



*Deep-seeking True All Metal Mode Performance  
for All Terrain Prospecting!*

1881 W. State Street  
Garland, Texas 75042

Tel: 1.972.494.6151  
Email: [sales@garrett.com](mailto:sales@garrett.com)  
Fax: 1.972.494.1881

**GARRETT**<sup>®</sup>  
**METAL DETECTORS**  
[www.garrett.com](http://www.garrett.com)

© 2011 Garrett Electronics, Inc. PN 1533500.A.0811



**Owner's Manual**

**AT GOLD Owner's Manual**

## **THANK YOU FOR CHOOSING GARRETT METAL DETECTORS!**

Congratulations on the purchase of your new Garrett *AT Gold*<sup>™</sup> metal detector. It was designed to find tiny gold nuggets in the most challenging prospecting environments, including shallow fresh water hunting.

The *AT Gold* operates at a high frequency optimized for gold prospecting and includes a True All Metal Mode. The ALL METAL Mode is preferred for prospecting because it provides the greatest possible depth and sensitivity. It also provides a continuous audio response to allow the operator to hear the subtle detection signals produced by faint targets.

The *AT Gold* is a Motion All Metal detector, meaning that slight motion of the searchcoil is required to maintain detection, although static detection of targets can be achieved while in Pinpoint mode. The *AT Gold* includes manual and automatic Ground Balance—plus an exclusive Ground Balance Window<sup>™</sup> feature—to optimize the detector's performance in highly mineralized ground, where gold is most often found. This detector is also waterproof to a maximum depth of 10 feet (3 meters) for searching in freshwater lakes and streams.

In addition to its True All Metal Mode, the *AT Gold* includes two Discrimination Modes, making it a versatile coin and relic hunting machine. When selecting either the DISC 1 or DISC 2 mode, the operator gains more Tone ID information from targets in addition to the ability to discriminate unwanted trash targets (e.g. nails, foil, pull tabs).

The *AT Gold* also features simple, one-handed operation for all controls—no dials or knobs that require a second hand to adjust.

Garrett's exclusive Target ID technology provides two indicator scales which allow you to see the detector's discrimination setting (Lower Scale) as well as the analysis of each target (Upper Scale). In addition, the Digital Target ID provides a more specific target value. The *AT Gold* also features High Resolution Iron Discrimination (40 points) for separating desirable targets from iron junk, several advanced audio features, and a standard 5"x8" (13x20cm) DD searchcoil optimized for detecting small nuggets in challenging mineralized soils.

Backed by more than 45 years of extensive research and development, your Garrett *AT Gold* metal detector is the most advanced of its kind in the industry. The *AT Gold*'s advanced audio features are designed for the serious prospector but will also prove to be very appealing to coin and relic hunters.

In order to take full advantage of the special features and functions of the *AT Gold*, you are urged to carefully read this instruction manual in its entirety.

## TABLE OF CONTENTS

|                                                      |    |
|------------------------------------------------------|----|
| AT GOLD CONTROL PANEL.....                           | 4  |
| QUICK START GUIDE.....                               | 5  |
| AT GOLD COMPONENTS .....                             | 6  |
| LIST OF PARTS .....                                  | 7  |
| ASSEMBLY .....                                       | 8  |
| POWERING ON.....                                     | 11 |
| TARGET INFORMATION.....                              | 12 |
| DIGITAL TARGET ID .....                              | 13 |
| SENSITIVITY.....                                     | 15 |
| GROUND BALANCE.....                                  | 16 |
| Automatic Ground Balance.....                        | 17 |
| Manual Ground Balance.....                           | 17 |
| Adjustable Ground Balance Window.....                | 18 |
| FREQUENCY ADJUSTMENT .....                           | 21 |
| THRESHOLD ADJUSTMENT .....                           | 22 |
| SEARCH MODES OVERVIEW .....                          | 23 |
| ALL METAL MODE.....                                  | 24 |
| ALL METAL Mode Overview.....                         | 24 |
| Audio Characteristics of ALL METAL Mode .....        | 25 |
| DISCRIMINATION MODES .....                           | 26 |
| DISC Modes Overview.....                             | 26 |
| Tone ID in DISC Modes .....                          | 26 |
| Audio Characteristics of DISC Modes .....            | 27 |
| DISC 1 Mode (Zero Discrimination Pattern).....       | 27 |
| DISC 2 Mode (U.S. Coins Discrimination Pattern)..... | 28 |
| IRON DISCRIMINATION.....                             | 29 |
| IRON AUDIO .....                                     | 32 |
| Iron Audio Use in DISC Modes.....                    | 32 |
| Tip for Using Iron Audio .....                       | 34 |
| Iron Audio Use in ALL METAL Mode .....               | 35 |
| AUDIO CHARACTERISTICS.....                           | 36 |
| Proportional Audio Target Examples .....             | 37 |
| BENCH TESTS.....                                     | 38 |
| SWEEPING THE SEARCHCOIL.....                         | 41 |
| PINPOINTING .....                                    | 43 |
| Tip for Narrowing the Detection Area.....            | 45 |
| Alternative Pinpointing Techniques.....              | 46 |
| ADVANCED TIPS AND TECHNIQUES .....                   | 48 |
| PROSPECTING TIPS.....                                | 52 |
| UNDERWATER OPERATION .....                           | 54 |
| CARE AND MAINTENANCE .....                           | 56 |
| Battery Replacement .....                            | 56 |
| TROUBLESHOOTING GUIDE.....                           | 58 |
| METAL DETECTING CODE OF ETHICS .....                 | 59 |
| CAUTIONS .....                                       | 60 |
| WARRANTY / SERVICE .....                             | 61 |
| ACCESSORIES.....                                     | 62 |
| SUGGESTED READING.....                               | 64 |

## AT GOLD CONTROL PANEL

**Target ID Legend**  
indicates metal types.

**High Resolution Iron Discrimination**  
indicates level of iron discrimination selected.

**Mode Indicator**

**Digital Target ID**  
(also shows ground balance settings while in GND-BAL mode.)

**Target ID Cursor**  
indicates probable target identity.

**Lower Scale**  
indicates notch discrimination pattern.

**Depth Indicator**  
indicates depth of a coin-sized target.

**Sensitivity Setting**

**Iron Disc Pushbutton**  
to change iron discrimination level.

**Iron Audio Pushbutton**  
to toggle Iron Audio ON/OFF.

**ON / OFF Power:** hold 1 second to turn power on/off.

**MODE:** press quickly to toggle through detection modes.

**RESET:** hold 5 seconds to restore factory settings.

**SENSITIVITY Pushbutton**  
to change sensitivity.

**PINPOINT Pushbutton**  
Press and hold to pinpoint.

**FREQ Pushbutton**  
to toggle through 4 frequencies.

**THRESHOLD Pushbutton**  
to change the level of background sound.

**GROUND BALANCE Pushbutton**  
Press and hold for fast auto ground balance or use with THRESHOLD (+) or (-) for manual ground balance.

**Battery Level Indicator**

## QUICK START GUIDE

### 1. Install batteries.

The AT Gold operates with four (4) AA batteries which are already installed by Garrett.



### 2. Power ON.

Press and release the ON / OFF Power button. The AT Gold powers on in the last mode used and is ready to search. (Factory default mode is ALL METAL.)



### 3. Select Mode.

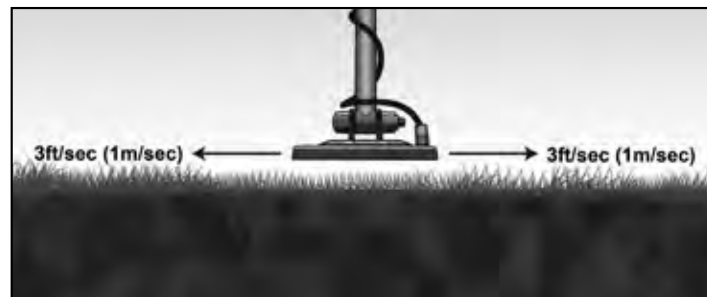
Use the Mode Pushbutton to select a different detection mode, if desired.

### 4. Adjust settings.

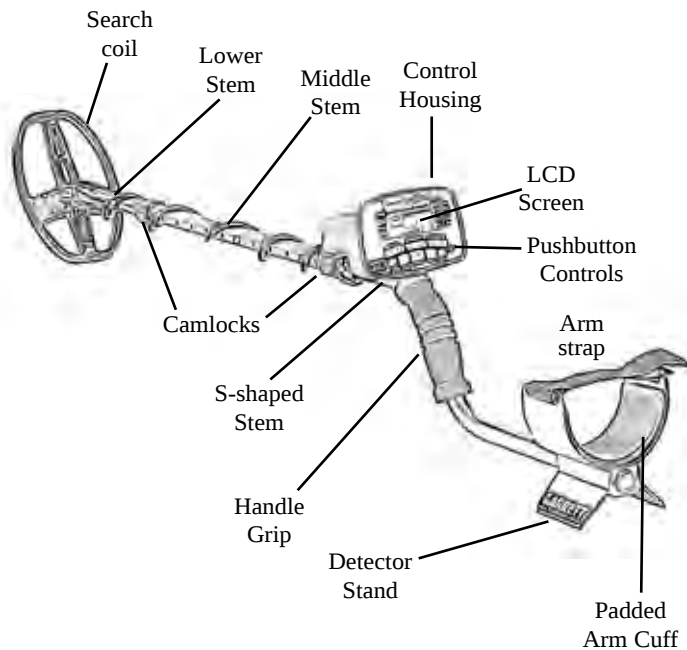
Adjust Sensitivity or Discrimination settings, if desired.

### 5. Begin scanning.

Lower the searchcoil to within 1" (2.5cm) of the ground and scan the coil left and right at approximately 3 feet (1m) per second.



