

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

OREMASTER LONG RANGER

Model C1

SUPER GEIGER COUNTER

The C1 OREMASTER LONG RANGER Super Geiger Counter was designed for the individual who could not afford to go up to the price of the large instruments, and yet he wished an OREMASTER with its tremendous long range, sensitivity, features, and performance, which OREMASTERS are so famous for.

This instrument has the OREMASTERS famous built-in powerful, sensitive speaker, its big giant $4\frac{1}{2}$ " super sensitive laboratory type meter, it has four ranges of sensitivity, two meter speeds, and is directional. The big, giant meter is exceptionally easy and pleasant to read where small meters are many times difficult to read accurately.

This directional feature has always been one of OREMASTER'S outstanding achievements, by where it enables the prospector to determine the actual direction of a mineral deposit that is detected on this super-sensitive instrument. The detector head is lead shielded on the rear side to increase the instruments normal directional detection.

It can quickly detect the presence of many deposits from considerable distance or depth. The speaker is exceptionally desirable whenever the going is rough or in snake country or where ever one cannot watch the meter. When using the speaker, all that is necessary to do is just simply snap on the switch, turn the FAST - SLOW speaker switch to the SPEAKER position and go about your prospecting, hunting, fishing, or hiking!

Should you arrive near a detectable radio-active ore body or in an area containing an ore body, you will notice the increase count through the powerful, sensitive speaker that will alert you to the presence of a mineral deposit. This is very convenient when you do not wish to watch the meter constantly.

You may then turn to the meter position which is automatically done when you turn the FAST-SLOW-SPEAKER switch as soon as it is turned from the SPEAKER position, the meter is automatically activated.

You will, at once, see a high reading on the meter and by turning in a complete circle (pivot), very slowly, with the instrument pointed directly ahead of you, as soon as the instrument is pointed in the direction of the actual deposit, you will receive the highest reading on the instrument meter.

When the instrument is turned in the opposite direction, and the deposit is behind you, you will receive your lowest reading on the meter. This is a tremendous help in prospecting, as you can quickly and accurately determine the direction that the ore body is located in, that you are receiving the high reading from.

The instrument is still directional when using the speaker, as well as the meter.

The super sensitive gieger tube is a thin walled, beta-gamma tube that detects both beta and gamma rays.

It is possible, many times, to detect the presence of gold deposits, as the instrument is sensitive enough to detect the rays emitted by Zircon and other minerals, which are found, normally, in many gold deposits in placer, lode, and pockets.

A high quality voltage regulator tube is incorporated to prolong the life of the geiger tube and maintain steady, economical operation of the instrument and the longest possible battery life. With the automatic regulator tube and the economical circuit in the OREMASTER, it squeezes the last, useable energy out of the B batteries and the A batteries.

A high quality crystal diode for peak performance is incorporated in the famous OREMASTER super sensitive circuit. All the parts are of high quality.

A large handle is incorporated that will fit both small and large hands very nicely - in cold weather a large gloved hand may be used without difficulty.

The case is aluminum, beautifully hammertoned, and rustproof. The batteries are replaced through the back of the instrument through the hinged door, which instantly exposes the battery for the easiest possible replacement or inspection.

Only one 90 volt B. battery, two $1\frac{1}{2}$ volt A batteries and one small $22\frac{1}{2}$ volt battery are used.

The size of the instrument is 17" long, 5" wide and 4" high. Weight is approximately 6 pounds complete with batteries and ready to operate.

If you will compare the features and performance of this instrument we believe you will find that it has features that will not be found in other instruments.

It is very ruggedly built and dependable and is a man-sized instrument. This is one instrument that you will be very proud to own!

The price of this instrument is \$199.50 and like all OREMASTER products, it may be purchased on contract terms - just \$45.00 down and \$13.83 per month for 12 months or \$11.32 per month for 15 months.

These budget terms make it possible for you to buy a high-powered quality instrument on contract where otherwise you would possibly be forced to purchase a low price, less sensitive instrument.

For the best results one should purchase the best instrument he can afford. After all, you are looking for great wealth when prospecting, so it is well worth the effort and investment.

Special terms and lower down payments are available to those, such as pensioners and others, that require them tailored to fit your particular budget. Advise us of your requirements.

We have seen radiation so high that these droppings from stock could be detected driving by them in a jeep with an OREMASTER Super Scintillation Instrument.

This was evidently caused by the large Thorium deposit near where the cattle had been feeding.

Areas that give a high abnormal reading should be carefully checked for the possible presence of mineral deposits.

Areas that give an unusually below normal reading should be carefully investigated for the possibility of oil deposits or possibly a subnormal mineral deposit.

W H I T E ' S E L E C T R O N I C S

1218 Main Street
Sweet Home, Oregon

RADIO-ACTIVITY AND MINERAL DEPOSITS

There is evidence indicating that the radio-activity of igneous bodies is non uniformly distributed. Small stocks and batholiths are higher in radio-activity than are the large ones.

