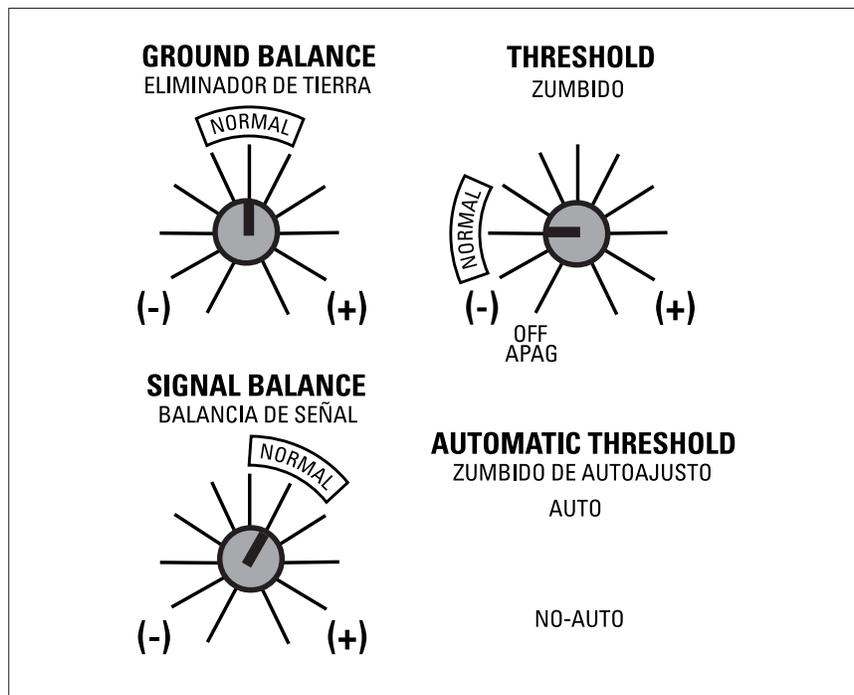




TM 808

Instruction Manual

(English Edition)



NOTE:

To locate large metal in normal conditions, set the controls as shown above. Walk briskly, noting areas that produce an increase in sound - *beep*. Cross these areas from at least two sides (X) to pinpoint target location. When AUTOMATIC THRESHOLD is in AUTO, detector must always be moving to respond to targets. NO-AUTO doesn't require motion to respond to targets.



A Message from...
Kenneth R. White

Congratulations, and thank you for choosing the TM 808.

As an avid detectorist, I commend you for making an excellent choice in deep seeking equipment. White's continually strives to achieve performance and reliability above and beyond your expectations.

Your new TM 808 has been hand built and carefully tested. Properly cared for, it will last years.

The following instructions are intended to familiarize you with this fine detector, and give you a good understanding of the basics. Obviously, there is no substitute for field experience. Practice using your detector in the field, and study this manual carefully. Before long you may be able to teach the experts a thing or two!

People use White's metal detectors to find valuables every day. Regardless of a metal detectors performance, it is the operator who makes the critical decisions that result in great recoveries. A metal detector is simply a tool which greatly increases the capabilities of the user to find such valuables. Knowing your detector, and re-searching good places to use it, are key elements to successful metal detecting.

Another important factor today is obtaining permission prior to searching private property, and the necessary permits prior to searching publicly owned lands. These steps, as well as refilling dug holes, and removing trash you discover, will go a long ways toward protecting the hobby from future restrictive legislation.

We know in a very short time you will be using the TM 808 to help you find valuables. We are proud to continue White's tradition of high performance and reliability with your TM 808.



