

# OPERATING INSTRUCTIONS: MASTER HUNTER CX MASTER HUNTER CX PLUS

## ASSEMBLY INSTRUCTIONS:

1. Compress the button ends of the spring clip and insert them, button end first, into the lower stem of the detector so that the button ends pop out of the holes. The spring clip has been installed in the upper stem at the factory. This will enable the stem assembly to be attached to the electronic housing and the over all length of the detector adjusted for a comfortable operating length.
2. Attach the lower stem to the searchcoil by inserting the two rubber washers into the stem and slipping the searchcoil onto the stem. Insert the threaded bolt through the holes and hand-tighten the two knobs.
3. Install the upper stem to the lower and then this assembly to the detector housing by depressing the buttons and coupling the stem to the housing. Adjust for the most comfortable operating length.
4. Wrap the searchcoil cable snugly about the stem with the first turn of the cable over the stem.
5. Insert the cable connector into the connector on the detector housing and hand-tighten securely.

## STARTER PHASE:

### GETTING STARTED:

**SETTINGS:** Make certain the two knobs on the side control panel are dialed to the Initial Setting arrows ( $\Delta$ ). Touch no other controls.

### OPERATION:

1. Grasp the handle of the detector making certain there is no metal nearby, and lower the searchcoil to a level of about one foot above the ground.
2. Press the **Power** touchpad.
3. After you hear the beep, the detector is operating in the Discriminate Mode.

**Note:** The optimum audio threshold level is a faint audio sound which has been preset at the factory. If AudioThreshold adjustment is necessary, Press and Hold the **All Metal** touchpad and press the (+) or (-) touchpads to achieve the preferred threshold sound level.

If the threshold has been adjusted, press the **DISC**riminate touchpad to begin operation in the discriminate mode. Otherwise, you will not have to touch another control during the *Starter Phase* (except the **Power** touchpad to turn the detector off).

### SCANNING:

1. Move the searchcoil from side to side in front of you in a straight line at a speed of one or two feet per second. Walk slowly forward. Don't be in a hurry!
2. Hold the searchcoil level, and try to maintain a constant height of an inch or two off the ground. Skim it lightly over grass, weeds, rocks and other obstructions.
3. Avoid letting the searchcoil swing upward at the end of each sweep.

#### **DISCOVERY:**

1. When your searchcoil passes over an acceptable target, your speaker will produce a pronounced audio signal.
2. Try to locate your target precisely by scanning back and forth over the target to determine where signals are loudest.
3. Notice all indications on the meter above the touchpad and try to identify the target before you dig it up.

**JUNK TARGETS:** When controls are at the Initial Settings ( $\Delta$ ), the detector is programmed not to respond to most junk items. Occasionally, you'll encounter targets that cause the detector to respond with quick, sharp sound – not like the clear, strong signal of a coin. Dig up some of the targets that make irregular “blips;” see how they register on the meter. Learn to recognize them. Because the detector is primarily programmed to hunt coins in this Getting Started Phase, it will also precisely identify small junk targets. Some larger objects such as aluminum cans may present a good audio signal. This is normal.

**TO TURN OFF** your detector, simply press the Power touchpad and all battery power is disconnected.

After you have become acquainted with your detector, re-read and study these instructions. When you become completely familiar with this Master Hunter detector, it can be used effectively to hunt for any kind of treasure.

**AFTER TEN HOURS:** At this point, you have probably noticed some conflicting meter readings in areas with a great deal of metal trash, especially when the meter attempted to analyze two or more targets. Further operating experience with target identification systems will help you understand more about these so-called false readings.

## **CONTROL FUNCTIONS**

### **Touchpads**

Familiarize yourself with the touchpad and knob controls. Their basic functions are given here. How they can help you find treasure is explained in the Operating Instructions of this Manual.

#### **POWER:**

Raise searchcoil approximately one foot above the ground. Press the touchpad once, and the detector begins operating. Approximately three seconds is required to check the batteries, and their condition is indicated on the meter. While the detector is operating, battery condition can be checked at any time by pressing and releasing this pad. Each time the detector is turned on, the battery condition is reported and the detector automatically begins operating in the Discriminate mode.

Press once again to turn the detector off. Special memory circuitry will retain all settings made. Also, the detector will switch itself off automatically when no touchpad is pushed and no target is detected during a period of 10 minutes

### **ALL METAL/FAST TRACK:**

This touchpad serves a dual function. When pressed and released, it places the detector in the All Metal Mode. When pressed and held firmly, the second function, *Fast Track*, is activated. As you begin scanning with the searchcoil in a normal manner, ground balance adjustment is quickly and automatically achieved. Release the touchpad after a double tone is heard. Now, the automatic *Ground Track* system takes over. No further adjustment is necessary, no matter what level of ground mineralization is encountered.

### **PINPOINT - DEPTH:**

Press and hold to activate the pinpointing function of the detector when a target has been discovered. A complete discussion of pinpointing can be found in the Operating Instructions section of these instructions. After you have pinpointed a target and released this touchpad, the meter will indicate the depth of coin-sized targets, and the reading will be highly accurate regardless of the size coil being used. This reading holds for approximately three (3) seconds. The detector then returns automatically, to the operating mode previously selected with the audio threshold you have already set.

### **DISC:**

Press to return to the Discriminate Mode when you have been operating in the All Metal mode. The detector begins operating in the Discriminate mode whenever it is turned on. See more under the "Side Panel Controls" heading.