## AT GOLD COMPONENTS



## LIST OF PARTS

No tools are required to assemble the *AT Gold*. Four (4) AA batteries are included with the detector. The box for your detector contains the following parts:

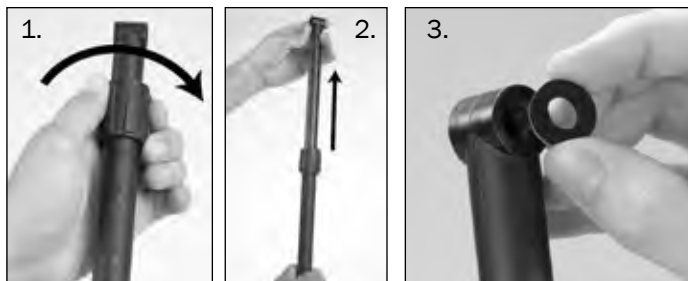
- |                                                                               |                                          |
|-------------------------------------------------------------------------------|------------------------------------------|
| ❶ One (1) control housing with S-shaped stem                                  | ❹ One (1) 5"x8" (13x20 cm) DD searchcoil |
| ❷ One (1) upper stem and one (1) lower stem connected, with camlock fasteners | ❺ Owner's manual                         |
| ❸ One (1) wing nut, two (2) mounting washers and one (1) threaded bolt        | ❻ Warranty Card                          |
|                                                                               | ❼ Headphones                             |

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

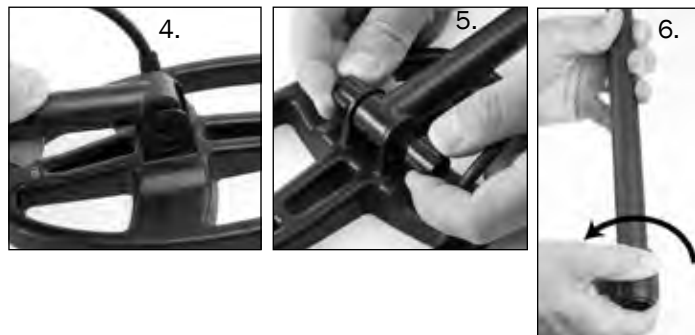


## ASSEMBLY

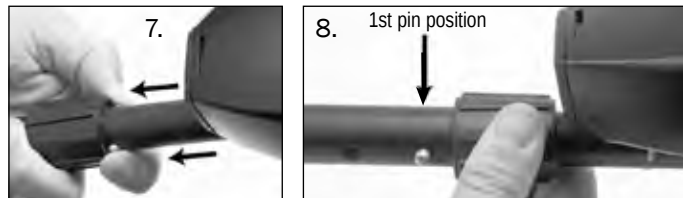
1. Holding the upper and lower stem assembly in front of you (as shown below), twist camlock to the right (clockwise) to loosen.
2. Slide lower stem out to engage spring clips in upper stem holes.
3. Align the holes in the mounting washers with the small posts on the lower stem and press firmly into place.



4. Slide the searchcoil onto the stem.
5. Insert the threaded bolt through the holes of the lower stem and searchcoil. Hand-tighten searchcoil assembly with the wing nut.
6. Holding assembly as shown, loosen camlock at the end of the upper shaft by turning counter-clockwise.  
Note: If the camlock collar slides off during loosening, simply slide it back on and tighten slightly.



7. Depress the spring clip in the S-stem (containing control housing) and insert S-stem through the upper camlock collar into the upper stem.
8. The spring clip must be engaged in the FIRST stem opening in order to maintain battery compartment access. Hand-tighten the camlock collar. Do not overtighten!



9. Depress the spring clip in the lower stem and adjust to the most comfortable operating length. Hand-tighten the lower stem camlock collar. Do not overtighten!
10. Wrap the cable snugly about the stem with the first turn of the cable over the stem.

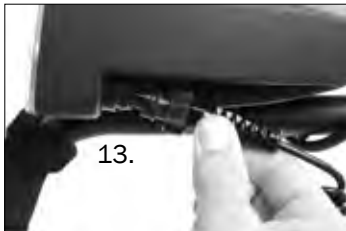


11. Insert the coil connector into the 4-pin connector of the control housing and hand-tighten. After lining up the connector pins, press the connector in firmly, yet carefully, until the O-ring is felt to be fully inserted.

Note: If the O-ring is properly seated, the connector's collar can be easily tightened; if the collar is difficult to turn, the O-ring may not be seated properly.



12. If needed, adjust the arm cuff by removing the screw on the bottom. Move the two-piece cuff to the other hole, reinsert the screw through the headphone cable clip, and tighten.



13. If desired, attach headphones to the 2-pin connector of the Control Housing. After lining up the connector pins, press the connector in firmly, yet carefully, until the O-ring is felt to be fully inserted.

14. Secure the headphone cable under the detector's arm cuff by pressing the cable into the headphone cable clip.

Note: Headphones are not required but are desired by many hunters to hear faint targets. Connecting the headphones will silence the detector's speaker.

Note: The provided headphones are for dry use only; see page 61 for optional waterproof headphones.



## POWERING ON



ON/OFF Power  
and MODE  
Pushbutton

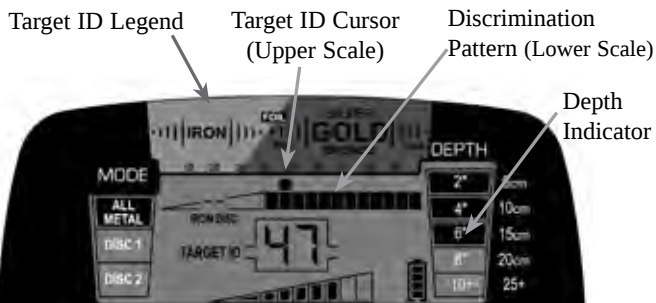
### Switch the detector on with the power button.

Press and release to switch the unit ON and resume hunting with the same settings used prior to switching the unit OFF.

**To turn off the detector,** press and hold this pushbutton for one (1) second (until the detector produces a second beep).

**To restore the factory settings,** press and hold the power button for 5 seconds (until the detector produces a fast double beep).

## TARGET INFORMATION



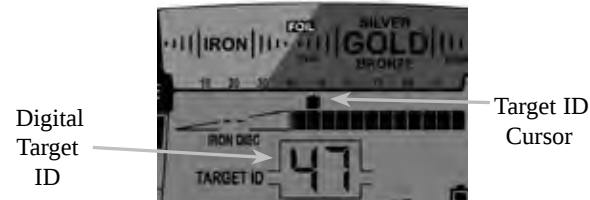
**Target ID Legend**—Works in conjunction with the Target ID Cursor to indicate a target's probable identity. Ferrous (iron) targets will indicate on the left half, non-ferrous targets that are thin or have low conductivity will indicate in the middle, and thick or high conductivity targets (e.g. thick gold) will indicate at the right.

**Target ID Cursor (Upper Scale)**—The Target ID cursor, in conjunction with the Target ID Legend, indicates the probable identity of a detected target. The upper scale consists of twenty (20) graphic segments for Target ID.

**Lower Scale**—The lower scale, or Notch Discrimination Scale, continually indicates the discrimination pattern. The *AT Gold* will produce an audible target response for the pixels that are switched on, and no audible response for those that have been switched off. The Target ID Cursor will always indicate all targets.

**Depth Indicator**—The depth of a coin, or similar sized target, is indicated in 2" (5cm) increments. Note: targets *larger* than a coin may display shallower than actual depth while targets *smaller* than a coin may display deeper than actual depth.

## DIGITAL TARGET ID

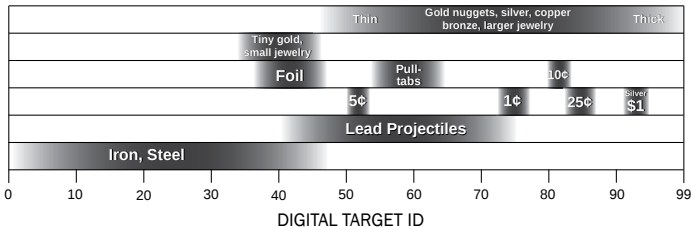


The *AT Gold's* Digital Target ID system provides a specific target value to help identify targets more precisely. Targets are identified on the LCD by number, with items near 1 being the most ferrous. The most conductive targets (such as large gold and silver) register closer to 99.

The Digital Target ID is a more precise version of the Target ID Cursor shown in the Upper Scale. Each Target ID Cursor has a width of 5 digital points. For example, a Digital Target ID of 47 will light the cursor from 45 to 50.

This system, when used in conjunction with the audio target signals, provides you with more information. The sample chart on the following page provides Digital Target ID ranges of some commonly found items.

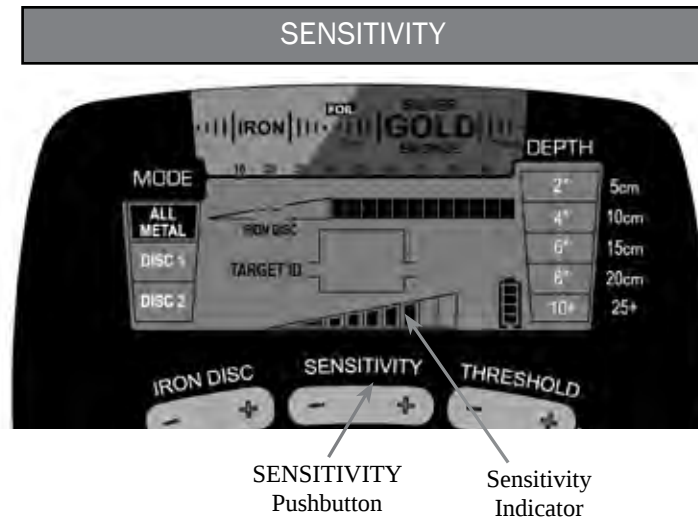
It is important to note that detection depth can exceed Target ID depth (i.e. faint targets at depth can be heard without providing any Target ID).



Note: Target values can vary based on the orientation of the target in the ground, amount of ground mineralization, etc. It is important to practice in the field to learn how these factors can affect Target ID.

The Digital Target ID for gold and other conductors can vary widely based upon its size and thickness. This is because small, thin pieces of metal cannot conduct electrical current as well as thicker pieces of metal. Therefore, small, thin gold—for example—will register lower on the Target ID scale than would a larger, thicker piece of gold, even if the two pieces have identical purity. In addition, in mineralized soils, the Target ID of small gold pieces can be skewed by the ground mineralization into numeric IDs that normally indicate iron. Most small gold nuggets indicate in the 40 to 60 range. Very tiny nuggets and deeply buried targets with small signal response may not give a numeric reading at all. Nevertheless, targets which do not give any Target ID are often worth investigating.