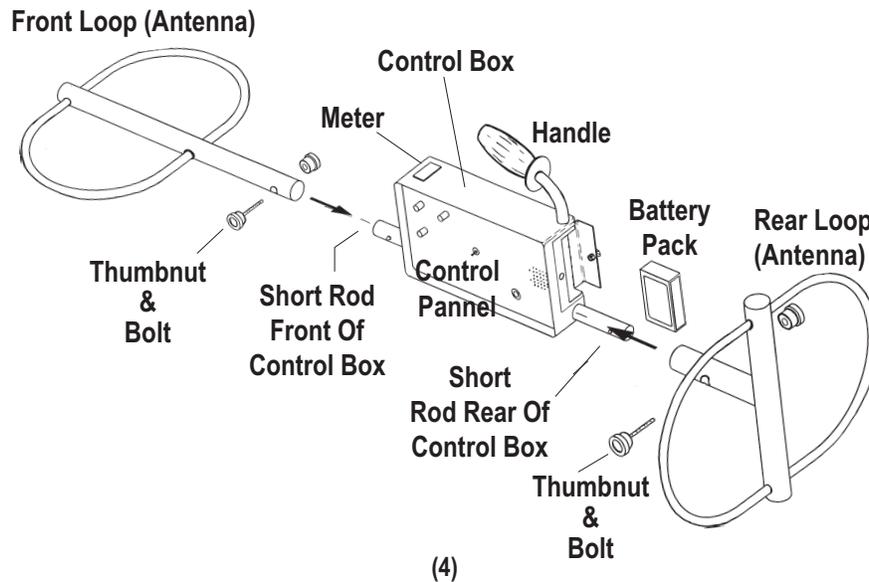


Table of Contents

Assembly	4
Batteries	5-6
Description of Controls	
Threshold	7
Signal Balance	8
Ground Balance	9
Automatic Threshold	10
Push-Button	11
Headphone Jack	11
Operation	
Tuning (Ground Balancing)	12-14
Locating Metal	15
Determining Metal Depths.....	16
Caring For Your Instrument.....	17
Warranty Statement.....	18
NOTES	19
Carton / Carry Case.....	Back Cover
Manufactures Information.....	Back Cover

Assembly Instructions

- 1) Remove all parts from the shipping carton, taking note of how the instrument fits into the inserts. Save this carton (and inserts) for future storage or travel. See back cover for further Carton / Carry case instructions.
- 2) Assemble the front loop or antenna as shown, by compressing the button on the short rod protruding from the front of the control box, sliding the loop onto this short rod, and aligning the button on the control box short rod with the hole on the front antenna so that it locks into place. Use the thumbnut and bolt to further secure the antenna.
- 3) Assemble the rear loop or antennas as shown, by compressing the button on the short rod protruding from the rear of the control box, sliding the loop onto this short rod, and aligning the button on the control box short rod with the hole on the rear antenna so that it locks into place. Use the thumbnut and bolt to further secure the antenna.
- 4) Continue by reviewing the next section on Batteries.

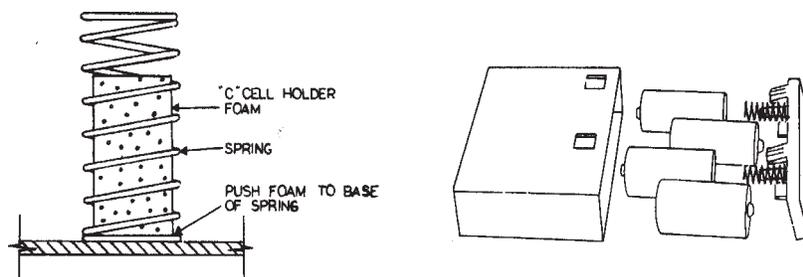


Batteries

The standard battery holder supplied with your instrument holds four "C" size batteries. Alkalines are recommended as they supply more consistent power for longer time periods. Rechargeable "C" size batteries may also be used in this holder, although they will need to be removed from the holder for recharging.

Using The Standard Battery Holder:

1) Remove the battery holder lid by applying gentle pressure down on the two locking tab openings on one side (just enough so that they unlock), flip the pack over and apply gentle pressure on the other two locking tab openings. The lid will then slip off.



