OPERATING INSTRUCTIONS:
GRAND MASTER HUNTER

STARTER PHASE

SETTINGS: Make certain the two knobs on the side control panel are dialed to the Initial Setting arrows (∆) and your audio control points straight up at 12 o'clock.

OPERATION:

1. Grasp the handle of your Grand Master and place the searchcoil lightly on the ground.
2. Make certain you are three or four feet away from any metal object.
3. Press the ON touchpad.
4. After you hear two beeps, you are operating in the Discriminate Mode. You will not have to touch another control in the Starter Phase.

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 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: In the Discriminate Mode, your Grand Master is programmed automatically at the Initial Settings 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 Discriminate Mode is primarily designed for coin hunting, your Grand Master precisely identifies small junk targets. Larger objects such as aluminum cans may present a good audio signal. This is normal.

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

AFTER TEN HOURS: Proceed to the next section and begin advancing into the Professional Phase.

CONTROL FUNCTIONS

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.

ON – BATT CK:

Raise searchcoil approximately two feet above the ground. Press the ON touchpad once, and the Grand Master 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 momentarily pressing this button. Each time the detector is turned ON, the detector checks its batteries and its internal circuitry, monitors the environment (outside electrical interference), determines the signal-to-noise ratio and sets detection depth to the maximum (optimum) level.

DISC:
Press to select Discriminate Mode. The detector automatically resets the audio tuning threshold to your predetermined level. In this mode, ground balancing is maintained automatically.

PINPOINT:
With the searchcoil on or near the surface being scanned, and as you scan from side to side or back and forth across the target, press and hold this touchpad for accurate pinpointing of target, which will be indicated at the point of loudest sound and highest meter reading. Raise the searchcoil a few inches above the ground (or sideways where there is no target) and release the touchpad. The meter will indicate depth of coin-sized targets. The Grand Master Hunter then returns automatically to the operating mode previously selected. It tunes itself to your pre-determined tuning threshold.

ALL METAL:
Press to select the All Metal Deepseeking Mode. The detector automatically resets the audio tuning threshold to your predetermined level.

OFF:
Press to turn Grand Master off; manual (touchpad) depth (sensitivity) and ground balance settings will be lost. An “Automatic Off” feature switches power off when no touchpad is pushed and no target is detected during a period of 10 minutes.

FERROUS DISCRIMINATION ADJUST:
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; all objects to the right will be detected.

NON-FERROUS DISCRIMINATION ADJUST:
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; all objects to the right will be detected.

AUDIO ADJUST:
Rotate to select the minimum audio level that you can hear. This is your personal “threshold” sound level. This low setting assures the Grand Master Hunter’s optimum performance. It may be necessary to manually reset each time you change between loudspeaker and headphones. Headphones do not require as much volume as a loudspeaker.

DETECTION DEPTH:

In All Metal and Discriminate Modes, the touchpads permit you to override the automatically set detection depth level. Press (+) to increase detection depth; press (-) to decrease. A momentary pressing 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.

INITIAL SETTING:
Pertains to recommended settings (∆) of Multi-Range Discrimination controls.

HEADPHONE JACK:
Remove rubber plug to connect headphones; always leave plug in place when headphones are not used.

GROUND BALANCE:
These touchpads are functional only in the All Metal Mode. AUTO RESET activates the computer ground soil analysis and automatically adjusts internal circuitry to cancel the effects that mineralized soil has on the detector. When more precise ground balancing is required, the touchpads marked + and – allow overriding of the automatic circuitry as explained under the heading "To Ground Balance" in the Operating Instructions section.

METER:
The Grand Master Hunter's 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 instrument.

- **Battery Check** reports condition of rechargeable batteries in the section marked NiCad. Condition of all other type batteries is reported in the other section. It is time to replace batteries when the pointer can only reach the lower (left) end of the respective battery section.
- **Lower Band** reads in inches the depth of coin-sized targets. Large or very deep objects may not be accurately measured or identified.
- **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.
- **Upper Band** indicates probable identity of all targets whether announced by an audio response or not.
- **0-to-100 Scale** indicates ground conditions and acts as an aid when manually setting ground balance (See "To Ground Balance" in Operating Instructions section). It indicates minimum-to-maximum detection depth settings (don't confuse with coin depth) and the calibrated set point (Ore Test Cal.) for ore sampling (high grading).

CALIBRATION CONTROL PANEL

Access: Slide the battery cover back slightly to expose the Calibration Control Panel when adjustments are necessary in Tone and/or Frequency.

Tone Control: Use a small pointed tool to adjust the audio tone control dial (located below the long slot on the left) to preferred pitch.

Frequency Adjustment: Flip one or both of the two rocker switches (below the larger opening on the right) to modify the operating frequency of your detector. This might be necessary when two or more Grand Master Hunters are being used so close together that they "talk" to one another. The combination of two switches permits selection of as many as four different operating frequencies. Outside interference can also cause a "warble" sound when the detector is in All Metal Mode. When such a "warble" is heard, push one of these Frequency switches.

OPERATING INSTRUCTIONS

TO BEGIN: Before operating the Grand Master Hunter, set all controls to Initial (∆) or your preferred settings. Press the ON touchpad and the detector begins a three-second test cycle. An audible tone indicates that battery condition is displayed on the meter, and the detector is ready to operate. Battery condition can be checked at any time by pressing this touchpad. Rotate the audio control to achieve a faint sound or if you prefer silent operation, turn the control until speaker (or headphones) just becomes silent. You are now operating in the Discriminate Mode. If the two Discrimination knobs are set to the Initial Setting (∆), the Grand Master will automatically eliminate detection of nails, foil, bottlecaps and pulltabs. It will also cancel (ground balance) ground mineralization. Operate in this mode until you become familiar with the Grand Master Hunter.

