

OPERATOR'S
INSTRUCTIONS

COINMASTER 6000/Di SERIES 2



White's

A WORD FROM MR. KENNETH WHITE, SR.

Congratulations on the purchase of our all new COINMASTER 6000/Di SERIES 2 metal detector! We are very proud of this instrument because it has the features that are most important in locating and recovering buried treasure. And, these features have been tested, proven, and then refined over many years of field use. The 6000/Di is not only the most sensitive detector on the market, it is also one of the most dependable!

We here at White's have worked very hard over the past thirty years to bring you the finest metal detectors money can buy. We have the best engineers and technicians, using the latest in computers and test equipment, developing new products. Our assembly personnel are true craftsmen, carefully building each detector by hand and testing their workmanship for quality through every phase of construction. Our service personnel, including those at the factory and those trained at the factory to work in the field at White's National Warranty Service Centers, are highly skilled at repairing our instruments. And, White's management staff is constantly in touch with treasure hunters in the field so we will know the needs and problems of our customers. By understanding the hobby of treasure hunting, we are able to produce metal detectors that are unsurpassed in the field. Today, we are working harder than ever for you!

You and your 6000/Di will make an outstanding treasure hunting team. Learn the "language" of this detector and become familiar with its operations. Then, your trips into the world of treasure hunting will be adventurous - **and rewarding!** Treat your new detector like a good friend and it should never let you down. In all the world, there are no finer metal detectors made at any price!

Let us know if there is anything we can do to be of help, and, write us about your treasure hunting adventures!

Good Hunting Always,

A handwritten signature in black ink that reads "Kenneth White". The signature is written in a cursive, flowing style.

Kenneth White, Sr.

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SPECIFICATIONS

PATENTS: U.S. 4030026, U.S. 4128803, U.S. 4293816, UK 1548239, CDN 1038036
OTHER PATENTS PENDING

USES: Coin hunting, prospecting, relic hunting, beachcombing

WEIGHT: (With NI-CAD Batteries): 5 lbs.

LOOP SIZE AND STYLE: 8" Concentric, waterproof and interchangeable

OPERATING FREQUENCY: 6.59 KHz

AUDIO FREQUENCY: 412 Hz

OPTIMUM TEMPERATURE RANGE: 33-100 F

OPTIMUM HUMIDITY RANGE: 0%-75%

AVERAGE DEPTH ON 25¢ IN GEB/NORM: 8-10 inches. Your actual depth may vary as a result of mineralization, object size, loop size, time object is buried and skill.

SPECIAL FEATURES: Visual Discrimination Indicator (VDI), Depth Reading

POWER REQUIREMENTS: 4 Alkaline "C" Cell Batteries or White's sealed NI-CAD pack.

BATTERY LIFE EXPECTANCY: 8-12 hours continuous use.

MODES: GEB NORM, GEB DISC, TR DISC, GEB MAX

White's Electronics, Inc. reserves the right to modify or improve the design capabilities of the 6000/Di Series 2 without further notice.

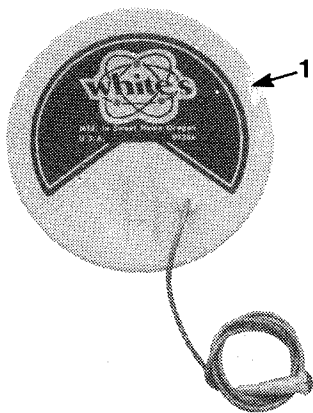
PARTS IDENTIFICATION

As you unpack the COINMASTER 6000/Di Series 2, compare all parts with the parts listed on this page. The picture on the following page will help identify them.

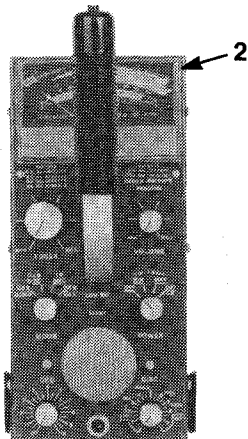
1. 8" CONCENTRIC LOOP
2. CONTROL BOX
3. LOOP BOLT, THUMBNUIT, TWO PLASTIC WASHERS (Not Shown)
4. THREE SECTION ROD
 - a. White Plastic Loop Isolator
 - b. Short Metal Section
 - c. Long Metal Section
5. STANDARD BATTERY PACK WITH 4 ALKALINE "C" CELLS
6. SEALED RECHARGEABLE BATTERY PACK
7. BATTERY CHARGER
8. MINERAL SAMPLE (Not Shown)

If you don't find all the parts listed, contact your dealer. If that isn't possible, note the missing item on your warranty card and send it in. In either case, you will receive prompt attention.

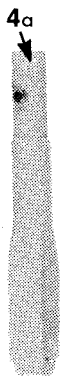
PARTS IDENTIFICATION continued



1



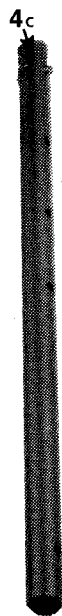
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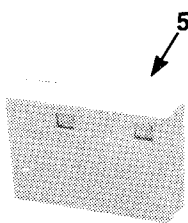
4a



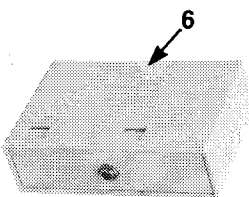
4b



4c



5



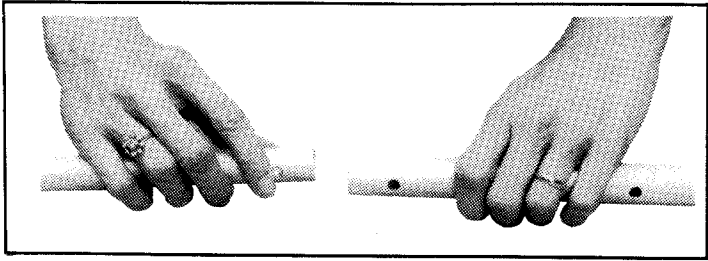
6



7

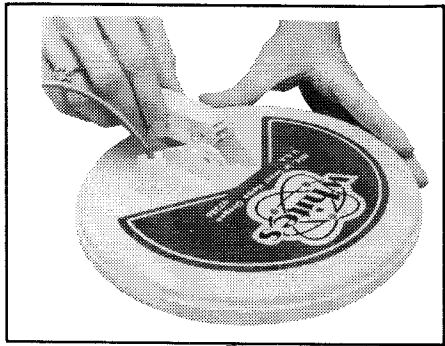
ASSEMBLY DIRECTIONS

ILLUSTRATION A



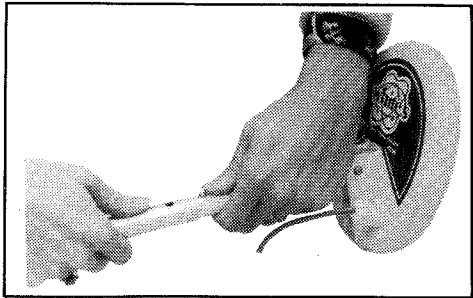
Slide the shorter metal rod into the longer metal rod, depressing the snap locks to fit into one of the longer rod's four holes. (Illustration A)

