



## **GOLDSEEKERS 15000**

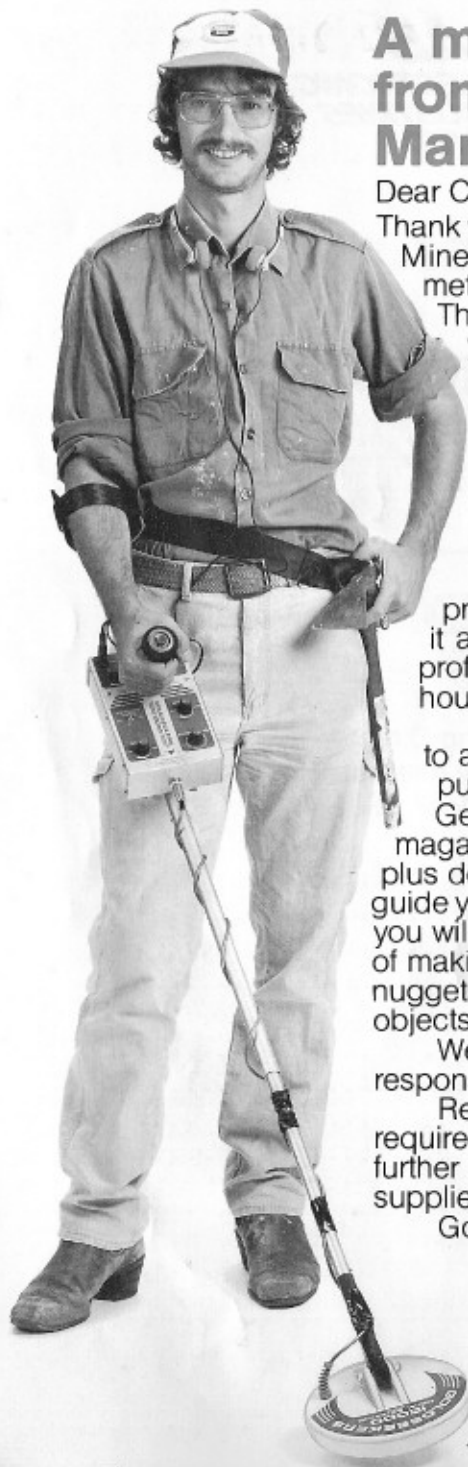
# **INSTRUCTION MANUAL**

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## A message from Minelab's Managing Director

Dear Customer,

Thank you for deciding to purchase a Minelab Goldseekers 15000 metal detector.

This detector is the result of many years of combined research and development to produce the first metal detector suited to Australian conditions.

It is bred from technology adopting the most advanced electronics currently available in this field - in the world!

If you learn it and use it properly, you'll be able to operate it almost as well as any full-time professional prospector in a few hours at most.

If you take the time and trouble to absorb information such as that published in Australian GOLD, Gem & Treasure (the leading magazine for detector operators), plus do the necessary homework to guide yourself to the right locations, you will further increase your chances of making worthwhile finds of gold nuggets, coins and other valuable objects.

We recommend that you join a responsible detector club.

Remember, in most States you are required to hold a Miner's Right. For further information, contact your local supplier or Mines Department.

Good luck in the field,

Rob Wylie

*P.S. Let us know how you get on!*

## GOLDSEEKERS 15000

### ASSEMBLY INSTRUCTIONS

#### PUTTING IT ALL TOGETHER.

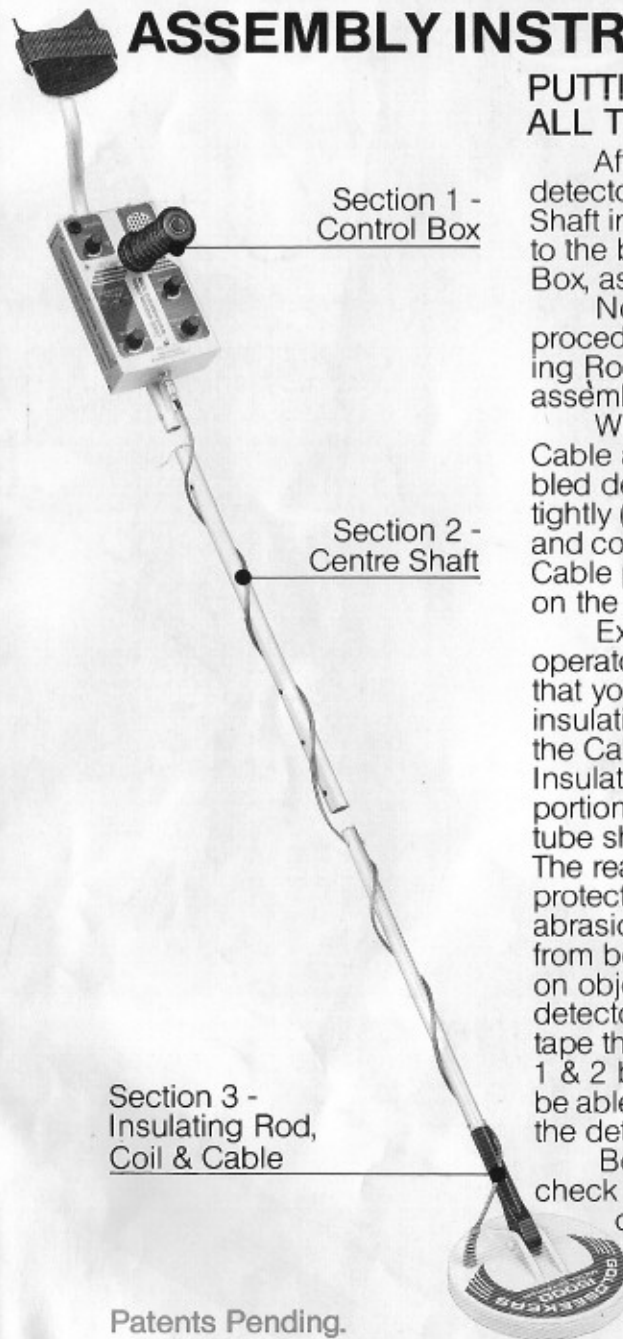
After unpacking your detector, slide the Centre Shaft into the one attached to the base of the Control Box, as shown.