TO SET DISCRIMINATION: The Ferrous Range and Non-Ferrous Range controls may be set to the Initial Settings (∆) or to levels that are found acceptable for the area being searched. To reject steel bottlecaps turn the Ferrous knob to the Initial Setting (∆). The Grand Master Hunter will continue to accept all ferrous range targets of more conductive metal such as nickels and most thin gold and platinum rings by responding with an increase in sound.

- To reject aluminum pulltabs set the Non-Ferrous knob to the Initial Setting (∆). The Grand Master Hunter will continue to accept all non-ferrous range targets of more conductive metals, such as large gold rings and all coinage by responding with Garrett's unique Belltone.
- At these initial settings (∆), the detector will accept all coins and most rings while ferrous trash and pull tabs are eliminated. Because of their small size and/or allow, it is possible that a few rings and other pieces of jewelry that are normally detected at or near pulltab acceptance may not be accepted. Experience will enable the operator to adjust discrimination for individual preferences and trash conditions.
- The differing audio responses, whether an increase in sound volume or the Belltone, will identify targets as being in the ferrous or non-ferrous range, respectively. Because the Grand Master will respond audibly to targets deeper than will be identified on its meter, targets indicated by audible signals should be dug, even if no indication is given on the meter.

TO ADJUST SOUND: The audio (sound) level is set by adjusting the Audio Threshold knob on the side control panel. To achieve the greatest depth of detection, a faint sound should be maintained at all times although silent operation is acceptable. Silent operation is achieved by decreasing the sound from the faint level until the audio just goes silent. In the Discriminate

Mode, the AUTO and MANUAL touchpads are inoperative. The detector automatically retunes itself to maintain the selected audio level.

When the All Metal Mode is being used, the operator can select either AUTO or MANUAL retuning. In AUTO retuning, the operator makes no readjustment of the knob except, perhaps, to reset threshold level when switching between headphone and loudspeaker operation. When MANUAL retuning is desired, the operator may need to press occasionally the ALL METAL touchpad on the Meter/Control Console to maintain the preset audio threshold.

TO PINPOINT TARGETS and MEASURE DEPTH: When a target is located, if more precise pinpointing is desired, press and hold the PINPOINT touchpad to activate the Grand Master's electronic pinpointing mode. Electronic pinpointing is activated **only while the touchpad is being pressed**. To pinpoint a target, place the searchcoil on or just above the ground. Depress the pad and move the searchcoil across the target. When the sound is loudest and the meter is at its highest reading, the target will be beneath the center of the searchcoil. Lift the coil off the ground away from the target and 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 calibrated for the 8.5" coil; depths indicated when a different searchcoil is used will be less accurate. When the PINPOINT touchpad is released, the Grand Master Hunter will automatically return to the mode in which it had been operating, and the depth reading will hold for approximately three seconds.

TO CHANGE MODES: When the Grand Master Hunter is turned on, it automatically selects the Discriminate Mode of operation. Touch the ALL METAL touchpad and the instrument immediately begins operating in its All Metal Mode, seeking all items made of metal. There is no discrimination. Any item found by the detector will be indicated by an increase in sound. There will be no Belltone. When using the All Metal Mode, it may be necessary to ground balance the detector.

TO GROUND BALANCE: The Grand Master Hunter should be properly ground balanced for optimum operating results when hunting in the All Metal Mode. For example, the detector's electronic pinpointing is more precise when proper ground balancing is achieved. The following instructions are given for proper ground balancing:

1. Raise the searchcoil to about waist height and press the AUTO RESET touchpad.
2. Wait as the meter scans from low to high.
3. Following the audible tone, lower the searchcoil to the operating height and watch the meter scan downward and stop at the appropriate ground balance setting. This will be indicated by a second audible tone.
4. The detector is now properly ground balanced and will ignore all but the most intense mineralization without further action required by the operator.

If extremely dense earth mineralization causes the audio to change during use, you may decide to ground balance more precisely. If the audio **decreases** when the searchcoil is being lowered, raise the coil, press the Ground Balance Manual Reset (+) touchpad once and lower the coil. If no audio change occurs, the detector is precisely ground balanced. If the sound level **increases**, raise the coil, press the Ground Balance Manual Reset (-) touchpad once and lower the coil. Note the response each time the coil is lowered and press the appropriate pad one time until a constant sound level is attained during lowering of the coil. Precise ground balancing of the Grand Master Hunter will give you the greatest efficiency of operation.

Occasionally, during your search in the All Metal Mode, changing ground conditions will require (+) or (-) adjustments.

TO SEARCH: Begin your search for treasure by lowering the searchcoil to a height of from one to two inches above the ground and scan in front of you at a speed of one to two feet per second. Scan the searchcoil side to side in a straight line, maintaining a constant height. At the end of each scan path, advance the searchcoil from one-half to two-thirds its diameter and scan a path in the opposite direction. This overlapping insures that you do not miss targets.

TO TURN THE DETECTOR OFF: Push the OFF touchpad. All power is shut off. **Note:** If no control on the detector has been used and no target has been detected during a period of 10 minutes, the detector shuts off automatically. This is designed to help eliminate run-down batteries and battery acid leakage that sometimes results when battery-powered equipment is inadvertently left on.