ILLUSTRATION B



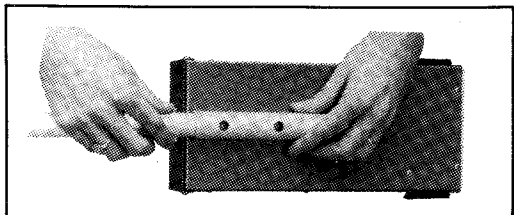
Place the two rubber washers in the depressions on the loop isolator and connect to the loop with the bolt, tightening the thumbnut by hand. (Illustration B)

ILLUSTRATION C



Connect the loop isolator to the lower portion of the rod. (Illustration C)

ILLUSTRATION D



Slide the complete rod section into the bracket underneath the instrument control box. (Illustration D)

ASSEMBLY DIRECTIONS continued

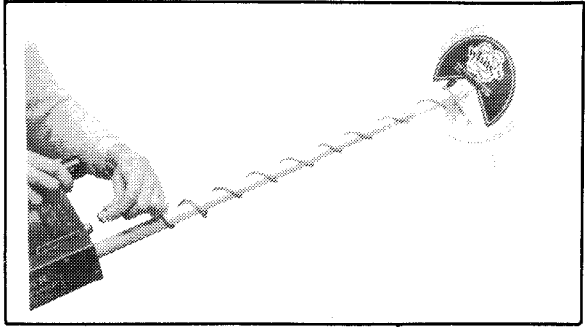


ILLUSTRATION E

Wrap the cable around the rod, with the first wrap going over the top of the rod. Continue this until the cable connector just reaches the control box. (Illustration E)

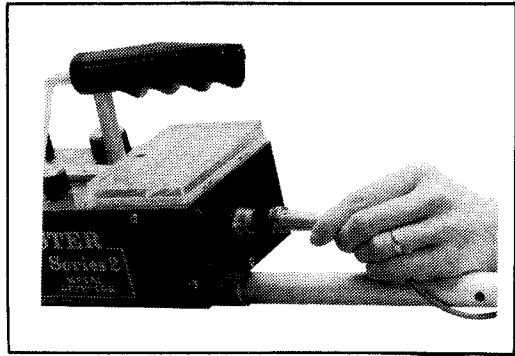


ILLUSTRATION F

Screw the cable connector into the terminal on the front of the control box. (Illustration F)

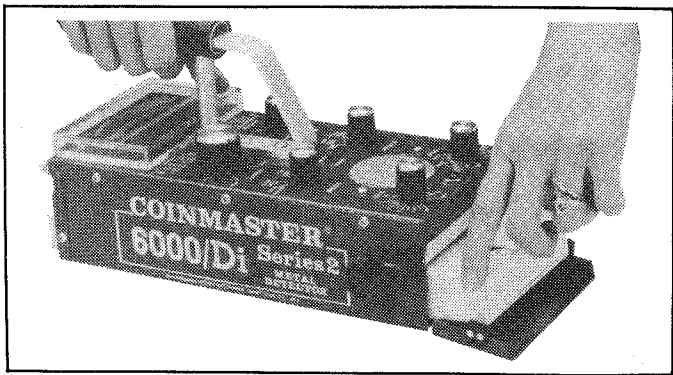


ILLUSTRATION G

Open the rear door on the control box and slide in the Standard Battery Pack. (Illustration G)

NOTE: Connect Rechargeable Battery Pack to the Battery Charger for its initial charge. Follow the directions for Rechargeable Batteries on Page 11.

ASSEMBLY DIRECTIONS continued

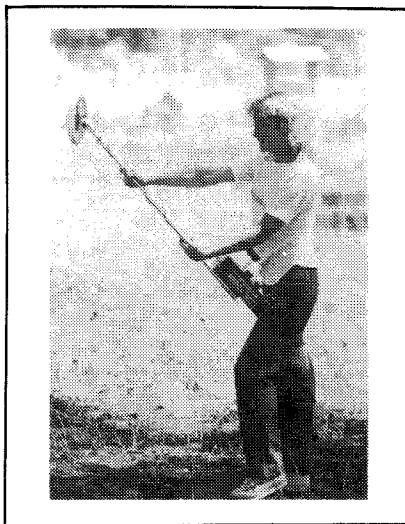


ILLUSTRATION H

Set the metal detector for your height by extending the rods and locking them in place with the snap locks. Unit is ready to operate. (Illustration H)

IDENTIFICATION OF CONTROLS AND FEATURES

(SEE ILLUSTRATION ON FOLLOWING PAGE)

1. **TUNER:** Adjusts the detector for its threshold tone. This is a slight audio tone that represents the detector's maximum sensitivity.
2. **MODE:** Selects the operating mode, GEB NORM, GEB DISC, TR DISC, GEB MAX. This switch selects **AUDIO FUNCTION ONLY**. It does **NOT** affect the meter.
 - a. **GEB NORM:** Used with the GEB control, it detects all metals while neutralizing the effects of ground mineralization.
 - b. **GEB DISC:** Used with the GEB and DISC controls to neutralize the effects of ground mineralization while also discriminating against undesirable targets.
 - c. **TR DISC:** Used with the DISC control to discriminate against undesirable targets. Does not neutralize the effects of ground mineralization.
 - d. **GEB MAX:** Used with the GEB control, it detects all metals while neutralizing the effects of ground mineralization. Generates nearly 30% more sensitivity than GEB NORM; however, this mode is less stable and therefore more difficult to use.
3. **GEB:** Variable **GROUND BALANCE** control works in conjunction with all three GEB modes to neutralize ground mineralization effects.
4. **SPEAKER:** Emits the detector's audio tone to aid in the detection and identification of targets. Goes silent when headphones are used.
5. **HEADPHONE JACK:** Allows you to hear detector's audio tone on **MONO** headphones. This saves on power drain and makes it easier to interpret the audio tone.
6. **DISC:** Variable **DISCRIMINATION** control works in conjunction with GEB DISC and TR DISC modes. Aids in distinguishing between desirable targets, (coins, rings, gold, etc.) and undesirable targets (bottle caps, pull tab, foil, etc.). It should be used only as necessary to avoid discriminating against desirable targets as well as undesirable targets. **EXAMPLE:** When set to reject pull tabs or screw caps, the US nickel, some thin gold rings and small gold items may also be rejected.
7. **POWER:** 4 Position switch that controls the following:
 - a. Turns the detector **ON** and **OFF**.
 - b. Selects the detector's **SENSITIVITY** for GEB/DISC MODE, and, the meter's **VISUAL DISCRIMINATION INDICATOR**. In areas of high mineralization, it is best to use the **MINIMUM** sensitivity setting. For low mineralization, it is best to use the **MAXIMUM** sensitivity setting.
 - c. The **BAT CK** position tests the strength of the battery pack and shows this condition on the meter.
8. **LOW BAT. ALERT:** LED glows when the battery pack falls below the minimum power level necessary to effectively operate the detector.
9. **VOLUME:** Adjusts the loudness of the audio tone for speaker or headphones. Set at **MAXIMUM** it will register the greatest difference between positive and negative tones, providing for the detector's greatest depth capability.
10. **METER:** Registers signal intensity which performs the following functions:
 - a. **VISUAL DISCRIMINATION INDICATOR (VDI):** No matter what position the **MODE** switch is in, the **METER** will act as a **VISUAL DISCRIMINATION INDICATOR** when the **PUSH BUTTON** is **OUT**.