Now repeat the procedure with the Insulating Rod, Coil & Cable assembly.

Wind the connecting Cable around the assembled detector shaft fairly tightly (but without strain!) and connect and screw the Cable plug to the socket on the Control Box.

Experienced operators recommend that you use heavy-duty insulating tape to secure the Cable to the black Insulating Rod and that portion of the aluminium tube shown in Section 3. The reason for this is to protect the Cable from abrasion and to prevent it from becoming snagged on objects whilst the detector is in use. Don't tape the cable to Sections 1 & 2 because you won't be able to easily dismantle the detector for transit.

Before use, always check your Cable and connecting plug are undamaged and secure.



Section 1 -  
Control Box

Section 2 -  
Centre Shaft

Section 3 -  
Insulating Rod,  
Coil & Cable

Patents Pending.

# GOLDSEEKERS 15000



## CONTROL DECK

Refer to Battery Removal & Installation (p.14) and insert batteries as shown and described. Your detector will then be ready for use.

This photograph shows the Goldseekers 15000 controls referred to individually in the following section.



## EXPLANATION OF CONTROLS



FIG. 1



FIG. 2



FIG. 3

### ON/OFF CONTROLS

The volume is "off" when the knob is turned completely anti-clockwise. On turning the knob, you should feel a slight resistance and hear a click: this signifies that the machine is in the ON position. When used in the field, the operator will achieve the unit's best performance with the knob set to maximum volume - that is, with the knob turned fully clockwise.

### HIGH AND LOW TOGGLE SWITCH

This toggle switch should always be set on the LOW position for good or clear ground. The high setting should be selected for ground concentrated in ironstone or mineralisation. If the ground still produces large variable responses, then you should decrease the sensitivity by turning the sensitivity knob anti-clockwise. By doing so, some "depth" will be lost.

### SENSITIVITY

To obtain maximum setting, turn the control knob to its extreme clockwise setting. This setting need only be altered in poor ground conditions such as heavy mineralisation or heavy ironstone. (The High/Low Toggle Switch should be used in its high setting, prior to reducing sensitivity.)

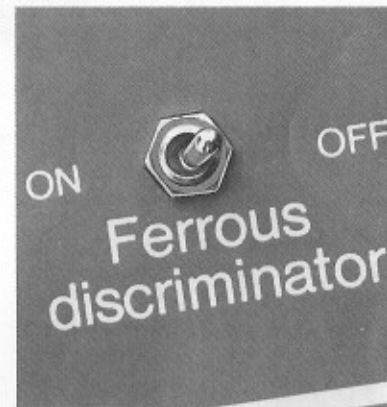


FIG. 4

### IMPORTANT:

When using Discrimination in heavy ironstone conditions, the coil should not be moved up and down as if you were attempting to ground balance, but should only be moved side-to-side to eliminate the possibility of false ferrous readings.



FIG. 5

### DISCRIMINATION

This mode will not sacrifice sensitivity or depth. Ferrous and non-ferrous objects will produce very different sounds through the loudspeaker or head-phones. Non-ferrous objects will produce sharp, crisp beeps: ferrous objects will be signalled by staccato-like sounds which are noticeably different from non-ferrous.

### THRESHOLD

With the volume control set fully clockwise, and the detector head held away from any metal object or the ground, depress the Reset and Tune Button on the handle. Now turn the Threshold knob until a soft sound is heard. (In this respect, the Threshold control behaves like a volume control - that is, turn it clockwise for a louder response; anti-clockwise for a softer sound.) The control should be set just a slight turn of the knob past the point at which the tone is just audible, but not to a level where prolonged use would be irritating.



FIG. 6

## RESET AND TUNE BUTTON

This switch, located at the top of the handle, is a "press down" type which is only activated while the button is depressed. It should be held down until ground balancing is complete.

In salty areas, where salt can cause spurious signals, the button should be held down during

detection and not be released until the salty terrain has been left.

Also, if a background audio level fades away or gets too loud, the button should be depressed momentarily. In normal use, the button is not held down.