OPERATING TIPS

(Restatement of Mode Characteristics)

ALL METAL MODE: Use to obtain the greatest depth penetration and detection of all targets. Before digging, you may wish to evaluate targets using the Discriminate Mode. In mineralized soils the Ground Balance must be properly adjusted for effective operation.

DISCRIMINATE MODE: Provides probability and/or conductivity identification of detected objects. No ground balancing adjustments are required.

TARGET IDENTIFICATION: Target ID and/or conductivity classification of the last target over which the searchcoil passed will be indicated on the meter. In the case of most coins, the exact type will be indicated. Encrustation or patina, however, may result in improper classification.
The meter will move to the left “out of target ID range” for the following reasons:
1. The target is buried deeper than the identifying range of the meter.
2. The target is too small to analyze accurately.
3. The target is too large or too near the searchcoil to be analyzed accurately.

PINPOINTING: Electronic pinpointing offers greater accuracy in target location. For greatest accuracy, the Grand Master should be properly ground balanced, particularly when being used over highly mineralized ground. A thorough explanation of pinpointing is given on Page 20 of this Manual. Learn proper ground balancing to achieve increased recoveries.

DEPTH: The detection depth (sensitivity) level of the All Metal and Discriminate Modes is set automatically each time that the detector is turned ON from its OFF position. The detection depth level of the two modes operate independently.

The Grand Master Hunter circuits automatically adjust to maximum detection depth which permits stable and static-free operation. The meter pointer indicates on a 0-to-100 scale the level set. The operator can override the automatic setting by pressing either the (+) or (-) touchpad which will, respectively, increase or decrease detection depth. The pointer will

indicate manual override changes. A single pressing of either touchpad results in an incremental change. A continuous pressing results in a continuous change until the touchpad is released. It is possible that erratic operation may result if override levels are selected by the operator.

DISCRIMINATION: Dual full range controls permit discrimination to be set at any desired level and combination. Normally, the Initial Settings (∆) are used. For additional discrimination rotate the knob clockwise, for less discrimination, counterclockwise.

To set the detector to precise pulltab rejection rotate the Non-Ferrous control knob to the designated pulltab setting on the dial. It is best to do this with the detector on a table with the searchcoil extending into the air at least two feet away from all metal. Scan a pulltab across the bottom of the searchcoil about two inches away. If sound increases, the knob should be rotated slightly farther counterclockwise. Rotate this control no farther than necessary to eliminate audio detection of the pulltab. Remember that there are many kinds of pulltabs; calibration for one type may not work for others.

AUDIO DISCRIMINATION NOTES: Some “reject” targets when brought within an inch of the bottom of the searchcoil produce a positive sound. Do not be concerned because this is normal. During most searching your coil will be at least an inch above the ground, and all items eliminated from detection will produce no increase in sound.

It is possible, however, that some unwanted targets may produce a static-like sound when the searchcoil is scanned across them. This could be because of their type, orientation in the ground, mineralization or other reasons. At first, you will want to dig up a few of these erratic-sounding signals to assure yourself that the targets are indeed junk. You will soon learn to pay no attention to such sounds and dig only targets that produce clear, sharp increases in sound or the coin alert Belltone.

ORE SAMPLING: To determine the conductivity (predominance of metal and mineral) of an ore sample, use the Ground Balance + and – touchpads on the side control panel to adjust the detector to the calibrated point on the meter indicated Ore Test Cal. Perform ore sampling tests in the All Metal Mode. Move rock samples in toward the bottom of the searchcoil. An increase in sound indicates that conductive material (gold, silver, copper, etc.) is present in a particular sample.

COIN ALERT: When operating in the Discriminate Mode a coin alert bell-like tone will be heard when all non-ferrous range acceptable targets, including most coins, are detected. This is an automatic function.

ARM REST INSTALLATION: Hand tighten two the screws on the bottom; use no tools.

SEARCHCOILS: The Grand Master Hunter may be used with three searchcoils, 4.5”, 8.5” and 12.5” diameter, and a 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 general searchers. For an area known to produce valuable coins, rings and jewelry, this searchcoil should be used.

The 12.5” diameter searchcoil is useful for large and deep targets such as those encountered in cache and relic hunting. A depth multiplier attachment is available that multiplies the depth the Grand Master Hunter can detect objects that are larger than quart-sized. Cache and relic hunters find this attachment particularly useful in their searching.

A 4.5” “Super Sniper” searchcoil is available to provide the ability to recover coins and other treasures from high junk or worked-out areas and areas adjacent to playground equipment, fences and metal buildings. Since Super Sniper searchcoils have a small diameter, they more easily detect individual targets; thus, to a good extent, they eliminate the masking effect of junk targets. Electronic prospectors can quite effectively use the Super Sniper in their search for nuggets and when ore sampling.

BATTERIES

The Grand Master Hunter utilizes 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.

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. Depress four latches to release the top and remove batteries.
4. Install 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.

Recharging:

1. Slide back the battery door to clear the charging jack.
2. Plug in the connector.
3. Charge overnight or a minimum of twelve hours to restore a completely discharged rechargeable pack. Recharge power is 110v. 60Hz. If another voltage source is the only power available, an appropriate converter must be used. Otherwise, the rechargeable system will be destroyed.

CAUTION: Use only high quality batteries. **Do not attempt to recharge non-rechargeable batteries.**

DETECTOR MAINTENANCE

Your Grand Master Hunter is a sensitive electronic instrument. Although it is built to be rugged, care in transporting and handling will extend its life and result in optimum operating performance.

