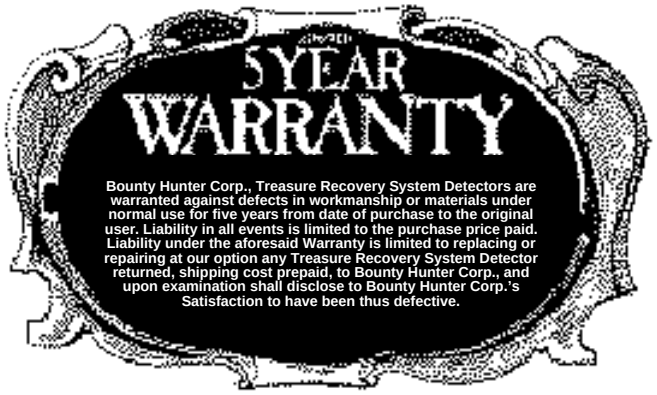
BIG BUD PRO 220-D
Operations Manual



BOUNTY HUNTER

DIGITAL RECOVERY SYSTEM

BOUNTY HUNTER Metal Detectors
11900 MONTANA AVE.
EL PASO, TX 79936
(915) 855 4206

Read all instructions in this manual before using your Metal Detector.

We don't want you to have any problems with your detector, but it does happen occasionally. If your detector fails to operate at all, first check the batteries. If the unit still does not operate, try clicking the Power Switch on and off a few times. Sometimes they stick in the off position. Also refer to page 21, Troubleshooting.

If you have any questions you may want to call the factory and ask for assistance.

This Select 220-D metal detector has a limited 5-Year Warranty to the original purchaser. If your detector requires service while under warranty, please return it to Bounty Hunter Corporation at the address below. It will be serviced and promptly returned. Units not under warranty will be serviced for a nominal charge.

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PROPER CARE FOR YOUR DETECTOR

Metal detectors are sensitive electronic instruments. Although your Select 220-D does not need to be handled with constant protection, reasonable care must be taken to help insure a long trouble-free life for your detector.

KEEP IT CLEAN... Take a few minutes after each use to remove dirt and dust. Wipe the housing and wash the coil—especially if it has been dipped in saltwater. A plastic bag over the control box at the beach will help protect the unit from sand and prevent corrosion due to salt air.

KEEP IT COOL... Never store your detector in an extremely hot environment, such as an automobile trunk in the summer, for extended periods of time. The prolonged heat will not only shorten battery life considerably but can cause electronic components to break down.

KEEP IT SAFE... Never transport your detector in such a manner that will subject it to extreme vibration or shock. The unit may be cushioned by wrapping it in a blanket or by putting it in a carrying bag or case designed for that purpose.

COIL... The coil is waterproof and may be submerged in either fresh or saltwater. Caution should be exercised to prevent water from entering the chassis. After the coil is used in saltwater, the coil should be rinsed with fresh water to prevent corrosion of the metal parts.

Welcome to the fascinating world of metal detecting.

Your new Bounty Hunter Big Bud Pro Select 220-D was designed for versatility in all areas of treasure hunting. Coin-shooting, relic hunting, and gold nugget shooting are some of the many ways your detector can be utilized.

Metal detecting is a fun, rewarding hobby that is in complete harmony with the environment. So be sure to use your detector with consideration and respect for others' property. Always fill in your holes and use small trowels for digging. If you are digging in a lawn, plug the grass properly and there will be no damage to the grass. It's also important to always gain permission upon entering private property.

Metal Detecting is a lifelong pursuit available to all ages. The hobby is completely dependent on the type of equipment being used and the operator's expertise. With the electronically advanced Select 220-D metal detector, and diligent practice, you will achieve a level of expertise making the hobby of metal detecting very rewarding. The first step towards this goal is to carefully read this manual before attempting to operate your new Select 220-D metal detector.

Happy hunting!

Assembly of this unit is easy and requires no special tools. The only assembly required is to attach the search coil and lower stem to the upper stem and on to the control housing. Fresh batteries can then be installed and the detector will be ready for use.