Also, it appears that the radio-active elements tend to concentrate into the top most parts of the batholiths during their formation because radio-activity, as measured into eroded body today, is highest near the rims and decreases towards the center.

Furthermore, mineralized areas around igneous bodies are rather loosely connected with the highly radio-active parts of the intrusives. Stocks and batholiths of igneous or metamorphic origin possess broad zones of higher than normal radio-activity in the vicinity of related ore bodies controlled by major structural features.

This association is independent of the origin of the ore bearing solutions. In general, the radio-activity of rocks is higher in the vicinity of ore bodies and a radio-active aureole may extend outward some distance from the mineralized areas into the country rock.

Some ore bearing solutions are rich in radio-active elements that are able to diffuse through the surrounding rock for considerable distances. Consequently, they are not only building up the high level of radio-activity in the mineralized zones, but also produce in the country rock a notable activity that decreases away from the ore body.

Because the activity of some non radio-active ores are higher than the activity of the country rock, it is sometimes possible to locate ore bodies by systematically studying the radio-activity at the surface.

Other mineralized areas may be found from their association with rocks of abnormal activity. Similar surveys may also be made to detect the presence of formation contacts, faults, and shear zones and other structural features to map outcrops of veins, dikes, and igneous bodies that differ in activity from the rocks surrounding them and of deeply weathered rocks.

Veins and other deposits mined for their content of radio-active elements may be detected by means of geiger counters and scintillation counters by their high activity if the country rock has been only slightly permeable to direct radio-active elements constituting the ore.

There are over 100 different radio-active minerals that have been classified and many other radio-active minerals of uncertain value are also known to exist, but have not yet been adequately studied.

Mineral deposits that contain strong gamma radiation may be detected from much greater distance normally than deposits that do not contain them.

Gamma radiation consists of true rays which are like those of X Rays and light and so are not electrically charged, but they are a million times shorter in wave length than visible light.

They readily pass through at least 3 inches of lead. In South Africa, prospectors have been equipping themselves with airborne scintillation counters to prospect for diamonds to locate the Kimberlite pipes, the funnel shaped bodies of bluish rock ranging up to over 2000 ft. in diameter in which diamonds are found.

Of volcanic origin, Kimberlite rock belongs to the basalt family and so has subnormal radio-activity blackout therefore should be a likely place to look for the diamond bearing formation.

Measurements of radio-activity by means of scintillation counters and super sensitive geiger counters also provide a means of oil exploration. Oil fields are generally low in radio-activity and are commonly surrounded by a zone having an activity that is slightly higher than normal. This may vary in different areas.

This difference in activity is believed caused by the upward movement of Chloride, rich oil field waters, which because of the reducing action of the minute amounts of dissolved hydrocarbons they contain are sulphate free and consequently are capable of dissolving radium from surrounding strata, such as Uraniferous shales not far from the surface.

The radium bearing waters move upward at varying speed. When encountering oil or gas accumulation, they are rerouted laterally toward the edges of the accumulations, they deposit most of the radio-active constituents near the edges of an oil field, as the result of oxidization of the sulphides and sulphates, by descending atmospheric water.

In areas that give a high reading, yet nothing can be quickly detected that is giving off this reading and it is thought that the reading may be originating at depth from a radio-active ore body, it is a good policy to check the foliage, the trees, moss on the trees, and the leaves on the trees.

If you have had a campfire, check the ashes for a higher reading. If there is cattle, deer, elk, sheep, antelope, or any grass or foliage eating animals in the area and any of their droppings that are encountered should be checked for a high reading.

Unless there is bomb fall out in the area, a high reading over a wide area on any of these tests will indicate the possible presence of a large radio-active ore body.

The deposit could be either Uranium or Thorium - or both, as the animal concentrates the foliage in their stomach, these droppings can be surprisingly radio-active in an area containing these deposits.

RADIO ACTIVE ORE BODY

The highest reading on the big 4½" meter is secured, when the instrument is pointed in the direction of the ore body, as more rays enter the sensitive section of the Geiger tubes through the perforated front of the instrument.

