White's Electronics, Inc.

1011 PLEASANT VALLEY ROAD SWEET HOME, OREGON 97386

OPERATORS INSTRUCTIONS

Manufacturers of The World's Largest Line of Mineral and Metal Detectors

MINERAL AND METAL DETECTORS | ELECTRONIC MAGNETOMETERS | SUPER GEIGER AND SCINTILLATION COUNTERS | ULTRA VIOLET LIGHTS

THE NUGGETMASTER T. R.

Mineral and Metal Detector

We first want to congratulate you on your purchase of this fine new Super Sensitive Nuggetmaster T. R.

Please follow these instructions carefully, to operate the instrument correctly and practice with it at every opportunity.

We do not believe you can buy a finer instrument than the one you have chosen for the use for which it-is designed, but remember that the instrument is no better than its operator, (even though we have heard customers say that the instrument was smarter than they.) You are the operator, and the more familiar you become through use and practice, the better operator you will be. The better the operator, the more finds you will make.

This is a Super Sensitive Instrument and may have more sensitivity than you may need at all times. If so, you can slightly ad;ust-the #2 Mineral-O-Metal Contol until the meter pointer just drops to, or just below zero on the meter face. In this position the sound will be a little softer, and the meter a little less sensitive, but the instrument will still retain a very high degree of sensitivity and be a little easier to operate.

You may notice that the sound in the speaker may slowly increase or decrease with a corresponding change in the meter reading. This is caused by changes in the formation of mineralized soil and atmospheric temperature changes. This is normal for a sensitive instrument. Should the sound drift down, a slight adjustment of the #2 Mineral-O-Metal Control will bring up the tone and meter reading as desire to retain peak sensitivity.

When detecting a metal object, the sound and meter reading will instantly increase as the object is detected and decrease as soon as the object is passed. The sound and meter reading will both be the heighest when the exploring loop is centered directly over the object that is being detected.

Until one becomes familiar with the operation of the instrument, it is usually best to operate with a little less sensitivity so that the meter pointer is on zero or just below zero.

To put the instrument into operation, proceed as follows:

1. Install the loop rod in the sleeve, under the instrument.

2. Slip the two studs on the loop, through the bottom of the two holes on the end of the exploring rod and install the two nuts.

3. Spiral the loop cable around the exploring rod, and insert the plug into the socket on the front end of the instrument. One of the prongs on the plug has a hole in it. This prong fits in the top hole in the socket.

4. Turn the Metal-Null- Mineral Control knob so that the marker line or dot on the knob is lined up in the center of the circle under the word NULL (Control #1.)

5. Turn the Speaker Control Knob from the OFF position to the right. (This controls the volume of the speaker when the instrument is in operation.)

6. Turn the Large Black Knob, labeled Mineral-0-Metal, so that the 0 is at the top of the dial and centered on the marker line. (Control #2.)

7. Turn the MI-ME control to the ME position. (ME is for METAL) Control #3.)

8. Turn the OFF-AUTO control to the OFF position.

9. Turn the Range Control to the #1 position. Hold the loop parallel (flat) with the ground) and approximately 2" to 3" above the ground or surface when making the following adjustments. (Control #4.) BE SURE THE BATTERY CHECK SWITCH IS OFFF.

10. Turn the Power Switch to the ON position.

11. Turn the WHITE Metal-Null-Mineral Control, (which is Control #1), very, very slowly to the left, until the sound just starts in the speaker and the metal meter pointer swings to the Right, then turn this control slightly to the Right until the meter pointer just returns to 0 or just below zero, then very slowly turn the larger Mineral-0-Metal tuner control #2, (which is located just below Control #1) and is marked tuner) to the LEFT, until the meter pointer just starts to move on the meter face. After these adjustments are made, be sure to hold the loop as steady and as close to the height to which it was adjusted as possible, for the best and smoothest meter movement and operation.

When passing the loop over a non-magnetic conductive metal, such as the metal sample you received with your instrument, the sound will increase in the speaker, and a higher reading will be registered on the meter. Both the increase in sound and meter reading will be retained as long as the loop is held over the metal object. As soon as the loop passes the metal object, the sound will lower in frequency and volume, and the meter will lower in reading and return to approximately the same reading as before the object was detected. No reading will be had when passing the loop over the mineral sample.

