

OPERATING INSTRUCTIONS: AMERICAN AND INTERNATIONAL SERIES MODEL S-4

The American Series detectors are shipped assembled and ready to use. Adjust the stem length for your height, then study the following.

CONTROL FUNCTIONS

Power/ ON-OFF/ Tuning Knob: Rotate knob clockwise to turn detector on. Further rotation tunes the detector audio threshold level.

TR Discrimination Selector: This two-position selector switch allows you to determine the junk items you wish to eliminate from detection.

Ground Cancel Control: Permits adjustment for the canceling (nulling) of iron ground minerals while operating in the VLF Ground Canceling Mode.

Master Control Switch: Used two ways.

- (1) Press Master Control Switch and **hold** while rotating the Tuning Knob.
- (2) Press briefly to retune the detector audio threshold when the level increases or decreases in volume and does not correct itself in a matter of a few seconds.

SENSITIVITY HIGH/LOW Switch: Select HIGH or LOW Sensitivity.

BATTERY TEST SWITCH:

Operate the detector for at least two minutes. Press and HOLD the Battery Test Switch in the #1 position for several seconds. Notice the reading. Do the same in the #2 position. Replace batteries when the readings are low. To replace the batteries, remove the three knurled thumb screws from the top panel. Lift the panel for battery access.

CONTROLS ADJUSTMENT:

Optimum Tuning Point:

(How to tune the detector)

1. Depress the MASTER CONTROL SWITCH to either the right or left side and **HOLD**.
2. Rotate tuning knob clockwise until a faint sound is heard. This is the OPTIMUM (most sensitive) TUNING POINT.
3. Release the MASTER CONTROL SWITCH.

Note: Hold detector away from metal while tuning, and at least two feet above the surface.

MODE SELECTION:

VLF Ground Cancel Mode: To activate the detector's VLF Ground Cancel Mode, press the Master Control Switch to the left and hold for about two seconds before releasing.

TR Discriminate Mode: To activate the detector's TR Discriminate Mode, press the Master Control Switch to the right and hold for about two seconds before releasing.

SENSITIVITY SELECTION:

Low Sensitivity: It is suggested that you operate the detector at this setting until you have become very proficient using the instrument. This setting allows operation more easily over mineralized ground and high trash areas.

High Sensitivity: This setting gives extra depth when searching in areas of minimal ground minerals.

TR DISCRIMINATION SELECTION:

Target Acceptance and Rejection

When a metallic object is accepted, the detector's speaker or earphone sound will increase from your pre-selected audio threshold level. When a metal object is eliminated (rejected), the sound will decrease or become silent. Some rejected targets will cause the audio to "break up" or sound erratic. The following explains the various **Trash Elimination Settings:**

- 1: Bottlecaps, foil, nails and rusty iron, will be eliminated.
- 2: Pulltabs, bottlecaps, foil, nails and rusty iron will be eliminated. Nickels, rings and many foreign coins and tokens may also be eliminated at this setting. Test typical trash items before operating.

VLF Ground Canceling Operation:

When operating in the VLF mode, the ground canceling adjustment is as follows.

1. Set to the Optimum Tuning Point.
2. Press the Master Control Switch to the left and **Release**.
3. Lower the searchcoil from about waist height toward the ground.
4. Listen for an audio change. If the sound decreases, raise the searchcoil and turn the Ground Cancel Control slightly toward increase; press the Master Control Switch to retune and repeat this procedure until there is little or no change in the audio level when lowering the searchcoil. Obviously, if the sound increases the adjustment would be to turn the control toward decrease.

TR OPERATION:

1. Set to Optimum Tuning Point
2. Hold the searchcoil about one inch above the surface. Press the Master Control Switch to the right and release.
3. Keep the searchcoil level while searching.
4. Operate in **Low Sensitivity** for maximum results in mineralized ground.

VLF OPERATION:

1. Set to Optimum Tuning Point
2. Hold the searchcoil about one inch above the surface. Press the Master Control Switch to the left and release.
3. Keep the searchcoil level while searching.
4. Operate in **LOW SENSITIVITY** for maximum results in mineralized ground.
5. There is no discrimination. This mode is for searching in all-metal only.

MAINTENANCE

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

REPAIR SERVICE

- ❖ In case of difficulty, read this Owner's Manual again thoroughly to make certain your detector is not inoperable needlessly. Your dealer may also be able to offer advice.
- ❖ When your 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 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 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.
- ❖ Ship to Garrett Metal Detectors, 1881 W. State St., Garland, TX 75042.
- ❖ You can call the Garrett Customer Service Department (800-527-4011) 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 American S-4, observe these precautions:

- ❖ Do not hunt in an area where you believe there may be shallowly buried underground electric lines or pipes.
- ❖ Do not hunt in a military zone where bombs or other explosives may be buried.
- ❖ Avoid striking any line known to be or suspected to be carrying electrical power.
- ❖ Do not disturb any pipeline, particularly if it could be carrying flammable gas or liquid.
- ❖ Use reasonable caution in digging toward *any* target, particularly in areas where you are uncertain of underground conditions.

PATENT PROTECTION: Proof of Garrett 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