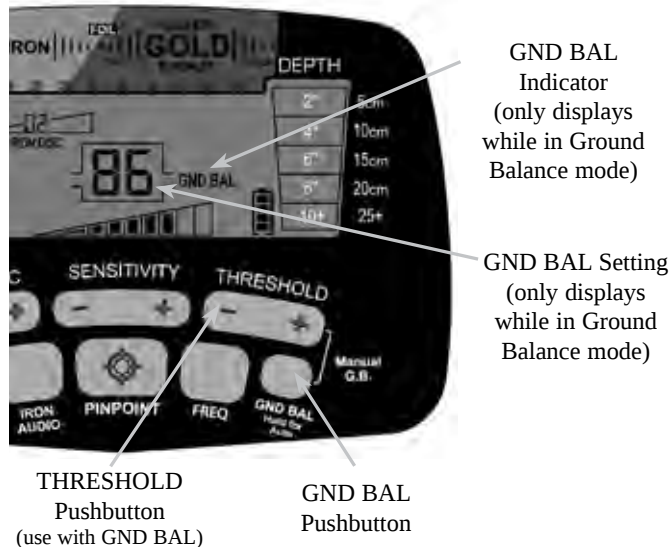
Tips: Digital Target ID is most reliable when the target is properly pinpointed and centered under the searchcoil and the coil is swept flat and at a constant height above the ground. Use a magnet to help remove small bits of shallow iron and then scan over the area again to see if the Target ID has changed.



The AT Gold has eight (8) settings for sensitivity. Use the (+) or (-) SENSITIVITY buttons to step through the eight levels, which are continuously shown on the LCD.

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, highly mineralized soils, electrical interference or the presence of other metal detectors) and the erratic operation cannot be resolved with discrimination, ground balance, or by changing frequency.

## GROUND BALANCE



**GND BAL Pushbutton**—Hold for Automatic Ground Balance or use in conjunction with the THRESHOLD pushbuttons for Manual Ground Balance. The Ground Balance setting will be retained when the detector is switched OFF.

As ground mineralization begins to increase, it has a negative affect on detector performance. The greater the amount of mineralization, the greater the loss of detection depth and Target ID accuracy becomes. It is imperative to ground balance the detector to maintain optimal performance.

The *AT Gold* can be ground balanced either automatically or manually to cancel unwanted ground signals and obtain maximum stability and target detection. By calibrating the *AT Gold's* ground balance to the phase (measurement) of the

ground's signal, the result is deeper target detection, more accurate Target ID, and more stable operation.

Note: Always locate an area of soil free of metal before attempting to ground balance the detector.

**Automatic Ground Balance**—Press and hold the GND BAL pushbutton while continually "bouncing" or "pumping" the searchcoil from 1 to 8 inches (2 to 20 cm) above the ground. When there is a minimal audio response from the ground, release the pushbutton and begin hunting. The ground balance value will have been indicated in the center of the LCD. Low ground balance values indicate conductive soil; high ground balance values indicate ferrous soil.

Note: If the *AT Gold's* Ground Balance setting does not change during the auto ground balancing process, the detector is either sufficiently ground balanced already or the current ground exhibits such neutral mineralization that the settings will not change.

**Manual Ground Balance**—Press and release the GND BAL pushbutton and continually bounce (pump) the searchcoil from 1 to 8 inches (2 to 20 cm) above the ground. If low tones are produced, increase the Ground Balance setting using the (+) THRESHOLD pushbutton. If high tones are produced, decrease the setting using the (-) THRESHOLD pushbutton. Press and release the (+) or (-) THRESHOLD pushbuttons to make single-step adjustments, or press and hold to make large adjustments.

Continue bouncing the coil and making adjustments until a minimum audio response is obtained, indicating the detector is ground balanced. The Ground Balance setting will be indicated on the LCD.

Press and release the GND BAL pushbutton again to exit Manual Ground Balance mode.

You may want to use the Manual Ground Balance function to ground balance slightly positive to enhance detection of small targets or balance slightly negative to reduce detection of "hot rocks," terra cotta and clay bricks. Adjusting the *AT Gold* to be ground balanced slightly positive may produce a weak but audible response from the ground as the searchcoil is lowered. Maintaining a level coil swing at a constant height above the ground will minimize this ground response.

#### **Typical Ground Balance Ranges:**

- 65–99: Highly ferrous (ferrous oxide minerals, black sands, magnetite, hot rocks)
- 50–65: Highly ferrous, slightly conductive (hot rocks, terra cotta)
- 30–50: Moderately to highly ferrous (red and iron-bearing clays, most terra cotta, hot rocks)
- 0–30: Light to moderately mineralized (brown and yellow clays, etc.)

**Adjustable Ground Balance Window™**—Experienced prospectors recognize that mineralized ground is often a mixture or matrix of different soils, rocks, and pockets of concentrated mineralization, each possibly requiring a slightly different ground balance setting. In such cases it may not be possible to find a single ground balance setting that simultaneously balances to the different ground components. This is not a result of limited ground balance resolution; rather, this is due to localized variations in the ground minerals.

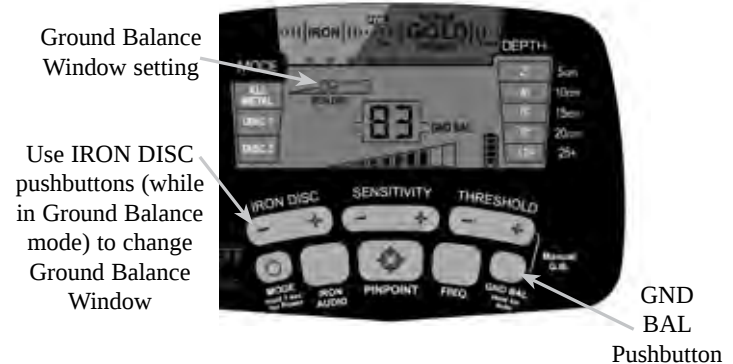
For conventional detectors operating in All Metal Mode, these ground variations can produce subtle audio responses

that reduce the operator's ability to discern faint signals, resulting in missed targets. Even detectors with continuous ground tracking cannot compensate for these localized ground variations.

Garrett has addressed this issue with its adjustable Ground Balance Window which allows the operator to effectively "spread" the ground balance setting in order to simultaneously ground balance to a range of values. This smoothes out the audio by reducing the subtle ground responses and allows the operator to hear those faint targets.

To access this feature, press and release the GND BAL button to enter Manual Ground Balance mode. Use the (+) or (-) IRON DISC buttons to adjust the GB Window between 0 and 6 as displayed on the LCD above IRON DISC. Press and release the GND BAL button again to exit this mode. Note: adjustments to the GB Window take effect only after exiting Ground Balance mode and apply only to the All Metal Mode.

To optimize the setting, switch to All Metal Mode, ground balance the detector, and set the GB Window to zero or a small value. Then exit to All Metal Mode, sweep the coil



over a clean area and listen for ground responses. If ground responses occur, increase the GB Window by 1, exit to All Metal Mode and sweep the coil again. Repeat this process until the ground response reduces to an acceptable level. It is recommended to use the minimum GB Window setting needed. Using an excessive setting could reduce sensitivity to faint targets. The default value of 2 is optimum for most conditions.

As described above, this setting allows the detector to simultaneously ground balance to a range of values. For example, with Ground Balance set to 83, and the GB Window set to 2, the ALL Metal Mode will be operating with an effective ground balance spread of  $83 \pm 2$  (81 to 85); thereby minimizing the subtle responses caused by ground variations within this range. This feature can even be used to reduce the response to some hot rocks and terra cotta.

With the GB Window set to zero (0), the *AT Gold* will operate like a conventional All Metal detector.

## FREQUENCY ADJUSTMENT



FREQ  
Adjust Pushbutton

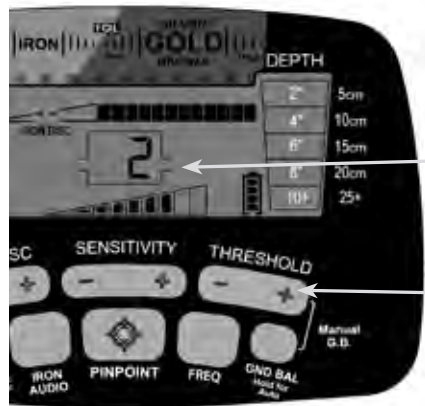
Press the FREQ pushbutton once to display the current frequency setting. Press again to adjust to a different setting.

The *AT Gold* is capable of operating at four slightly different frequencies in order to minimize the interference caused by electrical sources (e.g. power lines) or other metal detectors.

Press the FREQ button to scroll through the frequency options to find one with the least amount of interference. The frequency setting (F1–F4) will be indicated on the LCD.

Note: Frequency adjustments are small and therefore do not affect target detection capabilities.

## THRESHOLD ADJUSTMENT



THRESHOLD  
Setting  
(only displays  
when  
THRESHOLD  
buttons are pressed)

THRESHOLD  
Adjust  
Pushbuttons

Threshold is the constant background “hum” that is added to the target response. Press a Threshold button once to display the current setting. Press the (+) or (–) Threshold buttons again to select from 33 levels, ranging from -9 up to +23.

Positive Threshold values add an audible background hum to the target response (i.e. positive audio bias), while negative values subtract audio from the target response (i.e. negative audio bias). A Threshold of zero adds no audio bias.

Select a Threshold setting based on personal preference. However, to maximize the ability to hear faint signals, it is recommended to operate with a faint, yet barely audible threshold (i.e. faint positive audio bias). The louder the surrounding environment, the higher you may need to set the Threshold. Conversely, there may be times you wish to operate with a negative or silent threshold, for example, in order to reduce detector chatter, etc.

Headphones are also highly recommended to maximize the ability to hear faint signals, particularly in noisy environments.

## SEARCH MODES OVERVIEW

The *AT Gold* includes three detection modes: a true All Metal Mode and two Discrimination Modes.

**Press the Mode button to scroll through the three modes:** ALL METAL, DISC 1 and DISC 2.

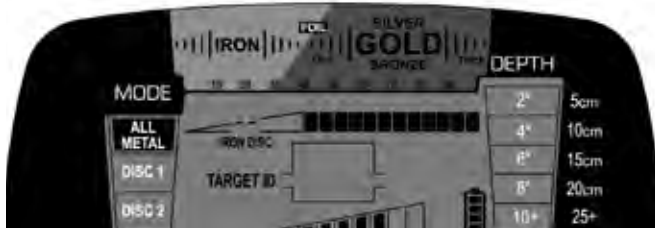
In general, the All Metal Mode is preferred for prospecting because it provides the greatest detection depth and sensitivity. The All Metal Mode also offers a continuous audio response to allow the operator to hear the subtle detection signals produced by faint targets. The All Metal Mode contains no discrimination, thus all types of metal will be detected.