### **DETECTION DEPTH: (+ and - Arrows)**

Press touchpads to regulate the depth to which your detector will operate effectively. Although the instrument's maximum depth is always desired, this is usually not feasible because of the type of soil over which you are scanning and other conditions. Ground mineralization and other conditions can inhibit the detector's ability to interpret target information. These touchpads permit you to achieve the maximum depth possible in relation to existing conditions. Press (+) to increase detection depth; press (-) to decrease. A single touch and release changes the level in a small increment; a continuous pressing results in a continuous level change. The meter pointer indicates level (minimum to maximum) on the "0-to100" scale. Minimum detection depth is 25; maximum is 100. All Metal mode permits 4 depth settings; Discriminate mode permits 32 settings. These touchpads adjust the depth in either mode that has been selected.

### **AUDIO THRESHOLD:**

It is recommended that you always operate the instrument at a minimum level of sound which will increase sharply when a target is encountered.

Press and hold the All Metal touchpad to regulate the threshold of sound constantly being produced by the detector as it is scanned. Regulate the threshold level with the (+) and (-) touchpads. When headphones are used, it will be usually be necessary to decrease the threshold level since sound is more audible through headphones

### **FACTORY RESET PROCEDURE:**

Any changes that have been made to the detector's factory settings of the Audio Threshold or Detection Depth can be returned to the factory setting level. This is accomplished by Pressing and holding the All Metal touchpad, then press the Discriminate touchpad. Both should then be released.

This reset procedure should also be done when batteries are replaced.

## **Control Functions**

### **Side Panel:**

It is recommended that both Multi-Range Discrimination controls be set at the Initial Settings ( $\Delta$ ).

#### **FERROUS:**

Rotate to eliminate response to bottlecaps, iron, foil and other similarly conductive metals. All objects indicated on the panel to the left of the pointer will not be detected audibly; all objects to the right will be detected and announced with an audible sound.

#### **NON-FERROUS:**

Rotate to eliminate responses to aluminum pull tabs, screw tops and other objects of similarly conductive metals. All objects indicated on the panel to the left of the pointer will not be detected audibly; all objects to the right will be detected and announced with an audible sound.

#### **HEADPHONE JACK:**

Remove rubber plug to connect headphones; always leave plug in place when headphones are not in use.

## **CONTROL FUNCTIONS**

### **Meter--(Master Hunter CX)**

The Master Hunter CX Target Identification Meter provides extensive visual information to the detector operator. Four bands of information plus Battery Check provide the operator with intelligence on ground minerals, detected targets, internal circuitry, and control adjustment monitoring to guide the proper use of the detector.

- ◆ **Battery Check** is activated every time the ON touchpad is pressed. Battery condition is satisfactory when the needle swings clearly into the Battery section (NiCad for rechargeable batteries). It is time to replace batteries (or recharge rechargeables) when the pointer reaches only the 50 to 55 position on the meter.
- ◆ **Coin Depth** band (just above Battery) reads in inches the depth of coin-sized targets. The detector automatically adjusts itself to report this information correctly whenever the **Pinpoint** touchpad is pushed and released, regardless of which size Crossfire searchcoil is used. The target is beneath the center of the searchcoil when the audio is at its loudest and the meter has deflected to the right as far as possible. Large or very deep objects may not be accurately measured or identified.
- ◆ **Color Band (Iron, Gold, Silver)** gives a probable identification of a target, based on relative conductivity. Coins will respond consistently based upon their metallic alloy. This band should be used in association with, not instead of, the **Target Identification Band** (just above) and the target audio.

- ◆ **Target ID Band** indicates probable identification of all targets, whether announced by an audio response or not.
- ◆ **0-to-100 Scale** indicates minimum-to-maximum detection depth settings (don't confuse with coin depth) and provides target information based on conductivity of the metal detected. This will become more helpful as experience is gained. This scale can also be used for identifying foreign coins when traveling abroad. Conduct tests and write down approximate readings for the various denominations.

## **CONTROL FUNCTIONS**

### **LCD Meter--(Master Hunter CX Plus)**

The LCD Target Identification Display on the Master Hunter CX Plus provides extensive visual information for the detector operator. Battery condition is reported continuously while the detector is turned on and information is provided on detected targets that will aid in their recovery.

The Upper Scale provides information about detected targets while the operating mode and battery condition is displayed below.

Coin Depth reads in inches the depth of coin-sized targets. The detector automatically reports this information correctly whenever the Pinpoint touchpad is pressed and released. This is so regardless of the Crossfire searchcoil being used. Large or very deep objects may not be measured accurately.

The LCD indicates the probable target identification of all targets whether announced by audio response or not.

The 0 to 12 Scale is an aid when setting the Detection Depth (Sensitivity) adjustment. Do not confuse this with Coin Depth Reading. This scale also provides target information based on conductivity of the metal detected, information that will become more valuable as experience is gained. Conduct test on various items of interest and note their approximate readings for future searches.

## **CONTROL FUNCTIONS**

### **Batteries**

The Master Hunter Series detectors utilize a battery pack which requires six (6) standard or rechargeable "C" cell batteries. When replacements are necessary, it is recommended that only high quality standard or rechargeable batteries be used. It is advisable to remove the battery pack when the detector is not in use, particularly for a period of weeks. A standard battery pack and optional rechargeable pack can be used interchangeably in the detector. The detector should operate 15 to 20 hours with carbon or rechargeable batteries and a longer time with alkaline batteries.

#### **Checking Condition:**

Battery condition is reported on the Meter each time the Power touchpad is pressed. Carbon or alkaline batteries will indicate in the 90 to 100 range on the meter when new; rechargeable batteries will indicate only in the area marked NiCad.