TEMPERATURE: The Grand Master Hunter is designed to operate under normal temperature conditions almost anywhere in the world. It will perform satisfactorily at temperatures as low as 10 degrees Fahrenheit and over 100 degrees Fahrenheit.

Do not expose the detector to temperature extremes, such as carrying it or storing it in an automobile trunk in hot weather or storing it outdoors in extremely cold (sub-freezing) weather.

ENVIRONMENT: The Grand Master Hunter is designed to operate satisfactorily in mist or light rain and in blowing dust or sand. The detector must be protected during periods of heavy rain, and the housing of the instrument cannot be submerged in water under any conditions.

WATERPROOF COIL: When properly connected, the coil of the Grand Master Hunter (or any Garrett detector) can be submerged in either salt or fresh water to a depth of approximately 30 inches or just below the connector. Exact depth will depend upon how the cable is wound. When submerging the coil, be careful not to submerge any part of the detector housing or the searchcoil connection.

CLEANLINESS: Keep your detector as clean as possible at all times. Wipe the housing and coil after each use and wash the coil as necessary. Protect the instrument from unnecessary dust and sand as much as possible. Disassemble the stem and wipe clean after use in sandy areas.

STORAGE: For periods of storage longer than approximately one month, remove the batteries from the battery compartment.

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 it 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 that 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:

GRAND MASTER HUNTER CX III

ASSEMBLY INSTRUCTIONS:

1. Compress the button ends of the spring clip and insert, button end first, into the lower stem of the detector so that the button ends pop out of the holes. The spring clip is installed at the factory in the upper metal stem. 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.

CONTROL FUNCTIONS
Touchpads:

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

Power/ Hold to reset:

- Turns the detector on;
- Turns the detector off;
- Returns the detector to factory settings.

Raise searchcoil approximately one foot above the ground. Press the touchpad once, and the detector begins operating. Each time the detector is turned on, the battery condition is reported on the detector's LCD Display and the detector automatically begins operations 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

SELECT:

Allows the operator to scroll through the following menu items to permit making manual adjustments for personal preferences:

- **Mode**
- **Depth(Sensitivity)**
- **Threshold (Audio Level)**
- **Tone**
- **Volume**
- **Frequency**
- **Talk (Voice)**
- **Battery Indicator**

Also displays these functions to be turned **ON** and **OFF** by using the + and - touchpads in the *Motion mode only.*

- **Surface Elimination**
- **Belltone**
- **Bi-Level**
- **(Audio) Boost**

In the *Non-Motion mode* the following functions are adjusted.

- **Manual Ground Balance**
- **Ground Track**
- **Automatic Threshold**
- **VCO**

NON-MOTION(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, the *Fast Track* Ground Balancing function is activated when the Non-Motion mode Is being used .

SET Disc ACC/REJ:
Functions in the Motion mode only. Permits acceptance or rejection of specific targets to establish discrimination notches as shown on the lower scale.

PINPOINT - DEPTH:
Press and hold to activate the pinpointing function of the detector when a target has been discovered. This function operates in either mode and causes the depth of coin-sized targets to be displayed on the lower scale. A complete discussion of pinpointing can be found in the Operating Instructions section of these instructions.

OPERATE:
Returns to the hunting mode after any change or adjustment of controls.

MOTION (Last Mode):
Returns the detector to the last *previously* used operating mode.

+ and -

- Permits alternation between the 6 operating modes;

- Permits adjustment of levels of *Depth, Threshold, Tone, Volume, Frequency, and Talk* in the Motion and Non-Motion modes and *Surface Elimination* in the Motion mode only;
- Activates (+) or turns off (-) *Ni-Cad* battery gauge in both modes, *Belltone, Bi-Level,* and *Audio Boost* in the Motion mode and *Ground Track, Automatic Threshold* and *VCO* in the Non-Motion mode;
- Moves LCD segments in the upper scale when discrimination is being set in the Motion mode;
- Permits adjustment to be made that achieve precise manual ground balancing in the Non-Motion mode.

Control Information
Graphic Display:

1. **Target ID Guide**
   At the top of the control panel coin denominations are listed for use with the Target Cursor to indicate probable target identification.
2. **Upper Scale**
   - Indicates target discovered
   - Indicates target strength in Pinpoint
   - Indicates levels of control setting
3. **Lower Scale**
   - Discrimination segments indicate notches
   - Indicates coin depth

Treasure Talk:

This function provides spoken information to assist in setting the detector and finding targets. Four levels of Talk enable you to specify the activity of this function.

- **Off:** Treasure Talk will operate only when the display panel cannot convey the necessary information.
- **A:** Allows voice prompting only when the detector is being adjusted using the Select touchpad.
- **B:** Allows voice prompting both when selections are being made and when coin depth information is available as Pinpoint touchpad is released.
- **C:** Provides voice prompting at all times, including Upper Scale ID numbers.

Getting Started:

To Begin

- Grasp the handle of your detector and lower the searchcoil to a level about a foot above the ground.
- Press and release the Power Touchpad and Treasure Talk will inform you that the detector is ready to operate and is in the Coins mode.
- The LCD Display shows the mode and the features that are presently active.
- Using the information stated previously in the Control Functions section, changes may be made as desired to the settings if desired.

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 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 the searchcoil passes over an acceptable target, the speaker will produce a pronounced audio signal and voice report, if voice is activated.
2. Try to locate the target precisely by scanning back and forth over the target to determine where signals are loudest.
3. Notice all indications on the LCD Display above the touchpad and try to identify the target before digging it up.