In either of the two Discrimination Modes, the *AT Gold* provides more Tone ID information in addition to the ability to discriminate unwanted trash targets (e.g. nails, foil, pull tabs). The two Discrimination Modes, by their nature, are less sensitive to small and deep targets than the All Metal Mode.

The All Metal Mode is ideal to use for maximum detection depth in areas that are not overly trashy or where there is no desire to eliminate any type of metal. The Discrimination Modes are usually desired in trashy areas for the elimination of some trash targets. The Discrimination Modes will provide quieter, more stable operation, but will not detect as deeply as the All Metal Mode.

In either of the three modes, the *AT Gold's* searchcoil must be in motion to detect targets. Truly static detection is possible while using the detector's Pinpoint pushbutton.

## ALL METAL MODE



### • ALL METAL Mode Overview

Designed to detect all types of metal. All 12 discrimination pixels are switched on and High-Res Iron Discrimination is disabled (--), indicating that no metal targets have been eliminated.

The All Metal Mode is preferred for prospecting and deep searches because it provides the greatest possible depth and sensitivity. It also provides a continuous audio response to allow the operator to hear the subtle detection signals produced by faint targets.

While in ALL METAL Mode, the *AT Gold* will respond to the entire range of conductive and magnetic properties encountered, including ground responses. The user is continuously hearing what the searchcoil is "seeing" in the ground. Therefore, it is essential to be properly ground balanced while operating in the ALL METAL Mode. Naturally occurring minerals in the soil must be canceled out during the ground balance procedure in order to detect only the signals from metal objects in the ground.

The ALL METAL Mode provides complete target information, including a Target ID pixel on the upper scale, Digital Target ID, and depth reading. The *AT Gold* thus allows the operator

to remain in the ALL METAL Mode at all times, in contrast to some detectors which require the operator to switch to a Discrimination mode to obtain Target ID. Be aware that some deeper targets (faint audible signals) may exceed the reach of Target ID.

### • Audio Characteristics of ALL METAL Mode

Because the ALL METAL Mode permits no discrimination, the detector will give an audible signal to indicate every piece of metal it scans over. Target responses will normally be heard as a proportional Medium Tone. However, the *AT Gold* is a unique All Metal detector in that its Iron Discrimination and Iron Audio™ features can be used to hear if detected targets are ferrous, as indicated by a low tone. Iron Discrimination levels can only be adjusted in the ALL METAL Mode if the Iron Audio feature is on and these changes will **not** be retained when the detector is switched off. (See *Iron Audio* section, pages 30–33.)

Gold prospectors and many relic hunters rely primarily on their ears to discern good target signals. These desired signals are presented as clean, repeatable responses that override the constant background hum.

## DISCRIMINATION MODES

### • DISC Modes Overview

The *AT Gold* includes two Discrimination Modes: DISC 1 and DISC 2. These modes are used to eliminate trash metal items (e.g. foil, pull tabs, nails) from detection. The two Discrimination Modes provide more Tone ID information than the ALL METAL Mode. Changes made to the Iron Discrimination settings **will** be retained when the detector is switched off. Discrimination filters are introduced in these two modes, which can make them less sensitive to small and deep targets than the ALL METAL Mode.

### • Tone ID in DISC Modes

In either the DISC 1 or DISC 2 Mode, the Tone ID feature produces up to three distinct audible tones based on a target's metal type and conductivity. All targets are reported with either a Medium- or High-Tone ID in the Discrimination Modes. The operator can, however, choose to hear discriminated iron targets with a Low-Tone ID when Iron Discrimination has been set and the Iron Audio feature is in use. (See "Iron Audio" section, pp. 30–33 for details.)

|              |                                                                                                                                                                               |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low-Tone:    | Ferrous targets such as nails, iron, steel, etc. (The Low-Tone is only heard during the use of the Iron Audio feature to indicate discriminated iron targets.)                |
| Medium-Tone: | Non-ferrous targets with low to medium conductivity, including small jewelry, small coins, foil, thin targets, etc., and ferrous targets that ID above the Iron Disc setting. |
| High Tone:   | Non-ferrous targets with medium to high conductivity, including larger coins and jewelry.                                                                                     |

### • Audio Characteristics of DISC Modes

The *AT Gold* provides more audio target information when it is operated in one of its Discrimination Modes, as compared to the ALL METAL Mode.

The additional audio features offered in either the DISC 1 or DISC 2 Mode are those of the multiple Tone ID and *Tone Roll Audio*. In its Discrimination Modes, the *AT Gold*'s Tone Roll Audio provides the user with more target information to help identify targets, particularly flat iron objects, such as bottle caps and washers. Tone Roll Audio provides a variance of target tones as the searchcoil approaches and passes over the target. These varying tones of audio provide better overall target information and identification.

### • DISC 1 Mode (Zero Discrimination Pattern)



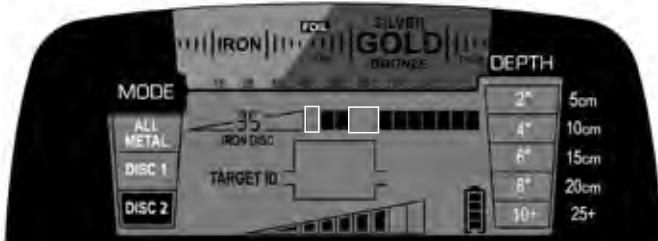
This Discrimination Mode has a similar pattern to the ALL METAL Mode—all 12 discrimination pixels are switched on and Iron Discrimination is set to 0 (zero). Some ground response has been filtered out in the DISC 1 Mode, but the *AT Gold* will respond to all types of metal.

Use DISC 1 to search for international coins (including bronze, gold, silver, and copper), jewelry, relics, caches,

and other desired targets. Increase the Iron Discrimination setting as necessary to eliminate unwanted iron items from detection.

Note: This notch discrimination pattern is preset; no other notches can be accepted or rejected, but Iron Discrimination can be adjusted and will be retained in memory.

- **DISC 2 Mode (U.S. Coins Discrimination Pattern)**



The Iron Discrimination level has been preset to 35 to exclude most iron targets. In addition, one pixel of foil and two pixels in the pulltab range have been excluded.

Use DISC 2 to search for U.S. coins, while avoiding common trash items such as iron, foil, and pulltabs. DISC 2 is *not* recommended for use in hunting for gold nuggets, gold jewelry, small international coins, and certain relics that have conductivities similar to the trash items that have been discriminated.

Note: This notch discrimination pattern is preset; no other notches can be accepted or rejected, but Iron Discrimination can be adjusted and will be retained in memory.

## IRON DISCRIMINATION

**Iron Discrimination**—The *AT Gold* features a high-resolution iron discrimination adjustment. This additional resolution allows more precise control of how much iron discrimination can be applied. The level can be adjusted from 0 (no iron discrimination) to 40 (maximum iron discrimination).

Note: In this section, the use of iron discrimination adjustments refers to those made while operating in either the DISC 1 or DISC 2 modes. (For more on the role of iron discrimination while operating in the ALL METAL Mode, refer to the "Iron Audio" section.)

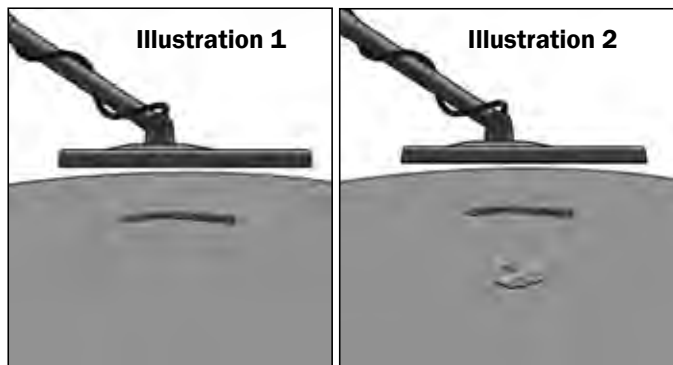


Iron Discrimination Setting

IRON DISC Pushbutton

Use the (+) or (-) IRON DISC pushbuttons to adjust the Iron Discrimination up or down. The small two-digit number above the words "IRON DISC" on the LCD indicates the iron discrimination setting.

The examples shown below illustrate how an iron object can often "mask" out the signal of an adjacent good target when too much iron discrimination has been applied. Using the High-Res Iron Discrimination, apply just enough iron discrimination to reject the undesired iron nail shown in this example. By using only a minimal amount of iron discrimination, the detector will detect the combined conductivity of the gold nugget and nail together thus overcoming the potential "masking" problem.



Iron targets, such as the nail shown in Illustration 1, can sometimes mask a good target's signal. If too much iron discrimination is applied, the good target (seen in Illustration 2) can be missed. Read page 29 to learn how to apply the proper amount of iron discrimination to eliminate the nail shown in Illustration 1 and still detect the gold nugget shown in Illustration 2.

#### Example: Detecting Targets in Trash with High-Res Iron Discrimination



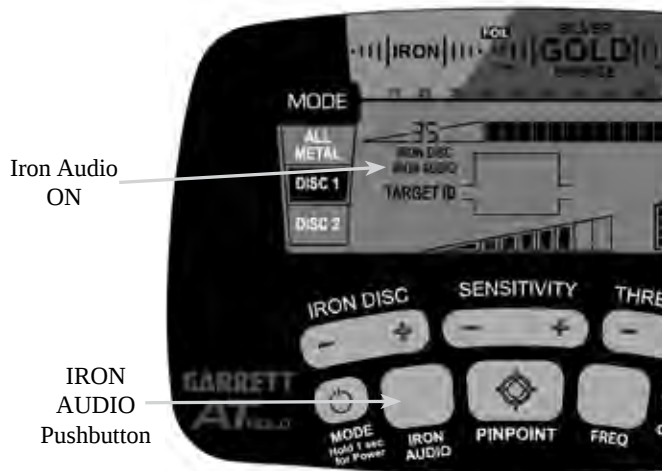
In the illustration above, the AT Gold is operating in the DISC 1 Mode with an IRON DISC setting of 20. The nail seen in Illustration 1 (on page 28) registers from 18 to 24 on the Digital Target ID scale. To eliminate the nail from detection, increase the iron discrimination level to 24 using the IRON DISC (+) pushbutton.