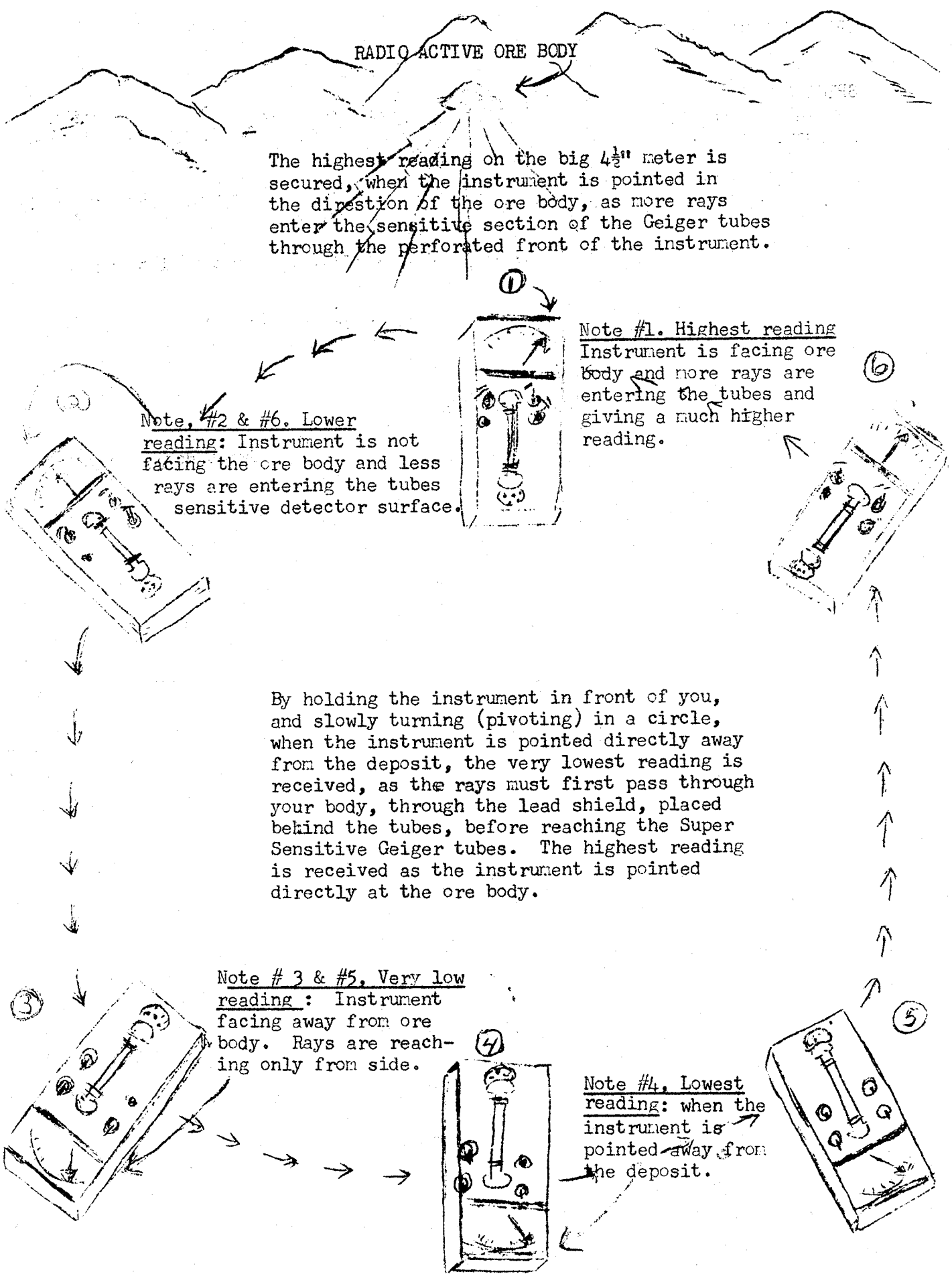
Note #1. Highest reading Instrument is facing ore body and more rays are entering the tubes and giving a much higher reading.

Note #2 & #6. Lower reading: Instrument is not facing the ore body and less rays are entering the tubes sensitive detector surface.

By holding the instrument in front of you, and slowly turning (pivoting) in a circle, when the instrument is pointed directly away from the deposit, the very lowest reading is received, as the rays must first pass through your body, through the lead shield, placed behind the tubes, before reaching the Super Sensitive Geiger tubes. The highest reading is received as the instrument is pointed directly at the ore body.

Note #3 & #5. Very low reading: Instrument facing away from ore body. Rays are reaching only from side.

Note #4. Lowest reading: when the instrument is pointed away from the deposit.



OREMASTER C1

SPECIAL NOTICE: If you are planning on an instrument for fall out detection you should get it, at once, so as to have it on hand, as it is doubtful if you would be able to secure one in an emergency.

It's like an insurance policy you must have it for an emergency or when needed as when the emergency arrives it is too late to obtain it.

The instrument should be on hand, with extra batteries, for immediate use.

(Specifications subject to change without notice)

GOOD LUCK PROSPECTOR!

WHITE'S ELECTRONICS

1218 M Street

Sweet Home, Oregon

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.

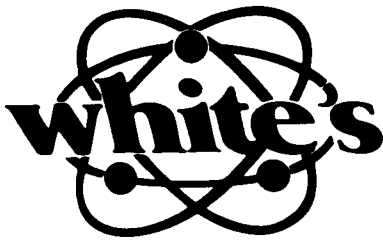
Read your warranty card carefully. It describes completely what is covered and the length of the coverage. If you have any questions don't hesitate to write us. We will be happy to answer any questions you may have.

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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