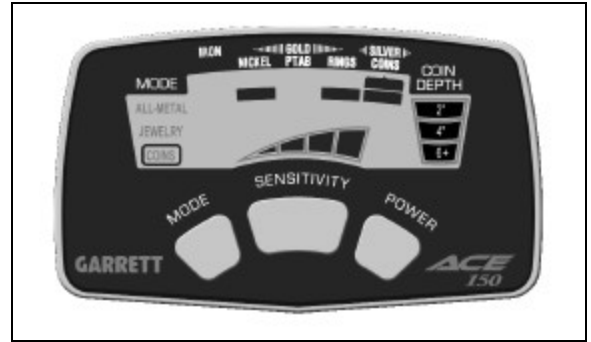
- **All-Metal Mode** - This MODE is designed to detect every type of metal and should be used when you want to find all metal items or when the materials of the desired object is unknown.

Switch to the All-Metal Mode to aid in locating a target when its signal is inconsistent. (Inconsistent signals can mean a trash target is nearby a good target).

- **Jewelry Mode** - This mode is designed to find jewelry such as rings, bracelets, watches

and necklaces and ignore most trash items such as bottlecaps and nails.

- Coins Mode - This mode is designed to find all types of coins and eliminate trash items such as iron, bottlecaps, most pulltabs and other objects normally encountered while coin hunting. Some bent pulltabs and pieces of tabs may not be eliminated from detection. Some digging of junk targets is to be expected.



ACE 150 Features

The ACE 150 is designed with Garrett's exclusive Graphic Target ID technology, which indicates the probable identification of a target along a horizontal scale that reads from low conductive metals (e.g. iron) on the left to high conductive metals (e.g. U.S. coins) on the right.

1. **Mode** - Indicates which detection mode is selected by highlighting the corresponding word on the LCD screen.

2. Target ID Legend - A Target ID Legend is located directly above the LCD screen and indicates commonly found targets and metals. When a target is detected, the Target ID cursor will appear below the word that most likely indicates the type of target found, based on its conductivity.

3. Upper Scale - The Upper Scale, where the Target ID cursor is illuminated when a target is detected, consists of five (5) graphical segments.

4. Target ID Cursor - The Target ID cursor is illuminated in the Upper Scale and indicates the probable identity of a detected target.

5. Lower Scale - The lower horizontal scale, or Notch Discrimination Scale, indicates the discrimination pattern where the ACE will or will not produce an audible signal when a target is located. This scale changes when switching between Detection Modes.

No audible signal will be produced when a target is located where a notch is present (those regions of the Lower Scale where no cursors are visible).

6. Coin Depth - The depth of a coin, or similar sized target, will be shown on the LCD screen. Depth is indicated when the LCD scale is illuminated at 2", 4" or 6+ inches. Sweep over the target with the searchcoil 1" from the soil to get the most accurate reading. **Note:** Targets larger than a coin may display shallower than actual depth while targets smaller than a coin may display deeper than actual depth.

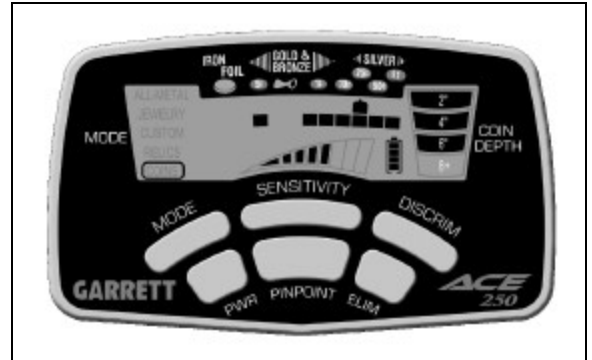
7. Low Battery Indicator - When the unit's batteries become weak, the Low Battery Indicator will turn on. For best performance, replace the old batteries with quality alkaline AA batteries. NiMH rechargeable batteries may be used, but will have a shorter life per charge. You can expect 20 to 40 hours of operation depending on battery type.

Access and replace the batteries by gently sliding the cover off the control housing. Remove batteries from the ACE when the unit will be stored for longer than 30 days (See Page 10).

8. Headphone Jack - ACE sport phones with 1/4" plug can be inserted into the jack found on the reverse side of the Control Housing.

9. Tone ID - The Tone ID feature produces distinct audible tones based on a target's conductivity:

- High conductivity targets (such as U.S. coins) produce a unique belltone signal.
- Medium conductivity targets (such as jewelry, nickels and international coins), produce a standard-pitched audio signal.
- Low conductivity targets (such as iron and nails) produce a low-pitch audio signal.



ACE 250 Controls

The ACE 250 includes these additional control functions not found on the ACE 150:

1. DISCRIM Pushbutton - Use the (+) or (-) DISCRIM pushbuttons to move the Target ID cursor to the left or right. Next, use the ELIM Pushbutton to modify the discrimination pattern on the Lower Scale.

2. ELIM Pushbutton - Press the ELIM (Eliminate) pushbutton to eliminate or activate the LCD cursor located on the Lower Scale, directly below the Target ID cursor.