1. Press the button on the upper end of the lower stem and slide the lower stem into the upper stem.

2. Using the supplied bolt and nut with knobs, attach the searchcoil to the lower stem.

3. Wind the search coil cable around the stem. CAUTION: Provide enough slack in the cable near the search coil so that the coil may be rotated easily.

4. Insert the coil's plug into the matching connector on the control housing. Be sure the holes and pins line up correctly.

The following troubleshooting steps may assist you in case you're having problems with your Select 220-D. **IF:**

YOUR DETECTOR IS EMITTING FALSE SIGNALS WHEN YOU'RE IN THE FIELD.

Your SENSITIVITY may be set too high. Try cutting back the SENSITIVITY slightly until the false signaling disappears. Remember, to swing your coil slowly. Some signals will occur on highly rusted metals, but if the signal does not repeat over the same area while passing the coil over it, then the target is usually not worthwhile. When hunting a heavily trashed area your detector may act erratic and emit false signals. To eliminate this try using the optional 4-Inch Coil System; this will allow the detector to separate trash located close to good targets.

YOUR LCD READOUT IS NOT LOCKING IN OR ID'ING WHILE PASSING OVER A TARGET & THERE IS MORE THAN ONE TONE BEING EMITTED BY THE DETECTOR OVER THE SAME TARGET.

This will usually occur when there is more than one object over the area you're sweeping—using the optional 4-Inch coil can eliminate this. If it is an odd piece of metal that the detector cannot recognize, the meter will also not lock in. Sometimes, oxidation can also make the meter ID arrows and tones jump around. This may also occur if the Sensitivity is set too high.

YOUR DETECTOR IS NOT STABLE AND HAS A PULSING, DISTORTED TONE INSTEAD OF A CLEAR TONE.

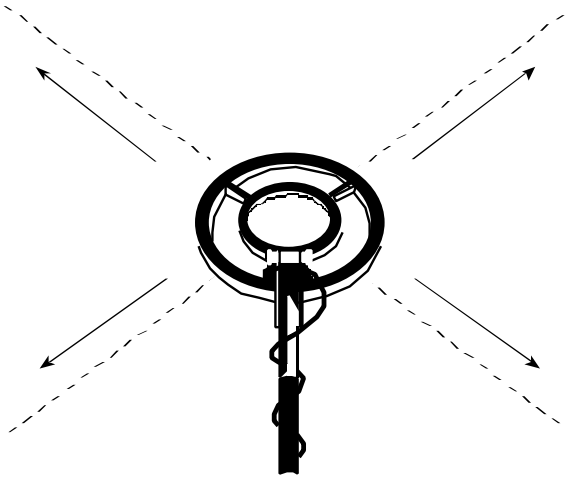
This can occur if you're operating near another detector or near power lines that can interfere with the frequency that the detector operates on.

YOUR DETECTOR IS EMITTING A CONSTANT LOUD TONE

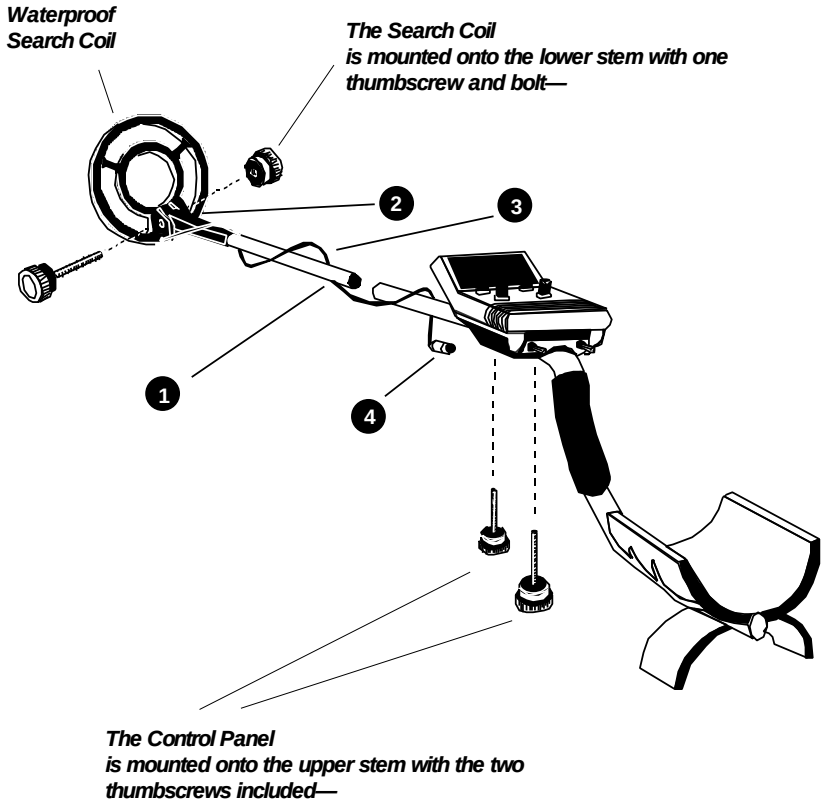
This usually occurs when the batteries are low. Try replacing your batteries with two new alkalines to determine if this is the cause.

