

GTI™ 1500



GARRETT™
METAL DETECTORS
Owner's Manual

SPECIAL NOTICE

The Garrett GTI 1500 metal detector with Treasure Imaging and Graphic Target Analyzer truly adds a new dimension to treasure hunting. A precision electronic instrument designed to utilize the miracles of high technology, especially to help find coins, the GTI 1500 will accomplish this task better than any other detector ever manufactured. It can also locate jewelry, gold nuggets or any other kind of metallic object.

Deep-seeking sensitivity and precise discrimination enable this marvelous instrument to identify targets by size as well as conductivity and to report actual depth of targets of any size, not just coins.

This exciting One-Touch metal detector is automatic and surprisingly easy to operate. Yet those who have special treasure hunting demands will find the GTI 1500 meticulously adaptable to any personal style of detecting. Microprocessor-controlled circuitry truly makes this an exceptionally deep seeking detector.

Although the GTI 1500 is built to withstand rugged treatment outdoors while giving years of trouble-free service, always remember that this detector is a precision electronic instrument.

Protect it from extreme heat and cold as well as mist, rain or blowing sand. Keep it as clean as possible.

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TO THE OWNER

As the proud owner of a Garrett GTI 1500, you enter a new and exciting world of treasure hunting. Treasure imaging and the Graphic Target Analyzer enable you to find coins with an ease that will take your breath away. You will spend your hobby hours in recovering treasure, not digging trash.

Study this Manual to learn the basic functions of your new GTI 1500. Its target identification and sizing, deep seeking and discrimination capabilities can find coins and any other kind of metallic treasure with an ease that will amaze and delight you.

Use Treasure Imaging to identify the size of any target you locate:

- Dig only "B-size" targets to avoid cans and similar trash while locating coins and most rings.
- Set GTA discrimination so that you hunt only for specific targets.

- Use the Target ID Guide to learn what you've found.
- Pinpoint electronically to determine location of target and learn size and depth.
- Find deeper treasures with computerized circuitry.

Your GTI 1500, whose microprocessor-controlled circuitry has been acclaimed and proven through countless hours of field use, is unparalleled in the simplicity of its operation. Just touch the POWER touch pad and begin hunting immediately.

The GTI 1500 offers dedicated coin hunters the automatic tuning adjustment precision available only with computerized controls.

When you find a target, Garrett's revolutionary GTA display instantly directs you to that target's range on the Target ID Guide. Press the TREASURE IMAGING pad to discover its exact size and depth, which will give you additional clues to its identity.

Welcome again to the Garrett fraternity of successful treasure hunting hobbyists. Now, find your own coins and other treasures with the GTI 1500, one of the world's most capable and universal metal detectors, yet one that is amazingly easy to operate.

ASSEMBLY

Your GTI 1500 is shipped complete in one carton:



- A. Control Housing
- B. Upper and Lower Stems
- C. Imaging Searchcoil
- D. Parts Envelope
- E. Training DVD & Owner's Manual
- F. Warranty Registration Card

Make certain all of these parts are included and are undamaged. Report any shortages or damages immediately to your dealer. Follow these assembly instructions. No tools are required. Hand pressure will be satisfactory for all tightening.



Inspect contents of the clear plastic envelope (*see above*).

- One (1) knob
- Two (2) Washers
- One (1) threaded bolt

1. Attach the lower stem to the 9.5" imaging searchcoil. Make certain that the two rubber washers are inserted onto the lower stem before slipping the searchcoil onto it.

Place the threaded bolt through the holes in the connector and hand-tighten using the remaining wing nut. Use no tools. (*See image A on page 11.*)



Image A



Image B

2. Depress buttons in the Control Housing stem and slide on the Upper Stem (see *Image B* above).

3. Depress the buttons in the Lower Stem and insert it into the Upper Stem. Buttons will pop into the holes, and you can achieve the desired stem length. The third set of holes from the end is most commonly used.

4. As shown (see *Image C* on following page), wrap searchcoil cable securely around stem and connect to detector. The first cable turn goes over the top of the stem. The cable should be snug but still slightly loose so that the angle



Image C

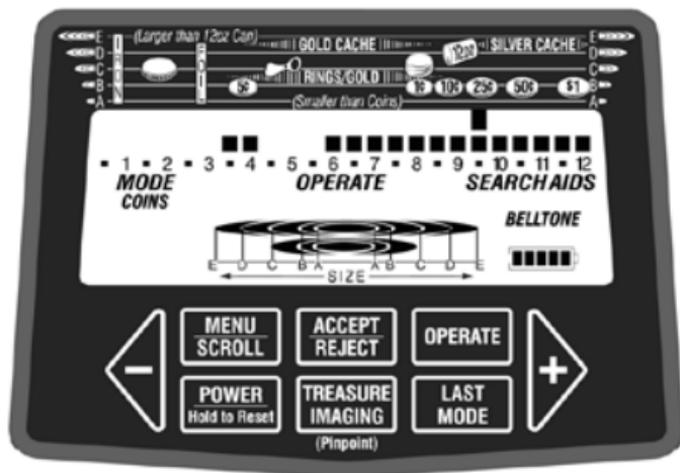


Image D

of the searchcoil can be changed easily, if required. To connect the cable to the detector, insert the cable connector into the connector on the control housing as shown and rotate the collar clockwise until secure (approximately four (4) turns). *(See Image D above.)*

Hand tighten only. Your GTI 2500 is fully equipped with eight (8) AA batteries.

GTI 1500 TOUCH PADS



- **Power/Hold to Reset**

Turns detector ON and OFF as well as returns it to factory settings when held.

- **Menu/Scroll**

Allows the Operator to scroll through the following settings to make adjustments or turn them ON or OFF. As you continue to push the Menu/Scroll button, **you will see the following options:**

- **Modes (5)**

- Coins, Jewelry, Relics, Zero, Custom

—Custom Functions Menu

Sensitivity (Depth), Threshold (Audio Level), Frequency, Volume, Tone, Rechargeable battery

—Search Aids

Salt Elimination, Belltone, Backlight

● Accept / Reject

Permits acceptance or rejection of specific target segments shown on the Lower Scale to establish discrimination notches.

● Treasure Imaging (Pinpoint)

When pressed and held, activates the automatic pinpointing function. In this mode the cursor indicating the target just discovered will blink on the Upper Scale as the target's signal strength is shown. Depth of target will be shown on the Lower Scale and size of the target indicated at the bottom of the Display Screen.

● Operate

Returns to operate (hunting) mode after any change or adjustment of controls.

● Last Mode

Returns detector to the mode (Coins,

Jewelry, Relics, Zero, Custom) that was previously being used.

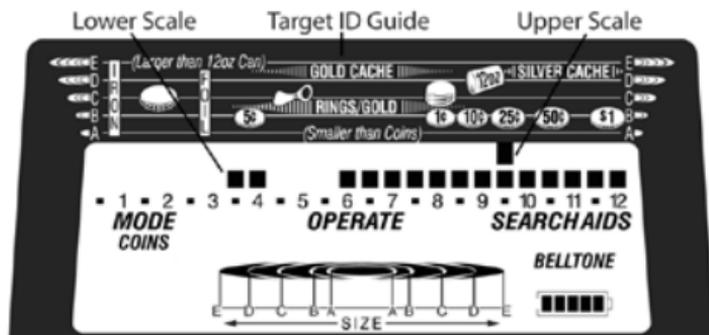
- & +

These touch pads permit precise regulation of the GTI 1500 . You will note that each press of a touch pad causes segments on the Upper Scale to move either to the right (+) or to the left (-).

