

**COINMASTER 6/DB
HANDHELD**

A n d

**COINMASTER 6/DB
HIPMOUNT**

**PUSHBUTTON G.E.B.
DISCRIMINATORS**

**A Message from
Mr. Kenneth White, Sr.
President, White's Electronics**

Congratulations! You are now the proud owner of one of the world's finest metal detectors. You'll enjoy the many relaxing hours you'll spend with your new detector.

Before we tell you how to assemble and operate your instrument, however, there are two important points to leave you with:

1. Your new detector is precision-made and has been carefully tested at our factory. Properly cared for, it will last for years and years. Treat it like a good friend and it should never let you down.

2. Any piece of fine equipment is only as good as the person operating it. Right now your detector is "smarter" than you, so you've got some catching up to do. Become very familiar with your instrument. Practice as much as you can. Soon it will become a part of you.

You and your metal detector will make an outstanding team. We've known many "shooters" who could follow in the tracks of others and find buried coins and rings the others had missed. You've got the equipment to out-shoot most anyone. Now all you need is the practice.

Good Hunting,

Kenneth White, Sr.

UNPACKING YOUR 6/DB HANDHELD

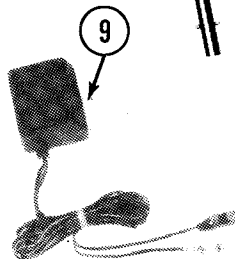
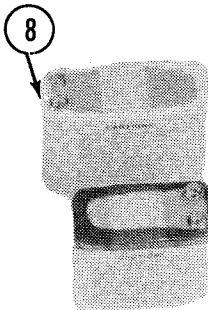
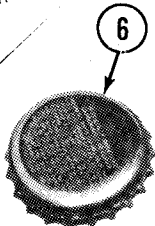
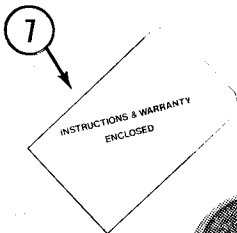
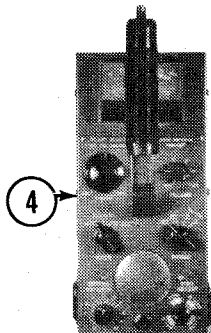
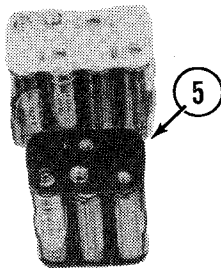
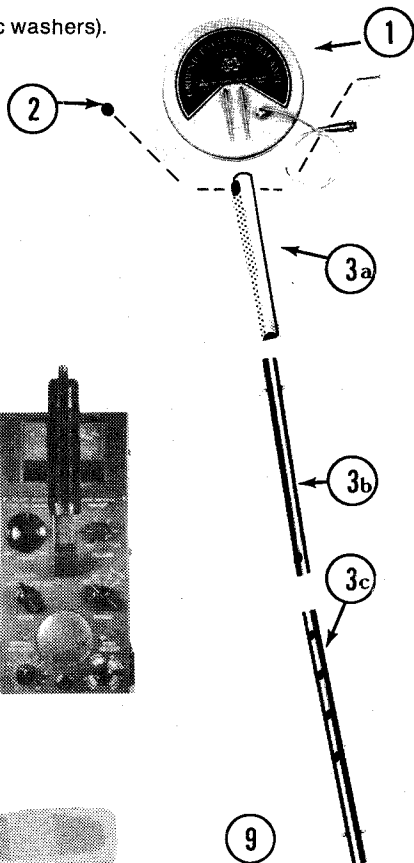
When you unpack your COINMASTER 6/DB HANDHELD, compare what you have with the items shown on these pages.

Fill out the Warranty Card and mail it within 10 days of purchase.

If you can't find all the parts, contact your dealer at once. If you can't do that, note the problem on your warranty card. In either case your problem should receive prompt attention.

You should have the following parts with the CM 6/DB HANDHELD:

1. Detector Loop.
2. Loop Bolt and Thumbnut (with two plastic washers).
3. Loop Rod (three sections).
 - a. Short white plastic section.
 - b. Short brass colored metal section.
 - c. Long brass colored metal section.
4. Instrument.
5. 9 & 12 Volt AA Penlight Battery Packs.
6. Test Sample .
7. Large Envelope Containing:
 - a. Assembly and operating instructions.
 - b. Warranty statement and card.
8. 9 & 12 Volt Rechargeable Batteries.
9. Charger.



UNPACKING YOUR 6/DB HIPMOUNT

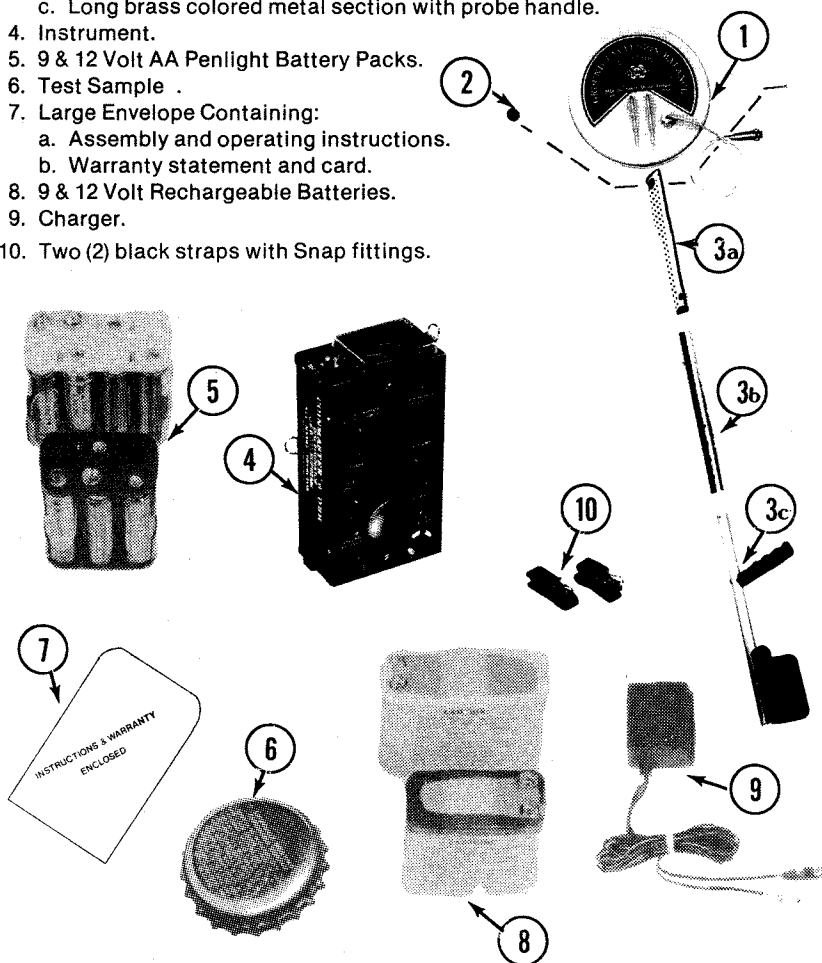
When you unpack your COINMASTER 6/DB HIPMOUNT, compare what you have with the items shown on these pages.