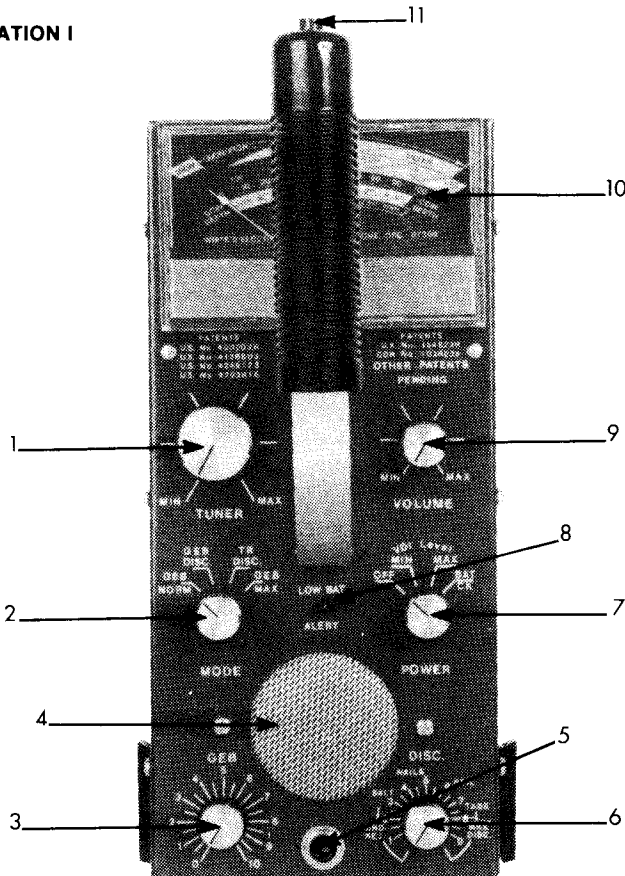
NOTE: The **METER** is calibrated to indicate different kinds of U.S. COINS ONLY. Foreign coins may show up slightly different on the **METER**.

IDENTIFICATION OF CONTROLS AND FEATURES (Continued)

The METER will indicate the type of target after two sweeps with the search loop. The METER will continue showing this indication until another target is detected or the PUSH BUTTON is pressed. The needle will normally stay near the center of the meter when nothing is being detected.

- b. DEPTH READING: No matter what position the MODE switch is in, the METER will give the depth on coin sized objects when the PUSH BUTTON is held in.
 - c. BATTERY CHECK: Shows the condition of the battery pack.
11. PUSH BUTTON: This control is held in while the TUNER is used to set threshold.
- a. PRESS AND RELEASE to automatically re-tune in every mode except GEB DISC.
 - b. AUTOMATIC mode switching.
 - c. DETERMINES the function of the METER. Note: PUSH BUTTON out, METER reads VDI. PUSH BUTTON in, METER reads DEPTH.

ILLUSTRATION I



STANDARD BATTERIES

The standard battery pack holds four ALKALINE batteries. ALKALINE BATTERIES ARE THE ONLY BATTERIES RECOMMENDED FOR THIS INSTRUMENT. To insert these batteries, proceed as follows:

1. Remove the battery pack from the instrument.
2. Remove the battery pack lid by gently pulling the top sides of the pack apart until the lid springs up.
3. Note the position of each cell. (The flat side of each cell fits against one of the 4 springs.)
4. Remove the dead batteries and replace them with new ones. (If the cells are put in backwards, the detector will not work.) (See Illustration J)
5. Line up the locking tabs on the lid with the holes on the battery pack. Snap them together.
6. Insert the battery pack into the detector. The two terminal points must touch the pointed contacts inside the instrument.

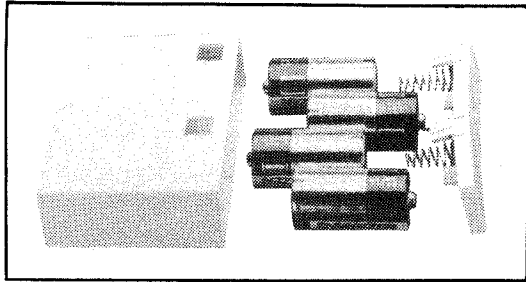


ILLUSTRATION J

RECHARGEABLE BATTERIES

Rechargeable NICKEL CADMIUM batteries are included with this instrument. These can be recharged up to 1000 times and should last between 8 and 12 hours after a full charge. Charge the Rechargeable Batteries before their first use.

RECHARGE THE BATTERIES:

1. When the METER is out of the "Battery Good" range and when the BATTERY ALERT LIGHT glows.
2. If the batteries have not been recharged for more than two months. (Batteries slowly lose their charge when stored.)
3. NOTE: Charge the batteries only as necessary. Unnecessary recharging shortens the life of the battery pack.

NOTE: Batteries will last longer when headphones are used.

OPERATING THE CHARGER

1. Insert the charge plug into the battery pack. NOTE: The battery pack may be charged either in, or out of, the detector.
2. Plug the charger into an electrical outlet.
3. The pack will be fully charged within 10 hours. The pack will reach 50% of its full charge within 5 hours.

CAUTIONS ABOUT THE BATTERIES

1. The battery pack should not be left on the charger more than 24 hours.
2. Do not dispose of batteries in a fire.
3. Protect the battery pack from being shorted. Burns may result and the battery pack may be damaged.
4. The rechargeable battery system, (charger and pack), has a specific charge current. Do not attempt to mix other chargers or packs with this system. Batteries may explode if a charge current is too high.
5. Non-rechargeable batteries may explode if they are recharged.
6. Store batteries in a cool, dry place.
7. THE RE-CHARGEABLE BATTERY PACK IS A SEALED UNIT WITH NO CUSTOMER SERVICEABLE PARTS. OPENING IT MAY DAMAGE THE UNIT AND WILL VOID THE WARRANTY.

PROPER CARE OF YOUR DETECTOR

The following are precautions you should take to protect your instrument from harm, ensure its long life and avoid nullifying the warranty.

CLEANING: The loop and rod or probe are waterproof. They can be cleaned with fresh water and a mild cleanser. After cleaning, however, dry the instrument thoroughly. **CAUTION:** The instrument case is not waterproof, and water - if allowed to enter it - will damage electronic components.

WEATHER CONDITIONS: Protect your detector from excessively cold weather. Freezing can damage the electronic components, the case and/or the batteries. Excessive heat can also damage the instrument. Never leave it in the sun. If it's left in a car on a hot day, cover it to protect it from the direct rays of the sun, and then leave the windows slightly open to permit ventilation. Protect your detector if you operate it in the rain, as water may get into the instrument case.

SALT WATER: Salt water is very corrosive! Immediately after your detector has been exposed to salt water, rinse it thoroughly with fresh water, being careful not to allow water to enter the instrument case. Then wipe it with a cloth dampened with fresh water and dry it thoroughly.

ADDITIONAL PRECAUTIONS:

- a. Avoid dropping your detector.
- b. Do not use WD-40 on any part of the metal detector.
- c. Avoid sharp jars to the loop.
- d. Do not allow batteries to corrode inside the instrument.
- e. Do not alter or modify your instrument during its warranty period. Alterations will void the warranty.