The + and - touch pads enable the following regulation: Permit alternation between the five search modes; Permit adjustment of levels of sensitivity, Threshold, Frequency, Volume and Tone; Activate (+) or turn off (-) Salt Elimination, Bell tone target audio and Backlight; Activate (+) or turn off (-) the NiMH battery gauge; Move cursor in the Upper Scale when discrimination is being set in the Operate mode.

Experiment with these touch pads yourself and experience the precise degree of regulation possible with the GTI 1500.

GRAPHIC TARGET DISPLAY



Target ID Guide

This guide printed above the LCD screen shows U.S. coin denominations, gold, silver and other typical metallic objects.

Upper Scale

Indicates target discovered; Indicates target strength in Treasure Imaging mode; Indicates levels of Menu control settings.

Lower Scale

Discrimination segments (notches). Indicates depth of all targets in inches when in Treasure Imaging mode.

Operating Status

The complete operating status of your detector is shown on the screen at all times. When the TREASURE IMAGING (pinpointing) touch pad is pressed and held, size and depth of targets will also be shown.

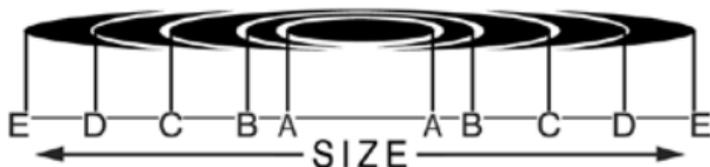
The mode in which you are searching will always be shown on the left side of the screen under the MODE heading.

MENU, OPERATE, IMAGE and SEARCH AIDS are shown at the top of the screen in its center to indicate detector status.

MENU is shown when the detector is being regulated. OPERATE will be illuminated whenever you have pressed the OPERATE touch pad and are hunting, and IMAGE when you press and hold the TREASURE IMAGING touch pad. SEARCH AIDS is illuminated to indicate the Search Aids that have been activated.

On the second line are detector functions you can regulate as desired: Sensitivity, Threshold, Frequency, Volume, Tone and

Rechargeable (seen in lower right corner of LCD screen). When one of these functions has been illuminated by use of the MENU/SCROLL touch pad, it can be regulated by pressing the + or - touch pads.



Treasure Imaging

Five target sizes are shown on the color-coded Imaging diagram at the bottom of the screen.

Size A - Solid small oval (orange): targets smaller than coins, including bits of iron or foil.

Size B - Oval extending to B grid lines (red): all U.S. coins, most rings and small metal trash such as pieces of pull tabs.

Size C - Oval extending to C grid lines (purple): targets larger than coins and smaller than 12-oz. cans, such as large rings, small belt buckles, jewelry and such trash targets as screw tops, bottle caps and complete pull tabs.

Size D - Oval extending to D grid lines (blue): larger belt buckles, large jewelry items, 12-oz. cans and other items of similar size.

Size E - Oval extending to E grid lines (green): objects larger than a 12-oz. can, such as kettles, strongbox or big metallic trash.

Experience with Treasure Imaging will enable a hobbyist to identify to an amazingly precise degree any target before it is recovered. The Target ID Guide printed above the LCD screen showing coin denominations, gold, silver and other typical metallic objects is designed to relate location of the Target Cursor with the size indication to help identify discoveries.

Note - The five letters (A,B,C,D,E) on each

side of the diagram and the horizontal color-coded lines connecting them. These refer to the five relative sizes at the bottom of the Display Screen.

Relating conductivity and size to help determine your target before digging it is a unique feature of the GTI. The target cursor on the Upper Scale, which indicates the target's conductivity, will blink as you pinpoint a target and learn its size, as indicated at the bottom of the Display Screen. The blinking cursor will indicate the last target discovered before the TREASURE IMAGING (Pinpoint) touch pad was pressed.

Thus a "B-size" target with a coin's conductivity as indicated on the Target ID Guide will most likely be a coin.

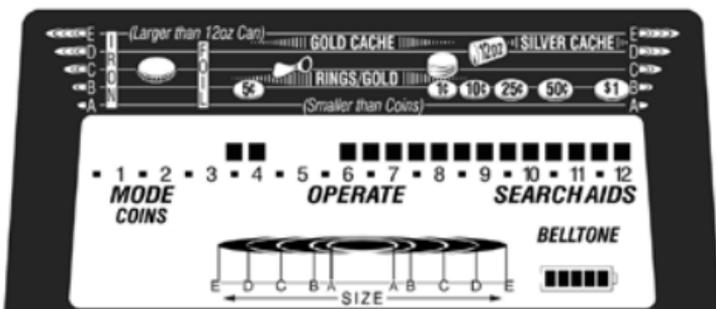
Because continued practice in relating size and conductivity will help you identify targets before you dig them, you will dig more treasure and less trash.

HUNTING BASICS

This OneTouch detector is today's most advanced; yet, its basic automatic operation makes it as simple to operate as any detector ever manufactured. You can begin hunting with it immediately. No special instructions are needed beyond what's included in the next few pages.

More importantly, you can start finding coins right now! Here's how to begin:

1. There are no dials to turn and no controls to adjust. Just grasp the handle of your GTI 1500, and hold the searchcoil at least three feet away from any large metallic object.
2. Touch and release the POWER touch pad and the GTI 1500 will begin detecting. The GTI screen appears as shown on the following page. You can see that you are operating in the Coins detection mode with Bell tone audio turned on, both preset at the factory.



3. Your GTI 1500 begins operating with all settings at factory-set levels. Any of the settings can be easily changed, but you may never want to do so! It is recommended that you use the factory settings the first few hours you hunt with your detector.

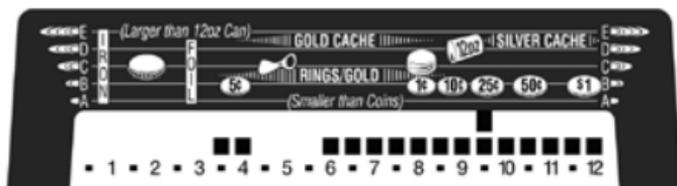
Scanning

Swing the searchcoil back and forth in front of you in a straight line or slight arc as shown in the photograph atop the facing page. Keep the searchcoil moving at a rate of about one to three feet per second. Maintain your coil at a height of one to two inches. The coil should be kept level at all times.



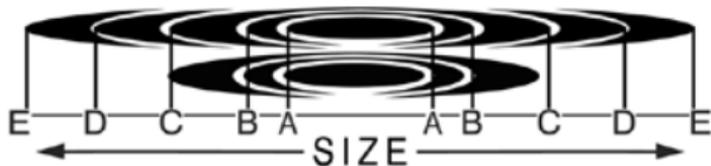
Discovery

Detection of all metal targets will be indicated by the appearance of a Target Cursor on the Upper Scale. A cursor will appear, as shown below, to indicate every detected target and will remain for 4 seconds or until a new target is detected (whichever comes first). Desirable targets will also produce a "beep". In the illustration below the Target Cursor is located at 9+, which would probably indicate a quarter if Treasure Imaging shows it to be a B-size target. Locate your target by scanning back and forth over it to determine where signals are strongest.



Treasure Imaging (Pinpoint)

Press and hold this touch pad to put your detector into a Treasure Imaging (Pinpoint) mode so that you can locate your target more precisely and also determine its relative size and depth. Size will



be shown at the bottom of the Display Screen, as shown above. Since you have a B-size target and your Target Cursor is blinking at 9+, you have probably found a quarter.

Pinpointing and sizing through TREASURE IMAGING can be an invaluable aid to treasure hunting when used properly.