In Illustration 2, the same iron nail is laying above a gold nugget. Since the Iron Discrimination level is now set to 24, the nail by itself would not be detected; however, the two objects (nail and gold nugget) have a combined conductivity of more than 24.

Therefore, the gold nugget is detected due to the combined conductivity being higher than that of the discriminated target (nail) alone.

## IRON AUDIO



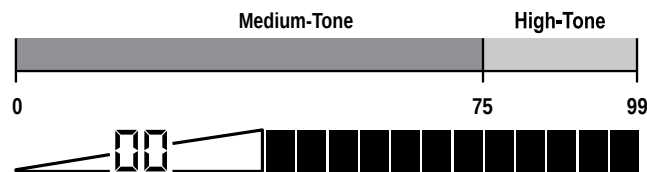
Press and release the IRON AUDIO pushbutton to switch the Iron Audio feature ON/OFF. When this feature is on the words "IRON AUDIO" appear on the LCD (as shown in the illustration above). The Iron Audio feature can be used in any of the AT Gold's three modes. Its functionality in either of the two Discrimination Modes or while in the All Metal Mode will be discussed separately.

### Iron Audio Use in DISC Modes:

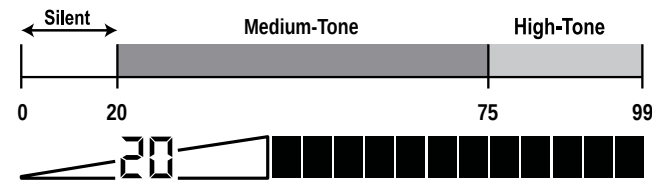
Scattered iron objects in the ground can mask good targets and even create "ghost signals" that appear to be a good target. Garrett's selectable Iron Audio feature allows the user to hear discriminated iron (normally silenced) in order to know the whole picture of what is in the ground and avoid being tricked into digging an undesired target.

Iron Audio helps the operator identify flat iron objects such as bottle caps that would otherwise appear to be good targets. With the use of Iron Audio, discriminated iron targets (normally silent) will produce a Low-Tone ID. Using Iron Audio, an iron nail produces several fast low tones as the searchcoil passes over, while a bottle cap or steel washer produces a very distinctive Low-High-Low response.

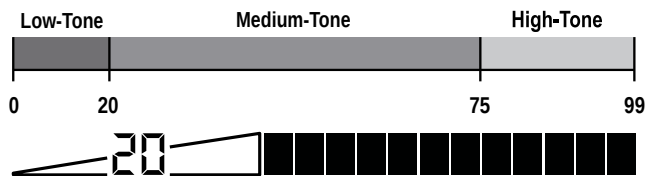
Refer to the illustrations below regarding the use of the Iron Audio feature while in either DISC 1 or DISC 2 mode:



IRON AUDIO OFF: Normal division of medium and high tones, with no (0) Iron Discrimination set.



IRON AUDIO OFF: With the Iron Discrimination set to 20, all targets below 20 are silent.

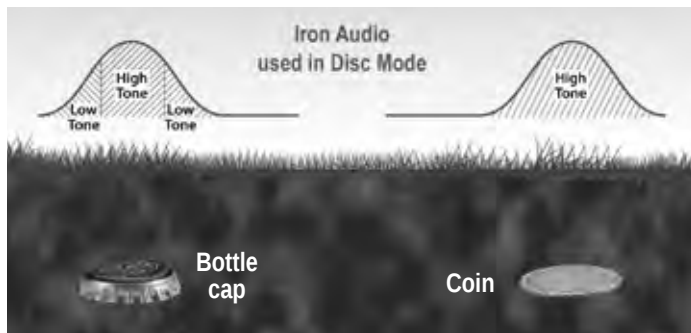


IRON AUDIO ON: Targets below 20 are now heard as a low tone and targets above 20 will produce a medium or high tone.

**Tip for using Iron Audio:** In areas with high concentrations of iron, it is recommended to switch off Iron Audio. Otherwise, it may produce far too many signals. Then, if a target is detected that has a questionable or inconsistent response, switch on Iron Audio to check if it is iron.

To fully appreciate the additional information offered by the Iron Audio feature, conduct the following experiment using a bottle cap and a coin. Start with the *AT Gold* in DISC 1 Mode, with Iron Disc set to 35 and Iron Audio off. Pass the bottle cap flat over the searchcoil at approximately 4 inches (10cm). Note the subtle breaks and inconsistencies of the target response, indicating it might be made of iron. Next, pass the coin flat over the searchcoil and note the clean, High-Tone ID.

Now, switch on Iron Audio and pass the bottle cap flat over the searchcoil again. The distinctive Low-High-Low response indicates a target that is unmistakably iron. Note that the coin still produces a clean, High-Tone ID. (See *illustration below*.)



Bottle caps, steel washers and other flat iron objects often sound like good targets to standard detectors. This is because the bottle cap's shape and flat surface resembles a coin which can trick the detector. With the *AT Gold*'s Iron Audio, however, the ferrous bottle cap will produce a very distinctive response with multiple tones, including Low-Tone flanking audio. As shown, the bottle cap will produce a distinctive response of Low-High-Low as compared to the coin's response of only High tone.

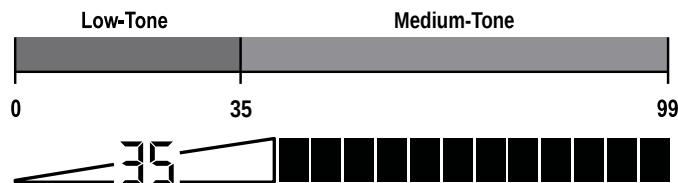
### Iron Audio Use in ALL METAL Mode:

In the ALL METAL Mode, all metallic targets encountered by the *AT Gold* are normally identified by a Medium Tone. The use of the Iron Audio feature, however, allows the introduction of a Low-Tone response to audibly indicate the ferrous content of targets. This Iron Audio feature in a True All Metal Mode metal detector is a **Garrett exclusive!**

The Iron Audio feature should be used in the All Metal Mode as a means to check targets for iron content. Therefore, it is not recommended to hunt with the Iron Audio feature continually switched on.

To fully appreciate All Metal Iron Audio, use an iron nail and a coin to experiment. Select the ALL METAL Mode, temporarily switch on Iron Audio, and set the IRON DISC to 35. (Note: Iron Audio must be switched on in order to set Iron Discrimination in the ALL METAL Mode.) Switch Iron Audio back off and pass the nail over the searchcoil. The nail will respond with a clean Medium Tone, similar to that of a good target, such as the coin. Now, switch on Iron Audio and separately pass the two targets completely over the coil again. The distinctive Low-Medium-Low response of the nail now indicates a target that is unmistakably iron. Note that the coin, however, continues to respond with a clean Medium Tone.

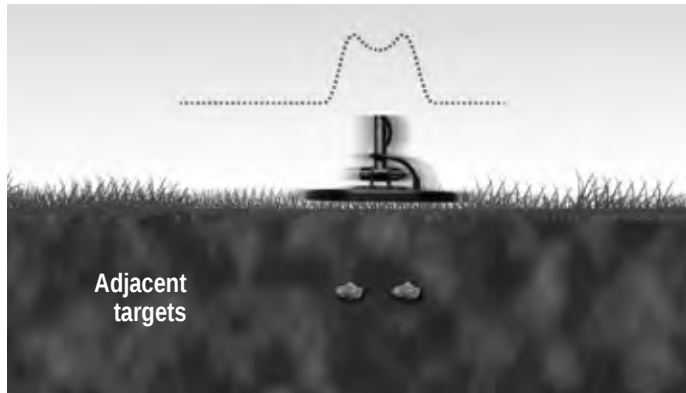
Refer to the illustration below regarding the use of the Iron Audio feature in the ALL METAL Mode:



IRON AUDIO ON: In ALL METAL Mode with this example, iron targets below 35 are now heard with flanking low tones and non-ferrous targets above 35 produce a clean medium tone.

## AUDIO CHARACTERISTICS

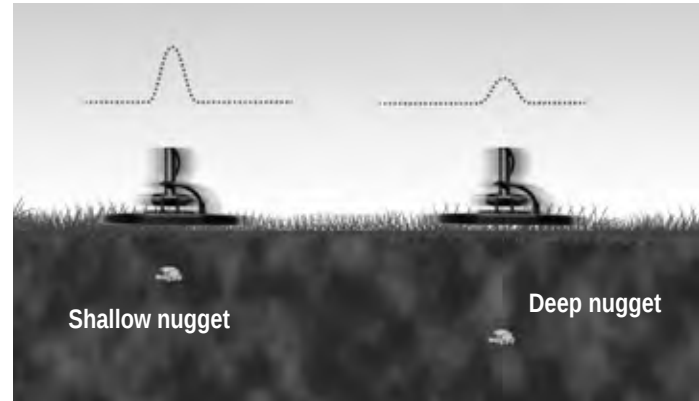
The *AT Gold*'s advanced audio characteristics provide fast recovery speed, which is especially important in areas where good targets are in close proximity or may be scattered amongst iron trash. (See *Example A*.)



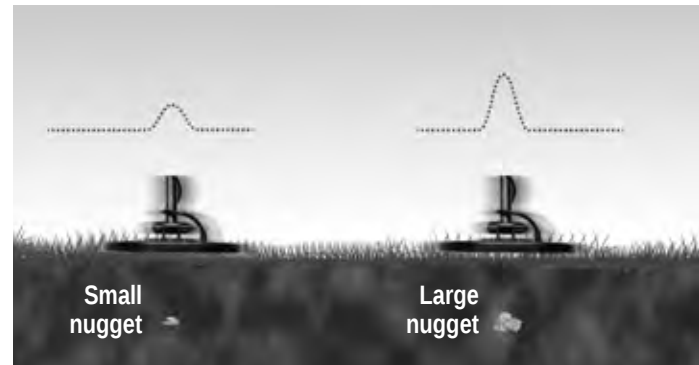
**Example A:** Adjacent targets can often produce a single strong signal with many metal detectors. The fast recovery of the *AT Gold*, however, will provide two peaks of audio response to these adjacent nuggets. These multiple audio responses provide the experienced user with more target information.