Batteries should be considered weak when they indicate between 50 to 55 on the meter. They should be replaced when the meter reports them below 50 or when the detector begins making target-like sounds when no target is encountered.

### **Replacement:**

1. Slide cover to the rear and remove completely.
2. Take out battery pack; it is not connected by wire. It may help to turn the detector upside down. Place your hand over the cavity to catch the pack as it slides out.
3. Release the top and remove batteries.
4. Install batteries. Carefully observe polarity of the batteries.
5. Replace cap on pack and insert pack into detector
6. While pressing down on pack, begin sliding in the compartment cover; remove hand and continue sliding until it snaps in place.

Please note that the detector will lose Audio Threshold and Depth/Sensitivity Settings when the battery pack is removed from the detector for more than approximately four minutes.

## **OPERATING INSTRUCTIONS**

**TO BEGIN:** Follow the instructions in the "Getting Started Section" for turning on your detector, checking the condition of the batteries, and setting of the Audio Threshold.

### **MODE DESCRIPTIONS:**

**DISCRIMINATE:** Each time the detector is turned on, it begins operating in the Discriminate mode. In this mode, the **Multi-Range Discrimination** control knobs on the side panel to eliminate detection of various trash targets. Ground balance is automatic in the Discriminate mode. Most operators will generally prefer to use the Discriminate mode, particularly when coin hunting or searching beaches, parks or playgrounds. To return to this mode when hunting in the All Metal mode, simply press and release the DISC touchpad.

**ALL METAL:** Press and release the ALL METAL touchpad to activate this mode. Hunt in the All Metal mode when the greatest depth of detection is sought, as when searching for caches or deep relics. Electronic prospecting will also be carried out in this mode. Because *no discrimination is possible* when using this mode, *all* metal targets will be detected. Use of the meter will give an indication of what kind of metal has been detected and can eliminate some needless digging on shallow targets. Meter identification is less reliable on deep targets.

*Fast Track* ground balancing is accomplished in this mode by pressing and holding the ALL METAL touchpad while scanning the searchcoil for only a few seconds in a normal manner. Release the touchpad and *Ground Track* will continue to track ground minerals and instantly make all necessary adjustments.

**SETTING DISCRIMINATION:** The Master Hunter CX and CX Plus detectors feature dual discrimination controls at the left end of the Side Panel controls. They offer multiple selectivity and the ability to reject and accept targets in both the ferrous (iron) and non-ferrous ranges. The two controls split the full range of discrimination between ferrous and non-ferrous. Detection of iron objects such as nails, some foil, iron bottlecaps and small pieces of junk is controlled by the knob on the left. The one on the right governs discrimination of such non-ferrous items as aluminum pulltabs and screwcaps.

Each of the two controls operates independently. The setting of one has no effect whatsoever on the other. To detect all ferrous materials, rotate the left (FERROUS) control to zero (fully counterclockwise). Advancing the control clockwise to higher numbers and more ferrous materials will be rejected. The control operates cumulatively; that is, setting it at bottlecap rejection, most nails and some foil will be rejected along with bottlecaps. You are urged *not* to advance this control farther clockwise than necessary to eliminate the troublesome ferrous junk material in the ground being searched.

Operate the right (NON-FERROUS) control in the same manner. When it is turned fully to the left, few of the non-ferrous materials will be rejected. To eliminate pulltabs, rotate the control clockwise to the suggested setting for them. Keep in mind, however, that there are many different kinds of pulltabs, and some – especially those that are bent or broken – seem to be acceptable to any detector at any setting. Set the controls for those being found just in the area where you are hunting.

The detector's dual discrimination controls offer a greater dynamic adjustment range and more resolution which enables you to instruct the detector precisely to reject specific junk targets. A most important feature allows the rejecting of most aluminum pulltabs while accepting the majority of gold and silver rings. When searching for rings in a pulltab-infested area such as a beach, set the non-ferrous control no farther than necessary to eliminate most of the pulltabs. Rings with a higher conductivity and greater mass than pulltabs will be accepted. Remember, however, that some rings will fall into the lower, or ferrous, range. Thus, dual discrimination lets you select rings that register both "above" and "below" pulltab rejection. So, don't advance either control any further clockwise than absolutely necessary.

**GROUND BALANCING:** While searching in the All Metal mode, you may find that movement of the searchcoil over the ground causes a noticeable increase or decrease in the sound coming from your detector. If so, you may readjust the ground balance of the detector by pressing and holding the *Fast Track* touchpad while moving the searchcoil from side to side three or four times from one to three inches from the ground. When the sound becomes constant again, release the pad and your ground balancing is completed.

When searching extremely mineralized ground, it is recommended that you operate the searchcoil two inches or more above the ground. You will not lose depth, but will actually detect deeper because ground mineral influence is greatly reduced.

**SEARCHING:** Begin your search for coins or other treasure by lowering the searchcoil to a height of from one to two inches above the ground. Scan in front of you at a speed of one to two feet per second by moving the searchcoil from side to side in a straight line (not an arc). Always try to maintain a constant height. At the end of each scan path, move the searchcoil forward approximately one-half to two-thirds its diameter and scan a path in the opposite direction. This overlapping insures that you do not miss targets.

When any acceptable target is found, the sound level from the detector's speaker or headphones will increase to alert you.

**TARGET IDENTIFICATION:** Target ID and/or conductivity classification of the last target over which the searchcoil passed will be indicated on the meter. In most cases, the type of coin will also be indicated. Encrustation or patina, however, may result in improper classification.