FIG. 7

## GROUND BALANCE

The Ground Balance is a ten-turn control - that is, it requires ten full turns to go from one extreme to the other. If you raise and lower the detector head above a patch of ground NOT containing metal objects and the sound level of the tone changes with your movement, then the detector is out of balance and requires adjustment.

Throughout this adjustment the Reset and Tune button must be depressed. Ground balance is achieved when raising or lowering the head from or to the ground does not result in changes in the sound level. You need to vary the control according to this Table.

YOUR ACTION	WITH THIS ACTION, TONE GETS	TURN GROUND BALANCE KNOB
Lower head	louder softer	anti-clockwise clockwise
Raise head	louder softer	clockwise anti-clockwise

As you get nearer the correct setting, you will find that the response to raising and lowering the head becomes less pronounced, and you will need to make finer adjustments with the control knob. (You may need to make further fine adjustments as you detect across an area).

The head should be raised to about 10cm. (4") and lowered to about 2 or 3 cm. (1") above the ground. Inexperienced persons should raise and lower the detector head at a slow rate to ensure that ground balancing is done correctly. If a detector is not ground balanced properly it will not give the operator the best performance.

In ground containing high ironstone concentrations, the sound may abruptly cease when the head nears the ground. When this happens the High and Low Toggle Switch should be switched to high.

Experienced operators will find that it is easier to ground balance by continuously moving the head up and down and varying the ground balance control at the same time.



FIG. 8

## HEADPHONE SOCKET

Headphones used should have an impedance of 8 Ohms or greater. Mono or stereo headphones may be used.

When the headphone jack is inserted into the socket, the loudspeaker is disconnected. You can tune the Threshold to a lower audio level and outside noises, such as the wind, will be less distracting.

As the loudspeaker draws more current, using headphones will conserve battery life.

## OPERATING INSTRUCTIONS

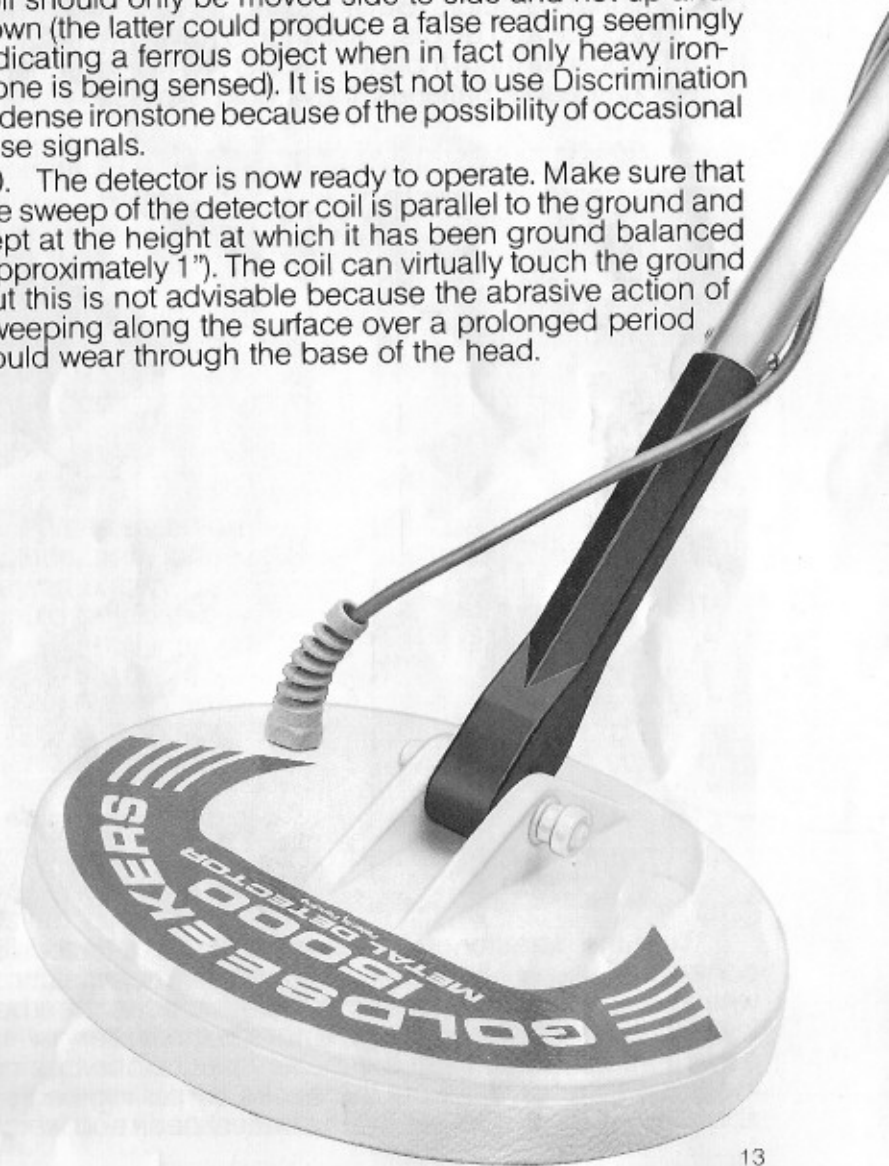
1. Check all cables and connectors for breakages or loose connections. Adjust the shaft to a comfortable length and rotate the coil angle so that it lies parallel to the surface which you are going to detect.
2. Check that batteries are charged and intact (see batteries section for more details).
3. Insert headphones fully into the Headphone Socket on the back right hand side of the detector Control Box (see fig. 8).
4. Flick the Toggle Switch on the top centre of the detector Control Box to low - not high (Fig. 2). Turn the Sensitivity switch onto maximum by rotating the knob fully clockwise (Fig. 3).  
The Discrimination switch can either be off or on. It will not effect the performance of the machine (see Discrimination section - Fig. 4). The Threshold knob should be turned fully anti-clockwise.
5. Hold the detector at waist height with the coil facing away from all metallic objects. Turn Volume control on full.
6. Depress and release the Reset button on the top of the hand grip, then place the headphone set over your ears. Then adjust the Threshold knob until a soft, comfortable audio level is obtained, one which will be pleasant to work with for a prolonged period. For best results the audio level should be set just above the quiet tone of the Threshold setting.
7. To ground balance, firstly depress the Reset and Tune button on the hand grip and hold it down. Continually raise and lower the coil between 3 & 10cm. (one and four inches) above the ground, while adjusting the Ground Balance control and striving for a constant signal without any highs or lows. If the sound builds up on the downward stroke, turn the control knob anti-clockwise. If the sound builds up on the upward stroke, then adjust the control knob slowly clockwise. When the best balance has been achieved release the Rest and Tune button.
8. If detecting on "hot" or mineralised ground, firstly flick the Toggle switch from low to high. Depress the Reset and Tune button and ground balance as explained previously.

