

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

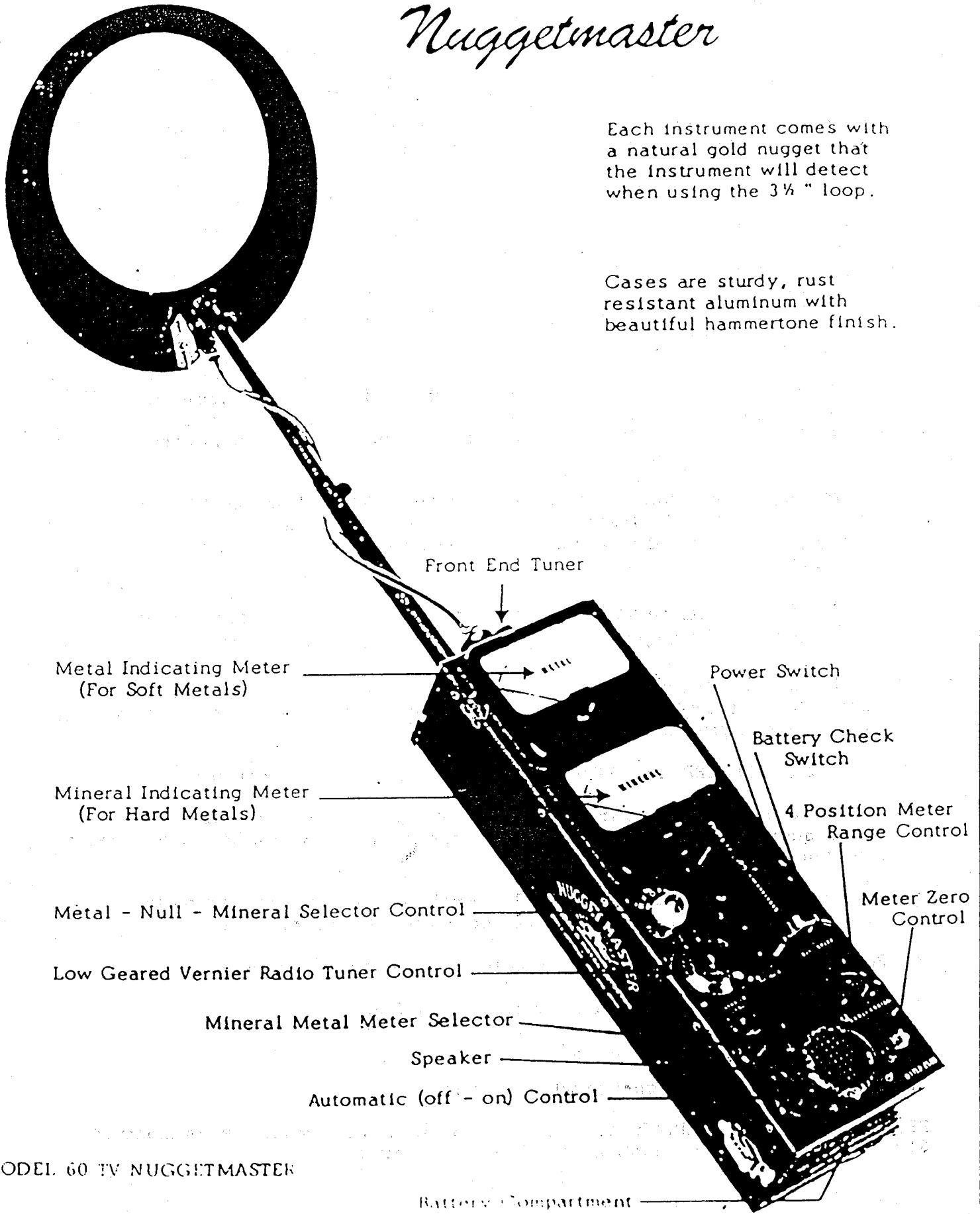
SUPER GEIGER AND
SCINTILLATION COUNTERS

ULTRA VIOLET
LIGHTS

Nuggetmaster

Each instrument comes with a natural gold nugget that the instrument will detect when using the 3 1/2 " loop.

Cases are sturdy, rust resistant aluminum with beautiful hammertone finish.