It is recommended that you always dig any weak but audible target signal. It might be a coin just at the edge of your searchcoil's detection range.

**PINPOINTING:** Electronic pinpointing offers greater accuracy in target location. When a target is located, press and hold the PINPOINT touchpad to activate the detector's electronic pinpointing mode. As long as the touchpad is pressed, the detector will operate in this mode. When you encounter a target, place the searchcoil near but not above it as you press and hold the PINPOINT touchpad. Then, move the searchcoil over the target area. When sound is loudest and the meter is at its highest reading, the target will be beneath the center of the searchcoil. Release the touchpad, and the meter will indicate the depth of coin-sized objects as measured from the bottom of the searchcoil. Depth reading is automatically calibrated regardless what size Crossfire coil is used. This depth reading will be held for about three seconds. After you release the PINPOINT touchpad, the detector will automatically return to the mode at which you had previously been hunting.

Practice pinpointing by placing a coin on the ground. Scan over this coin and use the pinpointing technique. Notice how accurately you pinpoint. You should quickly become proficient to within one-quarter of an inch.

**SEARCHCOILS:** The Master Hunter CX or CX Plus may be used with all four Crossfire searchcoils and Garrett's Treasure Hound depth multiplier attachment.

The 8.5" searchcoil, which provides excellent depth and good scanning width is the most popular size used by coin hunters and for general searching over parks, playgrounds and beaches. For an area known to produce coins, rings and jewelry, this searchcoil should be used for initial searching.

The 4.5" "Super Sniper" searchcoil offers the ability to recover coins and other valuable objects from areas with large amounts of buried metal trash or in areas adjacent to such metal as playground equipment, fences and metal buildings. Since Super Sniper coils have a smaller diameter, they can detect fewer targets at a time. This eliminates the possible "masking" effect of junk targets. Electronic prospectors can quite effectively use the Super Sniper when searching for nuggets.

The 12.5" diameter searchcoil is useful for large and deep targets such as those normally encountered in cache and relic hunting. It will also detect coins and other small objects at greater depths than the smaller coils. Many coin hunters will switch to this size when a faint signal heard while using a smaller coil indicates a fringe-area target.

The 10 x 14 inch Power DD coil is a must for searching in moderate and highly mineralized ground conditions. It is excellent for cache and relic hunting but its capabilities are not limited to these areas.

The Depth Multiplier attachment eliminates the need for a separate "two-box" detector and multiplies the depth to which the detector can detect objects that are larger than a fruit jar. The depth multiplier allows the detection of large targets more deeply, and is not bothered by small pieces of metal junk – minimizing unnecessary digging.



The detector automatically identifies that the Depth Multiplier is in use and will allow only the All Metal mode selection. Press the ALL METAL touchpad to return audio to your preset threshold.

## **PROFESSIONAL PHASE**

**COIN HUNTING:** After studying this Owner's Manual very carefully, you will be able to perform more tasks with the Master Hunters and complete them more easily. The following tips represent the experience of a professional with the detectors.

**Deep coin hunting:** For maximum depth and to avoid missing a small or very old coin, set both DISCRIMINATION controls to absolute zero. This will prevent missing an especially old coin that is so oxidized that it will be rejected by any discrimination. If sound becomes erratic, press the (-) DETECTION DEPTH arrow until the sound level out. You are now operating at the maximum sensitivity possible under present ground conditions. The 12.5" searchcoil is recommended for seeking extra-deep coins.

**Caution:** When operating on ocean beaches where salt is found, do not attempt to hunt in the All Metal mode which requires ground balancing. Even though the Discriminate mode automatically adjusts ground balance, we suggest the FERROUS control be adjusted to the approximate *Bottlecap* reject setting. Further, when you are operating at zero discrimination, you are effectively searching in an All Metal mode.

**Hunting in trashy areas:** Use of Garrett's 4.5" Super Sniper searchcoil can aid tremendously in the search for coins in areas with large accumulations of metal trash. Adjust both DISCRIMINATION controls to *maximum* reject – turned fully clockwise to the largest numbers. You will now detect only copper pennies and all silver coins. Press the (-) DETECTION DEPTH arrow until your sensitivity as reported on the Meter is reduced below 50%. This will enable you to operate on top of deep metallic trash without detecting it.

By the combination of decreased sensitivity and increased rejection of junk items it is now possible to find more coins. Although any size searchcoil will perform in this operating procedure, the 4.5" Super Sniper will produce the best results.

**CACHE & RELIC HUNTING:** Operating in the All Metal mode, use the *Fast Track* method to ground balance the detector. Attach the 12.5" searchcoil or the 10 x 14 inch Power DD searchcoil and adjust DETECTION DEPTH touchpads for maximum sensitivity possible (without erratic sound). Operate with the searchcoil approximately four to six inches above the ground (depending on ground mineralization) to eliminate erratic responses from ground minerals and small bits of metal. You will have super sensitivity and detect all targets dime-sized and larger. Caches and relics previously missed or overlooked will now be detected easily.

**ELECTRONIC PROSPECTING:** Even though the Master Hunter CX or CX Plus detector is a universal detector, excellent for prospecting, its very low frequency (VLF) circuitry will not detect some microscopic gold.

**Nugget Hunting:** Using the 8.5" searchcoil, the *Fast Track* ground balance system will leave the detector slightly positive in relation to the ground. This condition makes detection of small

nuggets easier since detectors that adjust slightly negative have a tendency to overlook the smaller nuggets.