## GOLDSEEKERS 15000

If the ground is still too "hot", with mineralisation or ironstone, back off the Sensitivity control a fraction at a time, turning it anti-clockwise until spurious ground noises are reduced to a tolerable level.

9. There is no sacrifice of depth or sensitivity in either discrimination or non-discrimination modes selected by moving the Toggle switch. With Discrimination in use, the coil should only be moved side to side and not up and down (the latter could produce a false reading seemingly indicating a ferrous object when in fact only heavy ironstone is being sensed). It is best not to use Discrimination in dense ironstone because of the possibility of occasional false signals.

10. The detector is now ready to operate. Make sure that the sweep of the detector coil is parallel to the ground and kept at the height at which it has been ground balanced (approximately 1"). The coil can virtually touch the ground but this is not advisable because the abrasive action of sweeping along the surface over a prolonged period could wear through the base of the head.

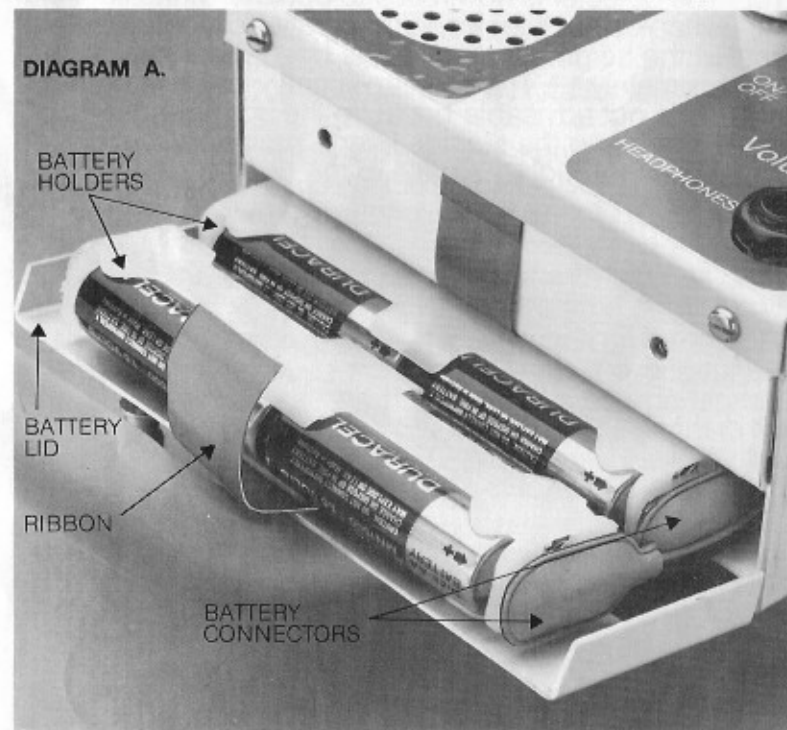




# BATTERIES

The Goldseekers 15000 uses 8 1.5 volt A.A. size pen light batteries, of the alkaline type which is readily available from most stores. Alkaline batteries are sealed. Other batteries are not recommended as any leaks could damage electronic components. For similar reasons, remove the batteries if the detector is to be stored without use for more than seven days. Battery life in the Goldseekers 15000 is extremely good in comparison with most conventional detectors. Batteries should be stored in a cool, dry place and on disposal should never be placed in a fire. Dispose of them thoughtfully. DO NOT try to recharge non-rechargeable batteries: they could explode.