Accurate pinpointing takes practice and is best accomplished by "X-ing" the suspected target area.

1. Once a buried target is indicated by a good tone response, continue sweeping the coil over the target in a narrowing side-to-side pattern.
2. Take visual note of the place on the ground where the "beep" happens as the coil is slowly moved side-to-side.
3. Stop the coil directly over this spot on the ground.
4. Now move the coil straight forward and straight back towards you a couple of times.
5. Again make visual note of the spot on the ground at which the "beep" occurs.
6. If needed "X" the target at different angles to "zero in" on the exact spot on the ground at which the "beep" happens.



When pinpointing a target, try drawing an "X", as illustrated, over where the tone is being emitted.



Important:

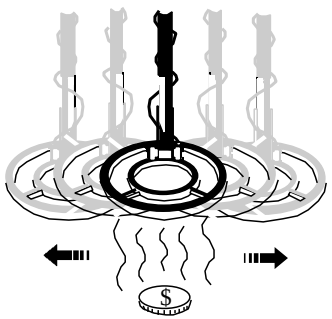
Your Select 220-D has two distinct systems in one:

I. ALL METAL Mode: Operates with Audio Threshold, manual Ground Balance control and Toggle Switch Tuner. In this setting, detected targets will cause the detector to sound off for as long as the target is under the searchcoil. The Ground Balance Control is used when the Toggle Switch is in ALL METAL setting only.

II. DISCRIMINATE Mode: Operates with Three Tone Audio Target Identification, Sensitivity Control, Automatic Ground Balance and "Motion" Automatic Tuning. In this setting, iron is rejected and the Discriminate Control is used to reject various levels of trash items. Motion is now required to make a detection and items held still under the searchcoil will be tuned out.

ALL METAL MODE
Constant Tone Over Target When Detector Is Held Still

DISCRIMINATE MODE
Target Sounds Off Only When Detector Is In Motion



If you do determine that there is more than one target present, try sweeping the coil over it at a more favorable angle in the DISCRIMINATION or NOTCH MODE to receive an improved reliable reading.

Accuracy: Although your detector is very accurate on finding coins and other valuable metals, it is not perfect. An example of this would be a pull tab that detects like a large gold ring.

Halo Effects: Gold and silver coins don't oxidize much so they have very little halo effect. However, nickels and pennies do oxidize quite a bit and this oxidation surrounds the coin and not only makes the coin appear more conductive, it also makes the coin appear larger than normal.

Some nails, nuts and bolts and other iron objects (such as old bottle caps) oxidize very much and the halo effect around these iron objects makes them hard to reject. Try sweeping the loop different directions over the target. A good target will have a fairly stable reading; whereas, a bad target will usually not.

Freshly buried coins may not respond exactly the same as coins buried for a long time.

NOTE : The search coil must be moving to detect a target using the DISC system. However, the detector operates very efficiently, even when swung at very slow speeds.

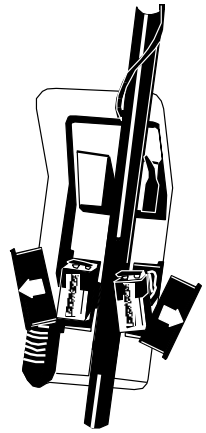
The DISC Mode is not affected by the ground mineralization, and when used at the beach, it will go from wet sand to dry and back without changing tune. The DISC Mode is recommended for areas of heavy surface trash. This Mode can reject small surface area targets such as wire, nails, tacks and rivets that to other detectors may look like coins. Larger junk targets are easily identifiable because of their erratic signal or widespread signal areas.