**Hot Rocks:** The Master Hunter CX series of detectors will instantly identify both types of “hot rocks” in any search area. Test for them in the following manner. Simply adjust both DISCRIMINATION controls to zero settings and scan in the All Metal mode. When you locate a suspected hot rock, press the DISC touchpad and release; then pass back over the target. If the target is simply a hot rock, it will not respond. If it has sufficient metal content, it will respond as metal. If it is a large gold nugget or non-ferrous metal, the audio will sound. Because small nuggets or other metallic targets sometimes produce no response in the Discriminate mode, it is advisable to use this mode only to test suspected hot rocks that respond loudly and positively to All Metal scanning.

**Searchcoil sizes** will differ according to the area being searched. If your search area is in a dry wash or among large rocks that restrict the use of an 8.5” coil, change to the 4.5” size. When working in areas that have already been searched, your only option is to change to the 12.5” searchcoil or the Power DD searchcoil. Extremely small nuggets may be missed with the larger coil, but the increased depth and sensitivity will permit you to detect deep nuggets that may have been previously missed. Professional nugget hunters know that one nugget of decent size is better than hundreds of microscopic ones.

**Alkaline salt** is heavily present in some rich nugget hunting areas. Attempts to search such areas with metal detectors have met with failure over the years because of the difficulty in ground balancing. However, by using the Power DD searchcoil or the 12.5” searchcoil and searching in the Discriminate mode with the controls at zero, salt is ignored and large nuggets are detected.

Test the detector at zero discrimination with a nugget two pennyweights in size; you will be surprised. Advance the FERROUS control to reject many small iron targets and still read the nugget. Never attempt to operate any large searchcoil too close to heavy salt or extremely negative ground minerals. Maintain an operating height of approximately three to eight inches.

## **OPERATING RECOMMENDATIONS**

As you operate and use your Garrett detector, you will quickly grow more proficient in its use. It is recommended that you build your own test plot. Bury several items, including a nail, a piece of foil, a pulltab, a bottlecap and several coins at depths of about two to eight inches and a foot apart. Clearly mark the location where each article is buried. Practice scanning the targets while listening to and studying the detection signals.

Remember that newly buried objects, especially coins, will be somewhat more difficult to detect than items that have been buried for some time. This is primarily a metallurgical phenomenon. Experiment with various settings of the Trash Elimination controls to see how your detector responds. Practice trying to pinpoint and locate targets precisely.

When scanning, **do not hurry**. Scan the searchcoil at a speed of about one to two feet per second. Keep the searchcoil flat and level to the ground. Move it back and forth slowly and steadily while you walk at a pace that is comfortable. Be methodical. Do not skip any areas. Wear headphones for greater sound perception and concentrate on your scanning.

After you have operated your Garrett detector for only a short time, you will be surprised at how proficient you have become at its use. Do not expect to achieve the greatest accuracy and success, however, until you have operated the detector for at least 100 hours or more.

Good hunting!

## **MAINTENANCE**

- ❖ Always remember that your Garrett detector is a sensitive electronic instrument. It is built to withstand rugged treatment in the outdoors, but you should always handle the detector as carefully as possible.
- ❖ 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 after use, and wash the coil when necessary. Protect your instrument from dust and sand as much as possible.
- ❖ 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 longer than about one month, remove batteries from the detector.

## **REPAIR SERVICE**

In case of difficulty, read this Owner's Manual again thoroughly to make certain your detector is not inoperable needlessly. Your dealer may also be able to offer advice.

When your detector must be returned to the factory for service, always include a letter that describes its problem as fully as possible. Before you return your detector to the Garrett factory, make certain:

- ❖ You have read this Owner's Manual carefully
- ❖ You have checked batteries, switches and connectors. (Check *batteries* especially closely. They are the most common cause of detector "failure".)
- ❖ You have checked with your dealer, particularly if you are not familiar with this type of metal detector.
- ❖ You have included a note with the detector describing the problems you are encountering with this detector and conditions under which they occur. Make certain to include your name, address and a phone number where you can be contacted between 8:30 a.m. and 4 p.m., Central Time.

- ❖ 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 or headphones unless they are part of the problem. Be certain to return all coils, unless the problem is mechanical.
- ❖ Ship to Garrett Metal Detectors, 1881 W. State St., Garland, TX 75042.
- ❖ 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 repair your detector after they receive it, plus another week for return shipping to you. All equipment will be returned UPS or parcel post unless written authorization is given by you to ship collect by air parcel post, UPS Blue (air) or air freight.

## **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 fence, 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.

## **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 Master Hunter, observing 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.

**PATENT PROTECTION:** Proof of Garrett's excellence is the recognition given them by the following United States patents: 4,709,213; 4,488,115; 4,700,139; 4,398,104; 4,423,377; 4,303,879; 4,334,191; 3,662,255; 4,162,969; 4,334,192; 5,148,151; 5,138,262; 5,721,489; 5,786,696; 5,969,528; Design 274,704 and 297,221; Design 333,990; G.B. Design 2,011,852; Australia Design 111,674 and other patents pending.

# OPERATING INSTRUCTIONS: MASTER HUNTERS 5-7, 7X AND 10X

## CONTROL FUNCTIONS

**Power/Depth Detection Knob:** Turn clockwise until switch clicks ON. This engages the battery test and the battery condition is indicated by the meter. If NiCad batteries are used, they will register in section marked NICAD. Rotate clockwise to increase detection depth. NOTE: Beginners operate at the initial setting ( $\Delta$ ) or less detection depth until experience is gained with the detector.