JUNK TARGETS: When the detector is at the factory-set Motion (Coins) it 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, the voice will say "Power Off" 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 the Grand Master Hunter CX lll, you will find it can be used effectively to hunt for any kind of treasure.

AFTER TEN HOURS: At this point, you have probably noticed some conflicting readings in areas with a great deal of metal trash, especially when the display 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.

SPECIAL NOTE ABOUT SETTINGS:

If you are ever unsure about the settings of your detector, press and hold the Power touchpad for 10 seconds or until the voice prompt informs you that the factory settings have been restored.

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HEADPHONE JACK:

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

MODE SELECTION AND ADJUSTMENTS:

Motion Operating Mode:

In the motion (Discriminate) mode the CX lll functions as a slow-motion detector with precise ground balance. Automatic circuitry requires that the searchcoil be moving to cause an audio

target response. In this Motion Mode you can press **Select** and use the **+** touchpad to rotate through six different modes of detection. When a particular mode is selected it will be lit constantly and the others five will be flashing. Press **Operate** to begin hunting or **Select** to move to another control selection.

Coins: Discrimination is preset to eliminate detection of lower conductivity trash items such as pulltabs and bottlecaps.

Beach: Specifically designed to eliminate salt and trash targets normally associated with hunting at the beach.

All Metal: No discrimination is programmed into this mode, so essentially every metal target will give an audio response.

A,B, C: These modes are designed to be user-set. Through the use of the **Acc/Rej** touchpad they can be modified for an individual's preference. The settings made to these three modes will be retained when the detector is turned off.

Note: When the detector is turned off and then back on, it will begin operating in the mode previously in use.

Non-Motion Operating Mode:
In this mode there is no discrimination. When turning the detector on, or switching to this mode the *Fast Track* feature will automatically ground balance the detector and *Ground Track* will keep it continually ground balanced.
Hunt in this mode when you desire the greatest depth and recognize that all metal targets will be reported audibly.

OPERATIONAL SETTINGS

Press **Operate** to set your changes after they have been made.

Motion Mode: (All changes will be reported audibly by the detector's voice function and all adjustments are made using the (+) or (-) touchpads).

Depth (Sensitivity): Use the (+) or(-) touchpads to adjust the depth (Sensitivity) from your current setting. The changes will be shown on the Upper Scale of the LCD Display.

Threshold: Increase or decrease this setting by use of the (+) or (-) touchpads. A minimum audio sound is generally preferred.

Tone: Allows adjustment of the audio pitch. Adjust for the tone that suits your hearing. Again, increase or decrease the tone level by use of the (+) or(-) touchpad.

Volume: Using the (+) or(-) touchpads adjustments may be made to the maximum volume produced when a target is encountered. This does not affect the audio threshold setting previously discussed.

Frequency: This detector has eight (8) detecting frequencies. When electronic interference from ambient conditions or those from nearby detectors cause static or erratic operation use

of another frequency generally will solve the problem. Use the (+)or(-) touchpads to change frequencies after selecting this function for adjustment.

Surface Elimination: After selecting this function use the (+) or(-) touchpad to increase or decrease the elimination range from the searchcoil. A maximum of 4 inches of surface elimination is available. All targets in this range will be ignored, so use this function wisely.

Belltone: The Belltone coin alert will signal the operator with a special ringing sound whenever a target of high conductivity has been located. This ringing sound is active only for targets equal in conductivity to copper cents and above. This function is turned on or off by using the (+) or (-) touchpad.

Bi-Level: Two noticeably different audio sounds are produce when this function is turned on. A standard audio response is given for all targets of a high conductivity than that of a US nickel. Nickels and lesser conductive targets cause a lower audio tone. This function is turned on or off by use of the (+) or (-) touchpads.

Boost (Enhanced Audio): This selection is designed to improve the fidelity of faint signals and is used primarily when signals are scarce and/or faint signals are suspected. After selecting this function use the (+) or (-) touchpad to select operation. When Boost is blinking the function is off. Additionally, this will be reported by Treasure Talk.

Talk: Use of this function allows the operator to select the level of Talk desired using the (+) or (-) touchpads.

Overload: This word will blink on the lower right side of the LCD Display when the detector encounters an exceptionally large target fairly near the searchcoil.

Battery Type: By use of the (+) or(-) touchpad the type of battery being used is selected. The scale is automatically adjusted for correct reporting of the battery power available.

Audio Warning: This audio sound will occur only if while making changes or adjustment a "wrong" touchpad is pressed.

Additional Information: All personal preference adjustments selected will be retained when the detector is turned off, even when the batteries are removed. However, all changes made to the Motion factory-set modes of All Metal, Beach, and Coin will be deleted and those modes will return to the factory-set default settings.

The detector must be turned off when the batteries are being replaced.

OPERATIONAL SETTINGS
Non-Motion Mode: (All changes will be reported audibly by the detector's voice function and all adjustments are made using the (+) or (–) touchpads)

The following list of control functions is used in both operating modes. Instructions for their use can be found above.
Depth (Sensitivity)
Threshold

Tone
Volume
Frequency
Talk

Manual Ground Balance: This function will be used rarely due to the detector's internal circuitry and the *Ground Track* automatic ground balancing method is usually quite satisfactory. However, when Manual Ground balance is desired, make certain that the *Ground Track* function is turned OFF, then press the **Select** touchpad and scroll to the *Man Grd Bal* is displayed. Raise the searchcoil a foot or more into the air and then lower it toward the surface to operating height. Listen closely to the audio sound. If the sound increases press the (–) touch pad one or twice. Raise the co and then lower it again. Do this until the audio sound remains the same or changes only very little. If the sound decreases the some procedure is done using the (+) touchpad. When the audio sound has little or no increase or decrease press operate to begin hunting or select to move to another function.