## BATTERY REMOVAL AND INSTALLATION



Turn the detector off. At the back of the detector's control box you will find two screw latches. These latches, when pulled out, will release the flap which can then be lowered downward (see Diag. A). Inside the battery compartment you will see two battery packs, one behind the other. Carefully take out the packs, by pulling on the ribbon which is placed behind the battery pack and which

has one end fastened to the box. Don't pull unduly hard on any wire connections. You now can remove all batteries from the battery packs. NOTE: Do not disconnect battery connectors from battery holders (see Diag. A. & B).

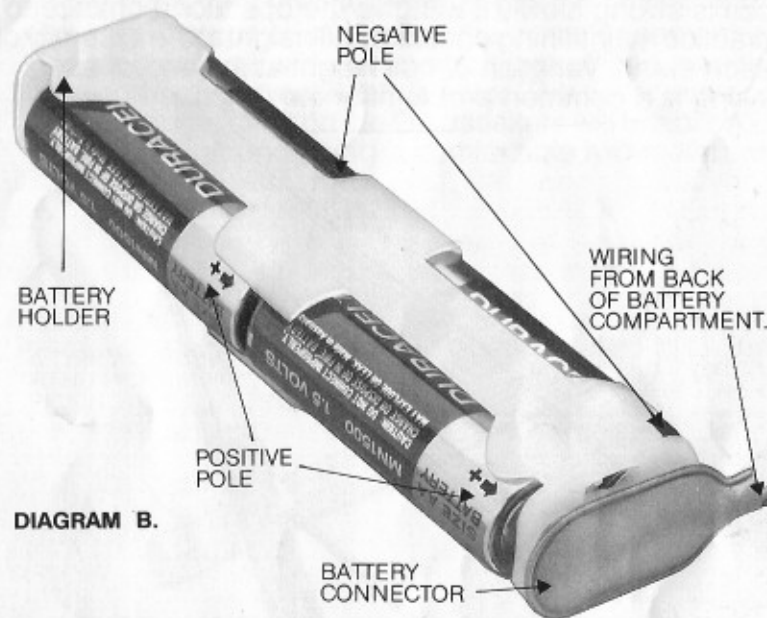


DIAGRAM B.

When inserting new batteries be very careful to replace them in their correct positions. Diagrams displaying battery polarity are on the packs. Correct polarity should be observed AT ALL TIMES (Diag. B).

Carefully replace the battery packs, with the ribbon behind the pack, close the flap and screw the latches firmly to secure the flap.

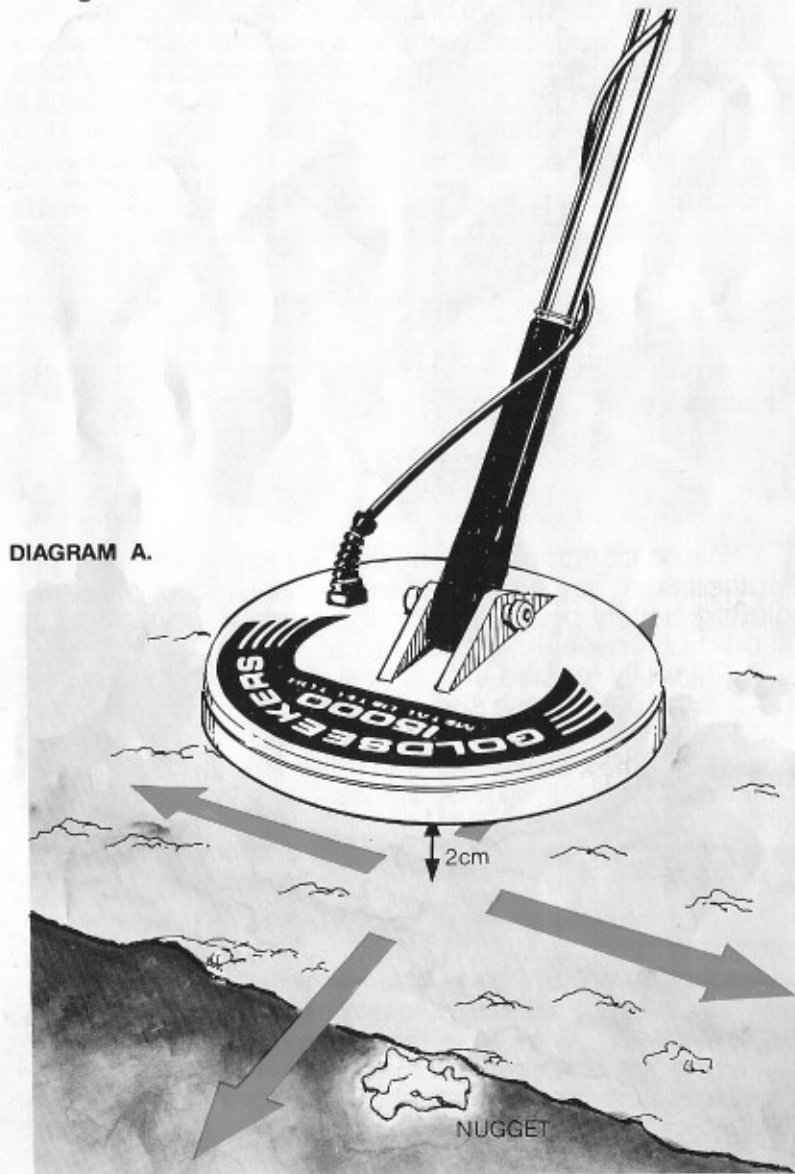
Switch the detector ON to check for function. If the detector does not work, check the battery polarity and battery connections.