**Tone:** Adjusts tone for preferred sound.

**Audio:** Adjust audio to threshold level (in the Ground Elimination/All Metal mode); operate silent or with threshold in the automatic Ground Elimination/Trash Elimination mode.

**Ground Elimination:** Provides adjustment for eliminating detection of iron ground mineralization when operating in the VLF Ground Elimination, Coin Depth, and Electronic Pinpointing modes.

### **Trash Elimination:**

REJECT: Gives full control over the target discrimination capabilities of the detector.  
DEPTH: Allows operator to select optimum depth potential when operating in the Discriminate (Trash Elimination) Mode.

**Master Control Switch:** The toggle switch on the handle of the detector permits the operator to select between the All Metal (Ground Elimination) and Discriminate (Trash Elimination) operating modes, as well as manually retune the audio threshold.

All Metal:	Press left and release;
Discriminate:	Press right and release;
Coin Depth:	Press left and hold;
Electronic Pinpointing:	Press left and hold.

It is recommended that you operate in the Discriminate Mode (see above) until you become familiar with the capabilities of your detector.

**Auto/Manual:** This small toggle switch by the **Audio** knob selects Automatic or Manual tuning in the All Metal (manual ground balancing) mode only. Automatic operation is recommended, especially for the beginner. (This switch should be in the manual position while tuning the detector, then switch to automatic.)

**Meter:** The Target Identification (classification) meter of your detector provides visual target information. The meter reports the battery condition each time the detector is turned on (see **Batteries** below) and three bands of information provide the operator with data on detected targets to guide their recovery:

- ❖ Upper band indicates probable identity of all targets whether announced by an audio response or not.
- ❖ Color band gives a probable identity of the type target by indicating its relative conductivity. Coins will respond consistently based upon their metallic alloy. This band should be used in association with, not instead of, the Target Identification (Upper band) scale.
- ❖ Lower band reads in inches the depth of coin-sized targets. Large or very deep objects may not be accurately measured or identified.

**Coin Alert:** When operating in the Trash Elimination (Discriminate) mode, a coin alert bell-like tone will be heard when silver or clad coins are detected. This feature is not available to the Master Hunter 5 or 6. It is an automatic function of the Master Hunter 7. This function on the Master Hunters 7X and 10X may be turned off with the toggle switch located on the extreme left of the control panel. When standard audio is selected, detected targets will merely increase the ordinary sound level.

## **OPTIMUM AUDIO LEVEL**

**Automatic Tuning:** Turn detector on with **Power** control. Flip **Auto/Manual** switch to Auto position. Rotate **Audio** control until only a faint sound is heard. This is the optimum audio level of your unit. The detector will now keep itself tuned automatically to the audio level you have just selected. This tuning level will remain the same throughout all operating conditions as long as the switch remains in the Auto position.

**Manual Tuning:** Turn detector on with **Power** control. Flip **Auto/Manual** switch to Manual position. Press the **Master Control** switch in either direction and hold while rotating the **Audio** control to achieve a faint threshold of sound. This is the optimum audio level of your unit. Release the **Master Control** switch. When the **Auto/Manual** switch is in the Manual position, the **Master Control** switch keeps the detector tuned at the level you have selected. Simply press the switch on the detector's handle to the left for one second when you are operating in the All Metal mode. Press to the right for a second to retune when operating in the Discriminate (Trash Elimination) mode. This retuning enables you to reestablish the preset audio level as necessary.

Recommendation: Beginners are advised to use automatic tuning until they have become experienced in the use of this detector.

Note: Some treasure hunters achieve satisfactory performance by operating with their detector audio silent. For optimum performance, Charles Garrett recommends that a faint sound be audible when the detector is searching.

## **OPERATING INSTRUCTIONS**

**Initial Settings:** Your Master Hunter has initial setting points ( $\Delta$ ) located on the control panel. By first rotating the controls to these points, you turn on the detector (with the **Power** knob) and adjust your audio level as described in the description of these controls. As you become more proficient with your detector, you may wish to make additional slight adjustments in the Depth controls in relation to your detector and the ground over which you are hunting.

**Discriminate Mode:** Press the **Master Control** switch to the right and hold for one second to activate the Discriminate (Trash Elimination) mode. When operating in this mode, the Master Hunter detects only selected metallic objects. The following settings are marked on the REJECT control to assist you in selecting the targets you desire:

- ❖ Nails setting will eliminate rusty iron and iron nails.
- ❖ Foil setting will eliminate iron, nails, foil and bottlecaps. Salt water will be eliminated near this setting.
- ❖ Pulltabs setting will eliminate iron, nails, foil, bottlecaps and pulltabs. Nickels will also be eliminated at this setting, along with some rings and many foreign coins and tokens. Test typical trash items before taking your Master Hunter into the field.

Because setting the REJECT control at the higher settings will cause some rings and coins to escape detection, it is recommended that you never rotate this knob any farther clockwise than is absolutely necessary. Full rotation counterclockwise (to the left) will cause most metallic objects to be accepted. As the knob is turned farther clockwise (to the right), more targets will be rejected. As you become familiar with your targets through bench testing (see below), you can remember the rejection settings of your Master Hunter by the numbers surrounding its REJECT control.