When searching for small single coins, gold nuggets, and other small objects, the smaller loop should be used, as it will detect smaller objects easier, especially in highly mineralized or magnetic areas. Tin cans, bottle caps, tin foil, aluminum foil, cartridge cases, coins, silver, gold, copper, lead, and brass are some of the high conductive metals that will read on the Metal Setting.

The instrument is not designed to react to sticks, rags, bones, paper, non-magnetic rocks, or non-metallic objects.

When looking for small metal objects such as coins, the ability of the instrument to detect them will vary in different areas. The more mineralized the soil the more difficult it is to detect them, and the less mineralized, the easier. Also the longer a metal object has been buried, usually the easier and deeper it may be detected as the ground becomes electrically conductive from the metal object over a period of time. In some cases you may detect a very old tin can, and after digging it up, receive a reading over the spot the can was buried in.

To locate hidden or buried metal objects, slowly and systematically carry the instrument across the area to be checked, being very careful to hold the instrument so that the loop is held at as constant and uniform a height as possible with the least up and down variation in relation to the formation or ground you are using the instrument over. When searching for small objects, such as a single coin, the instrument should be tuned in with the loop held as close to the ground as possible. Hold this height as close as you possibly can, and search the ground carefully, usually 1" - 2" above the surface, depending on the surface you are using the instrumen over, if possible. If the ground is rough, you may have to zero the instrument higher. For larger objects, one can hold the instrument approximately 2" to 4" obove the surface to be explored. With each sweep of the instrument, you will cover approximately 6 feet by 1 foot. If there is anything metallic under the surface and it is within detectable range of the instrument, you should be able to find it.

For large objects, the instrument may be carried at a higher elevation, and it is not as critical to height variation, and will respond to the larger metal objects. To practice, lay some metal objects on the wood floor or on your lawn and move the loop over them, and notice the way the instrument responds.

It is a good policy to slightly adjust the #2 Mineral-0-Metal Control every 5 to 10 minutes until the meter just starts to move slightly to keep the instrument at its highest peak of sensitivity, when searching for small objects, such as a small single coin, along beaches, etc., and every 10 or 15 minutes or so, for larger objects.

The #1 Range Control is the most sensitive meter setting. The #2 is one-half as sensitive, the #3 is one-third and the #4 is one-fourth as sensitive. The Range Control does not change the sensitivity of the instrument, but only the meter circuit. The #1 is the most sensitive and the #4 the least sensitive setting.

To set the instrument up for detecting on the Mineral Setting, to locate mineralized veins with a magnetic content, proceed as follows:

1. Turn the Metal-Null-Mineral Control back to NULL, so that the pointer line is centered on Zero, just under the word NULL. (Control #1)

2. Turn the #2 Mineral-0-Metal Control so that the 0 is centered on the line, just above the knob.

3. Turn the MI-ME Control to MI (Mineral).

4. Turn the power Switch to the ON position.

5. Very slowly turn the Metal-Null-Mineral Control #1 to the Right towards the Mineral side, until the sound just starts in the speaker, (the meter hand will swing to the Right,) slowly turn the Mineral-0-Metal Control #2 to the Left, just slightly until the meter pointer just returns to zero on the meter.

Passing the loop over the mineral sample, you received with the instrument, will cause the meter to read higher and the sound in the speaker will also increase, and this increase in sound and meter reading will be retained as long as the loop is held over the Mineral sample. The meter will not read on coins, or on soft conductive metals, (when operated correctly), when set on the mineral setting, (but will usually read on steel bolts due to their hardness and shape.)

AUTOMATIC DETECTION USING BOTH METERS

L. To use the Automatic control, to energize both meters, follow the instructions for detecting metals on the metal meter. Outlined on Page 2.

2. Turn the Range Control to the #4 position.

Due to the exceptionally high sensitivity of this instrument, always turn the Range control to the #3 or #4 position when used in the Automatic Position, and adjust the Metal Meter for a reading of approximately 5 to 15 on the upper meter when set on the metal setting.

(When set on the mineral setting, adjust the instrument for a reading of approximately 15 on the (lower) Mineral Meter.)

It is a good practice to use the #4 position, when using the instrument in the Automatic position, until you become familiar with the operation, then you can turn to the #3 Range, which is more sensitive than the #4 Range.

3. Turn the Power Switch ON and adjust the #2 Mineral-0-Metal Control until the upper Metal meter reading approximately 15 on the meter dial.