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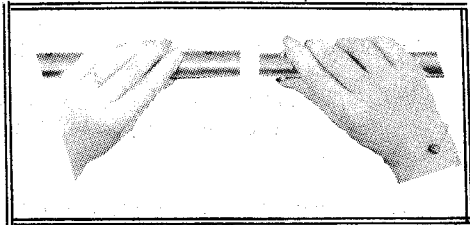
You should have the following parts with the CM 6/DB HIPMOUNT :

1. Detector Loop.
2. Loop Bolt and Thumbnut (with two plastic washers).
3. Loop Rod (three sections).
 - a. Short white plastic section.
 - b. Short brass colored metal section.
 - c. Long brass colored metal section with probe handle.
4. Instrument.
5. 9 & 12 Volt AA Penlight Battery Packs.
6. Test Sample .
7. Large Envelope Containing:
 - a. Assembly and operating instructions.
 - b. Warranty statement and card.
8. 9 & 12 Volt Rechargeable Batteries.
9. Charger.
10. Two (2) black straps with Snap fittings.



CM 6/DB HANDHELD ASSEMBLY

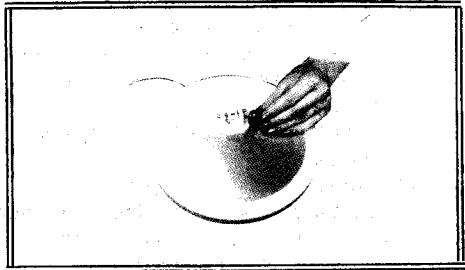
1. ASSEMBLE the TWO
ROD SECTIONS as
shown in Illustration A.



ILL. A

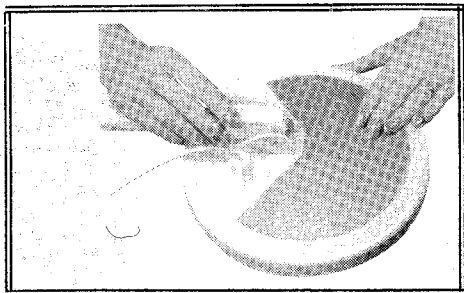
2. REMOVE the TWO
PLASTIC WASHERS
from the LOOP as shown
in Illustration B.

CAUTION: NEVER TIGHT-
EN THE WATERPROOF
CABLE FITTING ON THE
LOOP!



ILL. B

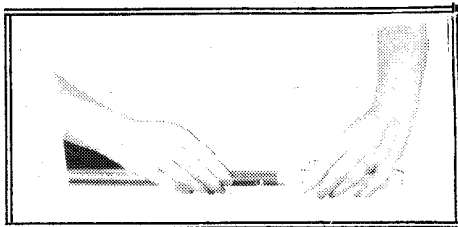
3. PLACE the TWO
WASHERS in the
depressions ON the
PLASTIC ROD and
CONNECT to the LOOP
as shown in Illustration
C.



ILL. C

4. REINSTALL BOLT and
THUMBNUt.

5. CONNECT the PLASTIC
ROD to the SMALL
METAL ROD SECTION
as shown in Illustration
D.

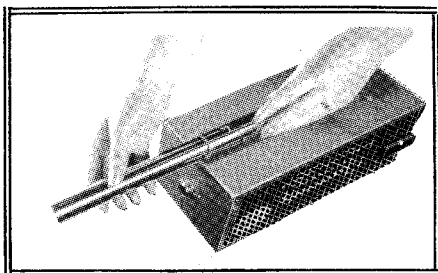


ILL. D

CM6/DB HANDHELD

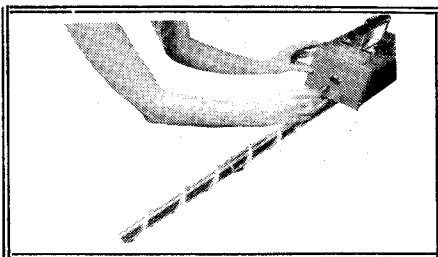
Assembly cont.

6. CONNECT COMPLETE ROD to INSTRUMENT as shown in Illustration E.



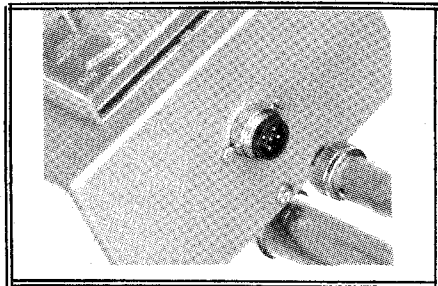
ILL. E

6. WRAP the CABLE around the ROD as shown in Illustration F.



ILL. F

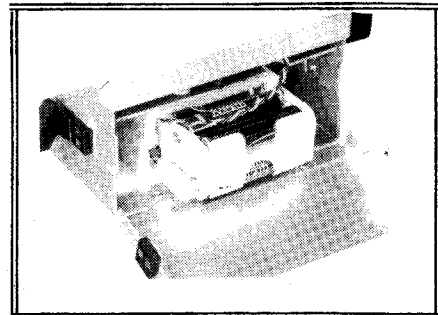
7. CONNECT the LOOP CABLE to the top of the INSTRUMENT as shown in Illustration G.