AN INTRODUCTION TO UNDERSTANDING THE COINMASTER 6000/DI SERIES 2

To fully understand how to operate the 6000/Di, have your dealer give you a demonstration. Then, read the manual and listen to the enclosed instruction cassette. By following these instructions you will be in an excellent position to master the instrument in the field. Remember, the more comfortable you feel about using the 6000/Di, the more treasure you'll be likely to find! The following four paragraphs will serve as an introduction to operating your detector so you will better understand how to obtain maximum results with it.

TUNING: When you arrive at an area to search, the metal detector must be Tuned to specifically balance the effects of ground mineralization. Tuning involves adjusting the Tuner control so the detector's internal circuitry is operating at its optimum frequency, or, Threshold. It is important to establish this Threshold with the Volume control set to its Maximum position. (This assures that the Threshold is set at its lowest audible level, allowing the detector to operate at its greatest depth capability.) The Tuner is adjusted with the loop in the air so there are no targets or ground mineralization to interfere. Adjust the Tuner so there is only a slight audio tone. Once Threshold has been set the Tuner will not have to be adjusted again. Threshold can be re-gained whenever necessary by pressing and releasing the Push Button. (For more detailed information, see pages 14 & 16.)

GROUND BALANCING: Next, adjust the control marked GEB. These initials, (GEB), stand for Ground Exclusion Balance and, simply put, mean that the detector can be made to ignore the mineralization content of the ground. If this adjustment wasn't made, the detector would respond to mineralized ground as if it were a "target". The trouble is, the ground would act as such a large "target" that items such as coins, rings, and gold would be hidden, and very difficult to detect. The GEB control balances out, (or "excludes"), the effects of mineralization. When the detector correctly balances out ground mineralization, it will best detect items in the ground. The idea is to have the detector's threshold tone (representing optimum Tuning), remain the same whether the detector's loop is in the air or on the ground. It is important, therefore, to keep adjusting the GEB control until this has been accomplished. At that time, the detector will have its greatest sensitivity to targets. The GEB control would only be adjusted again if the mineralization content of the ground changed greatly, or, if you went to another area to search. (For more detailed information, see pages 16 & 18 .)

DISCRIMINATION: The 6000/Di is able to electronically distinguish between different metals. By adjusting the variable DISC (Discrimination) control, it is possible to selectively screen out certain items that will appear as targets. This means the user can discriminate against items which can be reliably described as "junk". These include items such as pop tops, bottle caps, nails and aluminum foil. When searching for items of value, such as coins, jewelry and gold, you can save time by digging only those targets which are potentially valuable. The important thing to know, then, is how to set your DISC control to ignore only those items you do not want to dig. The indoor testing of your instrument's response to a wide variety of targets gives you the chance to learn where on the DISC control different items will be screened out. Familiarizing yourself with these points will allow you to accurately set the DISC control in the field. In addition to the DISC control, which affects only the audio portion of the metal detector, the 6000/Di has a Visual Discrimination Indicator (VDI) on the meter. It can further aid you in distinguishing between desirable and undesirable targets. The VDI function is unaffected by the adjustments made to the DISC control. (For more detailed information, turn to Pages 14, 15 & 16 .)

Properly tuning the instrument, using the Tuner and GEB controls, will set the detector up for its maximum performance capabilities. Research and proper hunting techniques are also important to successful treasure hunting. Use your imagination to locate the best search areas, and use the valuable information in this manual to get the most from your 6000/Di.

INDOOR TEST PROCEDURES

BENCH SET-UP AND TEST SAMPLES

It is important to fully understand the operation of the metal detector before using it in the field. By bench testing it indoors, it is possible to learn its "electronic language". Using these tones along with the meter, and its Visual Discrimination Indicator, will help you to become a more successful treasure hunter.

- a. Place the detector on a table with its loop extending into the air, three feet away from any metal.
- b. Remove any jewelry you may be wearing.
- c. Obtain both desirable, and undesirable, test samples. Including, US coins: penny, nickel, dime, quarter, half, dollar, jewelry, and, pull tabs, bottle caps, nails and foil.
- d. Check the battery condition, then proceed as follows.

TUNING FOR THRESHOLD

1. TUNER MIN
2. MODE GEB NORM
3. GEB 5
4. DISC 1
5. POWER MIN/VDI
6. VOLUME MAX
7. PUSH BUTTON: Press and hold in while turning the TUNER clockwise until a slight audio tone is heard. This tone is the THRESHOLD and represents the detector's maximum level of sensitivity.
8. RELEASE the PUSH BUTTON: Note: Whenever the MODE is switched to a different position, threshold must be regained by pressing and releasing the PUSH BUTTON. Follow these instructions before testing each of the four modes. Threshold must be obtained before operating in any mode.

BENCH TESTING GEB NORM

This mode does not require the loop to be in motion to be effective.

Follow the **BENCH SET-UP** and **TUNING FOR THRESHOLD**.

1. KEEP each item at least one inch away from the loop when testing.
2. HOLD a quarter in front of the loop as shown in Illustration K. Notice the reaction in the tone. Move the coin closer and farther from the loop and across the face of the loop to either side. Notice how the tone changes.

INDOOR TEST PROCEDURES

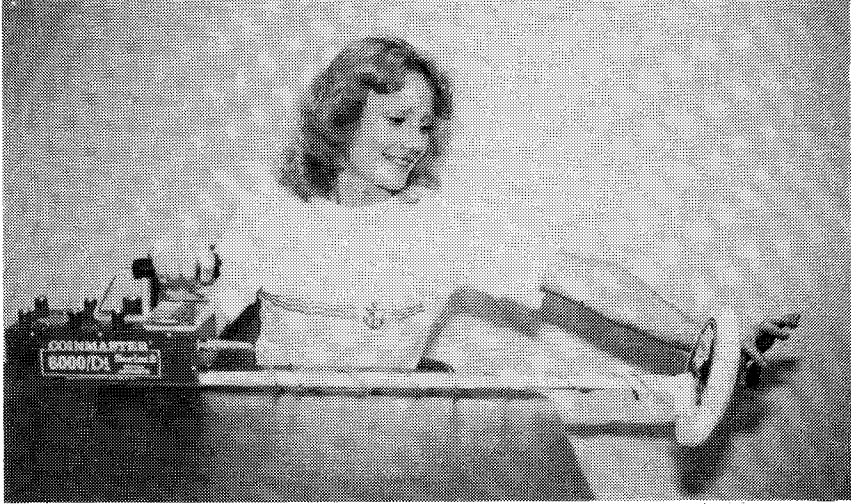


ILLUSTRATION K

3. MOVE the quarter back and forth in front of the loop. Notice the reading on the meter. (The METER requires at least TWO sweeps in order to give an accurate indication.)
4. REPEAT steps #2 and #3 with each of the coins and items of jewelry.
5. HOLD a bottle cap in front of the loop and repeat test #2 and #3 above. Test the other undesirable items in the same way.
6. NOTICE the coins, jewelry, bottle cap, etc., all SOUND the same. However, each shows a different METER INDICATION, aiding you in distinguishing between them.

