

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

NEW TREASUREMASTER

Transmitter-Receiver Model 68 TR All Metal Detector

We first want to congratulate you on your purchase of this fine new Super Sensitive Advance Instrument.

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

We do not believe that you can buy a finer instrument than you have chosen for the use that the instrument is designed for, 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 that you become, through use and practice, the better operator you will be. The better the operator the more finds you will make.

To put the instrument into operation proceed as follows:

1. Install the largest size loop rod in the sleeve, under the instrument, and insert the longest bolt through the sleeve, and through the 2nd hole in the rod. Put on one of the composition nuts and slide the end of the smaller rod, with the single hole in the side, into the end of the larger rod tubing. Line up the two sets of holes. Install the shorter bolt through the bolt holes, and screw on one of the composition nuts. The bolt should be inserted from the bottom side of the rod, so that the composition nut is on top.
2. Slip the two studs on the loop through the bottom of the two holes in the exploring rod and install the remaining two nuts.
3. Turn the Metal-Null Control knob so that the line, or dot on the knob is lined up in the center of the circle under the word Null.
4. Turn the Speaker Control knob to the Right.
5. Turn the Knob, labeled Radio Tuner, so that the #50 is at the top of the dial and centered on the marker line.
6. Turn the Range Control to the #1 position.
7. Turn the Power Switch to the ON position.
8. Turn the metal Control, very, very slowly and just slightly to the RIGHT toward the Metal setting, until the sound just starts in the speaker, and the meter pointer swings to the right. Very slowly and just slightly turn the Metal-Null Control to the Left, until the meter pointer rests just below 0 (Zero) to the Left on the meter face, so that you have a Zero

Reading. Do not turn the control any further to the Left than is necessary to obtain a Zero Reading, when making this adjustment.

9. Next, turn the Radio Tuner Control, very slowly to the Right, until the sound just starts in the speaker, then adjust this control until the meter pointer reads approximately 10 on the meter face, for maximum sensitivity.

After these adjustments are made, be sure to hold the loop as steady and as close to the same height, as it was when you adjusted it, 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.

Tin cans, bottle caps, tin foil, aluminum foil, cartridge cases, coins, gold, silver, 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, nor to non-metallic objects, when operated properly.

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, still receive a reading over the spot the can was buried in.

To locate hidden or buried metal object, 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. Retain this height as close as you possibly can, and search the ground carefully. Usually 1 to 2 inches above the surface, if possible; depending on the surface you are using the instrument over. If the ground is rough, you may have to Zero the instrument in 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 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 so critical to height variation, and will respond to the larger metal objects. To practice, lay some metal objects on a 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 to keep the instrument at its highest peak of sensitivity, when searching for small objects, such as single coins, along beaches, etc., and every 10 or 15 minutes or so for larger objects, if necessary.

The volume is increased by turning the Volume Control to the Right, and is decreased by turning it to the Left. If adjusting the meter to a reading of 10 on the meter is too much sensitivity to use in some areas, you may adjust the Radio Tuner, until the meter pointer just returns to Zero, and use it this way, which will be much easier to use in mineralized areas, where the soil has a magnetic content. The instrument may be used around water, but do not submerge the loop in water.

The small 7 1/2 " loop is used for locating single small coins or groups of coins and other very small objects. This loop will usually react to a single gold dollar just beneath the surface. A gold dollar is approximately one half the size of a silver ten cent U.S. coin.

The 11" loop is used for deeper detection on smaller to larger objects, and will react to larger objects beyond the range of the 7 1/2" loop. The 11" loop can however detect objects quite readily as small as a single 25¢ coin at a relatively shallow depth and in favorable soil.

The special 15" loop is used for still greater depth of detection on larger treasures; such as chests, boxes of coins, etc., that may be beyond the range of the 11" loop. However the 15" loop is also sensitive to metal objects as small as a single silver dollar at relatively shallow depth and in favorable soil. In difficult areas where the soil may have a higher magnetic content, the smaller loops should always be used in searching for smaller objects, for the best results.

When searching with the 7 1/2 " loop one covers approximately 7" x 6' of area, with a single slow pass of the loop.

When using the 11" loop an area of 10" x 6' is covered. With the 15" loop an area of 15" x 6' is covered.

After a slow pass is made, move the loop ahead the width of the loop for the next pass. Repeat this procedure until all of the search area is covered. This is the proper procedure to follow to insure the most finds.

When the instrument is operating properly and the exploring loop passes over a detectable object, a constant sound will at once be heard in the speaker and the meter pointer will swing toward the Right. As soon as the loop passes the metal object, the tone signal will lower and the meter pointer will swing toward the Left. Also, the larger the object the louder the sound will be and the smaller the object the softer and lower the sound. Native gold, copper, silver, and coins are never magnetic and are detectable on the instrument when a detectable quantity is present, as they are all highly conductive metals. (Tin foil, bottle caps, tin cans, and many other man made objects are also conductive and are detectable.)