ILL. G

8. CONNECT BatteryCONNECTORS to the BATTERY PACK TERMINALS and INSTALL as shown in Illustration H.

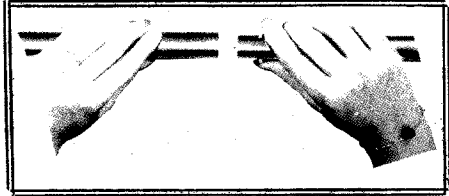
CONNECT WHITE MARKED LEAD TO (WHITE) 12 VOLT PACK AND BLACK LEAD TO 9 VOLT PACK.



ILL. H

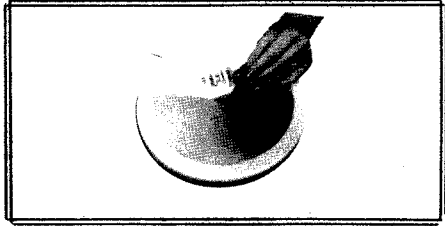
CM 6/DB HIPMOUNT ASSEMBLY

1. ASSEMBLE the TWO ROD SECTIONS as shown in Illustration A.



ILL. A

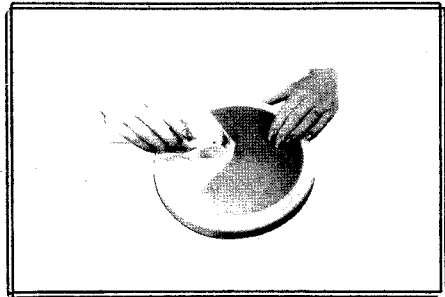
2. REMOVE the TWO PLASTIC WASHERS from the LOOP as shown in Illustration B.



ILL. B

CAUTION: NEVER TIGHTEN THE WATERPROOF CABLE FITTING ON THE LOOP!

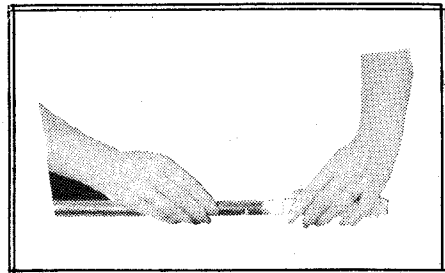
3. PLACE the TWO WASHERS in the depressions ON the PLASTIC ROD and CONNECT to the LOOP as shown in Illustration C.



ILL. C

4. REINSTALL BOLT and THUMBNUt.

5. CONNECT the PLASTIC ROD to the SMALL METAL ROD SECTION as shown in Illustration D.

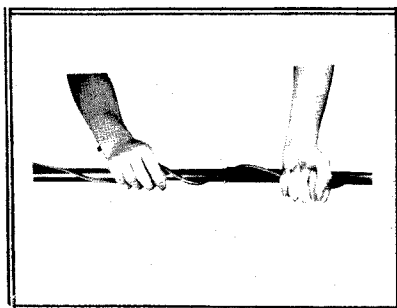


ILL. D

CM 6/DB HIPMOUNT

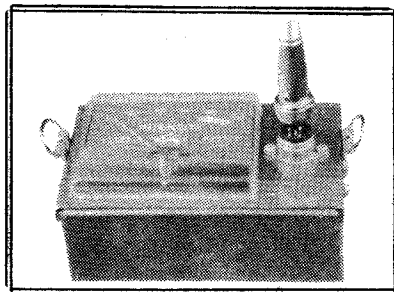
Assembly cont.

6. WRAP the CABLE around the ROD as shown in Illustration E.



ILL. E

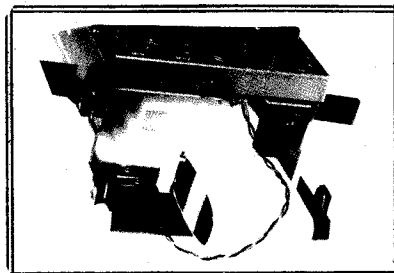
7. CONNECT the LOOP CABLE to the top of the INSTRUMENT as shown in Illustration F.



ILL. F

8. CONNECT Battery CONNECTORS to the BATTERY PACK TERMINALS and INSTALL as shown in Illustration G.

CONNECT WHITE MARKED LEAD TO (WHITE) 12 VOLT PACK AND BLACK LEAD TO 9 VOLT PACK.



ILL. G

9. CONNECT the two (2) straps to the case (see illustration H) and ADJUST to your comfort.



ILL. H

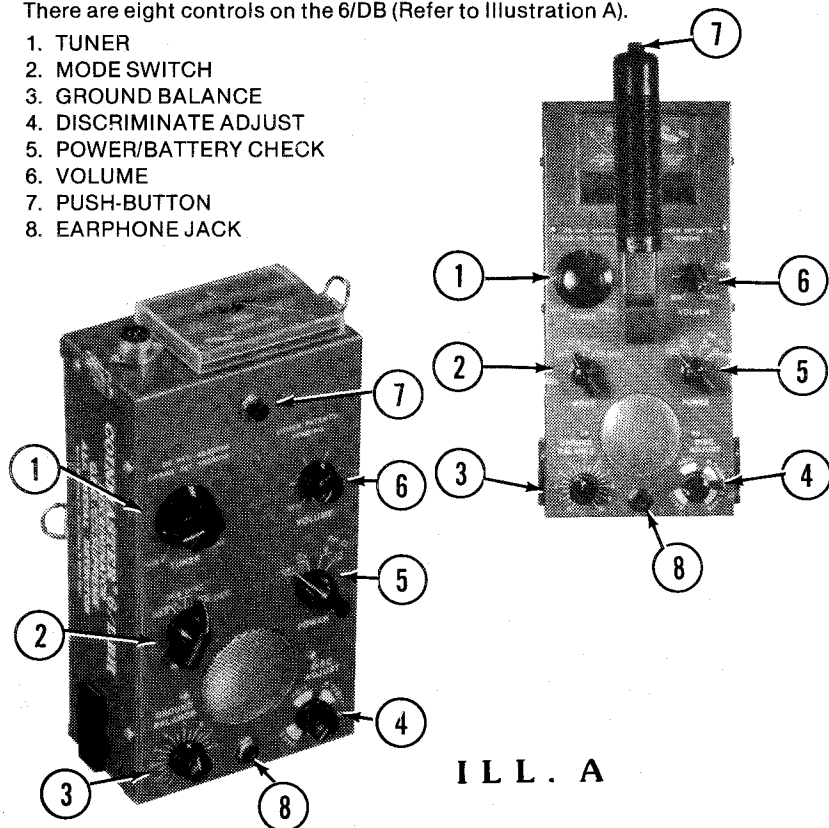
FAMLIARIZING YOURSELF WITH YOUR DETECTOR