To turn OFF your detector: Simply press and release the POWER touch pad. Charles Garrett recommends that you first become familiar with your new detector by hunting for at least 10 hours in the factory preset

Coins mode and that you read carefully the Warning section in this manual.

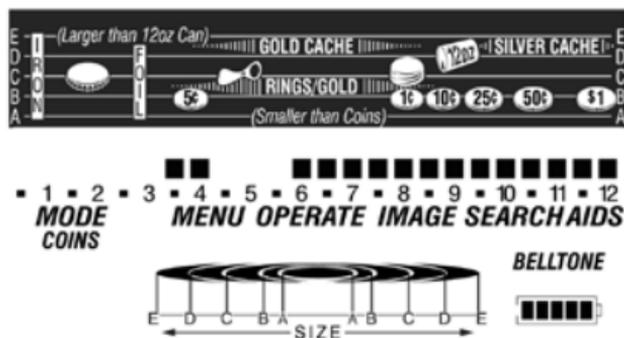
By now you are also certainly impressed with the super sensitivity, depth capabilities and the target analysis of this detector which utilizes patented DSP (Digital Signal Processing) methods to give it advanced detection capabilities that can be matched by those of only one other detector, the GTI 2500. You may have encountered an occasional instance when your GTI 1500 seemed to present inconsistent information. This probably occurred when the detector was attempting to analyze two or more targets beneath its searchcoil or when you have not properly centered the coil over your target.

This problem of analysis occurs with all detectors, but the GTI 1500 discovers vastly more targets than old-style instruments with their limited circuitry. In addition, the deep seeking power of the detector may sometimes cause it to detect but fail to identify clearly a target some distance away, one over which your searchcoil has not even scanned.

Correct operating techniques will enable you to properly use all of the data presented by your detector to become aware of the precise nature of all targets.

You will quickly master these techniques and learn why the GTI 1500 with DSP, Treasure Imaging and controls based on patented microprocessor technology has more accurate discrimination and better sensitivity and effectiveness than other detectors.

OPERATING ADJUSTMENTS



Status of each of the control selections will be shown on the LCD Graphic Display above the control panel touch pads. When you touch the POWER touch pad, your GTI 1500 is ready to hunt in a Coins operating mode with threshold, sensitivity (depth), tone and other controls preset at the factory, as shown above. As explained in the following pages, settings can be easily changed through regulation of the + and - touch pads.

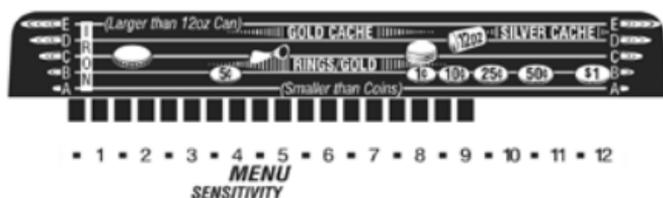
The GTI 1500 functions like other detectors and its coil must be moving slightly for detection to occur. Microprocessor-controlled DSP circuitry of the GTI 1500,

unlike that of ordinary detectors, however, adapts automatically to the coil's rate of movement. Your searches will have the same high degree of accuracy whether you are scanning rapidly to cover a large area quickly or moving methodically and very slowly over a location with multiple targets. Automatic circuitry is designed to provide precise ground balance at any speed.

Five different modes of detection are available, each with specific discrimination notches which are shown on the Lower Scale. When the name of the particular mode you select is constant, while the other four are blinking, either press the OPERATE touch pad to begin hunting or the MENU touch pad to move to another control selection.

CONTROL SETTINGS

Sensitivity (Depth)



Press the MENU touch pad to display SENSITIVITY on the screen (shown with factory setting at approximately 75% as indicated on the Upper Scale), and you can use the + and - touch pads to adjust the sensitivity at which your detector will operate most effectively. These changes will be shown on the Upper Scale. Although the instrument's maximum sensitivity (depth) is usually desired, this is often not feasible because of the type of soil over which you are scanning or because of electromagnetic or power line interference. Ground mineralization and other considerations can limit the detector's ability to interpret target information. This control option permits you to achieve a stability that permits maximum detection depth possible in relation to any specific environmental conditions.

Press + to increase sensitivity. Press - to decrease. A single touch and release adjusts the level in a small increment. Continuous pressing results in a continuous adjustment.

Threshold



Press the MENU touch pad to display THRESH on the screen (above, with factory setting indicated on Upper Scale), and you can use the + and - touch pads to adjust the threshold of sound that is being produced by the GTI 1500 as it scans. Multiple touches will increase or decrease the level. Changes can be seen on the Upper Scale.

You can search silently or at any level of constant sound. Charles Garrett and veteran hobbyists usually prefer to operate the instrument at a minimum level of audible sound but this is no longer necessary.

The audio will increase sharply whenever a desirable target is encountered. (Remember, a cursor will indicate every target.) When headphones are used, it will usually be necessary to decrease the threshold level since sound is more audible through headphones.

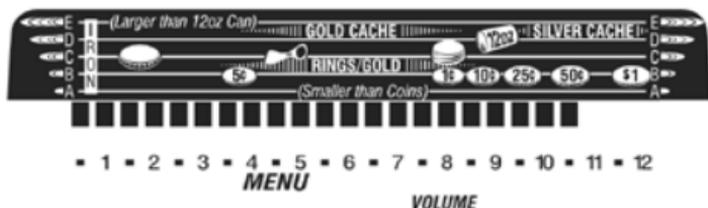
Frequency



This detector is capable of operating at four different detection frequencies or channels, which you will find valuable if you participate in competition hunting or if you enjoy hunting with others. In fact, operating your GTI 1500 at a different frequency might be necessary any time two or more detectors are being used so close together that their signals interfere with one another. Outside electrical or atmospheric interference can also cause an interference that results in strange sounds.

Whenever you hear unusual sounds and believe that you are encountering interference, press and release the MENU touch pad until **FREQ** appears on the screen (*as shown on the previous page*). The Upper Scale will indicate the frequency at which your detector is now operating. Use the + and - touch pads to change this frequency until you find one with little or no interference.

Volume



After pressing the MENU touch pad to display **VOLUME** on the screen, the factory setting for the loudness of the target sound will be indicated on the Upper Scale (*as shown above*). Use the + and - touch pads to adjust audio to the volume that you prefer. Touching the + pad will make the sound louder, while touching the - will lower the volume. Since this adjustment

controls the maximum volume of sound produced by the GTI 1500 only when a target is encountered, it will not affect the threshold level you have already selected as the primary audio function of your detector.

When headphones are used, it will usually be necessary to decrease volume since detections sounds are louder over headphones. Experiment to determine which volume best suits your hearing.

Tone

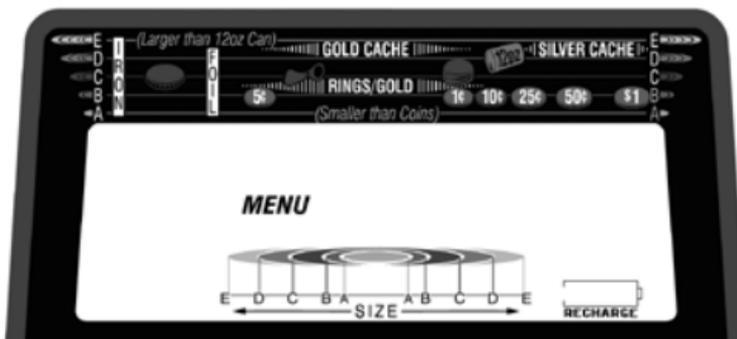


After using the MENU touch pad to display TONE on the screen, the factory tone setting will be indicated on the Upper Scale, as shown. Use the + and - touch pads to adjust the audio to preferred pitch or tone. Touching the + pad will raise the tone into a higher treble range, while touching - will

lower the pitch to a bass tone. All touches will make changes indicated on the Upper Scale. Experiment to find the pitch that suits your hearing.

