

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

OPERATING INSTRUCTIONS
for the
CONQUISTADOR 100

DETECTOR

This model incorporates a sensitive quality indicating signal intensity meter, a speaker, and a head set for detection.

METER

The meter serves 2 uses. It serves as a signal intensity meter, and is also used to check the batteries.

BATTERIES

See attached note for battery installation and replacement.

MINERAL & METAL SETTING

The Mineral-Metal control is used to adjust the instrument for detecting metals or for prospecting, to locate magnetic veins, as desired. When set on the metal side of null, it will detect any conductive metal, and when set on the mineral side, will detect magnetic iron ore and magnetic veins.

To put the instrument into operation proceed as follows:

- (1) Insert the largest rod, with the two holes spaced a few inches apart---- with this end--into the sleeve under the front end of the instrument and insert the longest bolt through the sleeve and the second hole in the rod, and put on one of the composition nuts.
- (2) Insert the end of the smaller rod with the single hole into the larger rod so the two holes line up and slip the shorter bolt through the bottom hole so that the threaded end protrudes up through the upper side of the rod, and install one of the composition nuts.
- (3) Install the loop, by inserting the 2 studs (from the bottom) through the 2 holes on the end of the rod, and install the 2 remaining composition nuts.
- (4) Spiral the surplus loop cable around the rod, and insert the plug into the socket on the front end of the instrument. (There is usually a yellow dot at the top of the socket, and on the plug.) Turn the plug until the dots line up and then plug it into the socket.
- (5) Plug the Phones into the jacks provided. (Only when you do not wish to use the built-in speaker.) Plugging in the phones disconnects the speaker.
- (6) Turn the Mineral-Null-Metal control until the marker line is lined up and pointed to the center of the Zero under the word NULL.
- (7) Turn the Power Switch from the OFF position to the ON position.

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 remaining 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 Radio Tuner Control knob, (labeled METAL-MINERAL) so that the 50 (~~XXXXXXXXXXXX~~) is lined up and centered on the black line, just above the dial. This will equally divide the metal and mineral setting.
5. Turn the Speaker Control Knob from the OFF position to the Right
6. Turn the amateur - expert switch to the amateur position (for new operators.) When set on the amateur position, the instrument will not be nearly as sensitive, and will be easier for a beginner to learn to operate.
7. Turn the Range Control to the #1 position. Hold the loop parallel (flat with the ground) and approximately 2" above the ground or surface when making the following adjustments.
8. Turn the Power Switch to the ON position.
9. Turn the Metal-Mineral Control knob, very very slowly to the Right, until the sound starts in the speaker and the meter pointer reads between 5 and 10 on the meter face. After these adjustments are made, be sure to hold the loop as steady and 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 over a period of time. In some cases you may detect a very old tin can, and after digging it up, still 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 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 to 2 inches above the surface, depending on the surface you are using the instrument 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 inches above 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 Radio Tuner 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 single coin, along beaches, etc., and every 10 to 15 minutes or so for larger objects. A little more sensitivity may be had, by adjusting the Radio Tuner for a reading between 5 to 10 on the meter, but this will require much more frequent adjustments of the Radio Tuner to compensate for the temperature drift on the meter, but deeper detection will be had, if desired, but the loop will have to be held a little steadier due to the increase in sensitivity.

The volume is increased by turning the Volume Control to the Right, and is decreased by turning it to the Left.

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. #1 is the most sensitive and #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 Radio Tuner Control back to 0 so that the pointer line is centered on ~~Zero~~ 50
2. Turn the Power Switch to the ON position.
3. Very slowly turn the Radio Tuner Control to the Left, towards the Mineral side, until the sound just starts in the speaker, and the meter hand reads between 5 and 10 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.)

You may now locate and trace detectable mineralized veins that have a magnetic content with this fine instrument. The instrument will usually read the highest and sound the loudest over the highest mineralized spot in the veins.

This model contains two batteries, and you may order new replacement batteries directly from our plant, if you cannot find them locally.

The batteries are:



Your instrument takes just one of each. These batteries are the heavy 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 battery should be replaced, when the reading drops below 30, for the best results.

Expert Setting

After you become familiar with the operation of the instrument in the amateur position, turn the Amateur-Expert Switch to the Expert setting. This is a Super Sensitive Circuit for maximum depth of detection. Adjust and operate the instrument the same as when set on the amateur position. But due to the Ultra High Sensitivity of the Expert Circuit, you will have to use more care in using the instrument, especially in moving the loop. The loop must be held as steady as possible to the same height that you adjusted it for and not raised or lowered excessively.

While more care must be used, you will be rewarded with more finds, due to the increased sensitivity, especially on the smaller and deeper objects.

The best method to locate coins, rings, and other small metal objects, is to use the small loop and to hold it approximately 1" to 2" above the surface you wish to search, and carefully adjust the Radio Tuner for this height, then be sure to retain and hold it at this ~~same~~ height while searching. Move the loop carefully from Left to Right over the ground ahead of you. (This will cover approximately 6" X 6ft), then move the loop forward approximately 6" and pass the loop from Right to Left over the surface. You have now covered a area of approximately 1 ft. X 6 ft. If there were any coins or other metal objects under the ground that you have just passed the loop over, and they were at a detectable depth, you would have found them!

Keep repeating the above procedure till you have covered the entire area you wish to search, as a Signal is transmitted directly below the loop into the ground. The loop must pass directly over all the ground that is to be searched 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 2 weeks with his Instrument. We thought he had found a cache, but he said they were just single lost coins.)

We wish you the very best of luck.

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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.

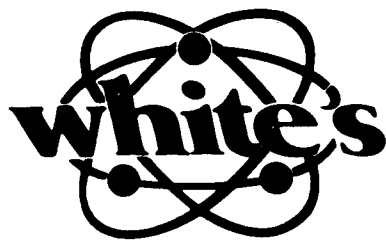
Read your warranty card carefully. It describes completely what is covered and the length of the coverage. If you have any questions don't hesitate to write us. We will be happy to answer any questions you may have.

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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