NOTE:

THE FOLLOWING INSTRUCTIONS APPLY TO BOTH THE 6/DB HIPMOUNT AND 6/DB HANDHELD.

There are eight controls on the 6/DB (Refer to Illustration A).

1. TUNER
2. MODE SWITCH
3. GROUND BALANCE
4. DISCRIMINATE ADJUST
5. POWER/BATTERY CHECK
6. VOLUME
7. PUSH-BUTTON
8. EARPHONE JACK



ILL. A

1. **TUNER** - This control should always be adjusted for a slight tone, sometimes referred to as a **THRESHOLD** tone. If it is adjusted for **NO SOUND** then you may miss some or all objects depending upon how far away you were from the **THRESHOLD**. If you have too much sound then an object may not be able to cause any increase in the **LOUDNESS** of the tone.
2. **MODE** - There are three separate modes of operation which is like having three detectors in one.
 - a. **G.E.B NORMAL** - Detects all metals at normal G.E.B. or VLF depths.
 - b. **G.E.B DISCRIMINATE** - Discriminates against selected trash at normal G.E.B. or VLF depths regardless of soil conditions. A true G.E.B. **DISCRIMINATOR** rejects the ground while discriminating. Pinpointing is accomplished by holding in the button.

Familiarizing cont.

- c. TR DISCRIMINATE - The G.E.B. DISCRIMINATE MODE described above allows you to discriminate without being affected by the mineral in the soil, but the BOTTLE CAP may be difficult to identify. The BOTTLE CAP can be easily checked in the TR DISCRIMINATE MODE because it is the main purpose of the TR DISCRIMINATE MODE. Salt water can also be adjusted out in this mode by adjusting the DISCRIMINATE ADJUST Control near the nails setting. In the TR DISCRIMINATE MODE, you will not be able to adjust out the effects of the ground, so this mode will require more practice and patience to master, but the rewards can be fantastic when in non-mineralized soil.
3. GROUND BALANCE - This control works in the G.E.B. MODE. When in the G.E.B. MODE, you can adjust out the effect of the ferric oxide (mineralization) content of the GROUND.
 4. DISCRIMINATE ADJUST - This control allows for detection of thin rings at the NAILS level; also it adjusts out FOIL, PULL TABS, and SCREW CAPS. A very small amount of depth will be lost at the PULL TAB setting, but a large amount will be lost at the SCREW CAP setting, (CAUTION - as on any discriminator we know of, at the higher settings, such as PULL TABS: nickels, some rings and small gold coins may be lost).
 5. POWER AND BATTERY CHECK - This control turns the detector OFF and ON and has a 9 Volt setting to test the 9 Volt battery pack, and a 12 Volt setting to test the 12 Volt battery pack.
 6. VOLUME CONTROL - This control adjusts the maximum amount of sound (loudness) that can come from the speaker and headphones. At "MINIMUM" the loudness will vary according to the strength of the "find," but the maximum loudness available will be very soft. At "MAXIMUM" the amount of loudness available will be very great.
 7. PUSH-BUTTON - This control can be thought of as a "MEMORY" control for the tuner. As long as you push in the button when you set the tuner, the memory circuit will remember the initial setting the next time you push and release the button. So, if the tuning changes because of any reason (other than actually moving the TUNER KNOB), such as changing the DISCRIMINATE or GROUND BALANCE control (and you did not hold in the button as you change one of these controls), all you do to retune is press and release the button. You do not have to hold in the button in the G.E.B. DISCRIMINATE MODE for tuning or when adjusting the discriminate controls.
- NOTE: 1. The PUSH-BUTTON TUNING DOES NOT WORK IN G.E.B. DISCRIMINATE.
2. If you are in G.E.B. DISC., holding in the button changes the detector to G.E.B. NORMAL. If you are in any other mode, holding in the button changes the detector to G.E.B. DISC. MODE.
8. EARPHONE JACK - This feature allows you to connect a headset to save on power drain of the batteries and provide greater sensitivity in distinguishing one sound signal from another.
-

G.E.B. TUNING OUTDOORS

The main idea is being able to adjust out the effects of the ground, so raising and lowering the loop while searching will not affect the tone.

IMPORTANT: The G.E.B. MODE DETECTS ALL METALS.

To TUNE the 6/DB, set the controls as follows:

1. TUNER to MIN
2. MODE to G.E.B
3. GROUND BALANCE to 0
4. DISC. ADJUST to NAILS
5. POWER/BATTERY CHECK to 9

NOTE: If meter reads above "75" proceed to step 6. If the meter reads below "75" turn to section on BATTERIES. (Page 17).

6. POWER/BATTERY CHECK to 12.

NOTE: If meter reads above "75" proceed to step 7. If the meter reads below "75" turn to section on BATTERIES. (Page 17).