2) Insert the small foam squares inside the two springs on the lid, and the two in the holder, to prevent loss of spring tension

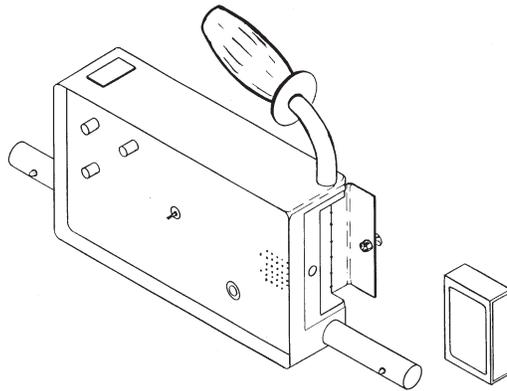
3) Note the position of each cell. The flat side of each battery cell fits against one of the four springs. There are two springs on the lid, and two in the case. The batteries fit alternating +, -, +, -.

4) Install new "C" cells. **Caution:** If the cells are put in backwards the detector may blow a fuse. Fuses can only be replaced by authorized service centers.

5) Line up the locking tabs on the lid with the locking tab openings on the battery holder. Snap the lid and holder together.

Batteries continued ...

- 6) Open the battery compartment door on the side of the control box nearest the rear antenna, by pulling the battery door knob.
- 7) Insert the battery holder into the detector so that the decal on the battery holder is facing toward the control panel of the detector.
- 8) Close the battery compartment door by first pressing on the door itself to close and hold it into position, then press the battery compartment knob in, until it snaps locked.

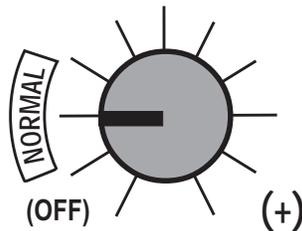


Rechargeable Batteries

Although this instrument doesn't normally come with a rechargeable battery system, high quality systems are available for this model. White's rechargeable battery #802-5185 and charger #509-0020 are recommended, for U.S.A. 110V use. These are sealed sets which offer the durability of spot welded contacts, and the conveniences of automatic charge, trickle charge, and maintain. Please

Description of Controls

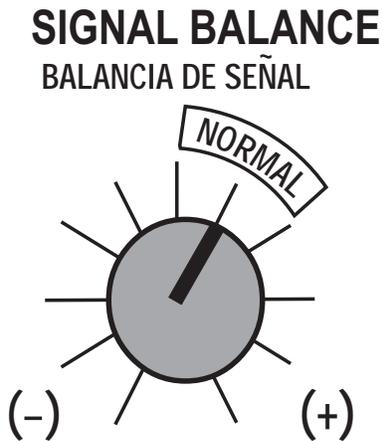
THRESHOLD ZUMBIDO



The THRESHOLD control turns the TM 808 On and OFF and adjust the volume of the background hum, or as it is commonly called, the "threshold". Turning the THRESHOLD control clockwise the power is turned ON and the batteries automatically check on the METER for a few moments. For the TM 808 to operate properly, battery test must indicate in the upper yellow high-lighted area of the METER. In average temperatures, new batteries will provide approximately 12 hours of continuous use. In cold climates, battery life will be reduced. The THRESHOLD control must be adjusted for a slight background sound or THRESHOLD that is heard continuously during searching.

The THRESHOLD control should be adjusted to give a barely audible hum. A slightly lower setting is used with headphones, and slightly higher when used without headphones, particularly when being used in a high noise environment. A setting in the NORMAL area will usually be appropriate. Generally, the lower the THRESHOLD can be set while still hearing a slight hum, the better. The THRESHOLD may fade over changing ground indicating the PUSH BUTTON on the handle needs to be squeezed and released which will return or reset the THRESHOLD hum. This resetting may be needed at regular intervals, unless AUTOMATIC THRESHOLD is on AUTO which automatically maintains THRESHOLD.