VCO: This feature helps identify deep targets and aids in pinpointing. For small or deep targets the sound level will increase, for larger and targets closer to the surface both the sound level and the tone will increase. To turn this function on press the (+) touchpad when the VCO designation is blinking.

Ground Track: This function of the detector permits the circuitry to maintain optimum ground balance at all times regardless of how mineralization beneath the searchcoil or other conditions might change. To turn this function off as mentioned in the Manual Ground Balance instructions, press select to locate the function and the (-) touchpad to turn it off. As with all the detector function, the voice capability of the detector announces the feature's status, level of operation, and if it is selected for operation or not.

Automatic Threshold: This function permits the circuitry of the detector to maintain a constant audio threshold level regardless of changing ground conditions The feature is turned on or off by using the (+) or (-) touchpads.

Don't Forget: The factory-set levels of ***all*** settings and controls can be instantly restored by pressing and holding the POWER touchpad The detector will beep and the voice will advise that the detector has been re-set to factory settings.

MOTION DISCRIMINATION:
Setting of Notches
Changes to the preset notches can be made in several ways if so desired. A specific item may be located by turning off all segments on the Lower Scale except for the segment where that target will appear. This can be accomplished by pressing the (+) or (-) touchpad to locate the cursor and moving it to the segment that you wish to turn on or turn off. When the cursor is over that segment, press ACC/Rej to turn the segment on or off.
Another method is to search normally and when a particular item is encountered, press the ACC/Rej touchpad to turn that segment off. You will not be bothered by that target any longer.

All of the Motion Modes may be adjusted in this manner.

All changes made to the user-set A, B, and C modes will retain changes made to them when the detector is turned off. All changes to the All Metal, Beach and Coin modes will be lost as they automatically return to the factory settings.

Factory Settings: Remember that the factory settings may be gained at any time simply by pressing and holding the POWER touchpad for approximately 10 seconds. The detector will beep and the voice will announce that all factory set function have been restored. All changes made by the operator will have been deleted.

CONTROL FUNCTIONS
Batteries

The Grand Master Hunter CX lll 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. 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 LCD Display all the time the detector is turned on. Batteries should be considered weak when less than three (3) bars are displayed. They should be replaced when the battery scale reports only one (1) bar, 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.

Note: The detector must be turned off when the batteries are being replaced.

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.

After changing the batteries, it is always wise to perform the factory re-set procedure.

OPERATING INSTRUCTIONS

TO BEGIN: Follow the instructions in the "Getting Started Section" for turning on your detector, noting the condition of the batteries, and setting of the Audio Threshold and any other function that may be desired.

MODE DESCRIPTIONS:

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 LCD Display 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 Grand Master Hunter CX lll features fully adjustable notch discrimination. It offers multiple selectivity and the ability to reject and accept targets in both the ferrous (iron) and non-ferrous ranges.

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. The voice feature will supply verbal target information at this time also.

TARGET IDENTIFICATION: Target ID and/or conductivity classification of the last target over which the searchcoil passed will be indicated on the LCD Display. 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 upper scale reading is at its greatest deflection to the left, the target will be beneath the center of the searchcoil. At the same time, the lower scale reading is at its greatest deflection to the right which is measuring depth. These two scales, upper and lower, cannot overlap each other. Generally Pinpointing and Depth readings are precise when the two scales abut or just touch. Depth reading is automatically calibrated regardless the size Crossfire coil used. After the PINPOINT touchpad is released, the detector will automatically return to the mode previously being used.

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 Grand Master Hunter CX lll 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 and work in restricted areas. 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 detector 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, search in the Motion All Metal mode. This will prevent missing an especially old coin that is so oxidized that it will be rejected by any discrimination. Should the sound become erratic, press the (-)touchpad to reduce the detection depth until the sound levels 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 Non-Motion All Metal mode which requires ground balancing. Even though the Motion All Metal mode automatically adjusts ground balance, we suggest the Motion Beach Mode be selected to reduce any response the wet, salted sands.

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. Although any size searchcoil will perform in this arena, the 4.5" Super Sniper will produce the best results.

CACHE & RELIC HUNTING: Operating in the Non-Motion All Metal mode. Attach the12.5" searchcoil or the 10 x 14 inch Power DD searchcoil and increase DEPTH/Sensitivity for maximum sensitivity possible (without erratic sound). Scan the searchcoil approximately four to six inches above the ground (depending on ground conditions) 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 Grand Master Hunter CX lll detector is a universal detector, excellent for prospecting, it's 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 Grand Master Hunter CX lll detector will instantly identify both types of "hot rocks" in any search area. Test for them in the following manner. Simply scan in the Non-Motion All Metal mode. When you locate a suspected hot rock, press the Last Mode touchpad; pass back over the target in the Motion All Metal mode. If the target is 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 Motion mode, it is advisable to use this method only to test suspected hot rocks that respond loudly and positively to Non-Motion All Metal scanning.

Searchcoil sizes will differ according to the area being searched. If the 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 best option may be to change to the 12.5" searchcoil or the Power DD searchcoil. Extremely small nuggets may be missed with the larger coils, 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 Beach mode with all targets accepted, salt is ignored and large nuggets are detected.