## BATTERY INDICATOR

The Goldseekers 15000 has a unique battery warning system. When the battery life is critically low, distinct beeps will sound at about 20 second intervals through the headphones or the loudspeaker. These signals are unlike any others encountered in operating the detector. No matter what mode or form of operation is chosen, these signals will be clearly heard above any other sounds from the detector. Once this signal is heard, the operator can expect 15 minutes remaining use.

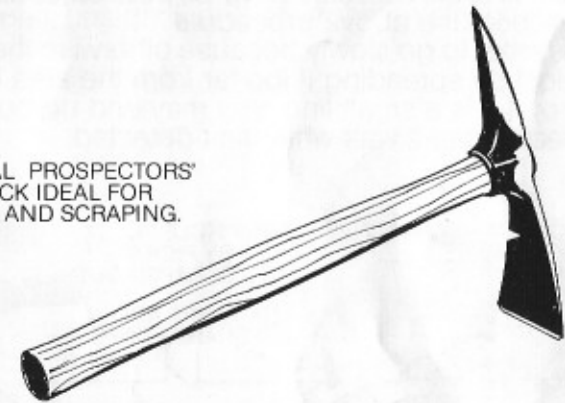
## DETECTION TIPS

The Goldseekers 15000 will return its best performance when it is ground balanced to approximately 1" above the ground and kept at that search height. If the coil is swung slowly it will give the operator a chance to practice maintaining constant coil height at the extremity of each swing. Variation of coil height at the end of each swing is a common problem for the beginner.



It is good practice to familiarise yourself with any new brand of detector. The best way to do this is to dig all object noises (including those giving ferrous signals even when searching for gold) as it will provide the operator with good experience in learning different audio signals and improving operator knowledge of ground noises. With Goldseekers' coil configuration the operator can achieve greater coverage within a shorter span of time than that allowed by a conventional detector. The wider scan coil and the longer shaft on the Goldseekers will enable you to cover more ground using a comfortable two metre swing.

A TYPICAL PROSPECTORS' HAND PICK IDEAL FOR PICKING AND SCRAPING.



OVERBURDEN SPREAD OUT

SHALLOW HOLE MADE BY SCRAPER

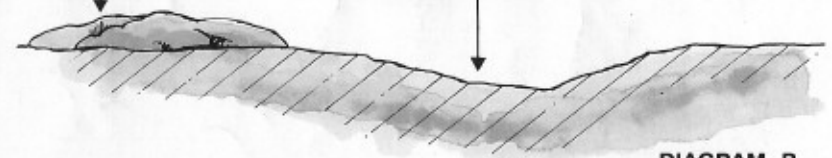


DIAGRAM B.

The Goldseekers 15000 is a "Static Type Detector" not a "Motion Detector" - which means the coil does not have to pass back and forth over the object to register an audio signal. However, it behaves as a "Motion Detector" when the Reset and Tune button is held depressed. The coil should pass over the ground in a smooth and even motion. It is good practice to detect an object noise from several directions, listening to the audio signals and taking note where they are strongest.



After making an appraisal of the target's position, best results will be gained by removing the top one to two inches of soil for approximately a 14cm radius of the target point and by flattening out the removed soil to one side of the cleared area (see Diag. B). By passing the coil over that flattened soil, your detector will signal if the object is small and contained in the top layer. It can be found more readily by this method than by digging a large hole. If it is not in the flattened soil, continue to dig and follow the same procedure. Do not leave sharp edges around the hole perimeter, because the detector could give a false reading on the edges of the hole (see Diag. C.) If the object is still not located, repeat the above procedure.

It is better to go slowly because otherwise the object may be lost by spreading it too far from the area being worked, or if it is a small find, you may end up burying it even deeper than it was when first detected.

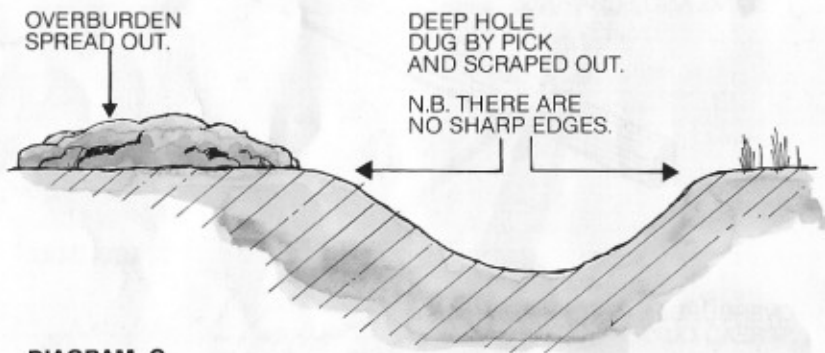


DIAGRAM C.

When the object has been removed from the hole, lay the detector down with the coil on its side, close to the hole. (See Diag. D). Gather a handful of soil at a time and pass it across the coil. The handful containing the object will emit a clear signal. Then halve that material into two hands and pass one at a time across the coil to further eliminate waste soil. This procedure is continued until the object can be seen in the hand.