Description of Controls continued.....

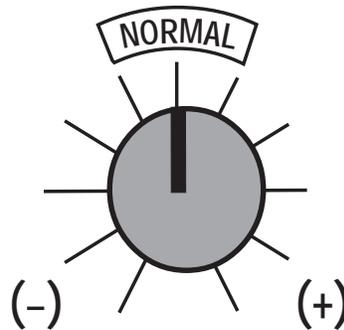


The SIGNAL BALANCE control adjusts the receive signal of the detector. The NORMAL position works well for most searching situations. This setting will provide more than adequate performance with little interference from electrical sources. If interference from extreme ground minerals, or electrical sources (radio, power lines, etc.) cause erratic behavior (extreme fluctuations in the threshold hum), or produce difficulties in setting the GROUND BALANCE control, the SIGNAL BALANCE control should be set further toward the (-) setting. If little interference is experienced and ground balancing can easily be achieved, the SIGNAL BALANCE control may be set slightly further clockwise toward (+). However, great caution should be used when increasing beyond NORMAL. If the detector operates erratically, due to the use of too (+) a setting, the response from deeper targets will be obscured. Additionally, if the GROUND BALANCE can not be set correctly, the SIGNAL BALANCE is overloading the detectors receive signal, and will reduce detection depth. The optimum setting is one which gives smooth operation allowing deep targets to be heard clearly, and GROUND BALANCE achieved with a reasonable degree of effort. If the instruments performance seems temperamental or unstable, a SIGNAL BALANCE setting slightly toward (-) should be selected.

Description of Controls continued.....

GROUND BALANCE

ELIMINADOR DE TIERRA



For the best results, the GROUND BALANCE control needs to be adjusted each time the detector is used. The NORMAL setting works well for most conditions. GROUND BALANCE is adjusted to cancel out or ignore common mineralization in the ground thus, allowing the deepest available penetration. A setting clockwise toward (+) is used for higher mineralization and a setting counterclockwise toward the (-) would be sufficient for low mineralized soils. The method for adjusting this control will be covered in the section on TUNING. In a nut shell, when GROUND BALANCE is set properly little or no change in THRESHOLD hum is noted as the detector is lifted slightly up or down in relationship to the ground. It should also be noted that the AUTOMATIC THRESHOLD control, which will be discussed in the next section, should be set in the NO-AUTO position while the GROUND BALANCE control is being adjusted. The GROUND BALANCE control and the SIGNAL BALANCE control work hand in hand to tune out undesired responses, and provide the deepest possible penetration (detection depth).

Description of Controls continued.....

AUTOMATIC THRESHOLD

ZUMBIDO DE AUTOAJUSTO

AUTO



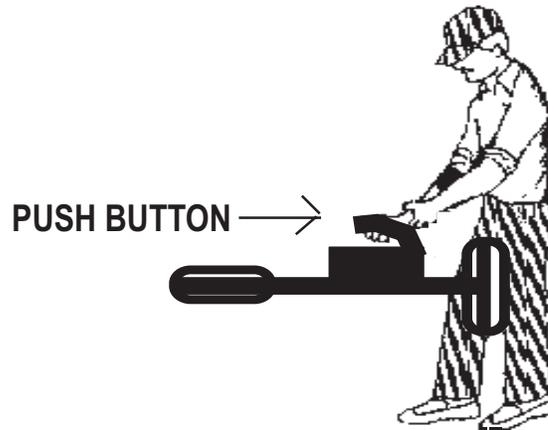
NO AUTO

The AUTOMATIC THRESHOLD control is used to activate (AUTO), or disable (NO-AUTO), the automated threshold resetting feature. This feature offers automatic threshold maintenance. When AUTO is used it allows the threshold hum of the detector to remain smooth or constant regardless of small changes in the ground mineralization, or upward / downward drift of the electronic signal. When NO-AUTO is used changes in threshold which are normal for such instruments, require manual resetting (squeezing and releasing the PUSH BUTTON on the handle).