The ELIM function can be used to modify each Mode's discrimination pattern. For example, when an unwanted target is located while hunting press the ELIM button to create a Notch (delete the cursor) to eliminate that specific target.

All Notch Discrimination modifications made while in the CUSTOM mode will be retained when the detector is turned OFF. However, all changes made to the Notch Discrimination scale while in the ALL-METAL, JEWELRY, RELICS and COINS modes will return to the factory settings when the detector is turned OFF.

3. PINPOINT Push Button - Press and hold the Pinpoint pushbutton to determine the exact location of a target that is still hidden in the ground, wall or other

structure.

When pinpointing, the Upper Scale on the LCD Screen indicates signal strength. When the greatest number of LCD segments (increasing left to right on the scale) is shown, the center of the searchcoil is directly over the target with the depth of a coin-sized target shown on the depth scale.

4. MODE options:

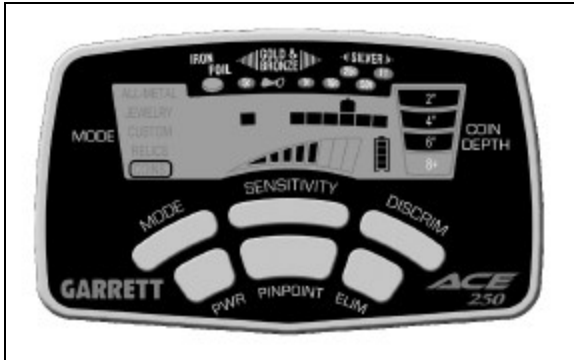
- **CUSTOM Mode** - This Mode can be programmed solely by the operator. The ACE 250 is factory preset with the CUSTOM Mode set the same as the COINS Mode. By using the DISCRIM and ELIM push buttons, an operator can modify the Notch Discrimination settings to individual specifications, which will be retained in the CUSTOM Mode when the ACE is turned OFF.

The CUSTOM Mode can be used to find specific metal items. For example, if an earring has been lost, scan the matching earring with the ACE 250 while in the CUSTOM mode. Note where the Target ID cursor appears when the earring is scanned. Next, use the DISCRIM pushbutton to move the Target ID cursor to the left and right. Push the ELIM button to delete the LCD cursors on the notch Discrimination Scale, leaving only the one where the Target ID cursor illuminated when the earring was scanned. The ACE 250 is now programmed to find only the missing earring based on the conductivity of its matching pair.

ELIM can also be used to modify the Notch Discrimination Scale to reject a specific type of trash while detecting all other metal. When a trash metal is detected while hunting, simply push the ELIM button to create a notch where

the Target ID cursor signaled the presence of the trash. The next time the ACE 250 encounters the same trash item, it will not produce an audible signal.

- RELICS Mode - Designed to eliminate trash targets normally associated with relic hunting, while detecting good targets in the lower conductivity range, such as lead and brass.



ACE 250 Features

The ACE 250 includes these additional features that are not found on the ACE 150:

1. POWER Push Button - Press and release to switch the unit ON and resume hunting with the same settings and modifications used prior to turning the unit OFF. When the POWER Push Button is pressed and held for 5 seconds the ACE 250 will return to the factory

recommended settings of each MODE. **Note:** After turning detector OFF, wait 3 to 5 seconds before turning back on.

2. Target ID Legend - The Target ID Legend depicts illustrations of coins, metals and trash items for a quick, visual reference when hunting.

3. Upper Scale - The Upper Scale, where the Target ID cursor is illuminated when hunting, consists of twelve (12) graphical segments for more precise Target ID and discrimination.

4. Coin Depth - Coin Depth is expanded to four (4) depth indicators including 2", 4", 6" and 8+ inches.

5. Sensitivity - The ACE 250 has eight (8) Sensitivity settings for more precise depth and target detection.

6. Battery Condition Indicator - An LCD display is continuously illuminated to indicate the battery level.

Troubleshooting Guide

SYMPTOM	SOLUTION
No power	<ol style="list-style-type: none"> 1. Ensure batteries are installed in the correct position. 2. Replace all old batteries with all new batteries
Erratic sounds or target ID cursor movement	<ol style="list-style-type: none"> 1. Ensure your searchcoil is securely connected and the coil cable is tightly wound around the stem 2. Ensure you are not using the detector indoors where excessive amounts of metal are found 3. Reduce your sensitivity setting 4. Determine if you are close to other metal detectors or other metal structures such as electrical power lines, wire fences, benches, etc. (NOTE: Iron targets may cause erratic sounds or Target ID Cursor movement. You can identify iron targets in an All-Metal Mode)
Intermittent Signals	<p>Intermittent signals typically mean you've found a deeply buried target or one that is positioned at a difficult angle for your detector to read. Increase the sensitivity on your detector and scan from different directions until the signal becomes more definite. In the case of multiple targets switch to the All-Metal Mode or press PINPOINT to precisely locate all targets. (NOTE: Iron targets may cause Intermittent Signals. You can identify iron targets in an All-Metal Mode).</p>
I'm not finding specific targets	<p>Ensure you are using the correct mode for the type of hunting you are doing. If you are hunting for coins, ensure you are in the COINS mode. You may also use the All-Metal mode, which detects all metal targets to ensure desired targets are present.</p>
Target ID Cursor bounces	<p>If your Target ID Cursor bounces erratically, chances are you've found a trash target. However, a Target ID Cursor may bounce if a good target (such as a coin) is not parallel to the searchcoil (e.g. on edge). It may also bounce if there is one or multiple "junk" targets laying next to the good target. Scan from different directions until your Target ID Cursor becomes more stable.</p>