7. POWER/BATTERY CHECK to .. ON
8. VOLUME to MAX.



I L L . B



I L L . C

9. PRESS and hold in the button and turn the TUNER TO THE RIGHT (clockwise) to the THRESHOLD (start of tone) and the meter is between 0 and 20. See Illustration B.
10. Release the button.
11. Lower the loop towards the ground as shown in Illustration C.
12. Since the GROUND BALANCE control is set at 0, the tone should get quieter as you lower the loop towards the ground. (Illustration C).
13. INCREASE the GROUND BALANCE control to 5.
14. RAISE the loop off the ground approximately three (3) feet.
15. PUSH and RELEASE the button.
16. LOWER the loop to the ground.

G.E.B. Outdoors cont.

17. If the tone gets louder, decrease the GROUND BALANCE Control.
If the tone goes quiet, increase the GROUND BALANCE Control.

(If you have difficulty adjusting the GROUND BALANCE control, you may be over some metal, move to another spot).

When a balance between the air tone and ground tone is achieved you are ready to start search procedure.

G.E.B. DISCRIMINATOR OUTDOOR OPERATING PROCEDURES



I L L . D

Since you tuned your 6/DB in G.E.B. MODE, it is not necessary to retune it in G.E.B. DISC. The only steps necessary are:

1. Raise the loop off the ground.
2. DISC. ADJUST to nails.
3. Change the MODE SWITCH to G.E.B. DISC.

(G.E.B. DISC. setting can also be achieved by leaving the MODE SWITCH in G.E.B., push and hold the button in. ——— The unit is now in G.E.B. DISC. MODE. We recommend operating the unit in the G.E.B. NORMAL MODE until a target has been located then verifying the target using this method).

The G.E.B. DISCRIMINATE MODE discriminates against selected trash at normal G.E.B. (VLF depths regardless of soil conditions). It is a true G.E.B. DISCRIMINATOR in that it rejects the ground while discriminating. In this mode, the loop MUST BE IN MOTION in order for the unit to give the correct signal.

TR DISCRIMINATE PROCEDURES

In TR DISCRIMINATE MODE you will NOT be able to adjust out the effects of the ground. This mode will require more practice and patience to master, but the rewards can be fantastic, especially in non-mineralized areas.

To operate the CM 6/DB in TR DISCRIMINATE MODE:

1. Lower loop to approximately $\frac{1}{2}$ " to $1\frac{1}{2}$ " off the ground.
2. MODE SWITCH on TR DISCRIMINATE.
3. Push and release the button to regain THRESHHOLD setting.
4. Lower loop COMPLETELY to the ground.

Sweep the loop as shown in Illustration D. You will notice if the loop is tilted or if you lift the loop up, the tone will get louder. THIS IS VERY IMPORTANT TO UNDERSTAND. To help eliminate false signals caused by lifting or tilting, try to keep the loop parallel while you sweep.

IMPORTANT NOTICE: The more the tone changes from the slightest up or down movement of the loop, the more mineralized the soil. To test for this condition, raise the loop about $\frac{1}{2}$ inch. The sooner the tone changes, the more the mineralization.

G.E.B. TUNING INDOORS

Place your detector on a table, with the loop extending into the air away from any metal. (Refer to Illustration E). Note that there isn't any metal on her hands that might interfere with tuning the 6/DB.

To TUNE the 6/DB, set the controls as follows:

1. TUNER to..... MIN.
2. MODE to..... G.E.B.
3. GROUND BALANCE to..... 5
4. DISC. ADJUST to..... NAILS
5. POWER/BATTERY CHECK to... 9

NOTE: If meter reads above "75", proceed to next step. If meter reads below "75", turn to the section on BATTERIES. (Page 17).

6. POWER/BATTERY CHECK to... 12

NOTE: If meter reads above "75", proceed to next step. If meter reads below "75", turn to the section on BATTERIES. (Page 17).

7. POWER/BATTERY CHECK to.. ON
8. VOLUME to MAX.



ILL.
E

G.E.B. Indoors cont.

9. PRESS and hold in the button and turn the TUNER RIGHT (clockwise) to the "THRESHOLD" (start of tone) and the meter is between 0 and 20.
10. RELEASE the button.
11. HOLD a coin in front of the loop face as in Illustration E. Move the coin and notice how the tone changes. The tone should get louder as the coin is brought close to the loop.
12. Now hold a NAIL in front of the face of the loop. Move the NAIL and notice how it reacts just like the coin. In G.E.B., all metals are detected.

To test your G.E.B. DISC. MODE indoors, first tune in G.E.B. MODE (See above tuning instructions). Put the MODE Switch to G.E.B. DISC. setting. (It may be necessary to push and release the button to obtain a stable THRESHOLD). You are now ready to start testing procedures. First hold a coin in front of the loop face as shown in Illustration E. You will notice if the coin is held still the detector does not sound off, but if you move the coin across the face of the loop, the detector will sound off. DO NOT get closer than 1 inch from the loop.

NOTE: In this mode, the loop must be in motion relative to the coin or object.

Test the unit using several targets, for example: A quarter, nickel, nail and a pull tab. Test each target with the DISC. ADJUST CONTROL at different levels. Notice the changes in the signal as the DISC. ADJUST CONTROL is set at a higher level.

Since you have already tuned the unit in G.E.B. MODE, to test the TR DISC. MODE indoors, all that is required is to switch the MODE switch to TR DISC. and push and release the button to regain the THRESHOLD setting. Since the main purpose of the TR DISC. MODE is to reject the bottle cap, we suggest using a bottle cap for testing along with the other targets used in testing the G.E.B. and G.E.B. DISC. MODE. First hold a coin in front of the loop, move the coin and notice how the tone changes. The tone should get louder as the coin is brought closer to the loop. Next, hold a bottle cap in front of the loop face, move the bottle cap and notice the tone changes. The tone should get quiet as the bottle cap is brought closer to the loop. Do not get closer than 1 inch or you will get a false reading.

You should now have a very basic understanding of how to tune your detector. More detailed information follows about tips on use, batteries and more.