Often you will receive a signal from a target that is too difficult to read to really determine what it is. What may seem to be a bad target because of the signal pattern, may be a combination of targets.

If the trash in an area is so heavy that you are getting a lot of choppy sounding false signals, you can get better results by slowing down your sweep speed and using shorter sweeps. It is also helpful to hunt areas twice, the second time at right angles to the first time. This will allow detection of some targets that were hidden by trash the first time due to the sweep direction.

If there is any doubt whether a target is good or not, DIG IT.
If you don't dig any junk at all, you are surely passing up good finds too.

This detector requires two 9 volt ALKALINE transistor-type batteries. The batteries are accessed by pulling out on the battery doors located on the bottom of the control housing.
Whenever the batteries need replacing, the Low Battery indicator light will come on and stay on. It will always "flash" momentarily whenever the Power Switch is turned on. This lets you know it is working properly and the batteries are good.



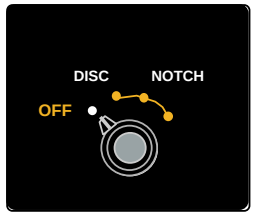
BATTERY LIFE: The use of ALKALINE batteries is specified for this detector.

The following tips will help you to get maximum battery life.
1. **Use headphones** — Using Headphones can be very beneficial. Battery life will be greatly extended. Background noise, such as street traffic, is minimized. Targets are easier to hear.
2. **Switch batteries around** — Upon installing a fresh set of 9 volt ALKALINE batteries keep track of your operating time. After approximately four or five hours use, switch the two batteries around. Audio draws one battery down slightly faster than the other; thus, switching them around helps insure equal drain.

Remember, most detector malfunctions are either due to faulty batteries or poor connections at the battery clip. Always check your battery condition if you feel your detector is not working properly. After you have connected and unconnected your batteries several times, the prongs on the clip lead may spread apart, or the prongs on the battery itself may be spread. Gently squeeze these prongs together with your fingers to insure a good snug fit. Anytime you are going to store your detector make sure you remove the batteries and store them in your refrigerator to prolong battery life.

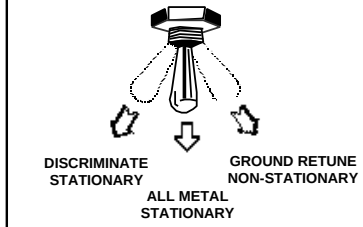
POWER SWITCH: This switch is used to turn the detector ON or OFF and to select search modes.

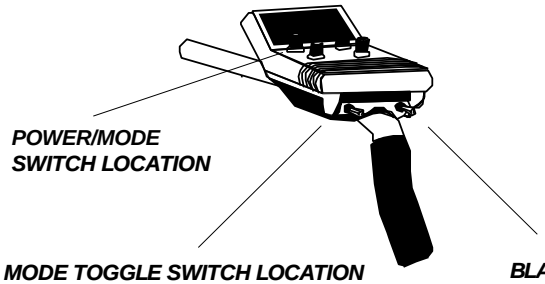
POWER/MODE SWITCH



PINPOINTING AND MODE TOGGLE SWITCH: This is a three position switch with one 'momentary' and two 'lock' positions. The center 'lock' position is the ALL METALS pinpointing mode. From this center position the momentary (spring loaded) position can be used for instant retuning of the ALL METALS auto pinpointing mode. The second 'lock' position (away from center) places the detector into its normal silent search motion mode.

PINPOINTING & ALL METAL/DISC MODE TOGGLE SWITCH





The detector should be held in a position that is comfortable for you. Sweep the detector from side to side in about a three foot arc. The unit does not need to be hurried, so go at a pace that doesn't wear you out. The search signal will peak as a target center is passed. Try to keep the search coil parallel to the ground at all times and avoid lifting the coil off the ground at the end of each swing. Since you are putting more distance between the coil and the target on a careless swing, this will prevent loss of detection of some deeper targets. In flat areas, sweep the coil as close to the ground as possible without touching. Hitting the ground or rocks may cause a false signal similar to the sound of a desired target. Sweeping the coil too high above the ground results in a loss of depth.