IMPORTANT: The detector must be kept in motion when using the AUTO position. Standing still over the target will cause the target signal to fade away.

In the NO-AUTO position, AUTOMATIC THRESHOLD is not functioning. Use this position when adjusting the GROUND REJECT control to compensate for the ground. It can be used as a searching mode if the ground mineralization does not change rapidly, and there isn't external interference from radio signals etc. In the NO-AUTO position the detector does not have to be kept in motion when passing over the target. You can stand over the target without the target signal fading away. It can be valuable to help pinpoint the center of a deep target. When using this NO-AUTO position it will be necessary to press and release the reset button on the end of the handle at regular intervals, to keep the threshold hum constant and free from upward or downward drift. If the threshold sound gradually increases or decreases while searching, press and release the button to return the detector to the normal threshold hum. This requires skill and experience, most users should operate in AUTO until some field experience is gained.

Description of Controls continued.....



The PUSH BUTTON is located on the tip of the carrying handle. It is used in the NO-AUTO position to reset the threshold hum when it drifts up or down. It does the job manually, that the AUTO position does automatically. Also used during pinpointing, when the PUSH BUTTON is pressed and released with the detector over a target, the signal will be reduced in intensity and magnitude aiding in locating the targets center. As will be described later, the PUSH BUTTON is also used to reset the threshold during GROUND REJECT tuning. When pressing and releasing the PUSH BUTTON, do so slowly. Depress, hold for a second, and then release for the best results.

HEADPHONE AUDIOFONO



The speaker is automatically turned off when headphones are plugged in. Maximum detection depth and longest battery life are achieved through the use of headphones. Most 1/4 standard 8-100 ohm headphones will function correctly with this model. This is a stereo jack thus stereo headphones, or those with a stereo switch, are necessary in order to hear the signal in both ear cups.

Tuning

1) Set the SIGNAL BALANCE, and GROUND BALANCE, to their NORMAL positions. Set the AUTOMATIC THRESHOLD to the AUTO position.

2) Turn the THRESHOLD clockwise and check the meter to determine conditions of battery pack (must be 75% or higher to operate the detector). The THRESHOLD control, at this point, needs to be readjusted for a very faint hum. The detector will operate well (locate metal) in most locations with the controls at these settings. However, for optimum performance and penetration depth, fine tuning of the GROUND BALANCE and SIGNAL BALANCE controls are necessary.

GROUND BALANCE PROCEDURE

3) Set the AUTOMATIC THRESHOLD control to the NO-AUTO position. Note: Stay away from all metallic objectscars, pipe, concrete rebar, etc. Remove all significant metal from your body. . . .belt buckles, car keys, watches, knives, etc.

4) Hold the instrument at arms length at your side as if you were holding a suitcase (approximately 18 inches above the ground), press the PUSH BUTTON on the handle, hold for a second and release. The threshold tone will be heard. Raise the instrument approximately six inches further above the ground. If the THRESHOLD hum changes little or not at all, the initial GROUND REJECT control setting "NORMAL" is adequate for searching in that particular area. Switch the AUTOMATIC THRESHOLD control to the AUTO positions and proceed to search.