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 Motion modes 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 it 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 that 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:
GRAND MASTER HUNTER II

STARTER PHASE

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

OPERATION:
1. Grasp the handle of your Grand Master. Make certain you are not near any metal, and lower the searchcoil to a level about one foot above the ground.
2. Press the ON touchpad.
3. After you hear two beeps, you are operating in the Discriminate Mode.

Note: The optimum audio threshold level is a faint audio sound. Adjust either the (+) or (-) **Audio Threshold** touchpads on the side panel to achieve the correct sound level.
You will not have to touch another control during the *Starter Phase* (except the **Off** touchpad).

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 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 (∆), the Grand Master Hunter 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 Grand Master is primarily programmed to hunt coins in this *Starter 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 **Off** touchpad and all battery power is disconnected.

After you have become acquainted with your detector, read and study the rest of these instructions. When you become completely familiar with this Grand Master Hunter, 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.

ON – BATT CK:
Raise searchcoil approximately two feet above the ground. Press the ON touchpad once, and the Grand Master 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. When the Grand Master is turned on, it automatically begins operations in the Discriminate mode.

ALL METAL:
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 your Grand Master when you have discovered a target. 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 Grand Master Hunter 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.

OFF:
Press to turn the Grand Master off. Special memory circuitry will retain all setting (except Secondary Functions described later in these instructions. The detector will switch itself off automatically when no touchpad is pushed and no target is detected during a period of 10 minutes.

Control Functions

Side Panel

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

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.

DETECTION DEPTH:
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 PITCH:
Press to adjust the audio to preferred pitch or tone. Touching the (+) pad will raise the tone into the higher treble range, while touching the (-) pad will lower the pitch to a bass tone. Experiment to determine which pitch best suits your hearing.

AUDIO THRESHOLD:
Press to regulate the threshold of sound constantly being produced by the Grand Master as it scans. It is recommended that you always operate the instrument at a minimum level of sound which will increase sharply when a target is encountered. 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.

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

DISC. AUDIO SELECT:
These controls determine the sound that will be made by targets encountered while operating in the Discriminate mode. Press to change from one audio mode to another. Experiment with all three sounds to select the one most comfortable for your style of hunting.

BELLTONE:
When selected, all targets accepted in the non-ferrous discrimination range (including most coins) will produce a coin alert bell-like tone. All other accepted targets produce the standard audio response tone.

STANDARD:
When selected, all accepted targets will produce the same audio response.

BI-LEVEL:
When selected, two distinctly different audio responses are produced. Targets accepted in the non-ferrous discrimination range will produce the standard audio tone. Targets accpeted in the ferrous range will be identified with a tone of a distinctly lower pitch.

GROUND BALANCE:
These touchpads are functional only in the All Metal Mode. AUTO RESET activates the computer ground soil analysis and automatically adjusts internal circuitry to cancel the effects that mineralized soil has on the detector. When more precise ground balancing is required, the touchpads marked + and – allow overriding of the automatic circuitry as explained under the heading “To Ground Balance” in the Operating Instructions section.

Secondary Functions: It is suggested that you disregard these secondary functions until you have mastered your Grand Master and understand all its primary controls. At that time, you can review the control instructions for these secondary functions and learn their operation.

- GB: Ground balance
- VOL: Volume control
- AUTO/MAN: Threshold regulation

These functions are for use only in highly specialized applications. Because it is quite possible that you will *seldom* require their use, you may not be concerned with them. You will want to understand, however, how they relate to the operation of the Grand Master. A complete explanation of these secondary functions can be found later in the Operating Instructions section.

CONTROL FUNCTIONS
Meter

The Grand Master Hunter’s 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. 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 ground conditions and acts as an aid when manually setting ground balance (See "To Ground Balance" in Operating Instructions section). It 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
Frequency control

This detector is capable of operating at four different frequencies or channels. Operating your Grand Master at a different frequency might be necessary when two or more Grand Master Hunters are being used so close together that they "talk" to one another. The combination of two switches permits selection of as many as four different operating frequencies. Outside interference can also cause a "warble" sound when the detector is in All Metal Mode. When such a "warble" is heard, push one or both of these switches to change the operating frequency of your detector. This shift in frequency will result in *no loss of sensitivity or depth*.

Access: Slide the battery cover back slightly to expose the Frequency Control switches.

Adjustment: Flip one or both of the two rocker switches (below the larger opening on the right) to modify the operating frequency of your Grand Master.

CONTROL FUNCTIONS
Batteries

The Grand Master Hunter utilizes 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 Grand Master 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 ON 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. Depress four latches to 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 Grand Master will lose Audio Threshold, Audio Tone and Operation Mode Settings when the battery pack is removed from the detector for more than approximately four minutes.

Recharging rechargeables:
1. Slide back the battery door to clear the charging jack.
2. Plug in the connector and plug charger into a 110v. 60 Hz. power source.
3. Charge overnight or a minimum of twelve hours to restore a completely discharged rechargeable pack. If another voltage source is the only power available, an appropriate converter must be used. Otherwise, the rechargeable system will be destroyed. Always recharge rechargeables after six months of non-use.

CAUTION: Use only high quality batteries. **Do not attempt to recharge non-rechargeable batteries.**

OPERATING INSTRUCTIONS

TO BEGIN: Follow the instructions in the *Starter Phase* for turning on your detector and checking the condition of the batteries. Set your audio threshold as described in Control Functions; Side Panel.