Detect again over the hole to make sure there are no other objects to be found (it wouldn't be the first time that gold nuggets have been found one under the other). Remember, fill in all holes you have dug: they are dangerous, unsightly and environmentally unacceptable.



(Make sure that you don't wear anything metallic below your elbow on the arm you use in the exercise shown above!!)

DIAGRAM D.

**M MINELAB**

## GROUND NOISES

There is nothing more annoying than getting a signal and digging but finding nothing. This can confuse the inexperienced operator and even destroy his confidence. It will take time and practice until you can learn to recognise which signal to pay attention to or to ignore.

Typically mineralised ground can make a detector respond with an indication that there might be an object reasonably deep beneath the surface. The sound could be rather broad and not very loud, or sometimes crisp and reasonably sharp.

Charcoal can sound loud at times and rather like a metallic object when close to the surface. Again, experience will teach the operator how to read the ground efficiently and gather understanding of the detector's response to the ground.

Charcoal is usually created by farmers burning off tree stumps or by bushfires. The growth is burnt below ground level, so it is not always obvious what the sounds are until you have actually dug up the causes of these noises a few times. These "burns" could be broad or could run in a straight line - quite deceptive at times!

Other noises which most effect detectors are "hot" rocks.

These are rocks which have very strong audio signals, just like metallic objects. Some are strong and others are weak. With the strong ones, some detectors have problems in tuning them out, but with Goldseekers 15000 you can virtually tune them right out simply by ground balancing over the rock.

If you are still not sure, switch the High/Low Toggle switch to high and reduce the sensitivity by turning the Sensitivity control knob anti-clockwise. If the signal continues, there is a good chance that there could be at least some gold in that hot rock. By breaking the rock in two, then passing both sections of the rock across the coil, one after the other, will determine which piece contains the gold.

## CLAY DOMES

A common occurrence in nugget bearing country is soil mineralisation which is commonly known as "clay domes". These are regions of rather broad sound which could be confused with the sound which would come from a deep large nugget.

The following procedure will quickly establish whether or not the sound comes from clay or a metal object. Remove about 4cms (1 1/2") of soil in a broad 30cm diameter circle with no sharp edges. This will allow the detector head to approach the "object" by about 4cms. Now with the head in this lowered position over the hole attempt to ground balance the signal. If ground balance can be achieved then this source of sound is probably clay, since it is not possible to ground balance a metal object which has been brought closer to the head. In addition, the signal from a metal object is greatly enhanced when the object is brought even slightly closer to the head, whereas the clay, because it is not concentrated, does not produce a greatly enhanced signal even when the head can be lowered. Be careful that the edges of the shallow hole are not producing spurious signals. The technique requires practice and experience but it is essential to develop a good technique to avoid digging large quantities of deep holes unnecessarily.

## SEARCHING FOR GOLD

The modern metal detector is not able to sense the presence of fine alluvial gold. It is therefore necessary to search out areas where "coarse gold" is known to have been found, or other areas where it is likely to occur.

The term "coarse gold" refers to gold ranging in size from a grain of wheat to many grams and in some cases hundreds of grams.

Fortunately, many fields of this type occur in all mainland States of Australia. Miners in the last century were required to register the weight and size of all nuggets found, and many maps are readily available which disclose this information. There are probably many other discovered sites, however, which were never disclosed and undoubtedly many others which are yet to be discovered.

Many of the nugget bearing areas are the result of broken down gold reefs containing quartz and ironstone. Experienced prospectors learn to "read the ground" and look for tell-tale signs indicating potential gold bearing fields.

It is a fascinating and exciting hobby to learn some of these skills and apply them in your search for gold.

The modern metal detector has given today's prospector enormous advantages over the prospectors of old. The ground can be rapidly scanned until a small piece of gold is found and then a study of the area made in order to decide where other gold nuggets are likely to be located. It is then best to make a systematic search of the area as indicated by the accompanying drawings.

The prospector of old, and in fact until very recent times, had to rely on seeing the gold lying on the surface of the ground, or alternatively pan for gold in selected areas. In some parts of Australia where water is scarce, panning was not possible and it is particularly likely there are undiscovered fields in these areas.

The main problem encountered while using metal detectors is the presence of heavy concentrations of ironstone. This is particularly the case in some of the richest known fields in Australia. It appears that gold nuggets and ironstone often go together, and in fact many gold nuggets have ironstone embedded in them or are encased in ironstone and others show strong ironstone staining. Some of these fields have only been superficially worked because of the interference to the detector caused by the ironstone. Usually only the most persistent professional is prepared to spend the time and energy necessary to learn to cope with these conditions, and then only partially.