When the detectable metal object passes under the exploring loop, and the meter hand swings from Zero to 50 (which is a full scale reading), you may turn the Range Control from the #1 position to the #2 position, and the meter hand will return towards Zero. You may then continue to check over the surface that you are receiving this reading from. Be careful to hold the exploring loop parallel with the surface and as evenly as you can, and maintain it at the same height as much as possible, such as you held it when you adjusted the Radio Tuner Control, and do not lower or raise the loop more than necessary in walking. The steadier you hold the loop, the more accurate the reading will be. (Raising and lowering the loop excessively will cause false and fluctuating meter readings.) Should the meter hand again go to a full scale reading while checking over the formation or surface that you are receiving the high reading from, turn the Range Control to the #3 position and locate the spot where the reading is the highest. The highest reading that you receive on the least sensitive meter range would usually be over the center of the object you are detecting. If the meter hand again goes full scale turn the Range Control to the #4 position, and locate your highest reading on the #4 position, (Should you receive a full scale reading with the Range Control in the #4 position, you may continue searching with the sound from the speaker as your guide to locate the places where the sound is still high, or slightly turn the Null-Metal control to the Left until the meter reading is on Zero, then continue to search for a still higher reading.

You may notice a slight gradual increase or decrease in meter reading and sound in your instrument as you use it. This is caused from slight changes in ground variations, magnetic soil background changes and atmospheric temperature variations, which are to be disregarded. Should the meter reading slowly drop to, or below zero and the tone cease, a slight adjustment of the Radio Tuner will bring the sound and slight meter reading back or reduce the sound and meter reading as desired or required. (Should the reading suddenly drop along with a drop in sound, over a small spot, this could be a magnetic rock.

Meter Ranges

This is an Ultra High Sensitivity instrument, that may incorporate more sensitivity than you may normally require or need, but its there if you need it.

- The #1 Range is the most sensitive
- #2 Range is less sensitive
- #3 Range is still less sensitive
- #4 Range is the least sensitive.

Due to the exceptionally high sensitivity of the instrument, we believe you may find that it may be more sensitive than most any instrument, even in the #4 position. Due to this fact you may operate it on the #4 position with just a slight or zero meter reading if desired. This will require less frequent slight meter adjustments than is usually required when using the #1, #2 or #3 ranges, but depth of detection is less.

For new operators, it is some times a good policy to use the instrument with the Range Control set on the #4 position, until one becomes familiar with the instrument's operation, and can properly handle the higher sensitivity which is incorporated into this unusual instrument.

*Special Service Notice: Should you ever be unable to find a null on your instrument, this is an indication to replace the 1 1/2 volt # W353 A Battery. Should this occur Do Not Ship the Instrument to the Factory. Just replace the # W353 battery.

This model contains three batteries, and you may order new replacement batteries direct from our plant, if you cannot find them locally. We prepay all batteries. The batteries are:

Eveready # W353	1 1/2 volt	\$1.75
Eveready # 467	67 1/2 volt	\$3.85
Eveready # 246	9 volt	\$1.85

Your instrument takes just one of each. 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 read from 30 to 40 on the meter. The battery should be replaced, when the reading drops to 25, which is the center of the meter face, for the best results.

The instrument has a full 2 years 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.

We wish you the very best of luck.

WHITE'S ELECTRONICS, INC.

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BATTERY INSTRUCTION SUPPLEMENT