Battery Gauge

The scale (lower right of screen) indicates the condition of standard (carbon or alkaline) or rechargeable batteries. To turn on the rechargeable option, press the MENU touch pad until RECHARGE is displayed. Press the (+) or (-) touch pad to activate.



SEARCH AIDS

Salt Elimination

When hunting on an ocean beach, or over any ground with high salt content, you may want to use this Search Aid to eliminate interference caused by wetted salt. If you wish to turn on the Salt Elimination aid, use the MENU to display Salt Elim and press + when the word is blinking to turn it on. Press - to turn OFF the function and cause the word to blink.

Bell tone

Garrett's Coin Alert Bell tone, which is the factory audio setting for the GTI, will signal the operator with a special ringing sound whenever a target has been located—such as a coin—of high conductivity shown on the highest (first nine from right) segments on the Upper Scale. Other accepted targets will cause a normal "beep," with a lower tone produced by targets in the iron range (four lowest segments on the left of the scale).

If you wish to use the Belltone audio enhancement for target sounds, no action

is necessary at factory settings. To turn off this function use MENU to display the word, press - and the word will begin blinking. Pressing + will turn it back on.

Backlight

This function of the GTI 1500 lights the control panel so that the detector can be used at night or in dark places. The Backlight will turn on automatically whenever the unit is in the MENU mode and will turn itself off when you leave this mode unless you have activated the function, as described below.

If you wish to turn on the Backlight aid, use the MENU to display Backlight and press + when the word is blinking to turn it on. Press - to turn off the function and cause the word to blink.

To maximize battery life it is recommended that you make certain that the Backlight is turned off whenever it is not needed.

Additional Settings Information

All of the personal preference adjustments you have just set in the GTI 1500

with the various operating functions will be retained by the detector when you press POWER to turn the detector OFF. These personal alterations are held in a non-volatile memory circuit and retained even when the batteries are removed. The detector must be turned off when batteries are being replaced.

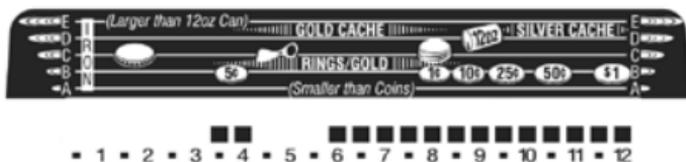
Any changes you make in discrimination settings in the various modes, however, will be retained only in the Custom Mode. Because ground conditions can vary from place to place, it may be necessary for you to adjust Sensitivity occasionally.

If you are ever unsure about the settings of the GTI 1500, you can instantly restore the precise factory-set levels of all settings and controls. Just press and hold down the POWER touch pad for five seconds or until a "double-beep" lets you know that factory settings have been restored.

OPERATING MODES

Press MENU and use the + touch pad to rotate through five different modes of detection that are available, each with a specific discrimination configuration as shown on the Lower Scale. When the name of the particular mode you select is constant, while the other four are blinking, either press the OPERATE touch pad to begin hunting or the MENU touch pad to move to another control selection.

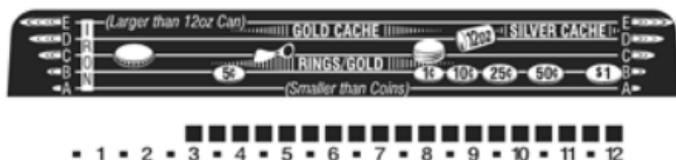
Coins



Discrimination preset in the detector for this mode that is shown above is designed to eliminate detection of lower conductivity trash targets, such as bottle caps, most pull tabs and other objects normally encountered in coin hunting. Some bent pull tabs and pieces of tabs may not be eliminated from detection. Successful

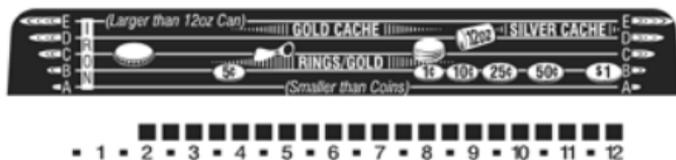
treasure hunters, however, all understand that they must dig some junk occasionally. Correct operation of the GTI 1500 should reduce this wasted effort.

Jewelry



This detection mode, is specifically designed to aid in hunting for jewelry, with discrimination in the detector's circuitry set to eliminate such trash targets as lower conductivity items and bottle caps.

Relics



This detection mode (*shown above*) is specifically designed for relic hunting, with discrimination in the detector's circuitry set to eliminate trash targets normally associated with relic hunting, while includ-

ing good targets in the lower conductivity range, items generally sought by most relic hunters.

Zero Discrimination



This mode, shown above, permits you to hunt with no discrimination and offers a method of "dual-mode" hunting. Your detector will give a "beep" to announce any metal it scans over while a cursor indicates it. You can then press Last Mode to return to another of the Discriminate modes to "quick-check" a target.

Custom

This mode was designed to be set by the operator. When the detector leaves the factory, Custom has been set to the Coins mode. Through use of the ACCEPT/REJECT touch pad, a hobbyist can modify this mode's discrimination to individual specifications. And modifications will be

retained by the detector's memory when it is switched OFF.

Many GTI 1500 owners may rarely use the Custom mode, and will hunt only in the preset Coins, Jewelry, Relics or Zero Discrimination modes. Complete instructions for setting discrimination notches for any of these modes can be found on the following four pages of this manual.

Note: When the detector is turned OFF and then turned back ON again, it will begin operations in the mode in which it was previously operating. Whenever the POWER touch pad is pressed and held, however, factory settings will be restored and the detector will begin operating in the Coins Mode.

SETTING DISCRIMINATION (Notches)

Using only the discrimination of its factory-set Coins, Jewelry, Relics and Zero operating modes, the GTI 1500 will more than satisfy the requirements of almost every treasure hunter. Many will never require any other discrimination. Still, this detector offers more, Custom discrimination, to tailor a detection mode to any requirement by setting precise detection "notches."

The Lower Scale contains Discrimination Segments. Those that are turned on (darkened) represent targets whose conductivity will cause a "beep" when they are detected in any operating mode. In the Zero mode all segments are turned ON, which indicates that almost every metal target will cause the "beep" of a detected target. Through use of the +, - and ACCEPT/REJECT touch pads, specific "notches" can be created by turning discrimination segments ON and OFF in any of the five operating modes.

There are two methods of setting discrimination in any mode.

First Method: While in the OPERATE mode press the + and - touch pads to position the blinking cursor above the Discrimination Segment corresponding to the particular target to be detected or ignored.

If the segment is turned on (showing), that target will be signaled audibly. If you wish to reject that type target, press the ACCEPT/REJECT touch pad. The segment will be turned off and disappear, creating a "reject notch." If the Lower Scale segment is not showing, press the ACCEPT/REJECT touch pad to turn it on, creating an "accept notch," and your GTI will sound off on targets represented by that segment. The OPERATE pad must also be pressed after notches have been set.

Second Method: Pass the searchcoil over an object to be accepted or rejected as a target or pass the particular target across the face (bottom) of the coil about two inches away. Check to make certain of the location of the target cursor on the Upper Scale. If the segment below is not showing, press ACCEPT/REJECT to turn it

on. If it is showing, pressing this pad will turn it OFF.