BENCH TESTING GEB MAX

This mode does not require the loop to be in motion to be effective.

Follow the **BENCH SET-UP** and **TUNING FOR THRESHOLD** procedures on Page 14.

1. SWITCH the MODE to GEB MAX.
2. PRESS and RELEASE the PUSH BUTTON to regain threshold.
3. REPEAT procedures #2 thru #6.

The items will all have the same meter response as in GEB NORM, but will be detected audibly at greater depths. This is due to the increased sensitivity of the GEB MAX mode.

NOTE: Interference from your house electrical system may prevent you from testing the GEB/MAX MODE indoors.

BENCH TESTING GEB DISC

This mode requires the loop to be in motion to be effective. A slow sweep speed is ideal. This mode is used with the DISC control to discriminate against undesirable targets. NOTE: The DISC control does not affect the METER.

Follow the **BENCH SET-UP** and **TUNING FOR THRESHOLD** procedures on Page 14.

1. SWITCH the MODE to GEB DISC.
2. PRESS and RELEASE the PUSH BUTTON to regain threshold.
3. HOLD a quarter in front of the loop. KEEP each item at least one inch away from the loop when testing. If any item is held still, the detector will not sound off; the METER will not accurately indicate the type of item.
4. MOVE the quarter back and forth in front of the loop and notice the difference in tone. Also, note the indication on the METER.
5. TEST each one of the coins, the jewelry, pull tabs, bottle caps, nail and foil. NOTE the difference in tone response and METER indication.
6. INCREASE the DISC control gradually, (half steps) press and release the push button after each adjustment and repeat the testing of each item. Note the difference in tone (the METER will continue to read the same). Continue this process, increasing the DISC as you test. AN ITEM IS DISCRIMINATED AGAINST WHEN THE TONE GOES SILENT.
7. MAKE NOTES about where each item is rejected. These notes will help in the field as you try to determine the kind of target you are detecting.

Increasing the discrimination level rejects certain undesirable items, but at the same time it rejects certain desirable items. Use only the level of discrimination that is necessary to efficiently hunt in a specific area.

BENCH TESTING IN TR DISC

The TR DISC mode discriminates against undesirable targets, but does not need the loop to be in motion to be effective. This is helpful when trying to discriminate against a target in water; in tight places where the loop cannot be "swept"; in saltwater; and in ground that is not heavily mineralized.

Follow the **BENCH SET-UP** and **TUNING FOR THRESHOLD** procedures on Page 14.

1. SWITCH the MODE to TR DISC.
2. PRESS and RELEASE the PUSH BUTTON to regain threshold.
3. HOLD a quarter in front of the loop. KEEP each item at least one inch away from the loop when testing. Notice the detector does sound off. However, the METER will not accurately indicate the item until it has passed back and forth at least two times.
4. MOVE the quarter back and forth in front of the loop. Notice the tone, and the METER indication.
5. TEST each one of the coins, the jewelry, pull tabs, bottle caps, nail and foil. Note the difference in tone response and METER indication.
6. INCREASE the DISC control gradually, (half steps), press and release the push button after each adjustment and repeat testing each item. Note the difference in tone. (The METER will continue to read the same.) Continue this process, increasing the DISC as you test.
7. NOTE that each item is rejected at the same point on the DISC control in TR DISC mode as it is in the GEB DISC mode.

Increasing the discrimination level rejects certain undesirable items, but at the same time it rejects certain desirable items. Use only the level of discrimination that is necessary to efficiently hunt in a specific area.

FIELD TUNING PROCEDURES

The detector needs to be GROUND BALANCED for each location when the detector is used in one of the three GEB modes. This minimizes the effects of ground mineralization. When the detector is GROUND BALANCED, there is no difference in the threshold tone between air and ground. Ground balancing is not affected by the position of the VDI SENSITIVITY LEVEL on the POWER control. It can be set at either MIN or MAX. However, in heavily mineralized ground, it is best to select the MIN setting. In moderately mineralized ground it is better to select the MAX setting.

GEB NORM

Check the battery condition and then proceed as follows:

1. TUNER MIN
2. MODE GEB NORM
3. GEB 5
4. DISC 5
5. POWER MIN/VDI
6. VOLUME MAX
7. TUNE FOR THRESHOLD: RAISE the loop waist high. Press and hold in the PUSH BUTTON while turning the TUNER clockwise until a slight audio tone is heard. Release the PUSH BUTTON. (Illustration L.)
8. LOWER the loop to the ground. (Illustration M.) Listen to the threshold sound as it nears the ground.



ILLUSTRATION L



ILLUSTRATION M

9. IF THE TONE DECREASES, raise the loop back up waist high and INCREASE THE GEB control (clockwise) slightly. IF THE TONE INCREASES, raise the loop back up waist high and DECREASE THE GEB control (counter-clockwise) slightly.
10. PRESS and release the PUSH BUTTON to regain threshold.
11. LOWER the loop to the ground and listen to the threshold sound as it nears the ground.
12. REPEAT step #9. If the tone decreases, increase the GEB control. If the tone increases, decrease the GEB control.
13. PRESS and RELEASE the PUSH BUTTON after each adjustment of the GEB control to regain threshold.
14. CONTINUE this procedure until the threshold tone remains the same whether the loop is in the air or on the ground.

If you have difficulty adjusting the GEB control to obtain a constant threshold, you may be over some metal. Move to another spot and repeat the procedures.

GEB DISC

Before searching in the GEB DISC mode, the detector must be GROUND BALANCED in GEB NORM, as established in steps #1 thru #14 on Pages 17 & 18.

After GROUND BALANCING in GEB NORM, proceed as follows:

1. Set the DISC control to the desired level of discrimination.
2. SWITCH the MODE to GEB DISC.
3. PRESS and RELEASE the PUSH BUTTON to regain threshold with loop held waist high.

The detector is ready to operate in GEB DISC. Remember, the loop must be kept in constant motion to be effective in this mode.

GEB MAX

Before searching in the GEB MAX mode, the detector must be GROUND BALANCED in GEB MAX. This procedure is the same as GROUND BALANCING in GEB NORM, steps #1 thru #14 on Pages 17 & 18.

After GROUND BALANCING in GEB MAX, the detector is ready to operate.

TR DISC

The performance of this mode is affected by the mineralization content of the ground. However, in only slightly mineralized ground it can be used very effectively.

Set the detector's threshold as established in the FIELD TUNING PROCEDURES for GEB NORM, steps #1 thru #7 on Page 17. Proceed as follows:

1. SET the DISC control to the desired level of discrimination.
2. SWITCH the MODE to TR DISC.
3. PRESS and RELEASE the PUSH BUTTON to regain threshold after every adjustment.
4. LOWER the loop to approximately ½ inch above the ground.
5. PRESS and RELEASE the PUSH BUTTON to regain threshold.
6. LOWER loop completely to the ground.
7. KEEP the loop level to the ground as you search an area. If the loop is tilted, or lifted up, the tone will get louder, causing a false signal.
8. SEARCH while keeping the loop parallel to the ground, and as close to it as possible.

The more the tone changes from the slightest tilt or up-down movement, the more mineralized is the ground. In heavily mineralized ground it is best to hunt in one of the three GEB MODES.