NOTICE

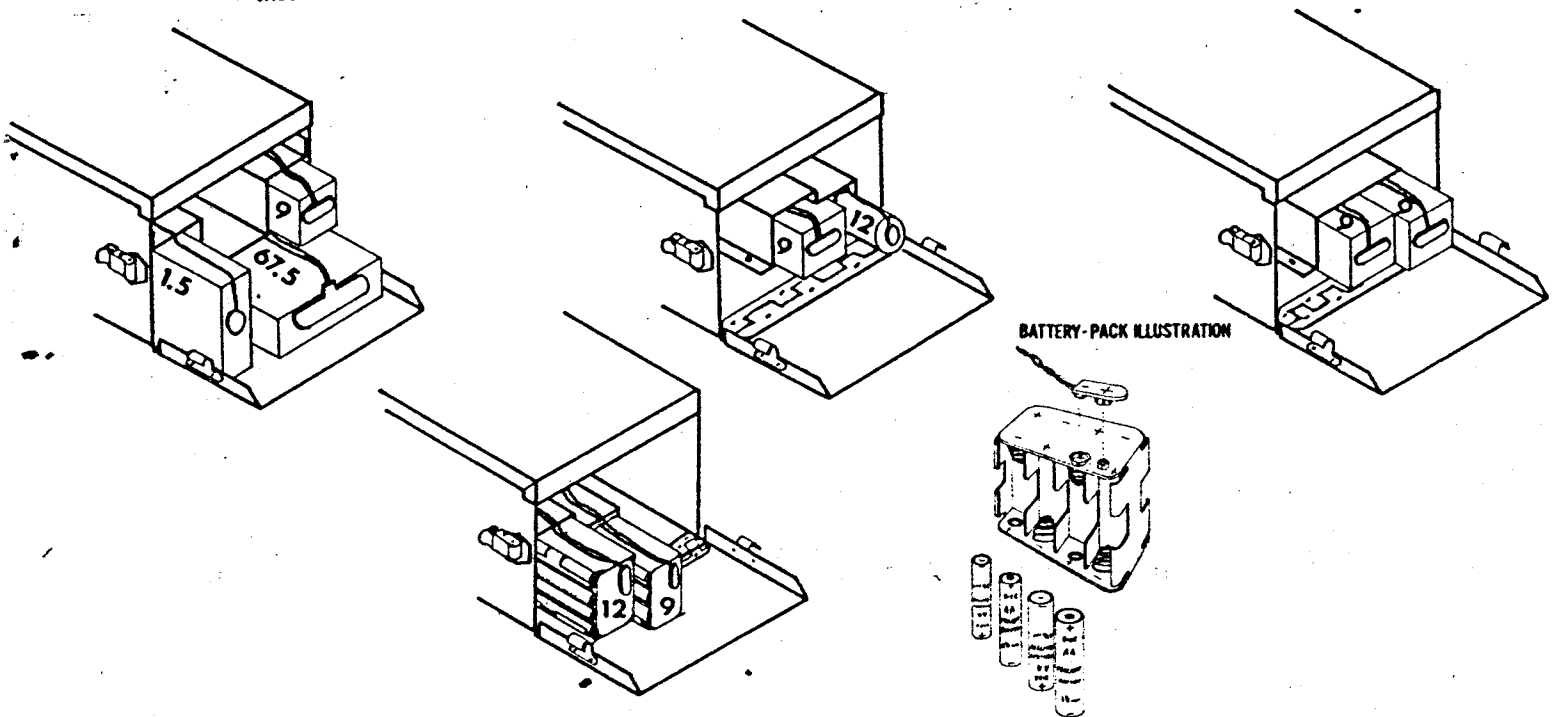
The enclosed battery diagram illustrates the four different battery arrangements used in our equipment. Carefully read the battery instruction page of your manual. It will explain what arrangement your particular model uses.

If you have the battery "pack" model, insure batteries are inserted into the pack with the proper sequence of polarity (see illustration). Negative (-) end of battery goes toward springs and positive (+) end toward caps.

When ordering replacement batteries from the factory, please state the instrument model, voltage of batteries and battery numbers.

BATTERY DIAGRAM

NOTE: To prevent damage in shipping, the batteries have been removed from your instrument and placed in a separate container within the shipping carton. See following diagram for proper installation.

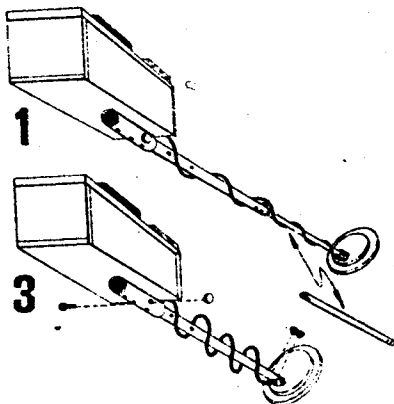


9 Volt
12 Volt
67.5 Volt
1.5 Volt
1.5 Volt "AA" (Battery Pack Models)

Eveready
246
228
467
W353
915

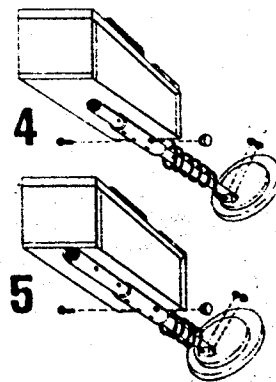
Burgess
2NG
PM8
XX45
2F
910

INSTRUMENT ASSEMBLY DRAWINGS



Illustrated in Drawing No. 1, is the easy method of breaking down and assembling a White's Metal Detector. **NOTE:** When breaking your instrument down for carrying or storing, always replace thumb bolts and screws to their correct places to as not to lose them.

Drawings No. 3, 4 and 5, are hints for the treasure



hunter who finds himself searching around old ghost-towns, homesteads, etc. Many places can be rather difficult to get into with a full length instrument. For this purpose we show you how, by drilling a few extra holes in the rods, the instrument can be shortened to accommodate almost any place a hunter can go. **NOTE:** Always coil the loop cable as snug as possible without trying to pull or stretch it.

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.

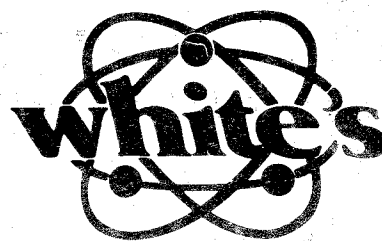
Read your warranty card carefully. It describes completely what is covered and the length of the coverage. If you have any questions don't hesitate to write us. We will be happy to answer any questions you may have.

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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