COINSHOOTING

Coinshooting can be divided into two categories:
NORMAL COINSHOOTING and RAPID COINSHOOTING.

1. In NORMAL COINSHOOTING, if you want to locate all coins, both shallow and deep, use the G.E.B. NORMAL MODE to search and pinpoint the object.
2. After locating the object, depress and hold the button to change to the G.E.B. DISCRIMINATE MODE to identify the object. A good headphone set, time and patience will help.
3. In NORMAL COINSHOOTING, sweep very slowly as shown in Illustration F.
4. As in any normal detector, the search signal should "peak" as the target center is passed.

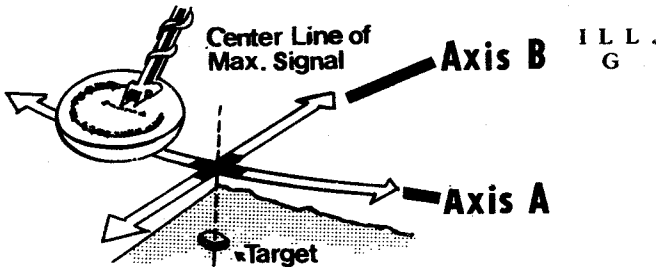
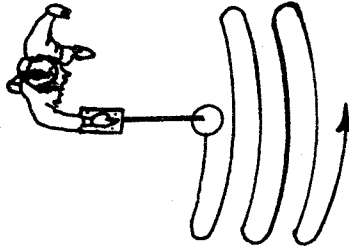
Coinshooting cont.

5. Try to keep the detector coil parallel to the ground at all times and avoid lifting the coil off the ground at the end of each sweep.
6. Keeping the detector coil parallel to the ground prevents the loss of detection of some deeper targets, since on a careless swing you are putting more distance between the loop and target by lifting it off the ground.
7. When you have pinpointed an object that sounds promising, hold in the button to switch the detector to the G.E.B. DISC. MODE.
8. Cross the target with a broad rapid sweep, first in one direction, then at right angles to insure a uniform reading as in Illustration G.

NOTE: The G.E.B. DISCRIMINATE MODE relies on Motion for proper operation. To produce the best possible signal, keep the coil in motion in a wide enough sweep to analyze the signal by its characteristic sound.

9. The object may be identified by the type of signal it produces. In some instances, some "junk" objects may be recognized by their erratic signal or the extra large area producing the signal.

ILL.
F

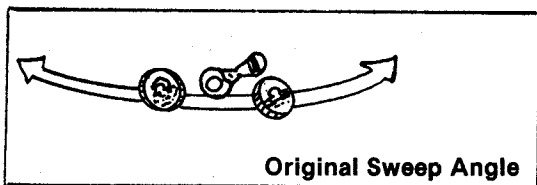


10. If you detect an object which produces a signal over a much larger area than a coin, ring or other valuable, it may be several coins close together in a group. (Illustration H).
11. To distinguish each separate object, sweep at different angles to screen out unwanted objects or to pinpoint a single object. (Illustration I).
12. If an object produces a very strong signal for its size, turn the DISCRIMINATE ADJUST first to SCREW CAPS to determine if the object is a COIN or SCREW CAP.

Coinshooting cont.

13. To distinguish a coin from a bottle cap, with the DISCRIMINATE ADJUST at SCREW CAPS, increase sweep speed. This will make the signal from a good object better and cause a "bottle cap" signal to drop out. This is one of two methods to identify and reject BOTTLE CAPS.

The other way to identify and reject BOTTLE CAPS is to place the detector in the TR DISCRIMINATE MODE and the DISC. ADJUST control to "FOIL." Then slowly check the target again. A BOTTLE CAP is almost always a strong signal and can usually be easily rejected in this mode.



ILL. H

RAPID COINSHOOTING



ILL. I

1. After initial tuning and selection of the desired discrimination level, place the 6/DB in G.E.B. DISCRIMINATE MODE.
2. Move the detector coil in a broad sweep as shown in Illustration F.
3. Keep coil slightly above ground and avoid contact in order to avoid generating a target or object type of signal. A good object will produce a clean, unbroken signal over the target area.
4. When a promising signal is found, hold in the button on the handle to switch to the G.E.B. NORMAL MODE for pinpointing.
5. Pinpoint the object in this mode as shown in Illustration G.

NOTE: The 6/DB is designed to identify an object by its metallic composition WHETHER MAGNETIC OR CONDUCTIVE. There are some objects which resemble a coin or valuable metal and which you will detect as a coin. Fortunately such objects are in the minority.

RELIC HUNTING

There are many areas where relics and other historically valuable objects have been lost due to battles such as the Civil War. In such areas almost any metallic object may be of interest. To locate such objects, it is best to use the G.E.B. NORMAL MODE.

1. Follow the initial tuning procedures.
2. To narrow your search to include only items such as brass, buttons, rings, medals, or buckles, hold in the button to switch to G.E.B. DISCRIMINATE MODE to provide more discrimination.
3. If too much ground clutter is present such as PULL TABS, you may want to set the DISCRIMINATE ADJUST to PULL TABS or SCREW CAPS.

BEACHCOMBING

The 6/DB is designed to be used in areas of wet or dry sand and salt or fresh water. The TR DISCRIMINATE MODE can be used on the ocean beach or in other areas of high salt concentration by tuning for salt water.

1. Set the MODE to TR DISCRIMINATE after initial tuning. If operating over or in salt water tune out the effects of salt water by adjusting the DISCRIMINATE ADJUST CONTROL.
2. If the G.E.B. DISCRIMINATE MODE is selected for the primary search, hold in the button to change to G.E.B. NORMAL MODE for pinpointing in salt-free areas.
3. If the G.E.B. NORMAL MODE has been selected for the primary search in a salt-free area, it may be necessary to adjust the GROUND BALANCE control to compensate for changing soil conditions. Switch to G.E.B. DISCRIMINATE MODE for object identification as in coin shooting.

If you are planning to do an extensive amount of beachcombing, a basket is needed with about three eighths inch mesh or slightly larger, that is, with holes big enough to allow sand to pass through and retain coins.