Remember: When you press the ACCEPT/REJECT touch pad, you cause the discrimination circuit to reject a target that is shown on corresponding segments of both the Lower and Upper Scales. This rejection will be indicated by the disappearance of a Lower Scale segment.

The same touch pad is used to cause the detector to accept a target. When such a desired target is being shown by the cursor but not the corresponding Discrimination Segment below, press the ACCEPT/REJECT touch pad. The segment will be turned ON and appear, indicating that your desired target will now cause a "beep."

Note: It is important to remember that each time the detector is turned OFF ACCEPT/REJECT selections will be retained only in the Custom mode. Any ACCEPT / REJECT modifications you have made in the preset Coins, Jewelry, Relics and Zero modes will be lost, since these four

modes return to factory-set detection settings each time the detector is turned OFF and turned back ON. Custom mode discrimination changes will be lost only when POWER is held for five (5) seconds for return of factory settings.

Why Use Notches?

There are numerous reasons why you would want to accept or reject specific targets:

You may be looking for only one item, a certain lost earring, for example. You can use the matching earring to set notches on your GTI to accept only that type of metal target. You may be hunting in an area where you are plagued with a specific type of trash. You can reject just this type of trash metal and continue to hunt with no other discrimination, detecting all other metal. You may have your own special ideas for designing a mode of detection. The Garrett GTI 1500 gives you virtually unlimited opportunities to test any and all your ideas and to try them out easily and quickly. Only Garrett's GTI and GTA detec-

tors permit such accurate levels of precise discrimination. Return to factory settings by pressing and holding the POWER touch pad for 5 seconds.

TREASURE IMAGING

Sizing and pinpointing targets precisely are important capabilities of your GTI 1500. Furthermore, when you press and hold the TREASURE IMAGING pad, the searchcoil can remain stationary over your target. Move the coil around slightly to try to center it directly over the target. Targets must pass beneath the searchcoil, not above it.

The searchcoil must be centered directly over the target to produce correct size and depth information. This is especially important when searching such areas as slanted walls or the ceiling of a cave. Targets that are not properly centered may be indicated as deeper and larger than you will find them to be after digging.

Here's a tip. For most effective normal automatic pinpointing: first, place the searchcoil on the ground near your target, but not over it. Then, press and hold the TREASURE IMAGING touch pad. Scan back and forth across the target, maintaining searchcoil contact with the ground. You

will notice a more distinct audio sound when the target is directly beneath the searchcoil's center. In addition, you will note that signal strength on the Upper Scale will increase. The Upper Scale cursor indicating the target just discovered will blink, even as signal strength is shown.

Depth Reading on Scales

When you press and hold the TREASURE IMAGING touch pad, depth will be indicated on the Lower Scale. Correct depth is given for all targets, not just for coin-size objects. Illumination of Upper Scale segments, from left to right, indicates target signal strength. The maximum reading attained will indicate exact target location. While still pressing the TREASURE IMAGING touch pad, check the Lower Scale to determine target depth in one-inch increments.

Size Imaging

When you press and hold the TREASURE IMAGING touch pad, you can observe your target's size as shown on the Display Screen.

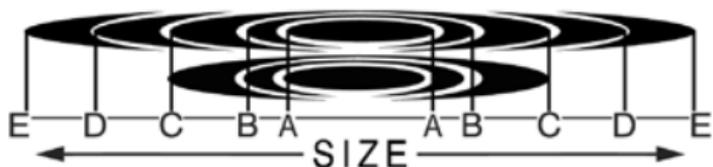
Four typical examples:



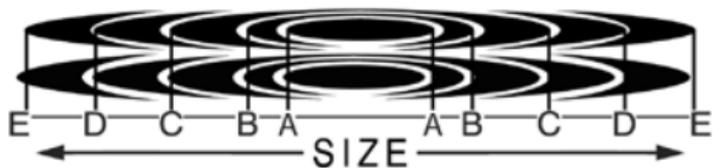
Size A- An object smaller than a coin



Size B- Treasure Imaging showing coin



Size C- This object is larger than a coin, yet smaller than a 12-oz. can



Size E- An object larger than a 12-oz. can

Radiating Size Array

While the TREASURE IMAGING touch pad is being pressed and held, you may occasionally observe a size reading that continues to change dramatically, with the size appearing to "radiate" rapidly and continually outward from the small oval at the center. Garrett engineers call this a "Radiating Array" effect, which indicates that the target is too deep and/or too small to determine an exact size.

It is likely, however, that the target is either Size A at 6"; a Size B at 8"; Size C at 10"; or Size D at 12". No depth reading will be displayed while the Radiating Array is occurring. The Array may also appear when the target is significantly off-center from the coil. Always remember that your searchcoil must be centered directly over the target to produce correct size and depth information.

BENCH TESTING



This will enable you to test typical targets and to learn about the discriminating capabilities of the GTI before taking it into the field or trying to set discrimination. The following tests should be performed, as shown above with the searchcoil perpendicular to a bench, floor or other non-metallic surface and several feet away from any metallic object:

1. Select the Zero mode of operation. Bring various metallic targets across the center of the bottom of the searchcoil at a distance of about two inches. Each target

will cause a "beep." Pay particular attention to the size of each target as indicated when you press and hold the TREASURE IMAGING touch pad.

2. Use the MENU/SCROLL and (+) or (-) touch pads to select the Coins detection mode. Then press OPERATE. Bring the same targets across the bottom of the searchcoil and listen for a "beep" when the various items are scanned. Notice where the Target Cursor darkens in the Upper Scale of the Graphic Display when particular targets are scanned across the coil.

3. Perform the same tests with the other modes and observe the sounds, Upper Scale indications and sizes when the TREASURE IMAGING touch pad is pressed and held.

4. Begin to experiment with the ACCEPT and REJECT touch pads. Notice carefully which of the segments are illuminated as you identify various targets.

5. Be methodical. Keep written records of results and use them when hunting.

OPERATING RECOMMENDATIONS

As you walk, scan the searchcoil from side to side in a straight line or slight arc. Keep the coil level and at a constant height of one or two inches above the ground while you move it at a rate of about one to three feet per second.

When scanning, do not hurry. Be methodical. Do not skip any areas. Overlap each scan sweep at least 25% of the searchcoil's width. Wear headphones to avoid ambient noises and concentrate on scanning. When you are searching in the Zero mode, detection of any metal target will be indicated by a "beep."

Target Identification

Conductivity classification of every target over which the searchcoil passes will be indicated by a target cursor on the Upper Scale. The searchcoil must be centered over your target to produce accurate size and depth information.

Highly mineralized soil can occasionally result in improper conductivity readings.

Raising the coil an inch or two as you scan over such soil is sometimes helpful. Remember to keep the coil level and at a constant height. Encrustation or patina may also affect conductivity of the target, resulting in improper classification.

Recovery (Treasure Imaging)

Locating your target precisely will enable you to recover it by digging the smallest hole possible. This is accomplished first by pinpointing which also enables you to utilize another function of the GTI 1500 for measuring size and depth.

Begin to locate targets by first drawing an imaginary "X" on the ground with the searchcoil at the place where maximum sound occurs. You can then utilize the real "magic" of the Treasure Imaging mode and learn size and depth.

Digging

Since the final step in recovery usually entails digging, always make as small a hole as possible. It is quicker, requires less work and makes refilling easier. You should always fill your holes.