FIELD OPERATIONS

The 6000/Di Series 2 is designed and engineered for outstanding performance in every treasure hunting situation. It is the ideal instrument for coin hunting, prospecting, relic hunting and beachcombing. It can also be used for a wide variety of industrial applications. The detector's depth capability is dependent on six main factors:

1. THE MODE OF OPERATION.
2. THE SIZE OF THE TARGET.
3. THE SIZE OF THE LOOP.
4. THE LENGTH OF TIME THE TARGET HAS BEEN BURIED.
5. THE AMOUNT OF MINERALIZATION IN THE GROUND.
6. THE SKILL OF THE OPERATOR.

GEB NORM MODE

1. This is an all-metal mode that does not audibly distinguish between desirable and undesirable targets. Loop does not have to be in motion to be effective.
2. Balances out the effects of mineralized ground.
3. Can be used when the purpose is to locate every metal object in an area. This would especially apply to relic hunting and prospecting.
4. To identify hot rocks, proceed as follows:
 - a. Switch the detector to GEB/DISC.

- b. If the tone decreases, the target is a hot rock.

GEB DISC MODE

1. This mode distinguishes between desirable and undesirable targets when used with the DISC control. Loop **needs** to be in motion to be effective.
2. Balances out the effects of mineralized ground.
3. Can be used when searching in areas with high content of undesirable targets, such as pull tabs, bottle caps and foil. Using this mode eliminates the need to dig every target to find out if it is desirable. Especially useful for coin hunting.

TR DISC MODE

1. This mode distinguishes between desirable and undesirable targets when used with the DISC control. Loop does not have to be in motion to be effective.
2. Balances out the effects of ground mineralization when used with the DISC control set to GND REJ (Ground Reject) position.
3. Does not balance out the effects of mineralized ground while DISC control is set for discrimination.
4. Balances out the effects of saltwater when used with the DISC control set to reject salt.
5. Can be used when distinguishing between desirable and undesirable targets in areas where the loop cannot be "swept" (as needed in GEB DISC); in shallow water; in saltwater; and as a back-up in prospecting.

GEB MAX

1. This is an all-metal mode that does not distinguish between desirable and undesirable targets. Loop does not have to be in motion to be effective.
2. Balances out the effects of mineralized ground.
3. Depth capability is @ 30% greater than GEB NORM. However, this increased sensitivity makes the tone less stable and requires more skill to use.
4. Can be used when the purpose is to locate every metal object in an area. Especially useful when the desired objects are buried deeply in the ground. This applies to relic hunting and industrial applications.
5. To identify hot rocks, proceed as follows:
 - a. Switch the detector to GEB/DISC.
 - b. If the tone decreases, the target is a hot rock.

PUSH BUTTON MODE CHANGING

The PUSH BUTTON can be used to automatically switch between modes without having to use the MODE control. It is important to note that when the PUSH BUTTON changes modes, it also changes the METER function, and, re-tunes.

- a. When the PUSH BUTTON is out, the METER reads VISUAL DISCRIMINATION INDICATION.
- b. When the PUSH BUTTON is held-in, the METER reads DEPTH on coin sized objects.

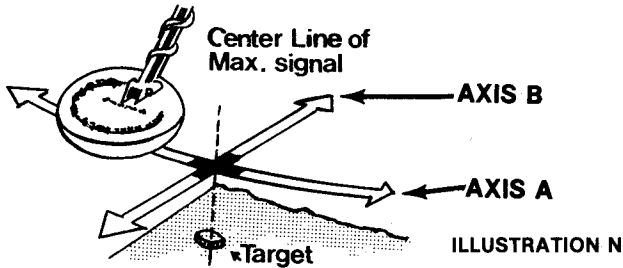
The following chart will simplify the MODE CHANGING functions of the PUSH BUTTON.

	PUSH BUTTON OUT		PUSH BUTTON IN	
MODE SWITCH	OPR MODE	METER	OPR MODE	METER
GEB NORM	GEB NORM	VDI	GEB DISC	DEPTH
GEB DISC	GEB DISC	VDI	GEB NORM	DEPTH
TR DISC	TR DISC	VDI	GEB MAX	DEPTH
GEB MAX	GEB MAX	VDI	GEB DISC	DEPTH

The MODE will remain switched as long as the PUSH BUTTON is held in. Remember, the METER reading will always be determined by the position of the PUSH BUTTON.

PINPOINTING

When a target is detected, sweeping it from different directions will help to determine if it is worth recovering. Follow these procedures to pinpoint. See Illustration



NOTE: It is possible to pinpoint a target in two ways: DE-TUNING, using the loudest volume in the GEB NORM mode, or, using DEPTH READING with the PUSH BUTTON Held in.

DE-TUNING METHOD

1. Switch to GEB NORM mode. (This method also works in the GEB MAX mode.)
2. Move the loop towards the target until the tone reaches its maximum level. At this point, move the loop across the target at a right angle until again the tone reaches its maximum level.
3. Press and release the PUSH BUTTON several times as you move the loop over the target area. You will be trying to narrow the detector's response to the target so it will be easier to know when the center of the loop is directly over the target.
4. When the target is pinpointed, move the loop off to one side.
5. Press and hold in the PUSH BUTTON (establishing DEPTH READING on the METER). Move the loop back over the target. Read the depth on the target and recover the object. NOTE: DEPTH READING is most accurate on coin sized objects.

DEPTH READING METHOD

1. Once you have determined a target is worth digging, press and hold in the PUSH BUTTON. This activates DEPTH READING on the METER.
2. Watch the METER as the loop is moved over the target area.

FIELD OPERATIONS continued

3. When the METER needle reaches its farthest position to the right, (the shallowest depth), the target is directly below the center of the loop. Read the DEPTH and recover.

Accurate pinpointing makes recovering objects easier; it minimizes the possibility of damaging the object; and, it minimizes damage to the area. Pinpointing is an important part of successful treasure hunting. Experience will help you develop personal techniques.

TIPS FOR DEVELOPING YOUR SKILLS

As you become more familiar with the capabilities of the 6000/Di, you will develop personal techniques that make it easier to locate buried treasure. The following information may be helpful as you learn the capabilities of this detector.

VISUAL DISCRIMINATION INDICATOR (VDI) and DEPTH READING

These two features may be used together to maximize the efficiency of each MODE.

1. WHEN SEARCHING IN THE GEB NORM MODE:

- a. All metals will be detected and the METER will indicate the kind of target that is located. Sweep the target from different directions.
- b. Cross check the target by pressing and holding the PUSH BUTTON to switch to the GEB DISC mode. Set the DISC control to the setting that will be most helpful to identifying the object.
- c. Sweep the target at a slow rate and from different directions. Listen to the tone and determine if the target is desirable.
- d. Pinpoint, using one of the two methods on Pages 21 & 22. Recover the item.

2. WHEN SEARCHING IN THE GEB DISC MODE:

- a. The audio tone will distinguish between desirable and undesirable targets, as set up with the DISC control. And, the METER will give an indication of every target located. Sweep it from different directions.
- b. When the detector indicates the target is desirable, press and hold in the PUSH BUTTON. This will switch the METER to DEPTH READING and the MODE to GEB NORM. Pinpoint using one of the two methods on Pages 21 & 22.