ACE Warranty & Service

Your ACE detector is warranted for 24 months, limited parts and labor, but does not cover damage caused by alteration, modification, neglect, accident or misuse.

In the event you encounter problems with your ACE detector please read through this Owner's Manual carefully to ensure the detector is not inoperable due to manual adjustments. On the ACE 250, press and hold the POWER Pushbutton for 10 seconds to return the recommended factory settings.

Before you return your ACE detector to the factory make certain you have:

1. Checked your batteries, switches and connectors. Weak batteries are the most common cause of detector "failure."
2. Contacted your dealer, particularly if you are not

familiar with the ACE detectors.

3. Included a letter that fully describes the problem and conditions under which they occur.
4. Included your name, address and a phone number where you can be reached between 8:30 a.m. and 4 p.m., C.S.T.
5. Carefully packed the detector in its original shipping box or other suitable box. Make certain that proper insulation or packing material is used to secure all parts. Do not ship stems or headphones, unless they are a part of the problem. Be certain to return all coils.
6. Ship to:
Garrett Metal Detectors
Hobby Repair Department
1881 W. State Street
Garland, Texas 75042

You can call Garrett's Customer Service Department at 1-800-527-4011 (U.S.A.) or 1-972-494-6151 (Outside U.S.A.) if you have further questions.

Please allow approximately one week for Garrett technicians to examine and repair your detector after they receive it; plus another week for return shipping. All equipment will be returned via UPS or parcel post, unless written authorization is given by you to ship collect by air parcel post, UPS Blue (air) or air freight.

International Customers

It is recommended our international customers contact their local dealer for repairs and warranty service to avoid the high costs of international shipping rates. If you do not know where to locate your local dealer please contact the Garrett factory by calling 1-972-494-6151 or e-mail us at sales@garrett.com.

WARNING!

Any metal detector may discover underground power lines, explosives or other items which when struck could cause personal injury. When searching with your ACE detector observe these precautions:

- Do not hunt in an area where there might be underground electric lines or pipes buried at a shallow depth.
- Do not hunt in a military zone where bombs or other explosives may be buried.
- Avoid striking any line known to be or suspected of carrying electrical power.
- Do not disturb any pipeline, particularly if it could contain flammable gas or liquid.
- Always use reasonable caution in digging,

particularly in areas where you are uncertain of underground conditions.

ACE Accessories

Garrett offers a complete line of ACE accessories that will increase your success and enjoyment of treasure hunting with your new detector. These accessory products are available from your local or dealer or by calling the Garrett factory at 1-800-527-4011.

1. ACE Tote Sport Bag - #1651500

\$14.95

Rugged and durable, this ACE series tote bag is 18" in diameter and is made of durable nylon mesh to easily hold and store all ACE series detectors (when disassembled) and accessories.



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2. ACE Sport Phones - #1612400

\$14.95

These sleek, light-weight sport headphones, with a 1/4" adapter, are designed especially for the ACE detector series to mask out external noise for greater audio signal clarity.



3. ACE Baseball Cap - #1663100

\$9.95

This 100% cotton cap features an embroidered green Garrett logo on the front, red and green ACE logo on the side and green garrett.com on the reverse. Comes with a convenient Velcro strap on the back.



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4. ACE Digging Shovel - #1606100

\$14.95

Highly durable, this ACE series stainless steel digging tool, with handy depth scale, is ideal for digging in all kinds of soils.



5. ACE Sport Visor - #1663200

\$9.95

The ACE series black Sports visor protects eyes from sun's rays and glare and includes padded rim to catch perspiration. Quick slip ON / OFF design is perfect for men and women.



6. RAM Books

Charles Garrett and other professional treasure hunters share their knowledge and experience of treasure hunting in these fine books:

New Successful Coin Hunting_____	\$9.95
Treasure Hunting for Fun and Profit_____	\$9.95
Ghost Town Treasures_____	\$9.95
Find Gold with a Metal Detector_____	\$9.95
Buried Treasure You Can Find_____	\$14.95
Gold of the Americas_____	\$9.95
Treasure Recovery from Sand and Sea_____	\$7.95
New Modern Metal Detectors_____	\$12.95
Gold Panning is Easy_____	\$9.95
Introduction to Metal Detecting_____	\$1.00
The Competitive Treasure Hunt_____	\$9.95
Treasure Caches Can be Found_____	\$9.95
Treasure Tips & Hunting Hints Booklet_____	\$4.95