Last Mode

Use of this touch pad can be particularly helpful while scanning because it effectively converts your GTI 1500 into an instantaneous dual, or triple-mode detector. Pressing and releasing this touch pad returns detector operations to the mode that has just previously been used. Thus, it is easy to alternate between any two operating modes, such as Coins and Zero or Custom. Pressing the TREASURE IMAGING touch pad, then, provides a third, all-metal mode.

More On Target Audio

It is important to remember that the GTI's audio causes weaker targets to be detected with shorter "beeps" and stronger targets to be detected with longer "beeps."

When a metallic object is accepted, the detector will, of course, "beep". Some rejected targets, however, may cause audio to "break Up" or sound erratic. This is generally a response to shallow, trash targets and can be remedied by raising the height of your searchcoil slightly when scanning (always keeping it level).

Another indication of a reject target is an audio signal as you scan one way, and no response when scanning from the other direction.

If you encounter a large target or scan too close to it, the detector will give an audible overload indication, which sounds like a buzzing alarm. Target identification, size and depth readings may be incorrect if an overload occurs.

Setting Sensitivity

Garrett engineers designed your GTI 1500 to achieve maximum detection depth, but you may not always be able to search at 100% sensitivity (depth)...just as you rarely can (or, even want to) operate your automobile at 100% of its speed capacity.

Outside electromagnetic interference and irregular ground mineralization may sometimes require that you search at reduced sensitivity.

Don't worry about losing "deep targets!" You won't ever be losing anything because you'll always be able to search as deeply

as ground and atmospheric conditions permit. Attempting to operate at sensitivities above a level that permits a quiet and stable operation may actually cause you to miss deep targets that you would have found had you not "pushed" the detector.

Another point to remember is that when you are searching with SENSITIVITY set below the maximum under "less-than-perfect" conditions, you will always have additional detection power when you are able to use it.

Test Plot Construction

As you search and use your GTI 1500, you will quickly grow more proficient in its use. Building and using your own test plot will sharply increase this proficiency. Bury several items at varying depths of 1"-6" about 18" apart. Include several coins, a ring, a nail, a piece of foil, a pull tab and a bottle cap. Bury large items such as a 12-oz. can or a length of pipe deeper (10"). Clearly mark where each article is buried and its depth. Scan over them while carefully studying the detection signals.

Remember that newly buried objects, especially coins, will be somewhat more difficult to detect than items buried for some time. This is primarily a metallurgical phenomenon. Experiment with various detection modes, and pay close attention to both audio and TREASURE IMAGING signals as you scan. Note your detector's response at the various settings. Practice pinpointing and imaging to locate targets precisely.

With Experience

After you have hunted with the GTI 1500 for only a short time, you will be surprised at how proficient you have become with it. Do not expect to achieve the greatest accuracy and success, however, until you have used this detector for at least 100 hours or more. Don't forget to take Charles Garrett's advice to press only one touch pad and search in the factory preset Coins detection mode for at least 10 hours during your "learning" phase.

Remember, the more you use your detector in the correct manner, the more treasure you will discover.

HEADPHONE JACK

The headphone jack is located at the rear of the battery pack under the armrest. Headphones are a valuable accessory for any metal detector to mask interference from outside noise. Headphones are particularly essential when hunting where noise (running water, people, surf, traffic, etc.) is excessive. Use of headphones will also extend battery life.

SEARCHCOILS

Your GTI 1500 is equipped with a 9.5" **PRO***formance* imaging coil.

You may also wish to purchase a 12.5" imaging coil. Also available for the GTI 1500 are a 4.5" Sniper coil, a 10" x 14" DD coil and a 5x10" DD coil.

The larger coil is helpful in seeking large and deep targets, while the smaller and elliptical coils are designed for use in especially trashy locations or places where a larger searchcoil just won't reach or can't fit. All Garrett searchcoils are fully submersible.

BATTERIES

The GTI 1500 is equipped with two battery packs, each holding four (4) standard AA batteries. (It is recommended that top quality heavy duty or alkaline batteries be used. The detector is also designed to utilize nickel metal hydride (NiMH) rechargeable batteries.) It is advisable to remove the battery packs when the detector is not in use, particularly for a period of a month or more.

Although standard battery packs and optional rechargeable packs can be used interchangeably in the detector, it is recommended that both packs being used at the same time always be the same type. The GTI 1500 should search at least 18 hours with carbon batteries and longer with alkaline cells. Rechargeables should power the detector approximately 20 hours on a full charge. These estimates are for speaker operation with the Backlight turned off. Operating with headphones will further extend battery life.

Checking Condition

Battery condition is reported continuously by the horizontal row of squares on the lower right side of the screen. Five are visible when fully charged batteries are being used. When only one square remains, batteries should be changed. You should always carry spares so that you will be ready.

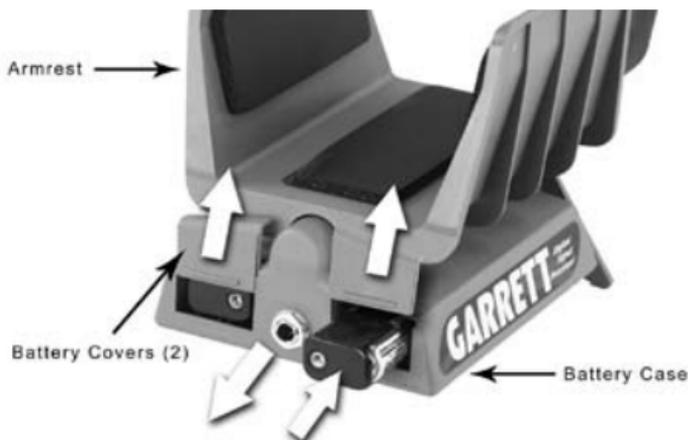
Rechargeable Batteries

When rechargeable batteries are being used, the RECHARGE battery option must be turned on for the battery level indicator to be accurate. Continue pressing the menu button to scroll to the battery RECHARGE icon. Press (+) to set the detector for rechargeable batteries. Press (-) to set the detector for carbon or alkaline batteries.

Replacement

1. Turn OFF the GTI 1500 by pressing the POWER touch pad.

2. It is not necessary to remove the battery case. Just slide it back slightly from its normal position beneath the armrest.



3. Slip up the two covers on the battery panel and remove them completely.

4. Take out the two battery holders (which are not connected by wire) by tilting the pack. (*See image above.*)

5. Remove the old batteries.

6. Install new batteries. Carefully observe polarity of the batteries and make certain the new batteries are aligned properly.

7. Replace holders in detector (*as shown in image on next page*). It is important that the "eyelets" be toward the center so that battery packs will be replaced in their



proper orientation. This is important! If an effort is made to install holders incorrectly, replacing the battery case covers will be difficult. If they are forced, damage to the detector can result.

8. Press down firmly and slide each cover back in place. Remember: The detector must be turned off when batteries are being changed.

Caution: Use only high quality NiMH, carbon, alkaline or heavy duty batteries.

RECOMMENDED ACCESSORIES

Your Garrett GTI 1500 represents the highest quality in metal detector manufacturing. Complement it with quality accessories such as these from Garrett:

- Headphones that will enable you to hear signals from the GTI more distinctly because they will mask other conflicting sounds from the environment.
- Additional searchcoils.
- Rechargeable Battery Pack and Recharger that cuts down on the cost of batteries.
- Coin Hunter Kit (pouch, probe, digger) that is all you need for recovering coins in the outdoors.
- Coil cover to protect your 9.5" searchcoil and lengthen its lifespan.