Bench Testing enables the operator to learn more about the discriminating capabilities of your Master Hunter before taking it into the field. The following tests should be performed with the searchcoil perpendicular to a bench, floor or other non-metallic surface:

1. Rotate the REJECT control fully counterclockwise. Flip the **Auto/Manual** switch to Manual and press the **Master Control** switch to the right for one second to tune the detector correctly.
2. Bring various metallic targets across the bottom of the searchcoil at a distance of about two inches. Each target will cause the sound to increase. This is true non-discriminating operation.
3. Rotate the control to the 3 or 4 position, and the sound will decrease or cease when small nails are scanned across the bottom of the searchcoil.
4. Rotate the control farther and the sound will diminish as steel bottlecaps are tested. You will note that nails, foil and other small junk items will also be rejected (cause no sound).
5. Rotate the control farther clockwise and pulltabs will be rejected. At this setting you will note that nickels and some rings will also be rejected. The conductivity of this type of target is not great enough to cause to detector to respond when the REJECT control is set at a high number.

Again, never rotate the REJECT knob any farther clockwise than absolutely necessary to eliminate targets you do not wish to detect.

**All Metal Mode:** Press the **Master Control** switch to the left and hold for one second to activate the All Metal (VLF ground balancing) mode. In this mode, the Master Hunter will respond with an increase in sound to the presence of any metal or conductive mineral target beneath its searchcoil. For maximum depth and best operation over highly mineralized ground, always operate in the All Metal mode.



Mineralization can be balanced (canceled out) in the All Metal mode by use of the **Ground Elimination** control. To determine if adjustment is necessary, lower the searchcoil toward the ground, stopping at a height of about two inches from the surface. Make sure no metallic targets are under the coil. When you lower the searchcoil, audio level will either increase, decrease or remain constant. If the sound remains constant, the **Ground Elimination** control is adjusted properly. If the audio level decreases, raise the searchcoil and rotate the **Ground Elimination** control one turn toward the increasing arrow (counterclockwise). Press the **Master Control** switch to the left and release. Lower the searchcoil again. If the audio level now increases, the control has been adjusted too far. Raise the searchcoil. Rotate the control one-half turn clockwise toward the decreasing arrow (clockwise). Press the **Master Control** switch again to the left and release. Continue this tuning process until there is no change or only slight change when the searchcoil is lowered to operating height.

Remember to rotate toward the *increasing* arrow when speaker sound decreases and toward the *decreasing* arrow when the sound increases. Also, remember that this is a 10-turn control and that it might occasionally be necessary for you to turn it several complete revolutions to achieve proper ground balance.

As you search in the All Metal mode, you should occasionally raise the searchcoil, then lower it. If your audio level changes, readjust the ground balance with the **Ground Elimination** control, according to the above instructions. Such readjustment will sometimes be necessary because of the changing concentrations of ground minerals, especially when you are prospecting in gold country.

**Searching:** Scan the searchcoil at a rate of about one to two feet per second. Maintain a one to two-inch searchcoil height above the ground. When you are searching in the Discriminate (Trash Elimination) mode, detection of a metal target within the range you have selected with your **Trash Elimination** controls will be indicated by an increase in sound. (Note for Master Hunter 7 users: Coin Alert belltone will sound when you detect silver or clad coins. Master Hunter 7X and 10X users will have the same results unless the switch has been flipped to deactivate Coin Alert.)

It is neither necessary nor desirable to operate your Master Hunter with the searchcoil held to the ground. The recommended operating height is two inches from the surface. In areas of heavy concentrations of mineral and rocks, it may be necessary (especially with the 12" coil) to operate with the searchcoil held even farther above the surface.

**Recovery:** Whenever your detector locates a target, you must recover it to find what you have discovered. This is accomplished first by *pinpointing*. You can then utilize another function of your Master Hunter for *measuring coin depth*.

Pinpoint targets by first drawing an imaginary "X" on the ground with the searchcoil at the place where maximum sound occurs. You will notice when you are operating in the Discriminate (Trash Elimination) mode that you cannot maintain the detection sound with the searchcoil held completely still above your target. The searchcoil must be moving slightly for you to detect the exact location of your target.

**Electronic Pinpointing:** Precise pinpointing in either mode is available with this feature of your Master Hunter (see **Master Control Switch**). When you press the switch to the left and

hold it there, you can place the searchcoil directly over your target. Move it around slightly, and maximum sound will be heard when the target is directly beneath your searchcoil. When pinpointing, the Master Hunter is operating in an All Metal mode, and you can hold the searchcoil perfectly still with the detector producing a constant sound.

For most effective electronic pinpointing, place the searchcoil on the ground directly above your target. Press the Master Control switch left momentarily and release; press left again and hold. Scan back and forth across the target, maintaining searchcoil contact with the ground. You will notice an even more distinct “blip” sound when the target is directly beneath searchcoil center.

**Coin Depth Measuring:** Measurement over mineralized ground will be most accurate when the **Ground Elimination** control is adjusted properly. Pinpoint targets as directed above, and move the searchcoil off to one side to clear the target. Place the searchcoil directly upon the ground and press the Master Control switch to the left and hold it there as you make a scan across the target. The Meter pointer will indicate coin depth by inches on the lower scale. This reading will hold until you release the **Master Control** switch.

Since the final step in recovery usually entails digging, it is recommended that you use a probe to help locate exactly where to dig. Always make as small a hole as possible. It is quicker, requires less work and makes refilling easier. And, you should always *fill your holes*.

**Meter Discrimination:** Because many professional treasure hunters firmly believe you should dig all targets, they always search in the All Metal mode. Others search in this mode and reject unwanted targets by using their **Meter**. When searching in the All Metal mode, always check your **Meter** on every target. You will learn through experience whether to dig or not.

**Target Audio:** When a metallic object is accepted, the detector’s speaker or headphone sound will increase from your preselected audio threshold level. If your Master Hunter has the Coin Alert feature, a belltone will announce silver coins, most gold coins, larger gold rings and all other targets of high conductivity.