5) However, if the THRESHOLD hum does change as the instrument is lifted, leave the AUTOMATIC THRESHOLD control in the NO-AUTO position and proceed to adjust to the ground in the following manner:

Ground Balance Procedure

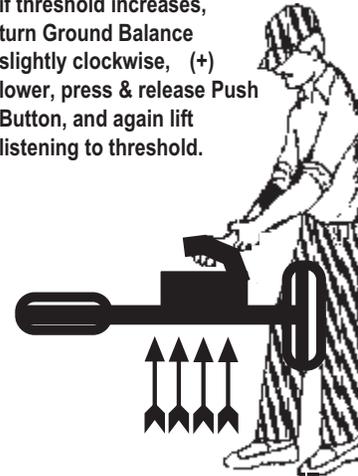
A.) If the THRESHOLD level decreased or faded when the instrument was lifted, turn the GROUND BALANCE control slightly counterclockwise toward **(-)**. Lower the unit back to arm's length, press and release the PUSH BUTTON control, and again raise the instrument about six inches further above the ground while listening to the THRESHOLD hum. If the THRESHOLD still decreases or fades, then repeat this procedure until the THRESHOLD level remains about the same as the instrument is raised about 6 inches further above the ground.

B) If the THRESHOLD level increases or beeps when the instrument is lifted, then just the opposite procedure as described above is required. Adjust the GROUND BALANCE control slightly clockwise toward the **(+)**. Lower the unit back to arms length, press and release the PUSH BUTTON control, and again lift the instrument about six inches listening for any change in the THRESHOLD hum. Again these procedures (A and B) need to be repeated until the THRESHOLD level changes little or not at all, as the instrument is raised about 6 inches further above the ground.

Lift about six inches if threshold fades, turn Ground Balance slightly counterclockwise, (-) lower, press & release Push Button, and again lift listening to threshold.



Lift about six inches if threshold increases, turn Ground Balance slightly clockwise, (+) lower, press & release Push Button, and again lift listening to threshold.



Ground Balance Procedure Continued...

C) Remember to press, hold for a second, and release the PUSH BUTTON on the handle after each adjustment is made to the GROUND BALANCE control while the detector is held at arms length like a suitcase. Determine whether the sound increases or decreases when the detector is raised about six inches further above the ground and make the appropriate GROUND BALANCE correction. Lower the loop and press and release the PUSH BUTTON. Continue with this procedure until there is little or no change in THRESHOLD when the DETECTOR is lifted.

D) The GROUND BALANCE procedure becomes critical as the SIGNAL BALANCE control is turned toward (+). The SIGNAL BALANCE control need not be set past the NORMAL range for most searching. If GROUND BALANCE cannot be accomplished as set out above, try moving to a different location as you may be over a buried metal object. If trouble persists, turn SIGNAL BALANCE control slightly counter-clockwise toward (-) and try again. The greatest detection depth (deepest penetration) will be achieved by a SIGNAL BALANCE setting suited for the conditions, indicated by smooth stable operation, and the ability to set the GROUND BALANCE control. If GROUND BALANCE is appropriate at NORMAL, or if finding the correct GROUND BALANCE setting is relatively easy, you may want to turn the SIGNAL BALANCE control slightly clockwise toward (+), and repeat the GROUND BALANCING steps. This assures the best SIGNAL BALANCE setting for the conditions, thus the greatest detection depth. The AUTOMATIC THRESHOLD should be returned to AUTO once GROUND BALANCE is completed.

Once TM 808 can be lifted about six inches, with little or no change in threshold, Ground Balance is set correctly.



Locating Metal

The volume will increase and the meter will read higher when the instrument is passed over a buried metal object. When the target is close to the surface, the meter may go full scale and the volume of the beep will increase to maximum. Remember, when searching in the AUTO position, the detector must be kept in motion when trying to find the center of the target. If the detector is stopped over the target, the sound of the signal will fade. Cross the suspected target area from at least two directions noting the area of loudest sound and meter indication. This procedure of "X-ing" over the target pinpoints target center.

When using the NO-AUTO position, a surface target can appear to be VERY large. This is normal. The target must be "narrowed down" to determine its location more accurately. Pass over the target area from at least two different directions. When the meter goes "full scale", momentarily press and release the PUSH BUTTON control. Continue to cross the target pressing and releasing the PUSH BUTTON control several times. There will be a point where the meter reading and speaker beep will "peak" out and start to drop back down. It is at this peak that the front loop is over the buried metal object. Pressing and releasing the push-button while the target is under the loop, will "shrink" the signal and make pinpointing easier. When using NO-AUTO, the PUSH BUTTON is needed to pinpoint the target whereas in the AUTO position, the AUTOMATIC THRESHOLD function pinpoints automatically.