MAINTENANCE

- Always remember that your GTI 1500 is a sensitive electronic instrument. It is built to withstand rugged treatment in the outdoors. Use your Garrett detector to the fullest extent possible, and never feel that you have to baby it. Yet, always protect the detector and handle it with reasonable care.
- Try to avoid temperature extremes as much as possible, such as storing the detector in an automobile trunk during hot summer months or outdoors in sub-freezing weather.
- Keep your detector clean. Always wipe the housing and LCD after use, and wash the coil when necessary.
- Your searchcoil is submersible. The control housing is not! Never submerge the control housing, and always protect it from heavy mist, rain or blowing surf.
- Disassemble the stem and wipe it clean after use in sandy areas.

- When storing for a month or longer, remove batteries from the detector and from their holders as well.

SPECIALIZED HUNTING

Coins

Because of its unique discrimination and imaging capabilities, the GTI 1500 functions as an outstanding coin hunting detector, especially in its Coins mode. Deep seeking capability, target conductivity and Treasure Imaging information available from Digital Signal Processor (DSP) circuitry, plus the GTI 1500's ease of handling make this a superb instrument for finding coins.

In addition, target sizing presents a second dimension in discrimination. When you discover a target whose conductivity as shown on the Upper Scale indicates that it might be a coin, check its size. If it's not a B-size target, it's not likely to be a U. S. coin! Small gold coins and antique coins may read A-size.

Whether you choose to hunt for them in a park or on a beach, Garrett's factory-set Coins mode offers discrimination that responds ideally to conditions normally encountered. You may occasionally dis-

cover quantities of specific trash targets that are not being eliminated from detection by factory-set discrimination. You can then use the ACCEPT/REJECT touch pad to eliminate these pesky pieces of junk, no matter which mode you are using. Just move your searchcoil across one of them, watch your Upper Scale for its response and push the ACCEPT/REJECT touch pad. The Lower Scale notch vanishes, and you'll have no more trouble from that type of trash metal. With the GTI 1500 you spend less time digging trash and more time digging coins!

Custom discrimination enables you to design your own coin-hunting mode. Any Custom discrimination selections you make will be retained in the detector's memory, even after the instrument has been turned OFF and the batteries removed.

For literature explaining more about coin hunting see the Recommended section in this manual. An order blank is included or you can call 1.800.527.4011 to place a credit card order.

Relics

Relics of all shapes and sizes can be found with a GTI 1500 when you hunt in its Relics mode. This mode is especially designed to eliminate those nuisance targets most often encountered in relic hunting. You may also want to search in the Zero Discrimination mode, but you must be prepared to dig metallic trash since your detector will sound off on any metal it locates when hunting in that mode.

Whenever you search in an area where relics are known to exist, you can be certain to find them with a GTI 1500.

Gold Nuggets

Gold and other precious metals can be found in various forms with a GTI 1500. You will most likely be searching for gold nuggets, which this detector can locate in streams or dry sand. Since the GTI 1500 is a motion detector, it is capable of finding only somewhat larger nuggets (the size of a BB-pellet and larger).

To locate even smaller nuggets (pinhead-size and slightly larger) Garrett's Scorpion

Gold Stinger is recommended.

It must be emphasized, however, that prospectors, when using the GTI 1500 or any other quality detector usually prefer to operate in the Zero Discrimination detection mode. When prospecting, discrimination may reduce the amount of small nuggets found, but some areas contain so much iron trash that a small amount of discrimination becomes highly desirable, even necessary. You may want to establish a special "notch" to avoid a particular junk metal target that is proving especially bothersome.

Hard work, patience and research are three of the keys to success in hunting for gold with a metal detector. Research is important because it is vital that gold always be sought in areas where it is known to exist.

For literature that will explain more about gold hunting see the Recommended Reading section in this Owner's Manual.

REPAIR SERVICE

In case of difficulty, read this Owner's Manual again thoroughly to make certain your Garrett GTI 1500 is not inoperable because of wrong adjustments or improper operating methods. Your dealer may also be able to offer advice. Remember that computerized circuitry of this detector permits you to restore instantly all of its precise factory settings. Simply hold down the POWER touch pad for five (5) seconds.

When your detector must be returned to the factory for service, always include a letter with the instrument that describes its problem as fully as possible. Include your name, address and a phone number where you can be contacted between 8:30 a.m. and 4 p.m., Central time.

Before you return your detector to the Garrett factory, make certain:

- You have carefully inspected batteries and their alignment. (Check batteries especially closely. They are the most common cause of detector "failure.")

- You have checked with your dealer.
- You have tried to restore factory settings.
- You have carefully packed the detector in its original shipping carton or other suitable box. Make certain that proper insulation or packing material is used to keep all parts secure. Do not ship stems, headphones or armrests unless they are part of the problem. Return any coil that you believe may be causing a problem.
- Ship to Garrett Metal Detectors, 1881 West State Street, Garland, TX 75042. Foreign shipments must be authorized by a local agent or representative.
- You can call Garrett's Customer Service Department (972) 494-6151, if you have further questions.

Please allow approximately one week for Garrett technicians to examine and service your detector after receiving it, plus another week for return shipping. All equipment will be returned UPS or parcel

post unless you give written authorization to ship collect by air parcel post, UPS Blue (air) or air freight.

RECOMMENDED READING

Since your Garrett GTI 1500 is a truly universal detector, all of the RAM books will be pertinent to its use. Of particular interest, however, will be the revised version of Garrett's popular *Modern Metal Detectors*, a basic text that will help you to understand all types of metal detection equipment and how to use them.

A special section of the revised edition is devoted to the use of One-Touch computerized detectors.

For beginners, however, the new edition of *Treasure Hunting for Fun and Profit* will prove especially interesting and helpful.

Where can you hunt? How about ghost towns and deserted structures? You will read about them in Charles Garrett's *Ghost Town Treasures*.

Bob Marx's *Buried Treasures You Can Find* locates thousands of sites where treasure is known to have existed. This fine book also includes much good information

about One-Touch detectors such as the GTI 2500.

You will also be interested in *The New Successful Coin Hunting*, filled with "how to" tips and success stories about coin hunting.

Charles Garrett's pocket-sized, treasure-hunting field guides are also highly recommended. Titles in this informative series include: *How To Find Lost Treasure*; *How To Find Gold: Metal Detecting and Panning*; and *How To Search Sand and Surf*.

Since the GTI 1500 is such an excellent detector for hunting for gold nuggets and ore veins, you will be interested in *You Can Find Gold with a Metal Detector*. All hobbyists are urged to familiarize themselves with this most interesting and exciting aspect of metal detecting.

RAM BOOKS ORDER FORM

Please send me the following RAM books:

(Please indicate number of copies desired.)

___	<i>New Successful Coin Hunting</i>	\$9.95
___	<i>Treasure Hunting for Fun and Profit</i>	\$9.95
___	<i>Treasure Caches Can Be Found</i>	\$9.95
___	<i>Ghost Town Treasures</i>	\$9.95
___	<i>You Can Find Gold with a Metal Detector</i>	\$9.95
___	<i>Buried Treasures You Can Find</i>	\$14.95
___	<i>Gold of the Americas</i>	\$9.95
___	<i>New Modern Metal Detectors</i>	\$12.95
___	<i>Gold Panning is Easy</i>	\$9.95
___	<i>How to Find Lost Treasure*</i>	\$3.95
___	<i>How to Find Gold</i>	\$3.95
___	<i>How to Search Sand and Surf</i>	\$3.95

* Free with the purchase of any other RAM book or Garrett product. If you do not wish to purchase anything but would like a free copy of *How to Find Lost Treasure*, mail \$2.00 for postage/handling to our address. U.S. orders only. For international orders, contact international@garrett.com.