Some rejected targets, however, may cause the 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 when scanning. Another indication of a reject target is an audio signal in one direction as you scan, and no response when scanning from the other direction.

Test typical trash items before operating your Master Hunter to determine what signal your detector will give on encountering them.

## **SEARCHCOILS**

Your Garrett Master Hunter was issued with a searchcoil size suitable for searching for almost any kind of target in any terrain. The optional 12.5” searchcoil is used for seeking large and deep targets; the 4.5” searchcoil is used for especially trashy locations or in tight places where a larger searchcoil will not reach.

When changing searchcoils, *hand-tighten* the knobs only. Never use tools of any kind. You may consider using a searchcoil cover to protect your searchcoil.

## **BATTERIES**

The Master Hunter requires six (6) 9-volt batteries for power. When replacements are necessary, use high quality carbon, alkaline, NiCad or NiMH batteries.

**Battery Test:** Each time the Master Hunter is turned on, the batteries that power its *two* circuits are checked automatically and their status is indicated on the detector's **Meter**. Immediately after the detector is turned on, the pointer on the **Meter** will report on Circuit #1 for approximately one second, then report on Circuit #2. If the pointer rises into the **Battery** section on the lower band of the **Meter**, the batteries are satisfactory. Rechargeable batteries are satisfactory when they test in the NiCad zone on the **Meter**.

### **Battery Replacement:**

1. Open the door on the back of the control housing and pull the battery tray to remove it from the unit.
2. On the side of the tray you will note that four batteries power Circuit #1 (which is always checked first on the meter) and that the other two batteries power Circuit #2.
3. Gently rock the batteries to be replaced and pull them from the tray.
4. Make certain the battery terminals are correctly aligned. Insert and press firmly to snap each battery into place, but *do not force*.
5. Slide the tray back into the detector on its "rails". Press securely to snap it into place, but *do not force*.

Never leave discharged batteries in the tray. Remove battery tray from the detector if it is to be stored longer than one month. Some owners remove the tray whenever the detector is not in use.

## **OPERATING RECOMMENDATIONS**

As you operate and use your Master Hunter, you will quickly grow more proficient in its use. It is recommended that you build your own test plot. Bury several items, including a nail, a piece of foil, a pulltab, a bottlecap and several coins at depths of about two to eight inches and a foot apart. Clearly mark the location where each article is buried. Practice scanning the targets while listening to and studying the detection signals.

Remember that newly buried objects, especially coins, will be somewhat more difficult to detect than items that have been buried for some time. This is primarily a metallurgical phenomenon. Experiment with various settings of the **Trash Elimination** control to see how your Master Hunter responds. Practice trying to pinpoint and locate targets precisely. Use both the manual and the electronic methods of pinpointing.

Before you dig each target, study the meter indication produced by this target. Try to guess what the target is and how deeply it is buried. Then, compare what you actually find with your estimates.

When scanning, *do not hurry*. Scan the searchcoil at a speed of about one to two feet per second. Keep the searchcoil flat and level to the ground. Move it back and forth slowly and steadily while you walk at a pace that is comfortable. Be methodical. Do not skip any areas. Wear headphones for greater sound perception and concentrate on your scanning.

After you have operated your Garrett Master Hunter for only a short time, you will be surprised at how proficient you have become at its use. Do not expect to achieve the greatest accuracy and success, however, until you have operated the detector for at least 100 hours or more.

## **MAINTENANCE**

- ❖ Always remember that your Master Hunter 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 after use, and wash the coil when necessary. Protect your instrument from dust and sand as much as possible.
- ❖ 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 longer than about one month, remove batteries from the detector.

## **REPAIR SERVICE**

- ❖ In case of difficulty, read this Owner's Manual again thoroughly to make certain your detector is not inoperable needlessly. Your dealer may also be able to offer advice.
- ❖ When your Master Hunter must be returned to the factory for service, always include a letter that describes its problem as fully as possible. Before you return your detector to the Garrett factory, make certain:
  - ❖ You have checked batteries, switches and connectors. (Check *batteries* especially closely. They are the most common cause of detector "failure".)
  - ❖ You have checked with your dealer, particularly if you are not familiar with the Master Hunter or ADS type detector.
  - ❖ You have included a note with the detector describing the problems you are encountering with this detector and conditions under which they occur. Make certain to include your

name, address and a phone number where you can be contacted between 8:30 a.m. and 4 p.m., Central Time.

- ❖ You have carefully packed the Master Hunter 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 or headphones unless they are part of the problem. Be certain to return all coils, unless the problem is mechanical.
- ❖ Ship to Garrett Metal Detectors, 1881 W. State St., Garland, TX 75042.
- ❖ 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 repair your detector after they receive it, plus another week for return shipping to you. All equipment will be returned UPS or parcel post unless written authorization is given by you to ship collect by air parcel post, UPS Blue (air) or air freight.

## **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 fence, 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.

## **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 Master Hunter, observing 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.

**PATENT PROTECTION:** Proof of Garrett's excellence is the recognition given them by the following United States patents: 4,709,213; 4,488,115; 4,700,139; 4,398,104; 4,423,377; 4,303,879; 4,334,191; 3,662,255; 4,162,969; 4,334,192; 5,148,151; 5,138,262; 5,721,489; 5,786,696; 5,969,528; Design 274,704 and 297,221; Design 333,990; G.B. Design 2,011,852; Australia Design 111,674 and other patents pending.