This fast recovery time helps the *AT Gold* operator to separate adjacent targets. The proportional audio response which makes this possible also allows the user to better judge a target's size, shape and depth. Proportional audio response means that the loudness of the target's response is proportional to a target's signal strength (i.e. small/deep signals sound faint and strong/large signals sound loud). (See *Examples B and C*.)

## Proportional Audio Target Examples



**Example B:** Notice the different target response provided by the *AT Gold*'s proportional audio in regards to target depth. The shallow target offers a stronger signal, while the same-sized deep object provides a softer signal.



**Example C:** Notice the different target response provided by the *AT Gold*'s proportional audio in regards to target size. The small nugget provides a softer signal, while a large nugget at the same depth provides a strong signal. Target size can be estimated by raising and then swinging the coil over the target. Large targets continue to be detected at greater distances from the coil while small targets more quickly lose detection.

## BENCH TESTS

You should conduct bench tests to become more familiar with the *AT Gold's* operation in both ALL METAL and Discrimination Modes. In addition, the use of the Iron Audio feature should be tested in each mode. Suggested test items should include:

- Various size gold nuggets or small gold ring  
(In the absence of gold nuggets, a U.S. nickel or small bronze coin are good imitators of the response characteristics of a similar size nugget.)
- Iron nail
- Bottle cap or steel washer

To conduct a bench test, place the searchcoil on a flat, non-metallic surface that is several feet from other metallic objects. Begin by testing in the ALL METAL Mode. Pass the test items individually across the searchcoil at a distance of



For bench testing, place the searchcoil on a flat, stable, non-metallic surface that is several feet from other metallic objects.

3 to 4 inches (8–10cm). Observe the Target ID for each. Next, select the DISC 1 Mode and pass the same targets across the searchcoil. Notice that the proportional audio characteristics and Tone ID responses sound similar in either the ALL METAL or Discrimination Modes. Use both large and small test pieces at varying distances from the searchcoil to observe the levels of their responses.

**Discrimination bench test:** A similar test procedure can be used to better understand how to set iron discrimination levels. Pass the iron nail across the searchcoil while in either DISC 1 or DISC 2 Mode. Note that in DISC 1 Mode, with the factory preset level of zero (0) Iron Discrimination, the nail produces a Medium Tone. If the iron nail registers up to a 26 on the Digital Target ID, use the IRON DISC pushbuttons to move the Iron Discrimination setting up to 26. Pass the iron nail across the searchcoil again to verify that it has been eliminated. If not, raise the Iron Discrimination setting a little higher using the (+) IRON DISC touchpad until the iron target no longer produces an audible response. The factory preset Iron Discrimination level of 35 in DISC 2 will eliminate most iron nails from detection without adjustment.

**Iron Audio bench test:** Next, remain in DISC 1 or DISC 2 with your Iron Discrimination level set to remove the iron nail tested in the example above. Press the IRON AUDIO pushbutton and pass the nail across the searchcoil again to hear the distinctive iron sounds. Then, test this nail in the ALL METAL Mode. Switch on the Iron Audio feature, set IRON DISC to 26, and pass the nail completely across the searchcoil again. The distinctive Low-Medium-Low response indicates that the target is unmistakably iron.

Flat iron objects like bottle caps or steel washers can appear to be good conductive targets to detectors. To test the *AT Gold's* advanced iron recognition abilities, conduct another

bench test with an iron bottle cap. First, set the detector to the ALL METAL Mode, switch off Iron Audio and pass the bottle cap across the searchcoil at a distance of 3 to 4 inches (8–10cm). Note that the bottle cap's flat surface gives a Digital Target ID reading generally in the 40–60 range.

Remaining in the ALL METAL Mode, switch on the Iron Audio feature and set IRON DISC at 35. Pass the bottle cap completely across the searchcoil again and listen for the distinctive Low–Medium–Low response indicating an iron target.

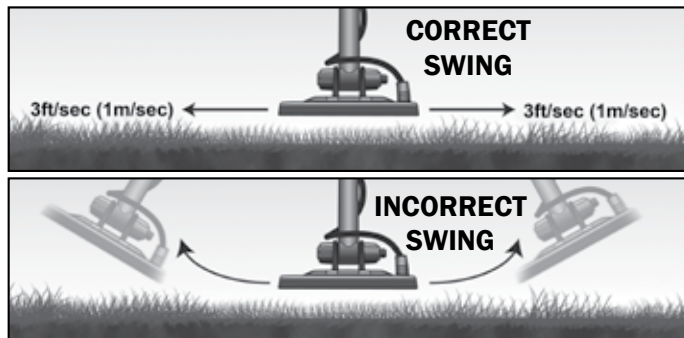
This ability to check iron targets while operating in a true ALL METAL Mode is a Garrett exclusive feature that helps make the *AT Gold* such a powerful detector.

Next, switch to the DISC 1 Mode, set IRON DISC to 35 and switch off the Iron Audio feature. Pass the bottle cap across the coil again and notice the subtle breaks and inconsistencies of the target response, indicating it might be made of iron. Pass a non-ferrous target such as a coin or gold ring across the coil and note its clean tone in comparison to that of the bottle cap. Remaining in DISC 1 Mode, with IRON DISC at 35, switch on the Iron Audio feature. Pass the bottle cap completely across the coil again and note the Low–High–Low response that is unmistakably iron. Again, pass the non-ferrous target across the coil to compare its audio to that of the bottle cap.

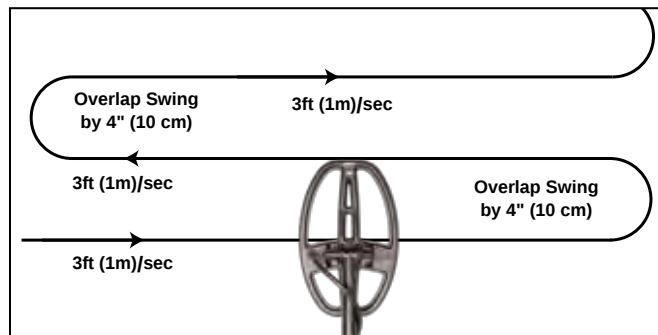
**Final tip:** Record the results of your bench tests and refer to them when hunting in the field. Knowledge of the audio characteristics and the Iron Audio feature of the *AT Gold* can reduce the amount of trash targets that are dug.

## SWEEPING THE SEARCHCOIL

- Keep your searchcoil at a constant height and parallel to the ground at all times for best detection results. Do not lift or tilt the coil at the end of swings.



- Walk slowly as you scan your searchcoil in a straight line from side to side at a speed of about 3 feet (1 meter) per second. Advance the searchcoil about half the length of the searchcoil at the end of each sweep.



In order to fully search an area, overlap the swings of your searchcoil by half the length of the coil (about 4 inches). Sweep the searchcoil in a straight line or with a slight arc at a sweep speed of about 3ft/sec.

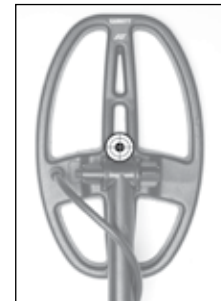
## PINPOINTING

Press and hold the Pinpoint pushbutton to determine the exact location of a target. To use the pinpoint function, position the searchcoil to the side of the target's suspected location at a fixed height above the ground (e.g. 1 inch or 2cm). Press and hold the Pinpoint button and sweep the searchcoil over the target area while maintaining the same fixed height above the ground. Sweep the searchcoil side-to-side and front-to-back in a crosshair pattern to locate the peak signal. Note: it is recommended to maintain a constant height during the entire Pinpointing process to prevent ground mineralization from producing false signals or masking the target's signal.

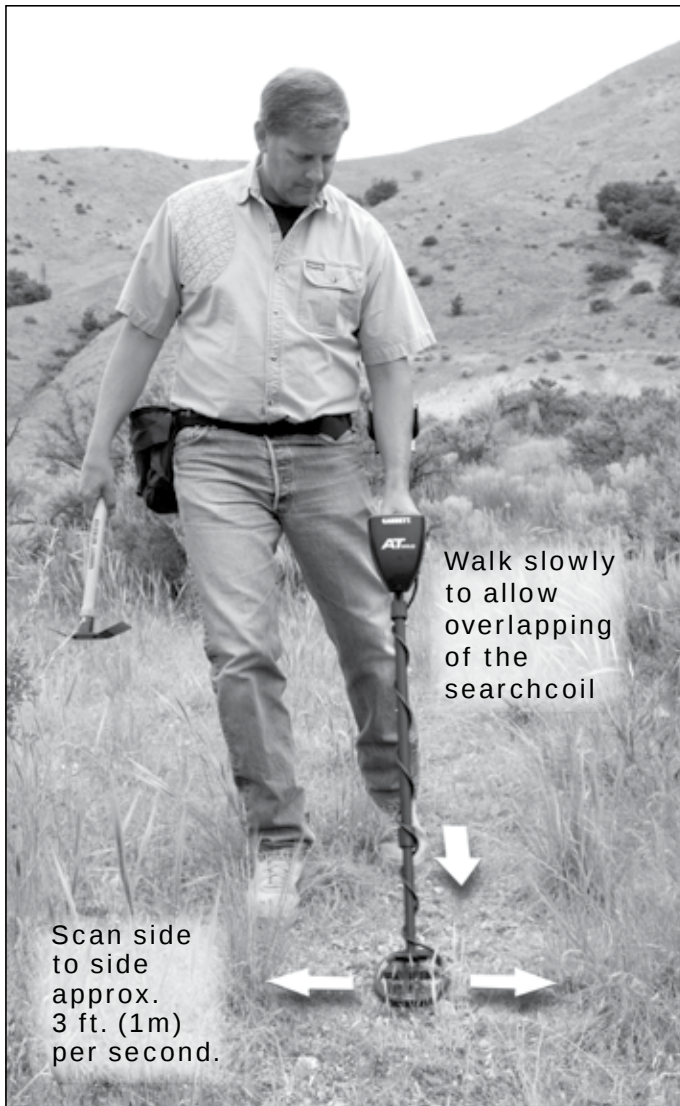
The bar graph on the LCD can also aid in locating the peak signal. When pinpointing, the Upper Scale on the LCD indicates signal strength. When the greatest number of segments (increasing left to right) are shown, the center of the searchcoil is directly over the target with the depth of a coin-sized target shown on the depth scale. The symbol "PP" for pinpoint is displayed on the LCD while pinpointing.