4. Turn the OFF-AUTO control to the ON position. Both meters are now energized. Passing the small loop over the metal sample will cause the metal meter to read higher on the metal meter scale and the sound to increase in the speaker. An ore body or vein containing a detectable quantity of conductive non-magnetic metal will be detectable on the (upper) Metal meter.

Passing the loop over the mineral (magnetic) ore sample will give a high reading on the lower, mineral meter, and a decrease in sound. Any ore-body or vein, containing a predominant detectable quantity of magnetic metal will be detectable on the lower, mineral meter. Occasionally, you may also detect rusty nails, bolts, washers, etc., that may also give a reading on the mineral (magnetic) meter, around old buildings.

For proper oeration of the instrument in the Automatic position, more frequent, slight adjustments of the #2 Mineral-0-Metal Control is usually required, to maintain a cojstant-backgrojnd meter reading above zero, so that the metal meter pointer does not drop below zero from slight temperature drift, until the object is actually detected. If you let the Metal meter pointer drift down below zero, without adjusting the #2 Mineral-0-Metal control, to hold the reading above 10, an erroneous reading may be registered on the (lower) Mineral Meter. This is very important for the most accurate indications.

The slow drift in the meters is normal for a highly sensitive instrument, but slight, frequent adjustment of the #2 Mineral-0-Metal control will hold your average 15 readings on the meter.

Should you detect an object, you will receive a very fast meter change, and not just a slow change.

When through using the instrument in the AUTO position, simply turn the AUTO-OFF Control to the OFF position and the Range Control back to the #1 position, and the instrument is ready for single meter operation.

This is a highly sensitive instrument, which requires practice, in order to become an expert operator, and the better operator you are, the more finds you will make.

The instrument comes complete with two exploring loops which are matched for this particular model. There is an 11" loop, which is the general prospecting loop, and is used for locating fairly large objects of either detectable metals or minerals. The 11" loop is for detecting moderately sized objects from approximately the size of a dollar on up to large sizes.

There is a 6" loop, which is used for detecting very tiny objects that are too small to be detected with the larger loops, such as small coins, rings, gold nuggets, small pieces of mineral float etc. In general, the smaller the loop the smaller the object that may be detected, but the shorter is the detectable range of the loop. The larger the loop, the deeper the object that may be detected but the larger the object must be. Large objects such as buried treasures approximately the size of a one pound coffee can or larger, would normally be detected while using the 11" loop for greater depth of detection.

In searching along gravel bars and in gravels, sands, etc., for very small objects the 6" loop is the one most suitable to use, as generally there small objects will not be detectable with the 11" loop, especially if it is in highly mineralized areas. River banks, gravel bars, etc., usually have a high concentration of minerals in the gravels and sands. One can tell very quickly if an area is mineralized. After the instrument is adjusted for operation of the height which it is normally used to prospect with, and with the exploring loop attached, slowly raise and lower the instrument approximately one to two feet. If you get a strong increase or decrease either in the reading or in the sound then you are over a mineralized area or zone. In highly mineralized areas over gravel bars, etc., one usually cannot use the instrument in the Automatic position due to the fact that the operator will not be able to carry the instrument steady enough to maintain constant and accurate readings without reducing the sensitivity of the instrument and reducing its detectable range.

Under these conditions, one should use either the mineral or metal meter along for these areas. If operating in a highly mineralized area, the proper way would be to select the lower mineral meter alone and adjust the instrument for a zero reading and you are then zeroing out the mineralized reading of the area and you will not receive a reading on the lower meter until you are over a more mineralized section or a greater mineralized object, a mineralized pocket or vein. When looking for single nuggets or treasure, you will select the upper Metal Meter and you adjust the upper meter as described in the operating instructions and then the instrument will not usually react to anything but a metal object and will then read only on the UPPER meter. When so adjusted there will be no reading until the exploring loop passes over a detectable metal object.

Due to the flexibility of the instrument, the various mineralized areas, etc., one should not expect to learn everything in one day; and experience comes with the opration of the instrument only over various areas and formations.

The 6" loop is especially designed for coins and will react to a single gold dollar, which is approximately ½ the size of a dime. Many of these gold pieces have been found in ghost towns.

Usually the longer one uses the instrument, the more familiar he becomes with it and the better the results that are obtained. It takes patience and experience to become a very good operator and the more one practices with the instrument the better.

This model contains two battery packs: One is a 9 volt pack incorporating 6 - 1½ volt AA pen light batteries and one 12 volt pack - containing 8 cells. The 9 volt pack is black in color, with a black connecting battery clip and the 12 volt pack is white with a white connector. Be sure to connect the white clip to the white pack and the black clip to the black pack.