When operating the detector, some false signals may occur at the end of your swing. At this point, where the coil reverses direction, the detector is most susceptible to trash-induced noise. There are ways to tell whether these noises are deep good signals or trash. One way is by repeatability. Trash-induced signals will not be repeatable as you swing the coil over the suspected target several times; a good target response will be repeatable. You may also want to use the Blanker to ignore the surface targets. Another method is to switch to ALL METALS THRESHOLD Mode and check the target response. If the response is weak, it may well be a deep good target, but if it is very strong, it is probably trash.

3. GOLD PROSPECTING: The Select 220-D has excellent capabilities for gold nugget hunting. Operate the unit with the toggle switch in the middle position (ALL METALS). Tune your **GND / salt ADJ** for proper ground balancing as described on page 13 of this manual. Be careful to turn the **GND / salt ADJ** in very small increments or some sensitivity may be lost. The coil size is critical when gold prospecting—the smaller the coil size the more optimal for gold prospecting.

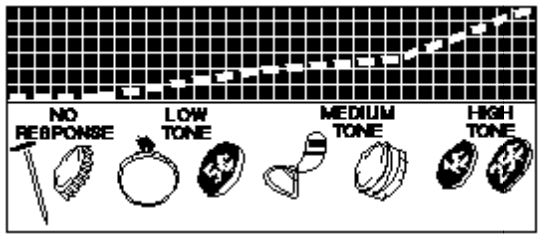
OPTIONAL ACCESSORIES: Optional accessories are available which will enhance the capabilities of your Select 220-D for specialized applications.

4-Inch Gold Nugget Coil: This coil was designed for gold prospecting and coin-shooting in heavily trashed areas—highly sensitive to smaller objects.

10-Inch Magnum Coil: An excellent coil for relic hunting or cache hunting—increases depth capability by being more sensitive to larger objects.

Buddy Box: When hunting near another metal detector interference can cause your detector to lose sensitivity and act erratic. By utilizing a Frequency Shifter (Buddy Box) this interference can be eliminated.

ATI-AUDIO TONE IDENTIFICATION: When operating in the DISC mode, all detected targets will cause an audio response. Through ATI these targets can be placed into three tone categories for identification of the detected item.



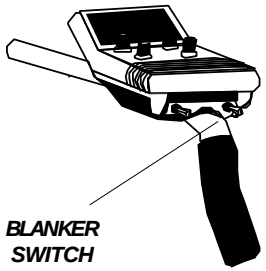
BLANKER TOGGLE SWITCH: The Blanker feature helps detection of deep coin targets, while at the same time ignoring all shallow surface targets and trash.

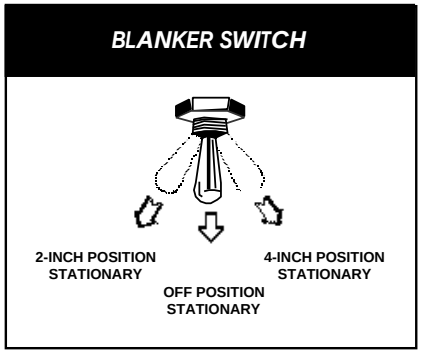
Most experienced Th'ers know that the majority of trash targets they encounter are shallow—generally less than three inches deep. They also know that most older coins, rings and other relics are often deeper than three inches.

Until now, the detector sensitivity could be reduced only to deep targets but not to shallow, often less desirable, targets. This is just the opposite of what most experienced Th'ers wanted.

The Blanker toggle switch activates an automatic circuit that reduces, and in most cases completely eliminates, detection of all shallow targets and trash. Yet, maximum sensitivity and discrimination of the deeper targets are still maintained.

To use blanking, simply push the Blanker Toggle Switch to "2" or "4" and have the mode switch in DISC position. When the Blanker is not in use, the Blanker Toggle should be in the center position.