It is recommended to practice pinpointing in a test plot.

**Note:** The center of detection is under the center of the coil, just ahead of its stem mount. The opening just ahead of the stem mount can serve as your reference point for pinpointing.

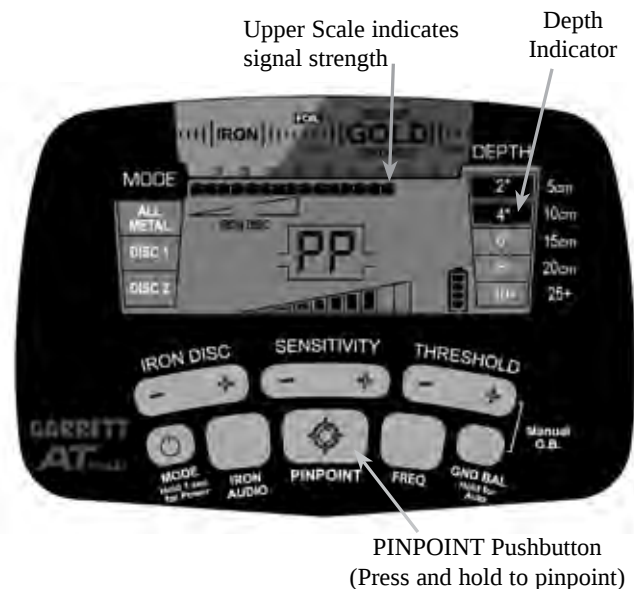


Indicates  
pinpointing  
center of the  
5"x8" DD  
searchcoil.



Walk slowly  
to allow  
overlapping  
of the  
searchcoil

Scan side  
to side  
approx.  
3 ft. (1m)  
per second.



Traditional  
pinpointing  
technique  
using Pinpoint  
pushbutton.



**Note:** For best pinpointing results, maintain a constant height above the ground (e.g. 1" or 2cm) and ensure that the detector is properly ground balanced.

**Tip for narrowing the detection area:** Large targets can produce wide signals while pinpointing, making it difficult to precisely locate the target's center. To help pinpoint, the detector can be retuned to the target to narrow the detection area as follows.

While holding down the Pinpoint pushbutton, move the coil toward the target until the upper scale just reaches a full-scale response. Then, quickly release and depress the Pinpoint button again to retune the detector and narrow its detection field. Continue moving the searchcoil toward the target to find its central peak response. If needed, repeat the retune process to further narrow the target's response.

A quality hand-held pinpointer such as Garrett's *Pro-Pointer* is a recommended accessory item to speed the target recovery process and to aid in locating secondary targets.

- **Alternative pinpointing technique: DD-tip or tail.** In the standard pinpointing method described on page 41, the target is pinpointed beneath the center of the searchcoil. Some detectorists using DD coils prefer to pinpoint off the tip or tail of the searchcoil, as follows.

Image A



PULL COIL TOWARD YOU

⊕ Indicates target position

Press and hold the Pinpoint pushbutton and sweep the searchcoil side-to-side to center the target (the point where the strongest audio response is heard and the maximum signal strength is displayed on the LCD).

Then, pull the searchcoil slowly toward you (see *Image A*), while noting the target signal.

Image B



Once the target signal drops off (both audibly and on the LCD meter), shallow targets should be located immediately in front of the searchcoil's tip (see *Image B*). Deep targets will be under or just inside your searchcoil's tip. This is because the conical shape of the searchcoil's detection field begins bending in slightly as the depth increases.

You can reverse this pinpointing technique to pinpoint off the DD coil's tail; in this case, push the coil away from you. The audio and LCD meter will place the target just off the searchcoil's tail.

- **Alternative pinpointing technique: DD-wiggle.** Quickly locate targets *without using the Pinpoint button* as follows. Continuously swing the searchcoil side-to-side using fast, narrow swings of 2 to 4 inches (5–10cm). While continuing this side-to-side wiggle, slowly move the searchcoil sideways toward the target's suspected position until the audio response produces a consistent, symmetric beat. This indicates the lateral left-to-right position of the target. Then locate the target's front-to-back position by rotating around 90° and repeating the same process.

**Tip:** Practice any or all of these various pinpointing options in your test plot. Choose the technique that works best for you. As you improve your pinpointing accuracy, you will dig smaller holes and increase your productive hunting time.

- **Ground balance the *AT Gold* as often as necessary** as the ground conditions are heard to change (excessive noise, etc). Gold nuggets are generally found in areas of high iron mineralization where the ground conditions can change frequently.

- **Determining ground mineralization level:** It is important to understand the soil conditions of your hunting environment. To determine how mineralized the soil is, begin by ground balancing the *AT Gold*. (Refer to Ground Balance section for how to ground balance.)

After ground balancing, gauge the concentration of ground minerals by manually increasing or decreasing the ground balance setting by 5 to 10 points and "pumping" the coil to check the ground response. If the ground response is minimal, then the area contains low ground mineralization. In areas of high ground mineralization, an increase or decrease of just 1 to 2 points on the ground balance setting will quickly produce a significant ground response.

- **Tips for locating targets amongst hot rocks or terra cotta:** Hot rocks are any rocks that contain enough iron minerals to make the detector sound off. A hot rock is more conductive than the surrounding soil (i.e. its ground balance is lower than the surrounding soil) and it will therefore sound like a good target. The mineralization levels of terra cotta can often create a positive target response like hot rocks.

A cold rock, or negative hot rock, is less conductive and/or more ferrous than the surrounding soil (i.e. its ground balance is higher than the surrounding soil) and it will

therefore produce a negative response. Depending upon your threshold level, this negative response will produce a central silent response preceded and followed by positive responses (i.e., sounds like a double response). Because of this central negative response, cold rocks can mask the presence of good targets.

There are methods to reduce the effects of hot rocks, terra cotta or cold rocks based upon the level of ground mineralization that is present.

In lightly mineralized ground, it is possible to ground balance the *AT Gold* to the hot rocks or terra cotta since ground balance is less critical in areas of light mineralization. Be aware, however, that the combined Target ID might be very low (e.g. a gold nugget and a hot rock together may register between 10 and 15 on the Digital Target ID). Therefore, Iron Discrimination levels must be reduced in order to ensure detection of good targets covered by the hot rock.

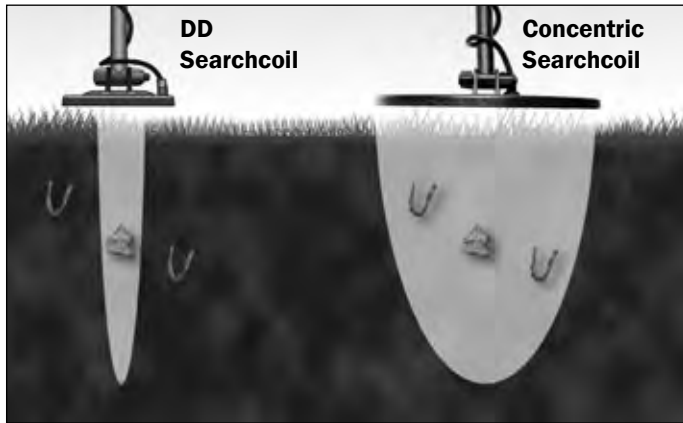
In more highly mineralized ground, the operator must either contend with the hot rocks or switch to a Discrimination Mode and introduce a minimal amount of IRON DISC. Hot rocks usually have a very low Digital Target ID (often less than 10), so very low levels of IRON DISC should be used. Tiny gold pieces may also have a very low Digital Target ID in highly mineralized ground, so take caution in applying much IRON DISC to avoid also eliminating the tiny gold.

- **Searching for meteorites:** With its high frequency, true All Metal Mode, adjustable threshold, ground balance and its sensitivity to low conductivity metals, the *AT Gold* is also a very effective meteorite detector. The majority of meteorites are found in deserts and other arid climates where they are best preserved.

Since most meteorites include high concentrations of

iron, there is little need to use one of the Discrimination Modes. Use the ALL METAL Mode for extra depth, keeping the searchcoil low to the ground. Iron-based meteorites can register Digital Target IDs from the low end of the scale like hot rocks to readings in the higher 50s, similar to large ferrous targets. If possible, purchase some meteorites found in the region you plan to search in order to conduct your own bench testing.

- **Isolating adjacent targets.** The narrow detection field of the AT Gold's DD searchcoil allows better separation of adjacent targets versus a similar size concentric searchcoil. Use narrow swings of the searchcoil in trashy areas to isolate good targets amongst the trash.



- **Swing your searchcoil parallel with uneven terrains** such as rock structures, wash-out areas or plow lines. This will minimize the negative effects caused by uneven ground areas. Changes in ground response can reduce the detector's performance as uneven ground rises and falls beneath the searchcoil.



Gold and other precious metals can be found in various forms with an *AT Gold*. You will most likely be searching for nuggets, but gold can also be found as lode or hard rock deposits in a vein, usually mixed with other minerals. The *AT Gold* can be used to locate placer deposits in streams or dry sand, with such gold then recovered by panning.

Gold is generally found in rock formations with a great many other conductive and ferrous minerals. For best results in mineralized ground, the *AT Gold* should be operated in the ALL METAL Mode and should be precisely ground balanced. This is particularly important when searching for tiny gold nuggets.

Although some electronic prospectors may experience success in using one of the *AT Gold*'s two discrimination modes to locate larger nuggets, the detector will not respond as well to tiny nuggets in these modes as it will in its ALL METAL Mode. Heavy ground mineralization could also limit depth of detection in one of the discrimination modes.

Hot rocks are a common problem for electronic prospectors. A "hot rock" can be described as a concentration of iron mineral that causes a detector to recognize it as metal. (Refer to the "Advanced Tips and Techniques" section for details on how to minimize the effects of hot rocks.)

Higher amounts of iron mineralization can often point toward better gold-producing areas. Magnetite *black sand* is often associated with gold deposits, so investigate black sand areas knowing that the gold discovery potential is greater in these locations.

Expect to dig small pieces of nonferrous trash metal items such as lead, brass, and aluminum while prospecting.