MODEL 60 TV NUGGETMASTER

MODEL 60 T V NUGGETMASTER

- * Exceptionally economical, using a special all transistor, low drain amplifier stable circuit, with a genuine Brazilian quartz crystal.
- * Three Electronic tubes, 4 transistors.
- * Big, Dual 4 1/2 " Super sensitive, Laboratory type indicating meters. One meter is engineered to read on soft metals, which includes gold, silver, copper, coins and other metal objects. The other meter is designed to read on any detectable mineral deposit, float or hard metal having, containing or associated with a magnetic field, which so many mineral deposits and pieces of float contain. (Native Gold, Copper and Silver are not magnetic and these, when detected, are read on the upper metal meter.) If a mineral deposit, vein or piece of float does not have any detectable soft metal in it that will cause the instrument to react, and has no detectable hard or magnetic metal or mineral, it is not detectable with the instrument. Magnetic Black Sands normally read on the lower mineral meter.
- * Five loops come with the instrument. A 3 1/2 ", 6", 12" and an 18" loop, which connect to the instrument, plus a special long handled, feather weight X3 waterproof gold probe with connection cable. All of the 5 loops are waterproofed.
- * MINERAL - METAL Selector switch to set the instrument for non-magnetic soft metals or for detectable hard or magnetic metals and mineral deposits.
- * AUTOMATIC Selector Switch, energizes both meters for the automatic detection of the presence of either detectable hard metals or soft metals, whichever is predominate in reading.
- * A special VERNIER RADIO TUNING Control for maximum sensitivity.
- * A genuine Brazilian quartz crystal with gold plated electrodes to control the frequency of the oscillator. This is the finest known method of oscillator frequency control.
- * Four meter ranges of sensitivity. The smallest size objects read on the #1 and #2 ranges, and the larger objects on the #3 and #4 ranges.
- * Powered by three economical dry batteries: 1 each 1 1/2 , 6 7/8 and 9 volt.
- * WEIGHT, with X3 Gold Probe, approximately 6 3/4 lbs.
- * SIZE, 17" long, 5" wide and 4" high.

Specifications subject to change without notice.

PRICE: \$395.00 TERMS: \$95.00 down and \$15.04 per month for 24 months;
\$19.22 per month for 18 months; or \$27.58 per month for 12 months.

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

Area Code 503 ~~367-2138~~ 541-367-6121

THE NUGGETMASTER Automatic Mineral & Metal Detector

The remarkable NUGGETMASTER automatic mineral and metal detector has unusual features and performance that we do not believe has ever been incorporated into an instrument of this type before.

The NUGGETMASTER has a special radio tuning control, which is the large radio tuning dial shown in the picture. This control gives a very fine and accurate adjustment of the instrument to obtain the very highest degree of sensitivity that is incorporated in this detector, and to adjust it to compensate for the minerals and metals in the vein or formation being prospected so as to start out with a zero reading on the meter, so that any detectable pocket or concentration of mineral or metal will be at once indicated both by the meter and speaker.

A special range control is incorporated similar to that which is used on Geiger and Scintillation counters. With this control one is able to detect the very edge of a mineral vein and to receive a full scale meter reading when the range control is set on the #1 position which is the most sensitive setting and the one commonly used to start prospecting, as this is the setting that will read on the very smallest amount of detectable minerals or metals such as small pieces of float, edges of veins, pockets, etc. When the meter gives a full scale reading when detecting the edge of a vein, by turning the range control to the #2 position the meter hand will return towards zero, and when passing over the vein itself another full scale reading will usually be obtained. By turning the range control to the #3 position, this will again return the meter hand towards zero. By tracing along this vein one can locate the high reading pockets and the high mineralization as well as the center of the vein. The center of the vein normally will be the reading that is the highest, and if the vein is large and the ore is rich the meter hand will then usually go to a full scale reading on the #3 position. If you receive a full scale reading on the #3 position, the range control may be turned to the #4 position, and only the richest or largest parts of the vein will read in this position, as this is the least sensitive setting for the meter. When passing over the edge of the vein on the far side, the very instant that the instrument passes off of this vein, the meter hand will return toward zero. By marking the spot where you first received the reading and the spot where the reading ceases it will show the approximate width of a detectable vein. By following the direction that the highest readings are constantly received in the #3 or #4 position you may actually trace the detectable length of the veins and also locate the high grade pockets and high reading areas in the vein where the richest mineral is concentrated.

There is a special selector control by where you may check for metals or minerals in a vein, whichever is desired, as well as an automatic selector switch to detect automatically minerals or metals whichever is predominate. The soft metal will read on the upper meter of the instrument and the hard and magnetic metals will read on the lower meter of the instrument.

Special Notice
High Power vs Low Power in an Instrument

Occasionally a customer will request High Power in an instrument to give greater depth of the transmitted waves from the instrument, and ask why we do not incorporate Higher Power.

There are several reasons why we do not do this and some of them are as follows:

To Produce a High Powered instrument would be to considerably add to the instrument's weight, which is not desirable.

The strength of the radio waves are limited by the FCC to 15 Micro volts per meter, which should not be exceeded and would be required to get more power.

Increasing the power reduces the detectability of the instrument on small objects which is undesirable, and reduces efficiency and results.