3. WHEN SEARCHING IN THE TR DISC MODE:

- a. The audio tone will distinguish between desirable and undesirable targets, as set up with the DISC control. And, the METER will give an indication of every target. Sweep it from different directions.
- b. When the detector indicates the target is desirable, pinpoint using one of the methods on Pages 21 & 22.

4. WHEN SEARCHING IN THE GEB MAX MODE:

- a. All metals will be detected and the METER will indicate the kind of target located. Sweep the target from different directions.
- b. Cross check the target by pressing in and holding the PUSH BUTTON to switch to the GEB DISC mode. Set the DISC control to the setting that will be most helpful to identifying the object.
- c. Sweep the target at a slow rate and from different directions. Listen to the tone and determine if the target is desirable.

TIPS FOR DEVELOPING YOUR SKILLS

- d. Once you have determined the target is desirable, pinpoint using one of the two methods on Pages 21 & 22.
5. Always fill in the holes you dig. Public officials and property owners will be more likely to allow continued treasure hunting in the area if there is no environmental damage.
6. Criss-cross an area when searching it. Many targets will only be detected when the detector sweeps them from a particular direction.
7. After recovering a coin, check the hole for additional objects.
8. Carry a plastic bag to protect the detector in case of rain.
9. It is important to get permission to search on private property in advance. It is best to ask in person.
10. Historical societies have access to valuable photographs, books and journals. These materials can help you in your search for treasure sites. It is a good idea to join these societies or use their facilities.
11. Carry extra batteries in case those in the instrument need replacing.
12. Read Treasure Hunting field manuals that contain information on how and where to use your instrument.
13. Following is a partial list of places to treasure hunt:

EXCELLENT

Amusement Parks
Circus Grounds
Fair Grounds
Carnival Grounds
Exposition Sites
Football Fields
Soccer Fields
Around Old Churches
Around Old Schools
Under Old Floors of "Outhouses"
Beaches
Beach Concession Stands
Grassy Area Above Beach
Under Boardwalks
Around Swimming Pools
Old Fence Post Holes
Around Parking Meters

AVERAGE

Badminton Courts
Volleyball Courts
Along Sidewalks

GOOD

Playgrounds
Campgrounds

Picnic Areas
Public Parks
Revival Grounds
Baseball Fields
Polo Grounds
Old Houses
Under Porches of Old Houses
Old Train & Bus Stations
Ghost Towns
Foundations of Old Buildings
Shallow Water - Swimming Area
Banks of Fishing Lakes
Under Fire Lookout Towers
Parking Lots
Under Bleachers
Auction Sites
Old Cemeteries
Outdoor Markets
Old Stagecoach Stops
Old Army Campsites
Old Gypsy Campsites
Battlefields
Under Large Trees
Demonstration Sites
Drive-In Theaters
Race Tracks
Horse Rings
Around Old Mailboxes

SERVICE TIPS

Here are some service tips that may help if difficulties are encountered.

1. The detector is "Dead", will not operate:
 - a. Check battery condition and battery leads.
 - b. Check for proper connection of the loop cable.
 - c. Check controls for intermittent operation.
2. Oscillating or pulsing speaker sound:
 - a. This effect is many times due to external electric sources such as: Other nearby metal detectors, power lines, television sets and CB radios.
 - b. In many cases moving to another area may be necessary. If the problem persists at another location, the detector may need servicing.
3. Erratic Operation:

Check for loose battery connections.

 - b. Be sure the loop cable is wrapped snugly around the rod and properly connected.
 - c. Check battery condition.
4. The detector "drifts" out of tune:
 - a. Drift may occur as a result of sudden changes in temperature. Allow stabilization time.
 - b. The detector may appear to drift if not properly ground balanced in the GEB MODES, or if used in the TR DISC MODE in mineralized soil areas.
 - c. Steady drift may be caused by component failure.
5. No sensitivity in the discriminate modes:
 - a. GEB DISC MODE: Insufficient signal as a result of not sweeping the loop over the target.
 - b. TR DISC MODE: Reduced depth as a result of increased ground mineralization.
6. Stereo Headphones: This detector is equipped with a mono-headphone jack. If stereo headphones are used, sound will come out of only one side. NOTE: The use of stereo headphones is not advised, unless they can be set for mono listening.

GLOSSARY OF TERMS

1. **BENCH TEST:** Before using a metal detector in the field, it is important to understand how it will respond to various metals, both desirable and undesirable. The bench test, performed indoors, allows you to become familiar with the detector's operation.
2. **COINHUNTING:** Using a metal detector to search for coins. Also included in this are jewelry and other personal items that people often lose.
3. **CONCENTRIC LOOP:** Patented coil configuration that generates maximum sensitivity and stability. Minimizes false target readings and allows for accurate pinpointing because the loop is most sensitive at its center.
4. **DEPTH CAPABILITY:** Refers to the detector's ability to penetrate into the ground with its signal. Depth depends on the size of the object, the size of the loop, the length of time the object has been buried, the mode of operation and skill of the operator.
5. **DESIRABLE TARGET:** Anything which might be of value to a person. These items include coins, jewelry, knives, gold, relics, etc. "One man's trash is another man's treasure!"
6. **DISCRIMINATION:** Circuitry that allows the detector to electronically distinguish between "desirable" and "undesirable" targets.
7. **DISC (DISCRIMINATOR):** Control that allows the operator to select the amount of discrimination needed for distinguishing between "desirable" and "undesirable" targets. Large amounts of discrimination can reduce depth capability.
8. **GEB (GROUND EXCLUSION BALANCE):** Circuitry that allows the detector to electronically balance out the effects of mineralized ground.
9. **GEB DETECTOR:** Metal detector that has Ground Balancing circuitry.
10. **GEB DISC:** Operating mode that balances out the effects of mineralization, while discriminating against "undesirable" objects.
11. **GEB NORM:** Operating mode that balances out the effects of mineralization while detecting all metals.
12. **GEB MAX:** Operating mode that balances out the effects of mineralization while detecting all metals at depths about 30% deeper than GEB NORM.
13. **GROUND BALANCE:** Refers to electronically eliminating the effects of mineralization. Also refers to a variable control used for balancing out the effects of mineralized soil.
14. **HOT ROCK:** A rock containing a high amount of iron oxide (mineralization).
15. **JUNK:** Refers to "undesirable" objects to which a metal detector will respond. These items include pull tabs, pop tops, nails and foil, etc.
16. **LED (LIGHT EMITTING DIODE):** LED's are used on some White's metal detectors as low battery alert indicators.
17. **MINERALIZATION:** The ferric oxide (iron) or magnetic content of the soil.
18. **MODE:** Refers to an electronic setting in which the detector can be operated. Modes of operation include: GEB NORM, GEB DISC, TR DISC, GEB MAX.
19. **NEUTRAL READING:** The detector is said to give a neutral reading if a target does not increase or decrease the threshold tone. The detector neither discriminates against it, nor detects it.
20. **NICKEL CADMIUM BATTERIES:** A type of rechargeable battery commonly used for lightweight portable equipment. They have long life and can be recharged as many as 1000 times or more. (Sometimes referred to as NI-CADS, a registered trademark for SAFT AMERICA, INC.)