PROSPECTING

In prospecting, you will want to locate an area with gold or similar valuable metals. Gold nuggets or gold dust are usually found along with highly mineralized "black sand." You can either pan for gold dust or tune out the "black sand" effect with the GROUND BALANCE control and search for nuggets.

1. Place the detector in G.E.B. NORMAL MODE.
 2. Search in areas where the ground signal increases greatly, even with occasional raising and lowering of the detector coil and retuning with the button.
 3. An excellent place to search is in a stream bed (a wash or dry creek bed) and especially downstream from known mining and mineral area.
-

BATTERIES (NON-RECHARGEABLE)

Batteries are the lifeblood of your instrument. Full voltage is necessary to assure best possible performance. Your white battery pack holds eight 1½ Volt AA penlight batteries. Your black battery pack holds six 1½ Volt AA penlight batteries. These are available at drug and grocery stores almost everywhere. Any brand will work well, although many "shooters" recommend the alkaline type for longer life.

To change batteries, first remove the battery pack from the instrument. Before you remove any batteries, examine the pack. Note the exact position of each battery and the position of the battery lead snaps. Your detector will not work unless the batteries are properly installed and the battery lead is properly connected.

Each battery has a positive (+) end and a negative (-) end. The plus (+) and minus (-) symbols are clearly marked on all batteries. Remove one of the batteries from the battery pack. Notice that the slot from which it was removed also has the positive (+) and negative (-) symbols clearly marked.

To replace the batteries, simply match the plus (+) and minus (-) symbols on the battery snap and then snap the new battery into place.

The battery lead snaps must also be matched to the button snaps on the pack - plus (+) to plus, minus (-) to minus - before you reconnect the power cable.

RECHARGEABLE BATTERIES

As far as we know WHITE'S has become the first to sell rechargeable batteries with a metal detector. This rechargeable system will save you up to \$2,000 in regular batteries over the life of your rechargeable pack. These NICKEL CADMIUM batteries can be recharged as many as 1,000 times or more. Our tests show that under normal conditions you may expect anywhere from 10 to 20 hours of continuous use before you would need to recharge them. If used for only a few hours a day you can expect many more hours of use.

The 6/DB is supplied with two battery packs, a 9 Volt and a 12 Volt pack of regular batteries. The regular battery system will allow you to begin using your detector immediately while your rechargeable batteries are being initially charged OR if you are in the field and your rechargeable batteries go dead, you can insert the regular battery packs and go on detecting until you can recharge your rechargeable battery packs.

OPERATING YOUR CHARGER

1. **CONNECT WHITE MARKED LEAD TO (WHITE) 12 VOLT PACK AND BLACK LEAD TO 9 VOLT PACK.**
2. Plug the charger into an electrical outlet.
3. Charge the pack 3 to 5 hours:
 - a. Before the first use.
 - b. After storage periods of 2 weeks or more.
 - c. When the battery packs test below "75" on the meter.

IMPORTANT CAUTIONS ABOUT YOUR RECHARGEABLE BATTERIES

1. The battery pack should not be left on the charger for extended periods. A maximum of overnight.
2. Always be sure to connect to the correct terminals.
3. Do not dispose of the batteries in a fire.
4. Do not attempt to replace defective cells in your rechargeable packs. Each cell is matched to allow charging of the entire pack.
5. Do not allow any metal to lie across the terminals on your pack, the **VERY LARGE CURRENT** available may cause severe arcing and is otherwise dangerous. This includes the rings on your hand.
6. Do not place the pack in your pocket where it might short against keys, coins, etc.
7. Do not substitute this rechargeable pack with a different type of rechargeable pack.
8. Non-rechargeable batteries may explode if you attempt to charge them.

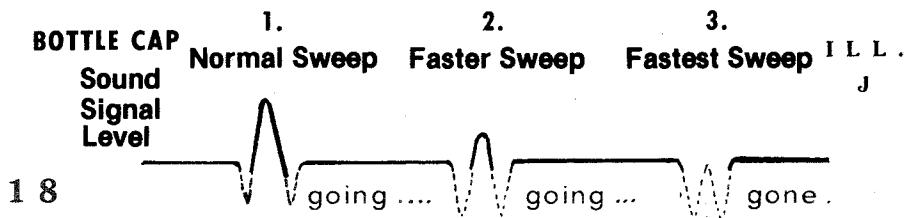
TIPS

1. "What will the detector locate?" Silver, lead, copper, bottle caps, tinfoil, pull tabs, cartridge cases, rings, brass and tin cans are just a few of the conductive objects which can be detected. Your detector will not locate sticks, rags, bones, paper, wood, or other non-metallic objects.
2. "How deep will it go?" In the G.E.B. MODE of operation, depth is determined by four main factors:
 - a. The **SIZE** of the object.
 - b. The **SIZE** of the loop.
 - c. The **SKILL** of the operator.
 - d. The **LENGTH OF TIME** the object has been buried.

In the TR DISCRIMINATE MODE the depth is determined by the same four main factors plus one other - the **AMOUNT OF MINERALIZATION**.

The longer an object has been buried, the better you will be able to detect it. A chemical reaction, called a "HALO" effect, may cause your detector to register a much larger increase in volume than might otherwise be expected for a small coin. If the effect is strong enough, your detector may continue to register even after you have dug up the coin.

3. Learn how to interpret different types of responses from your detector such as the following:
 - a. **BOTTLE CAPS** produce a coin-like sound, but there are two ways to identify and reject **BOTTLE CAPS**. One way is to place the detector in the G.E.B. DISCRIMINATE MODE, and the DISCRIMINATE ADJUST to **SCREW CAPS**. Then sweep with a fast sweep speed. This is necessary to reject a **BOTTLE CAP** in the **SCREW CAP** position as shown in Illustration J.

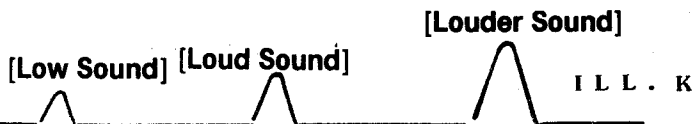


Tips cont.