Please send payment to:

RAM Publishing Co.
1881 West State Street
Garland, Texas 75042

(Order form continued on back of this page)

MAIL-IN ORDER FORM

Add \$2.00 for first book, and \$1.00 for each additional book ordered (maximum \$3.00) for handling and shipping charges.

Total for books \$ _____

8.25% Tax (TX/CA residents) \$ _____

Handling Charge \$ _____

TOTAL \$ _____

Payment Options:

Enclosed check or money order

I prefer to order through:

American Express MasterCard

Visa Discover

Card Number: _____

Expiration Date of Card: _____

Phone Number: _____

Signature: _____

Required on credit card purchases

Name: _____

Address: _____

City/State/Zip: _____

SPECIFICATIONS

Detector Type: Very low Frequency, transmitter/receiver, Treasure Imaging and Graphic Target Analyzer for precise target identification, multiple notch discrimination.

Controls: Easy access touch pads

Display: High visibility LCD adjacent to touch pads; data accessible at any angle; backlight.

Detection Frequency: 7.0 kHz, adjustable

Circuitry: Linear transmitter/receiver/filter front end Crystal controlled 13.3 MHz operation

High reliability surface-mount printed circuit board construction

Audio Frequency: 275 to 710 Hz

Batteries: Eight (8) AA

Battery Life: (Approximate)

Alkaline: 25 hrs.

Carbon Zinc: 18 hrs.

NiMH: 20 hrs.

Humidity: 0 to 95% Non-condensing

Temperatures:

Operating: 0° to 130°F.

Storage: -20° to 150°F.

Construction:

High strength glass-filled nylon with handle-mounted control/display panel.

Weight: (With 9 1/2-inch searchcoil) 4 lbs., 2 ozs.

MIND YOUR MANNERS

Filling holes and obeying no trespassing signs are but two requirements of a dedicated metal detector hobbyist. A sincere request that Charles Garrett makes to every user of one of his detectors is that each place searched be left in a better condition than it was found. Thousands of individuals and organizations have adopted this formal Metal Detector Operators Code of Ethics:

- 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 laws, regulations and rules governing federal, state and local public lands.
- I will aid law enforcement officials whenever possible.
- I will cause no willful damage to property of any kind, including fences, signs and buildings and will always fill holes I dig.

- I will not destroy property, buildings or the remains of ghost towns and other deserted structures.
- I will not leave litter or uncovered items lying around. I will carry all trash 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.

TRADEMARKS / PATENTS

GTI 1500, TreasureVision, Graphic Target Analyzer and OneTouch are TM of Garrett Electronics, Inc.

Patent Protection:

Garrett's high tech instruments are protected by one or more of the following

U.S. Patents and other Patents Pending:

5,148,151, 5,138,262, 5,721,489,

4,398,104, 4,423,377, 4,303,879,

4,334,191, 3,662,225, 4,162,969,

4,334,192, 4,488,115, 4,700,139,

4,709,213

Design 274,704 and 297,221

G. B. Design 2,011,852

Australia Design 111,674.

Other patents pending.

All Garrett detectors are manufactured in the United States of America.

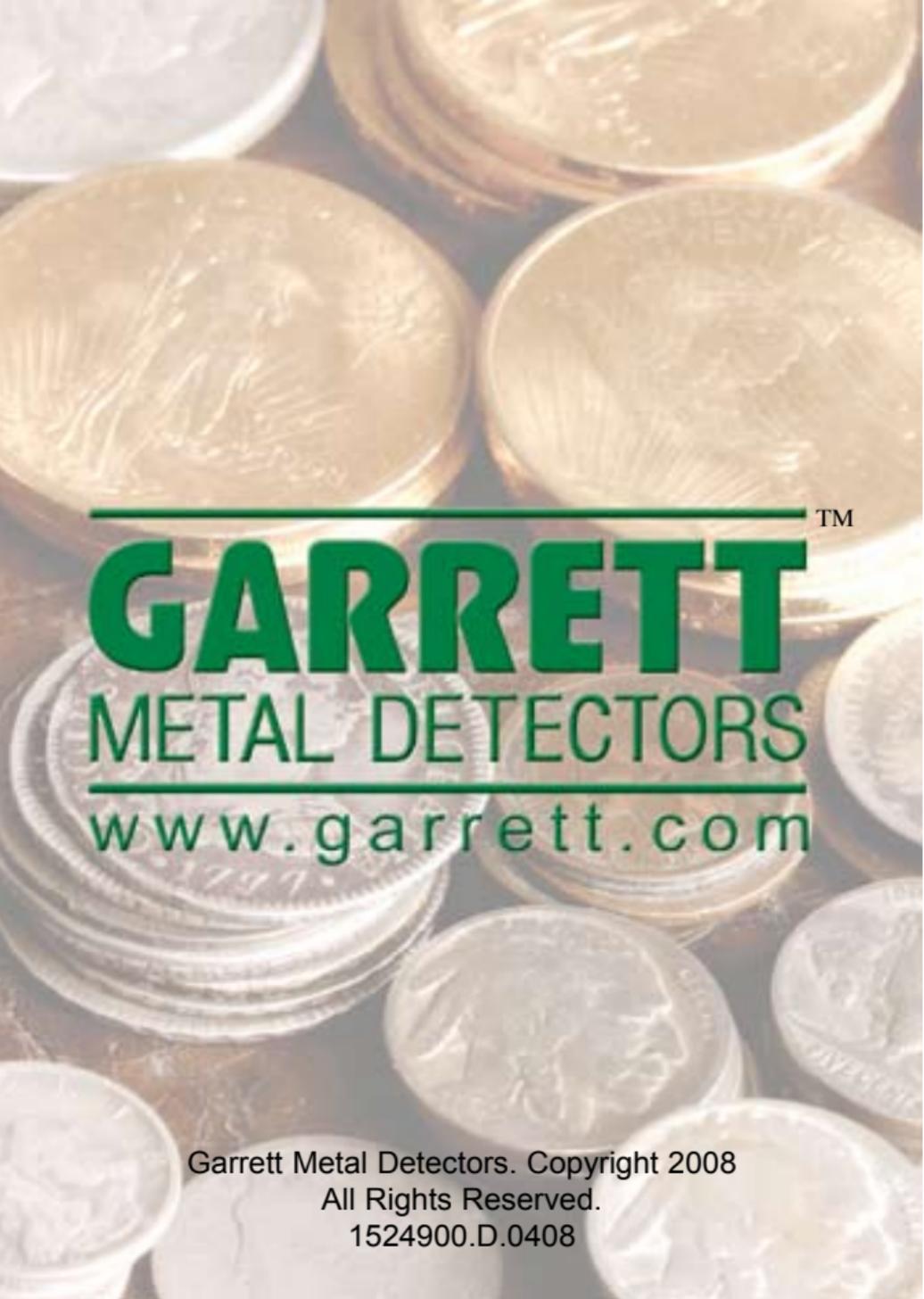
WARNING!

Any metal detector may discover underground power lines, explosives or other items which when struck could cause personal injury. When searching for treasure with your Garrett GTI 1500, observe these precautions:

- Do not hunt in an area where you believe there may be shallowly buried underground electric lines or pipes.
- Do not hunt in a military zone where bombs or other explosives may be buried.
- Avoid striking any line known to be or suspected to be carrying electrical power.
- 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 underground conditions.

Garrett Metal Detectors
1881 W. State Street
Garland, Texas 75042
T: (972) 494-6151
F: (972) 494-1881

1.800.527.4011 (U.S.)
sales@garrett.com
www.garrett.com



TM

GARRETT

METAL DETECTORS

www.garrett.com

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