GLOSSARY OF TERMS continued

21. **NULL POINT:** The point on the DISC and GEB controls where the target (or ground) does not cause the threshold tone to increase or decrease. A neutral reading.
22. **ORE:** A mineral containing a valuable metal. Detectors can be used to locate rocks with valuable metal contents.
23. **PINPOINTING:** Once a target has been located in a general area, this method is employed to determine its exact location.
24. **PROSPECTING:** Searching for precious metals in their natural form. Detectors can be used to find nuggets and pockets of black sand, as well as for ore sampling.
25. **REJECTION:** This is when the detector's threshold tone registers a decrease in tone. When a target is discriminated against, it is being rejected.
26. **RETUNING:** The push button on the detector's handle can be used to reset the detector's threshold. By simply pressing and releasing it, the instrument is automatically retuned.
27. **RELIC HUNTING:** Searching for older items like tools and household items. Often times these have a historical or archaeological value.
28. **SENSITIVITY:** Refers to the detector's depth capability. The more sensitive an instrument, the deeper it will detect.
29. **SIGNAL INTENSITY:** The registering of a signal on the meter. The signal comes from the instrument's detection of a target.
30. **SWEEP:** Method of swinging the detector's loop to search an area. The loop should completely cover the ground in front of you as you walk slowly along.
31. **TARGET:** Any item to which the detector responds. "Targets" may be desirable or undesirable.
32. **Thing:** Treasure Hunting. A "Ther" is a treasure hunter.
33. **THRESHOLD:** The detector's point of optimum tuning. At this point the detector operates at its maximum depth range. It is recognized by a slight audio tone.
34. **TRANSMIT RECEIVE (TR):** A common type of metal detector. In the search loop of these instruments there is one coil that produces a magnetic field, (transmits) and another coil that detects the introduction of a metallic substance into that field (receives).
35. **TREASURE HUNTING:** Using a metal detector to locate lost, buried, or hidden items of value. Included in this general term is Coinhunting, Relic Hunting and Prospecting.
36. **TR DISC:** Detector mode to be used with DISC control to either discriminate against junk or reject the ground.
37. **TUNER:** Variable control used to adjust the detector's threshold tone.
38. **UNDESIRABLE TARGETS:** Anything which a person might not want to locate. These include things which might be discriminated against, including pop tops, pull tabs, foil and nails. "One man's trash is another man's treasure!"
39. **VDI (VISUAL DISCRIMINATION INDICATOR):** Feature that aids in the identification of targets.

CODE OF ETHICS

Treasure hunting is the kind of new hobby that fires the imagination and generates its own enthusiasm. It's the most natural thing in the world to dig as fast as you can the minute you hear that first loud unmistakably "good" signal. It will be a real thrill to discover there's treasure right beneath your feet!

But wait a minute! We strongly urge you to adopt a code of ethics which will preserve the environment and also the rights of treasure hunters to operate detectors with as few restrictions as possible.

Before you even begin a search, check the law, ordinance or regulations about hunting on publicly owned sites. Abide by the rules. If the area is private property, get written permission from the owner to search it. You may find he will be more eager to give permission if you suggest sharing your finds with him, or if you offer to search for a specific item he has lost.

ABOUT DIGGING: In lawn areas use a screwdriver of no more than six or eight inches long as your tool. Limit the size of the hole to a maximum of two inches in diameter, cutting a plug of sod which can be easily replaced after you make your finds and fill the hole, leaving no HOLES. HOLES ARE BOTH UNSIGHTLY AND DANGEROUS!

Detectors designed for locating large and deeply buried objects should be used with discretion - never in the lawn area, and with careful judgement in other locations. Consider the scar you may leave, before you start digging. This will vary a lot from one part of the country to another, depending on local soil and climatic conditions. Public officials and private property owners will be much more likely to allow continued treasure hunting if you do no environmental damage. You may even be able to increase your reputation as an ethical hunter by volunteering to carry out and dispose of whatever trash items you find.

Adoption of these attitudes can only enhance the public's opinion of treasure hunters and assure that many areas, both public and private, remain open to you and your new detector.

A NATIONAL SERVICE PROGRAM

White's Electronics has always been concerned with the absolute quality of its mineral/metal detectors. Service after-the-sale is also of equal importance. In an effort to further the quality of service to our customers, White's reorganized its warranty service program significantly. Since January 1982, there have been ten factory authorized National Warranty Service Centers located regionally around the continental U.S. These Service Centers are identical to the Factory Service Center in Sweet Home, Oregon. In order to ensure you will get the finest service possible for your detector, the technicians in each National Warranty Service Center are Factory trained and given on-going training for new products and improved service techniques. They can also repair your out of warranty instruments with efficiency and timeliness.

Simply return the detector to the dealer where you purchased the unit. The unit must be accompanied by a completed service coupon provided by your dealer. You must provide proof of date of purchase before the unit is shipped.

If the unit has failed within the first 90 days of purchase, shipping will be prepaid.

If the unit fails after the first 90-day period, the customer is responsible for shipping costs. Please also include \$5.00 for return postage, handling and insurance.

Any repair work performed by other than a White's National Warranty Service Center will automatically void the warranty.

If a problem occurs with your metal detector, first contact the White's dealer who sold it to you. In many cases your dealer can solve the problem. If not, the dealer will have your detector repaired under the Warranty Program. All of White's National Service Centers, located throughout the country, are owned and operated by factory trained technicians. These centers are fully equipped and the personnel fully trained with on-going programs at White's in order to service your mineral/metal detector. With this program, the average repair time has actually been reduced from weeks to days!

TO LEARN THE NAME AND LOCATION OF YOUR NEAREST WHITE'S DEALER CALL:

TOLL FREE — 1-800-547-6911

WHITE'S ELECTRONICS' LIMITED WARRANTY

If within two years (24 months) from the original date of purchase your White's detector fails through normal use or due to defects in either material or workmanship, White's Electronics will repair or replace, at its option, all necessary parts without charge for parts or labor.

Simply return the detector to the dealer where you purchased it. The unit must be accompanied by a completed service coupon provided by your dealer. You must provide proof of date of purchase before the unit is shipped.

If the unit has failed within the first 90 days of purchase, shipping will be prepaid.

If the unit fails after the first 90-day period, the customer is responsible for shipping costs. Please also include \$5.00 for return postage, handling and insurance.

Items excluded from this warranty are non-rechargeable batteries, headphones and other accessories.

The warranty is not transferable. Nor is it valid unless the Warranty Registration Card is returned to the factory address below within ten (10) days of original purchase for the purpose of recording that date, which is the actual commencement date of the warranty.

The warranty does not cover damage to detectors caused by accident, misuse, neglect, alterations, modifications or unauthorized service.

Duration of any implied warranties (e.g., merchantability and fitness for a particular purpose) shall not be longer than the stated warranty.

Neither the manufacturer nor the retailer shall be liable for any incidental or consequential damages resulting from defects or failures of the instrument to perform.

Some states, however, do not allow limitations on the length of implied warranties, or the exclusion of incidental or consequential damages. Therefore, the above limitations and exclusions may not apply to you.

In addition, the stated warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

White's Electronics, Inc.
1011 Pleasant Valley Rd.
Sweet Home, OR 97386

white's electronics, inc.
P/N 621-0232

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