MODE DESCRIPTIONS:

DISCRIMINATE: Each time the Grand Master Hunter is turned on, it begins operating in the Discriminate mode. In this mode, you can use 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 on the Grand Master. You will want to hunt in the All Metal mode when the greatest depth is sought, such 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.

When using the All Metal mode, the **Secondary Function - GB**, Manual Ground Balancing, is also possible. You may prefer to use this function when searching for gold nuggets or at other times when highly mineralized ground is encountered.

SETTING DISCRIMINATION: The Grand Master features 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. If you wish to detect all ferrous materials, rotate the left (FERROUS) control to zero (fully counterclockwise). As you advance the control clockwise to higher numbers, more ferrous materials will be rejected. The control operates cumulatively; that is, if you have it set 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 you are searching.

Operate your right (NON-FERROUS) control n 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 your controls for those you are finding just in the area where you are hunting.

Your Grand Master Hunter'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 you to reject 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 your 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 Grand Master. 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.

Under unusual conditions, if your audio signal continues to increase or decrease to any degree, more precise manual ground balancing may be required. You can make this adjustment using the (+) and (-) pads below the GB on your Side Panel controls. Remember that you must press and hold the ALL METAL touchpad to make these manual ground balancing adjustments.

When you determine that manual ground balance is necessary, raise and lower the searchcoil and listen closely to the audio signal. If the sound grow louder, press the (-) button below GB several times. Lift your searchcoil again and lower it to operating height. If the sound level now decreases, you have made too great a negative adjustment. It will be necessary to press the (+) touchpad once or twice. Precise adjustment is possible because there are 256 possible steps on the manual ground balance of your Grand Master. Don't hesitate to press each button as many times as necessary. Press the proper (+) and (-) touchpads until the audio does not change or changes only slightly when the searchcoil is lowered to operating height. Remember that you must hold down the ALL METAL touchpad throughout this manual ground balancing procedure.

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. The meter will move to the left of "Out of Target ID Range" for the following reasons:

1. The target is iron and falls below all items indicated on the meter.
2. The target is buried deeper than the identifying range of the meter.
3. The target is too small to analyze accurately.
4. The target is too large or too near the searchcoil to be analyzed accurately.

It is recommended that you always dig any weak or "Out of Range" target. It might be a coin just at the edge of your searchcoil's detection range. The Belltone or Bi-Level audio responses will help identify weak targets in the Discriminate mode.

PINPOINTING: Electronic pinpointing offers greater accuracy in target location. When a target is located, press and hold the PINPOINT touchpad to activate the Grand Master's electronic

pinpointing mode. As long as you continue to press the touchpad, 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 no matter what size Crossfire coil is used. This depth reading will be held for about three seconds. After you release the PINPOINT touchpad, the Grand Master Hunter 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 Grand Master Hunter may be used with all three Crossfire searchcoils and Garrett's Bloodhound 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 Bloodhound depth multiplier attachment eliminates the need for a separate "two-box" detector and multiplies the depth to which your Grand Master can detect objects that are larger than a fruit jar. The Bloodhound enables the Grand Master to detect large targets more deeply, and is not bothered by small pieces of metal junk – minimizing unnecessary digging.

Your Grand Master will automatically identify that you are using the Bloodhound and will allow you to select only the All Metal mode. Press the ALL METAL touchpad to return audio to your preset threshold.

SECONDARY FUNCTIONS:

To activate the circuitry that permits regulation of any of these functions, press and *hold* the ALL METAL touchpad. Then, use the (+) and (-) controls below each secondary function listed on the Side Panel for precision adjustment.

GB (Ground Balance): This function will rarely be required since the detector's internal circuitry and the *Ground Track* automatic ground balancing method described in Control Functions; Touchpads will usually be highly satisfactory. When manual ground balance is desired, press and hold the ALL METAL touchpad and use these (+) and (-) as described under Ground Balancing in the Operating Instructions.

VOL (Volume): This adjustment controls the maximum volume of sound produced by the Grand Master when a target is encountered. It does not affect the threshold level you have already selected as the primary audio function of your detector.

AUTO/MAN (Threshold Regulation): By holding the ALL METAL touchpad and pressing the (-) touchpad, you select the *manual* method of regulating audio threshold. Manual retuning might be required only in extremely trashy areas where numerous unacceptable targets limit the instrument's ability to recover quickly enough to accurately report on all targets. When using this function to regulate threshold manually, it may be necessary to press the ALL METAL touchpad occasionally to maintain a satisfactory threshold level.

Depressing and holding the ALL METAL touchpad, then pressing the (+) button returns the threshold regulation function to automatic.

PROFESSIONAL PHASE

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

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 touchpad on the Side Panel several times until the erratic sound disappears. 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. You still have the advantage of one method of discrimination – the Belltone, which responds only to non-ferrous metal.

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 touchpad on the Side Panel 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 a 12.5" searchcoil and adjust DETECTION DEPTH touchpads on Side Panel 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 Grand Master Hunter 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 Grand Master 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 Grand Master 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 Belltone 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. You may miss extremely small nuggets 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 12.5" searchcoil and searching in the Discriminate mode. By setting DISCRIMINATION controls at zero, they ignore salt and detect large nuggets.

Test your Grand Master at zero discrimination with a nugget two pennyweights in size; it will surprise you. You can advance the FERROUS control to reject many small iron targets and still read the nugget. On even large nuggets, the Belltone will respond to aid your identification of gold in relation to small iron targets. 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 it 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 that 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.