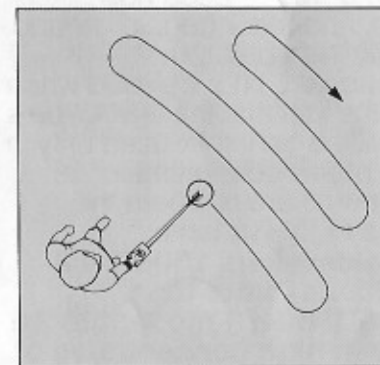
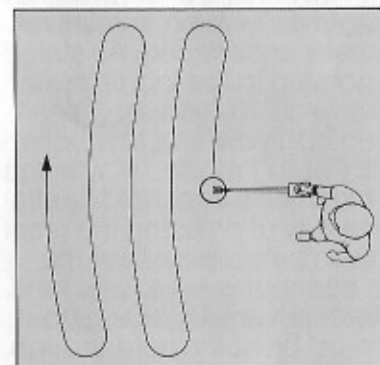
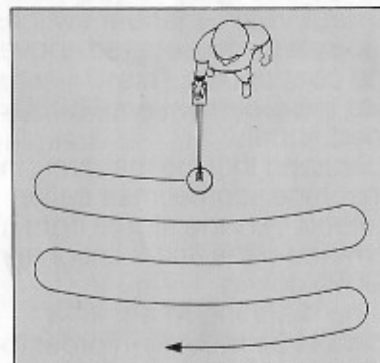
It is in these areas that the Goldseekers 15000 will open up many opportunities. The ease of operation means that the amateur can prospect these potentially rich fields with a depth of penetration and clarity of signal never before possible.

Many thousands of square kilometres of Australia are of this type of ground with much of it potentially gold bearing.

The art of working these areas can be discovered by reading some of the many excellent books available on gold prospecting techniques, particularly as they apply to prospecting with metal detectors; but there is no substitute for in-the-field experience gained during those quiet weekends in the bush.

We wish you the best of good luck.

## OUR RECOMMENDED TECHNIQUE



It is important to scan an area with a broad even sweep of the detector head, keeping it at a constant height above the ground (approximately 2-3cm, depending on the ground conditions and obstacles such as rocks and pieces of wood and leaves).

Each sweep of the head should slightly overlap the previous sweep. However, unlike most other search coils the Goldseekers 15000 head is sensitive across its full width and therefore only a slight overlap is required.

As indicated in the three accompanying figures, if a nugget of gold has been found there are likely to be others and a thorough search of the area from three different directions is recommended. This is because ground noise can vary depending on the direction the head passes across the ground.

In one direction ground noises may mask out the sound of a nugget, whereas in another direction the sound may be readily discernible.



## AUTO/MANUAL SWITCH

You will note that your new Goldseekers 15000 metal detector has been fitted with an 'automatic-manual' switch, as signified by the "auto/man" toggle switch located above the discriminator switch on the control box. This modification is relatively new to the Goldseekers 15000 and its attributes will be outlined shortly.

It is essential that you understand that the machine, in its basic form is a "manual" machine, (sometimes called 'DC') and as such is a static detector, i.e. the signal from a target will be maintained whilst holding the head stationary above the target. Use of the Goldseekers 15000 in "automatic" mode, will cause the machine to act as a motion detector, and the head must be moving in order to read and maintain (albeit only for an instant) a target signal.

An explanation of the "auto/man" switch is relatively simple; its use and effect are easily understood. As stated earlier, the conversion is incorporated in the toggle switch located near the discriminator switch. In manual ("man") mode, the instructions contained in the owner's Instruction Manual apply. In the automatic ("auto") mode, i.e. with the toggle switched to the left, the machine's threshold (audio) tune is retained without the necessity of pressing the reset button (hence the term "automatic"). As well, whilst the machine is in "auto" mode, the operator is able to ground, and re-ground, balance the Goldseekers 15000 without depressing the reset button. (It must be noted here, though, that use of the machine in "auto" mode does not automatically ground balance, and retain/regain ground balance. This must be done by the operator).

The "auto" modification should ONLY be used when absolutely necessary, (due to the fact that there MAY be a slight loss in sensitivity), and will be generally used only in areas where mineralisation is highly concentrated; its benefit will be especially evident in areas where the mineralisation concentration is highly variable.

**Please note that the Goldseekers 15000 will handle hot ironstone conditions (other than mineralisation) in the normal ("man") mode; the "auto" should be used only in high concentrates of mineralisation.** Please feel free to contact your local agent or distributor if you have any problems or queries regarding the above.

## PROPER CARE OF YOUR DETECTOR

Taking proper care of your detector is mostly common sense. The Goldseekers 15000 consists of high-quality electronic circuitry which should be given considerable respect.

- At all times, avoid dropping the detector and also be very careful when swinging the coil to avoid sharp objects protruding from the ground. A skid plate is recommended (they are far cheaper to replace than a coil).
- If temperatures are very high do not leave the detector in the hot sun longer than necessary. Covering the detector from direct sunlight will help protect it.
- It is not advisable to use the detector in the rain unless it is a very light drizzle. The Goldseekers 15000 is water resistant - NOT WATER PROOF.
- Should the coil be used in salt water, it must be washed with fresh water. You can use a mild detergent to clean it, then fresh water rinse, then dry with a soft cloth (always avoid subjecting the Control Box to excessive moisture).
- Lubricants should not be used on any part of the detector's Control Box, especially the electronic control knobs.
- Batteries should not be left in the device when the detector is not being used in case the batteries leak and create a corrosion problem within the electronics compartment. If a battery leak takes place, the electronic components could corrode (this would void the warranty through user negligence).