If the object is a coin or other valuable metallic object, the sound signal level will increase with a fast sweep speed rather than drop out as shown in Illustration K.

COIN

**Sound
Signal
Level**

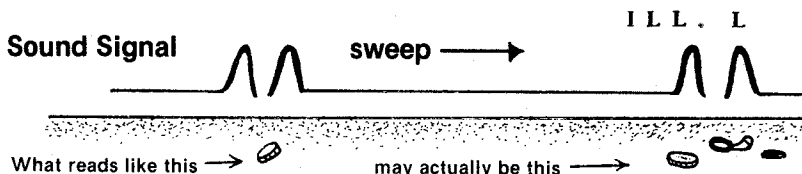


1. Normal Sweep 2. Faster Sweep 3. Fastest Sweep

The other way to identify and reject BOTTLE CAPS is to place the detector in the TR DISCRIMINATE MODE and the DISCRIMINATE ADJUST control to "FOIL." Then slowly check the target again. A BOTTLE CAP is almost always a strong signal and can usually be easily identified in this mode.

With this fantastic detector, you will get very deep objects in the G.E.B. DISCRIMINATE MODE regardless of the soil conditions, but occasionally you might dig up a BOTTLE CAP by mistake, so learn to identify them!

- b. SWEEP ANGLES are more important in locating and pinpointing a combination of objects. For example, with the detector set at G.E.B. DISCRIMINATE MODE and PULL TAB DISCRIMINATE LEVEL you will often get an audio or sound signal as in Illustration L.



If you are tempted to pass on and forget such a signal, don't. Instead, do one of the following:

1. Switch to the G.E.B. NORMAL for pinpointing.
 2. Sweep the detector coil across the target area in both directions. You may be able to isolate the signal from more than one object.
 3. If it appears that there is more than one object present, try sweeping the detector coil at different angles with the detector in G.E.B. DISCRIMINATE MODE for the most reliable reading. See Illustrations H and I.
- c. "TOO BIG" TARGET signals are produced by objects possessing a large surface area and may consist of an alloy or plating which causes the detector to respond to the non-ferrous or non-iron portion of the object. Such objects include beer cans, pop cans, and alarm clocks. Characteristics of such signals include:
1. The size of the signal both in ground area and strength.
 2. The distance you can raise the swinging detector coil above the ground before it fades. You may detect pennies buried about 5 or 6 inches below the surface of the ground and yet hit a strong signal with the detector coil raised 10 inches above the ground. Such a signal will not be produced by pennies, quarters or dollars unless possibly there is a quantity buried in one place such as in a gallon can. To check out such a signal, see how far you can raise the swinging detector coil above the ground before it fades, and test it in the TR DISC. MODE.

Tips cont.

- d. DEPTH ESTIMATING can be accomplished as follows:
 - 1. Locate an object with a detector signal.
 - 2. Raise the detector coil as you swing it until the signal fades.
 - 3. Note the maximum distance of the coil above the ground.
 - 4. Subtract the depth that a coin or similar object is usually detected from the distance above the ground and you will have an idea of how deep you must dig to uncover the object.
- e. PUSH-BUTTON retuning may be necessary due to changing ground conditions when searching in the G.E.B. MODE or TR DISCRIMINATE MODE. To retune, just press the button and release.
- f. PINPOINTING a target or object can be accomplished by sweeping a target in one direction and sweeping it at right angles to the original direction as shown in Illustration G. This is called "X-ing" the target. It is also helpful to sweep the target at several different angles as you move around it. Coins will usually produce one reading regardless of sweep direction.

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 with a blanket or something similar to protect it from the direct rays of the sun, and then leave the windows slightly open to permit ventilation. Needless to say, 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.

Storage: If you plan to store your detector for any length of time, unsnap the battery and remove it from the instrument. Whenever your detector is not in use, turn the **UNIT** all the way OFF.

Service and Warranty Information: If your new metal detector is ever in need of service, ship it to us at the factory or to one of the Service Centers listed on the back of the warranty statement. Insure it fully, prepay the charges, and enclose a letter describing the nature of the problem. As long as your detector is under warranty, and all conditions of warranty are met, there is no charge other than a small handling and postage fee.

Proper care cont.

Read your warranty card carefully. It describes completely what is covered and the length of the coverage. If you have any questions don't hesitate to write us. We will be happy to answer any questions you may have.

HELPFUL HINTS AND TIPS

1. "What will my detector locate?" Silver, lead, copper, bottle caps, tin foil, pull tabs, cartridge cases, rings, brass and tin cans are just a few of the conductive objects that can be detected. Your detector will not locate sticks, rags, bones, paper, wood or other non-metallic objects.
2. Learn how to interpret the different types of responses from your detector. A nail lying flat in the ground will sometimes produce a double or single reading depending upon whether your loop passed across it lengthwise or across its width. So, it's a good idea to sweep your finds from several different directions to try to learn as much as possible about the object you have located. Coins will usually produce one reading regardless of sweep direction.
3. Always "criss-cross" an area when hunting it.
4. After you have dug up a coin, always check the hole again for more. As many as 10 coins have been found in one hole!

Don't forget to fill in the hole. Public and private officials and property owners will be more likely to allow continued Treasure hunting if you do NO environmental damage.

5. When beachcombing, the best place to look for coins is near the concession stands.
6. Check the shallow water in swimming areas. Most rings and coins are lost when people enter the water.
7. Always carry a plastic bag for your detector in case you get caught in the rain.

NOTES

WHITE'S ELECTRONICS LIMITED WARRANTY

If within two years (24 months) from original date of purchase, your White's detector fails through normal use and 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, with all transportation charges prepaid, to the nearest White's Electronics Service Center or to the factory headquarters. Include a description of the problem, plus \$5.00 for return postage, handling and insurance.

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

The warranty is not transferable. Nor is it valid unless the **Warranty Registration** card enclosed in the shipping package 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 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.

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