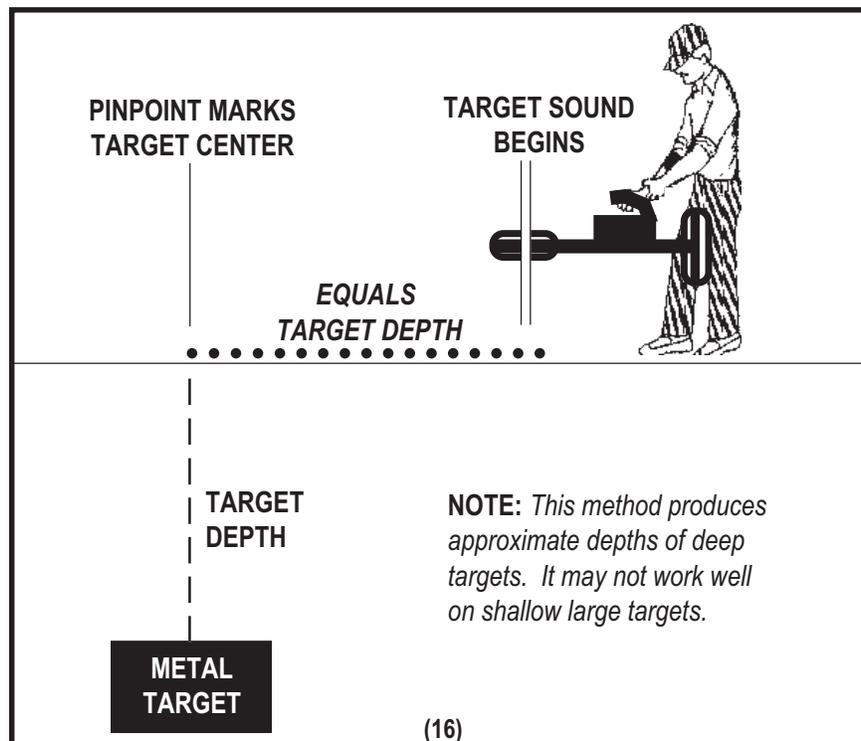
The most efficient way to search an area is to use a grid-like pattern over the area selected. Try to keep the grid lines no more than five feet apart. Make several passes in one direction, then turn 90 degrees and make several more passes to assure that you have not missed any buried object. The target will usually be pinpointed under the front loop or antenna.

Sometimes deeper targets will appear to locate closer toward the rear of the instrument. Usually this will be no more than 3 or 4 inches from the rear of the front loop even for the deepest targets.

Determining Metal Depths

Once the center of a target has been pinpointed, and marked, the approximate depth it is located in the ground can be determined by using the following triangulating method.

- 1) Move off to one side of the pinpointed target center mark.
- 2) Set AUTOMATIC THRESHOLD to the NO-AUTO position. Press and release the PUSH BUTTON on the handle, while holding the instrument at arms length.
- 3) Move directly toward the pinpoint mark stopping when the target first begins to respond. At this point the distance from the **center** of the front loop or antenna, to the pinpoint mark, is the approximate depth the metal is located in the ground.