Finding these items while prospecting is reassurance that your detector will also find gold targets of the same size. Iron objects should be ignored only with extreme care, as tiny pieces of gold can sometimes read like iron in highly mineralized ground. The *AT Gold*'s Iron Audio feature can help to distinguish true iron targets in many cases.

Carry a magnet to help discriminate gold from iron and hot rocks. Gold will not be attracted to a magnet but pieces of iron and many hot rocks will be attracted.

Hard work, patience and research are three of the keys to success in electronic prospecting. Research is important because it is vital that gold always be sought in areas where it is known to exist. Consider joining a prospecting club such as the Gold Prospector Association of America (GPAA) in order to participate in sponsored group outings in gold territories.

## UNDERWATER OPERATION

The *AT Gold* can be immersed in water to a maximum depth of 10 feet (3 meters) to search in and along *freshwater* shorelines, rivers, piers, docks or swimming holes. Use of the *AT Gold* at depths exceeding 10 feet (3 meters) can cause leaks and damage the detector. Use of the *AT Gold* beyond the recommended depth will void the manufacturer's warranty.

Because the *AT Gold* is optimized to find small gold pieces, saltwater use is not recommended for this detector. Its ability to find small gold makes it equally reactive to the conductivity

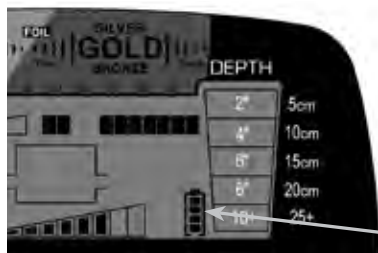


The *AT Gold*'s standard headphones include a waterproof connection for shallow water wading use. If the entire headset is to be immersed in water, waterproof headphones (*sold separately*) must be used.

of saltwater. This detector's ground balance adjustment is optimized to provide the greatest resolution in the normal ground range and is not designed to address saltwater. The *AT Gold* will, however, perform well for hunting coins and jewelry on dry sand beach areas.

The *AT Gold* is shipped with standard land-use headphones. These can be used for searching along waterways and for wading, but the earphones are not waterproof. For submersion, optional waterproof headphones (available from Garrett) must be used.

## CARE AND MAINTENANCE



Battery Level Indicator

**Battery Replacement**—The *AT Gold* is operating with fresh or fully charged batteries when 4 illuminated bars on the **Battery Level Indicator** are displayed (see above). The detector will maintain full performance until the batteries need to be replaced. Replace batteries when there is only



Remove the battery cover by rotating the cover one-quarter turn in a counterclockwise direction. Grasp the cap by top and bottom and pull it straight back. Slide the battery tray out to replace the batteries.



one segment remaining. NiMH rechargeable batteries may be used. Expect 20 to 40 hours of operation depending on battery type and quality.

Access and replace the batteries by rotating the battery cover housing one-quarter turn counterclockwise. Pull and remove the cap to slide the battery holder out. Remove batteries when the *AT Gold* will be stored for longer than 30 days.

The *AT Gold* is a rugged machine, designed for outdoor use in all environments. However, as with all electronic equipment, there are some simple ways to care for the detector to maintain its high performance.

- Avoid extreme temperatures as much as possible, such as storing the detector in an automobile trunk during the summer or outdoors in sub-freezing weather.
- Keep the detector clean. Wipe the control housing with a damp cloth when necessary.
- Disassemble the stem, and wipe it and the searchcoil clean with a damp cloth.
- When storing for longer than one month, remove the batteries from the detector.
- It is best to use quality alkaline batteries. When changing batteries, be sure to replace with all new batteries for optimum performance.
- Replace protective cover on the connector when not using headphones.

## TROUBLESHOOTING GUIDE

| SYMPTOM                                     | SOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No power                                    | <ol style="list-style-type: none"> <li>1. Ensure batteries are installed in the correct position.</li> <li>2. Replace all old batteries with all new batteries.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Erratic sounds or target ID cursor movement | <ol style="list-style-type: none"> <li>1. Ensure your searchcoil is securely connected and the coil cable is snugly wound around the stem.</li> <li>2. If using the detector indoors, be aware that excessive amounts of electrical interference exists, plus excessive amounts of metal can be found in floors and walls.</li> <li>3. Determine if you are close to other metal detectors or other metal structures such as electrical power lines, wire fences, benches, etc.</li> <li>4. Adjust frequency.</li> <li>5. Reduce your sensitivity setting.</li> </ol>                                                       |
| Intermittent Signals                        | 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. Scan from different directions to help define the signal. (NOTE: Iron targets may cause Intermittent Signals. You can help identify iron targets with the Iron Audio feature).                                                                                                                                                                                                                                                                                            |
| I'm not finding specific targets            | Ensure you are using the correct mode for the type hunting you are doing. If specifically hunting for U.S. coins, DISC 2 mode should be your best choice to eliminate other undesirable targets. The ALL METAL or DISC 1 modes will detect all metal targets to ensure desired targets are detected.                                                                                                                                                                                                                                                                                                                        |
| Target ID Cursor bounces                    | <p>If your Target ID Cursor bounces erratically, chances are you've found an iron 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> <p>NOTE: Large, flat pieces of iron—depending on their orientation in the ground—can read as a good target or can cause erratic Target ID Cursor movement. Use Iron Audio feature to help identify iron targets.</p> |

## METAL DETECTING CODE OF ETHICS

The following is a Code of Ethics that many treasure hunt clubs endorse and hobbyists follow to preserve our exciting hobby of metal detecting. We encourage you to do the same:

- I will respect private and public property, all historical and archaeological sites and will do no metal detecting on these lands without proper permission.
- I will keep informed on and obey all local and national legislation relating to the discovery and reporting of found treasures.
- I will aid law enforcement officials whenever possible.
- I will cause no willful damage to property of any kind, including fences, signs and buildings.
- I will always fill the holes I dig.
- I will not destroy property, buildings or the remains of deserted structures.
- I will not leave litter or other discarded junk items lying around.
- I will carry all rubbish and dug targets with me when I leave each search area.
- I will observe the Golden Rule, using good outdoor manners and conducting myself at all times in a manner which will add to the stature and public image of all people engaged in the field of metal detection.

## CAUTIONS

When searching for treasure with your Garrett detector, observe these precautions:

- Never trespass or hunt on private property without permission.
- Avoid areas where pipelines or electric lines may be buried.
- National and state parks / monuments, etc. are absolutely off-limits.
- Deepseeking detectors can detect concealed pipes, wiring and other potentially dangerous material. When those are located, the proper authorities should be notified.
- Do not hunt in a military zone where bombs or other explosives may be buried.
- Do not disturb any pipeline, particularly if it could be carrying flammable gas or liquid.
- Use reasonable caution in digging toward any target, particularly in areas where you are uncertain of the ground conditions.
- If you are unsure about using your metal detector in any area, always seek permission from the proper authorities.

## WARRANTY & SERVICE

Your *AT Gold* detector is warranted for 24 months, limited parts and labor, but does not cover damage caused by alteration, modification, neglect, accident or misuse. Use of the *AT Gold* at submerged depths exceeding 10 feet (3 meters) will void this warranty.

In the event you encounter problems with your *AT Gold* detector please read through this Owner's Manual carefully to ensure the detector is not inoperable due to misadjustments. Press and hold the power pushbutton for 5 seconds to return to the factory settings.

You should also make certain you have:

1. Checked your batteries, switches and connectors. Weak batteries are the most common cause of detector problems.
2. Contacted your dealer for help, particularly if you are not familiar with the *AT Gold* detector.

In the event that repairs or warranty service are necessary for your *AT Gold*, contact the local retail outlet where your detector was purchased. To avoid excessive shipping and import charges, do not attempt to return a Garrett product to the factory in the United States.

Information on international warranty/repair needs can be found on the Garrett website: **[www.garrett.com](http://www.garrett.com)**. Click on the Hobby Division and then the Technical Support page for more details.

### 4.5" (11.5cm) *Super Sniper™* Searchcoil—

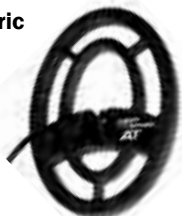
Part No. 2222500

Use when searching for small, shallow targets or in trashy or tight places.



### 6" x 9" (15 x 23cm) *PROformance Concentric Searchcoil*—Part No. 2222600

This waterproof searchcoil offers excellent depth for medium-sized targets in less mineralized soils.



### 9" x 12" (23 x 30.5cm) *PROformance Concentric Searchcoil*—Part No. 2222700

This larger size concentric searchcoil is waterproof and offers excellent depth for larger targets in less mineralized soils.



### 8.5" x 11" (21.5 x 28cm) *PROformance DD Searchcoil*—Part No. 2222700

This larger size DD searchcoil is waterproof, offers maximum depth for larger targets in more mineralized soils, and offers excellent separation for adjacent targets.



### Waterproof Headphones—

Part No. 2202100

Required when the headphones will be immersed in water.



### 5" x 8" (13 x 20cm) *DD Searchcoil Cover*—

Part No. 1607400

Protect the searchcoil's surface from scratching and chipping during use.



### Garrett *PRO-POINTER®* Pinpointing Detector—

Part No. 1166000



The *PRO-POINTER* combines performance with sleek design to assist in pinpointing hard-to-find targets. Includes proportional audio/vibration pulse rate target indicators and 360° side scan detection area. Water resistant with LED light for low light uses. Includes woven belt holster and 9-volt battery.

### 1/4" Headphone Adapter—

Part No. 1626000

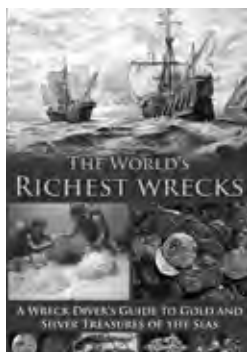
Allows use of standard headphones with a 1/4" male phone plug with the Garrett AT Gold. (*Not intended for submerged use.*)



**To see Garrett's complete collection of metal detector accessories, please visit [www.garrett.com](http://www.garrett.com) and view products within our Hobby Division.**

## SUGGESTED READING

RAM Books, a division of Garrett Metal Detectors, publishes new titles each year related to treasure hunting, gold prospecting, coin hunting and relic recovery.



## TO VIEW OTHER RAM BOOKS:

Go to [www.garrett.com](http://www.garrett.com) and visit the Hobby Division. An order form is available on our site which can be printed and mailed with your requested titles and payment.