With enough increased power, the instrument will be subjected to excessive capacitance affects and most objects will give a reading which can include trees, country rock, mud, moist earth, clay, etc. This is detrimental and results in needless digging with no results.

To obtain a good Super Sensitive field instrument that will detect the presence of small ferrous and non-ferrous objects, the instrument should be low power and high sensitivity and have a small loop and a large loop. With low power and high sensitivity a single Gold Nugget may be detected, whereas high power would not detect it, as the object is too small for the power used. The small loop is used for detecting very small objects (and has a very intense field) that is much too small for the larger loop to detect. The larger loop is used for detecting larger objects at more depth that are far beyond the detectable range of the small loop. The smaller the loop, the smaller the object it will detect.

You may also determine the difference between ferrous and non-ferrous material, and this is very desirable. Ferrous is a material or ore containing Iron. Non-ferrous is a material or ore containing no Iron.

Mineral is any naturally occurring substance that is neither animal nor vegetable, containing a mineral or minerals. Magnetite FeO₄ is a black Iron Oxide (magnetic).

Ore is any natural combination of minerals, especially from which a metal or metals can be extracted.

Gold is not a mineral but a natural Metal and is never Magnetic. Native Copper and Silver are also Metals and are never Magnetic. Gold, Copper and Silver are high conductors.

For prospecting for single surface nuggets along gravel bars, or streams the 3 1/2" loop should be used, not the 12" or 18" loops, as this gravel is usually highly mineralized and may have a magnetic field which may make it difficult or impossible to detect a small metal object as the large loop has a larger field that extends out over the magnetic field of the gravels and reduces the metal detectability of the instrument. By using the 3 1/2" loop the field from the loop is more concentrated over a smaller area as well as much more intense and may therefore be concentrated on the small metal object with much less interference from the magnetic minerals which increases the detectability of metal conductors. The 12" loop may be used on non-magnetic exposed bedrock for deeper detection.

When using the X1 or 3 1/2" water-proof loops underwater, the loop must be submerged in the water and then adjusted underwater the same as on dry land. It may take a few minutes for the loop to adjust itself to the water temperature before it settles down and stabilizes. Then the loop is removed from the water, the instrument must again be adjusted for the dry land used and a few minutes allowed for the loop to adjust itself to the normal temperature. The colder the water or the hotter the weather, the longer it may take for the loop to stabilize itself under water and a more frequent adjustment may be necessary. If the bottom of the stream is gravel and magnetic you must cover this ground. Usually the more one practices with the instrument, the better he becomes at operating it and the better are his results.

In checking a Lode deposit, such as a vein that is exposed, the X1 Gold Probe and 3 1/2" loop is used especially if there may be a magnetic mineral in the vein. The detectable gold, copper, or silver is then read on the Upper METAL indicating meter. These smaller loops usually may detect a foot or so in on a pocket. The 12" loop will detect two feet or so depending on the size of the pocket.

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Another important feature is that the speaker will come in loud and clear for either minerals or metals whichever the Mineral-Metal selector switch is adjusted to. In this way it is possible for one to prospect without watching the meter and the very instant that a detectable mineral or metal is detected the sound will come through the speaker and alert you to the fact that you are detecting a mineral or metal object. This is extremely important in rugged areas and in snake infested country where it may be hazardous to watch a meter and one must watch his footing very carefully. This could prevent you from missing a piece of high grade float from a nearby ore body.

When the Range Control is reduced from the #1 position to the #2, #3, or #4 position this does not in any way cut down the sensitivity of this remarkable instrument, but only reduces the meter readings and will leave the instrument operating at its full maximum sensitivity which is so desirable. To reduce the sensitivity of the instrument would be to reduce its effectiveness and efficiency. You now, for the first time, have an instrument that cannot only detect very small pieces of mineral or metal float but can also detect many veins and locate the high reading rich pockets in these veins.

These instruments are not deep detectors and are not designed for that kind of work. A deep detector so very frequently detects mud, water, clay, tree roots, etc., and does not detect small valuable objects which these instruments do. This eliminates receiving a reading and after digging down for considerable depth finding water, clay, etc., that is so objectional.

There are five waterproof exploring loops furnished with this detector. The 3 1/2" loop, and X3 Gold probe; which is used for detecting very small mineral or metal particles, that may occur in mineralized areas as well as for locating very small metal objects such as single coins, rings, watches, etc. For example, in a piece of quartz a small concentration of gold or a small nugget the size of a pea being buried in this quartz out of sight can instantly be detected when passing the small 3 1/2" loop over the gold bearing section.

The 6" loop is a special large nugget and coin loop, which will detect a single small coin as small as a gold dollar. A gold dollar is smaller than a 10¢ coin.

The 12" and 18" loops are for locating larger objects at more depth and for tracing larger veins and for treasure hunting.