Caring For Your Instrument

- 1) Water can damage your instrument. The TM 808 is not water proof, only water resistant. This instrument must be protected from showers, heavy rain, or submersion in water.
- 2) Clean the control box and antennas with a damp cotton cloth. Automotive or furniture wax can be used to polish this instrument if so desired however, use only cotton cloths. The instrument should be cleaned after heavy use on or around a saltwater beach. The warranty does not cover cosmetic imperfections due to wear, or exposure to sun and salt air.
- 3) Heat and cold can have an adverse effect on your detector. When not searching, rest your detector in the shade. When left in a car on a warm day, cover it to protect it from the direct sun. Store your detector indoors in a heated area during the winter months, with the batteries removed from the control box, and the batteries removed from the battery holder.
- 4) Care must be taken so that the front and or rear antennas are not bent during storage or use. These are precision parts, their function and performance are very much altered by physical shape and dimensions.
- 5) The battery holder requires some attention with time and use. With the batteries removed from the holder, use a screw driver, or finger nail file, to clean any build up of residue on the contacts inside the holder and on the contracts on the lid. The contacts on the outside of the battery holder may also need to be cleaned if residue is visible.

CAUTIONS:

Some "C" size batteries on the market today (usually uncommon brand rechargeable "C"s) are not the appropriate physical length to work properly in your battery holder. Compare the length of standard batteries to any rechargeable, or off brand battery, prior to purchasing. If problems are noted immediately after a battery brand change, try a different battery type before proceeding.

DO NOT USE ANY LUBRICANTS ON ANY PART OF YOUR DETECTOR!



Limited Warranty



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

Simply return the complete detector to the Dealer where you purchased it, or to your nearest Authorized Service Center. The unit must be accompanied by a detailed explanation of the symptoms of the failure. You must provide proof of date-of-purchase before the unit is serviced.

This is a transferable manufacturer warranty, which covers the instrument two years from the original purchase date, regardless of the owner.

Items excluded from the warranty are non-rechargeable batteries, accessories that are not standard equipment, shipping / handling costs outside the continental USA, Special Delivery costs (Air Freight, Next Day, 2nd Day, Packaging Services, etc.) and all shipping / handling costs inside the continental USA 90 days after purchase.

White's registers your purchase only if the Sales Registration Card is filled out and returned to the factory address soon after original purchase for the purpose of recording this information, and keeping you up-to-date regarding White's ongoing research & development.

The warranty does not cover damage caused by accident, misuse, neglect, alterations, modifications, unauthorized service, or prolonged exposure to corrosive compounds, including salt.

Duration of any implied warranty (e.g., merchantability and fitness for a particular purpose) shall not be longer than the stated warranty. Neither the manufacturer or the retailer shall be liable for any incidental or consequential damages. Some states however, do not allow the limitation on the length of implied warranties, or the exclusion of incidental or consequential damages. Therefore, the above limitations may not apply to you.

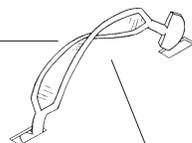
In addition, the stated warranty gives you specific legal rights, and you may have other rights which vary from state-to-state.

The foregoing is the only warranty provided by White's as the manufacturer of your metal detector. Any "extended warranty" period beyond two years, which may be provided by a Dealer or other third party on your detector, may be without White's authority involvement and consent, and might not be honored by White's.

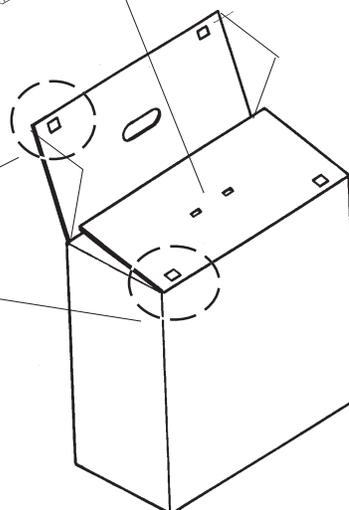
NOTES

Carton / Carry Case

Twist & insert each end of handle
(provided) through top of shipping
carton into second flap.
(CARRY CASE)



Peel off protective paper and apply the
four (provided) hook & loop tape
squares. Two on underside corner
of first flap, and two on top outside edge
of second flap.
(CARRY CASE)



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