When replacing the pen light batteries, be sure that they are replaced in series, as they are now. Notice that the battery holder is marked for each end of the battery with + for the top and - for the bottom, to insure correct placement, as shown on the battery diagram. We recommend RAYOVAC #15 AA pen light cells or EVEREADY # 915.

These batteries are the heavy duty type of battery for the longest life possible.

To test the batteries, turn the Power Switch ON, and turn the Battery Check Switch to each one of the battery check positions, in turn and note the reading. Good batteries will read from 30 to 40 on the meter. The batteries should be replaced, when the reading drops to 30 for the best results.

The instrument has a full 2 year Warranty on parts and labor (except batteries) to the original purchaser.

Take good care of the instrument, and it should give you many years of faithful service, and we hope many enjoyable and possibly profitable hours of pleasure. (One customer called, and said he found over $2,000.00 in coins in two weeks with his instrument. We thought he had found a cache, but he said they were just single lost coins.)

METER ZERO CALIBRATION

This control is set at the factory for the automatic detection using both meters. It is set so that the meter which is upscale will cross zero when going down before the other meter starts up. Therefore in the automatic detection mode, at a certain speed of beats, both meters will be at zero.

We wish you the very best of luck.

WHITE'S ELECTRONICS, INC.
1011 Pleasant Valley Road
Sweet Home, Oregon 97386

Revised 11-72

OPERATOR'S T.R. TIPS
(REVISED)

With the instrument assembled and ready to operate, bury a coin in the ground approximately one inch down and lying flat. Place the instrument so that the loop is on the ground and horizontal. Next, turn the instrument "on", with it in the Null or "0" position. Start turning the Metal-0-Mineral dial counter-clockwise, until a tone is heard. Now, go back the other way (clockwise) until it just goes quiet.

Now you should be able to move the loop about, without it making any noises, unless it is passing over some metal object. If it is making noises, then you may need to turn it a little more toward the Mineral Setting (clockwise).

Be sure that you are rubbing the loop on the ground and that you are not lifting the edges as you sweep it across the ground. Now, practice on the coin that you buried.

The further counter-clockwise you can turn the Metal-0-Mineral dial, without the instrument giving false readings, the more sensitive it will be.

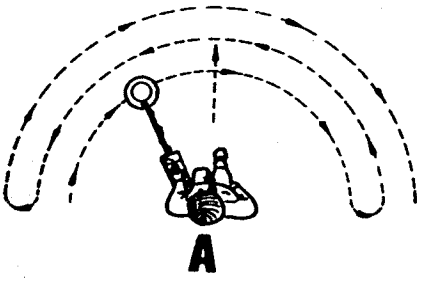
A demonstration is worth a thousand words - for the best results, see your local dealer and ask for a demonstration.

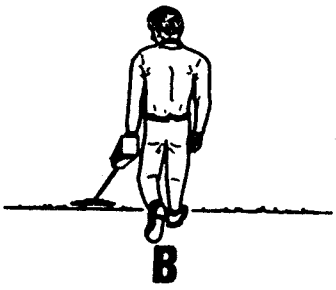
NOTE: These tips are mainly for beginners and are to be used only as a rough guide. Once the operator gets the general idea of how to operate the instrument, he may want to use it with a slight tone.

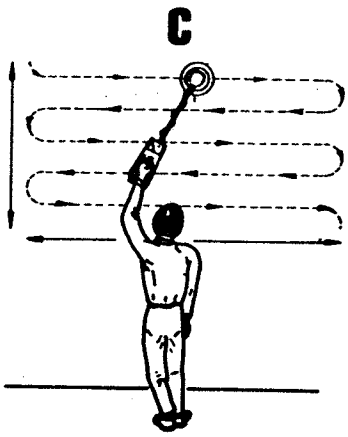
Gary W. Morris
Service Department Manager
White's Electronics, Inc