The instrument does not normally detect fools gold but should the fools gold contain a detectable quantity of gold the instrument will, at once, register this on the upper metal meter.

The sensitivity is so high that a small gold nugget the size of a grain

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of corn when passed closely over with the 3 1/2" exploring loop, will usually, at once, register a full scale meter reading on the upper metal indicating meter.

When taking a small piece of detectable magnetic iron the size of a grain of corn and the instrument is set for maximum sensitivity, a full scale reading may be obtained on the large lower 4 1/2" mineral meter when this piece of detectable mineral is passed within the detectable range of the small exploring loop. The small 3 1/2" loop does not have the detectable range of the 12" and 18" loops, but is used for locating gold nuggets that may be laying with the surface placer gravels, and for locating lost articles such as single coins, rings, etc. The 12" loop is used for general prospecting and will have much more detectable depth than the 3 1/2" loop.

For deeper detection on large objects the 18" loop is used and is called the Lodemaster. The larger the loop the deeper it can detect within certain limits, but the larger the object usually must be. The smaller the loop the shorter the range of detection but the tinier the detectable object may be. By having all five loops with the instrument you have an instrument that will not only detect very small pieces of mineral and metal but you have an instrument that will detect larger objects at more depth as well.

As the 3 1/2" and 6" loops are so sensitive, they can detect very small pieces of mineral float as well as metal float. By detecting these pieces of float the instrument alerts one to the fact that an ore body is in the area and could very well lead to its discovery. If an instrument could not detect these small pieces of mineral float, it is very unlikely that the operator would ever be aware that the ore body was near by. This is another reason why it is so important to have an instrument that can detect the small detectable metal and mineral objects in field prospecting.

When checking after a rain or heavy storm in gulches, dry washes and along streams, etc., the small 3 1/2" loop should be used for checking for small nuggets that may occur. The 6" loop should be used for detecting large nuggets that may be deeper. However, if there is a high concentration of black sands and these washes are highly mineralized it is advisable to use the 3 1/2" loop, as this loop has an intense field and can override the effect of the high mineralization in these areas and can still detect the presence of the detectable nuggets. The 3 1/2" loop should also be used along gravel bars in order to overcome the effects of the black sands and the highly mineralized gravels that normally occur in these areas.

This instrument does not detect any radio-activity but will detect the presence of minerals or metals. However, many of the radio active Rare Earth, Uranium and Thorium bearing minerals may be detected

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with this instrument. The instrument does not detect the radio-activity but it detects the presence of the minerals or metals and it is usually read on the lower mineral indicating meter of the instrument, when a detectable magnetic content is present, in the deposit.

Price: \$395.00 Terms, if desired, of \$95.00 down and \$10.86 per month for 36 months; ~~\$12.53 per month for 30 months; \$15.04 per month for 24 months; \$19.22 per month for 18 months; \$22.57 per month for 15 months; or \$27.58 per month for 12 months.~~

A 5% discount is allowed for cash purchases.

NUGGETMASTER Special Bulletin

When gold is under sand, dirt or gravel, we assume it to be a placer deposit, and these pockets or reefs containing a high mineral and magnetic content are read on the lower meter, which is the MINERAL and magnetic indicating meter.

Detectable gold in lode and detectable surface or sub-surface gold nuggets are read on the upper METAL meter.

You do not detect the placer gold as it is usually very fine. The instrument is zeroed in over the placer deposit and the mineralization zeroed out. Then you detect the pockets, reefs, etc., where the black sands concentrate the heaviest, and if there is any gold in the deposit it will normally concentrate the highest in these pockets. On these deposits, one can use the 18" loop or a 24" loop and detect down to several feet depending on the magnetic content and quantity.

The larger and richer the non-magnetic pocket, the deeper in it may be detected.

On exposed bedrock the larger loops may be used to prospect for large pockets that may be beyond the range of the 3 1/2" loop.

The 12" loop or 18" loop are usually not used on gravel bars on the metal setting but on the mineral or automatic setting due to the magnetic content of the gravel.

If a large high grade piece of detectable gold bearing quartz passes under the loop, the upper METAL meter will read and if the loop passes over a magnetic mineralized pocket the lower MINERAL meter will read when the instrument is set on the automatic position.

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.

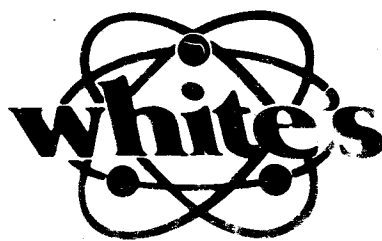
Read your warranty card carefully. It describes completely what is covered and the length of the coverage. If you have any questions don't hesitate to write us. We will be happy to answer any questions you may have.

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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