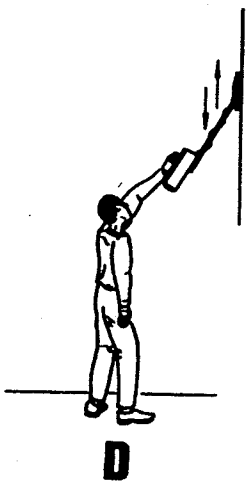
GWM/js

OPERATING ILLUSTRATIONS





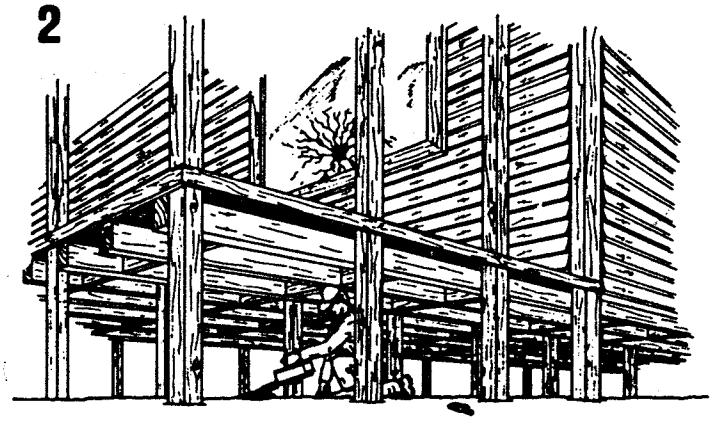




As shown in Diagrams A and B, when you are working on the ground, move forward in a straight line, at the same time, moving the loop from side to side across in front of you. The distance between each swath of the loop is determined by the size of the loop you are using. With a 6" loop you would make a 3" step, with 12" loop you would make a 6" step, and so on. Using this method of hunting enables the hunter to cover more ground, more completely, in less time. For tuning your loop, hold it as close to the ground as possible.

Diagrams C and D show you just one more of the many ways the versatile design of the White's instrument can help you either in prospecting or treasure hunting. This diagram demonstrates the extra ability the design gives in reaching to the out-of-the-way places. This system can be used for checking outcroppings, walls, etc.

2



Remember, a lot of old artifacts and treasure have been found under old buildings, as well as in the attics. When going through an old homestead, never overlook any place or area that could represent a good hiding place. So if you are planning such a trip, follow these simple illustrations and prepare your instrument. At a time like this you don't want to pass up any chances.

America's Largest Line of Metal Detectors

WE
WHITE'S ELECTRONICS

WHITE'S ELECTRONICS, INC. 1011 Pleasant Valley Road • Sweet Home, Oregon 97386

Proper Care of Your Detector

The following are precautions you should take to protect your instrument from harm, insure 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—may 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. It's best to lay it in the shade when temporarily not in use. 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 **VOLUME** knob all the way to the **"PWR OFF"** position.

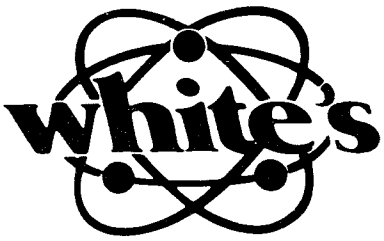
Service And Warranty Information: If your new metal detector is ever in need of service, ship it to us at the factory address below or to one of the Service Centers listed on the back of the warranty statement. Insure it fully, prepay the charges, and enclose a letter describing the nature of the problem.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

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. "How deep will it go?" Detection depth is determined by five main factors.
   a. The SIZE of the object.
   b. The SIZE of the loop.
   c. The LENGTH OF TIME the object has been buried.
   d. The SKILL of the operator.
   e. The ground MINERAL CONTENT.

   The longer an object has been buried, the better you will be able to detect it. A chemical reaction called a "halo effect" between such objects as silver or copper coins and the surrounding soil may cause your detector to register a much larger increase in volume than might otherwise be expected for a small coin. If the halo effect is strong enough, your detector may continue to register even after you have dug up the coin.
2. "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.
3. 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 only produce one reading regardless of sweep direction.
4. Rather than waste time, check around the trees for junk items such as foil, pull tabs, bottle caps, etc. This will frequently indicate whether or not someone has already been in the area with a detector.
5. Always "criss-cross" an area when hunting it.
6. 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!
7. When beachcombing the best place to look for coins is near the concession stands.
8. Check the shallow water in swimming areas. Most rings and coins are lost when people enter the water.
9. If you make plans for coinshooting, check the history records of the area.
10. Always carry a plastic bag for your detector in case you get caught in the rain.
11. Never ask permission to treasure hunt over the phone. People tend to visualize you using a pick and shovel, making large holes.
12. Join a local historical society or get acquainted with its members.
13. In lawn areas, use a screwdriver of no more than eight inches as your tool. Limit the size of the hole to a MAXIMUM of two inches in diameter. 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.



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