FOR ALL METAL TUNING —always push MODE toggle switch to TUNE, then release to center position. FOR DISCRIMINATE place and leave MODE toggle switch in DISC position.

SENSITIVITY: This control is used to reduce the detector's sensitivity to conditions that may cause the unit to respond in an erratic manner. Broadcasting antennas and power lines can cause false signals. Very large or multiple, closely spaced small trash targets can cause the detector to emit (indistinguishable or ghost) sounds. Generally these signals will sound chopped and will not be repeatable; you will soon learn to recognize them. Turning down the sensitivity control will help reduce the detector's erratic response if the above conditions should ever occur. There will also be some loss of target sensitivity, therefore always set the sensitivity control as high as you can while attempting to maintain smooth operation.

DISCRIMINATION AND NOTCH CONTROL: This variable control allows selective response to targets that are in the foil-screw cap range. When the Power / MODE switch is set to 'DISC', and the mode toggle switch is also set at DISC, the Disc / Notch control functions as a standard variable discriminator. Iron will automatically be rejected and as the control is increased from its full counterclockwise position—foil, nickels, pull tabs, screw caps, and zinc pennies will be rejected in stated order.

There are many different applications for metal detecting. Each one will predetermine the control settings utilized. Most effective techniques will only be acquired through trial and error while applying your metal detector.

1. COIN-SHOOTING: For coin-shooting, the best mode of operation is with your toggle switch in the left (DISC) position. There are three modes on your power switch to choose from when your toggle switch is in the (DISC) position: Disc, Notch, and Auto Notch. Any one of these can be used effectively for coin-shooting. For automatic operation, try the Auto Notch position. This will eliminate the medium tones where 90% of the pull tabs fall. By digging only the high tones emitted, you will minimize trash while digging mostly coins. Some cans, screw caps, and rusted bottle caps will still emit a high tone due to oxidation. By also digging the low tones emitted, nickels and many gold rings can be retrieved. Broken pull tabs and some oxidized pull tabs will also be detected by the low tones. Even though 90% of the pull tabs will be eliminated, you will still dig many pull tabs that fall in the same range as nickels and small gold rings. Some gold rings (about 15%) will also fall in the pull tab range and cannot be detected when operating in the Auto Notch mode. Be careful to adjust your **DISC / NOTCH** control completely counterclockwise to guarantee that all your gold rings and nickels can be detected. You may also use this control to bring in or eliminate zinc pennies.

2. RELIC HUNTING: Since most iron will be eliminated by operating with the toggle switch in the (DISC) position, it's important that your detector is operated with the toggle switch in the middle position (ALL METALS). The only control to be adjusted when operating in ALL METALS is the **GND / salt ADJ** . Follow the instructions on page 13 in this manual for proper Ground Balancing. This mode of operation is also preferred when looking for lost machinery parts or land stakes.

1. While testing the unit for its capability to pick up coins and other objects, always test away from other metals such as outside on the ground. You cannot test a unit indoors on the floor, because there is usually other metal in the floor that may conflict with the detector's signal or even mask the signal completely.

2. If you're not picking up coins or metal, even though your coil is close to the objects to be detected, there is a chance that you are not maneuvering the coil properly. Do not move the coil too quickly and try not to sweep the coil less than an inch away from the object.

3. No matter what mode of operation you've chosen (All Metal, Disc or Notch), your coil needs to be in movement before the unit will recognize a target. If you're air testing, you need to point the coil to the ceiling and make sure there is no metal near the coil whatsoever. The object you're testing with needs to be swung in a side to side motion before the detector will be able to recognize it.

4. Not all gold rings will give you a low tone. Some gold rings fall in the pull tab range and may emit a medium tone similar to the pull tab. Some pull tabs, especially if they are broken in half, will give you a low tone similar to most gold rings and nickels.

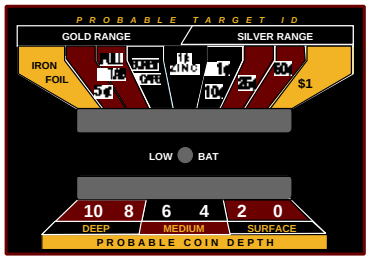
5. Zinc pennies will emit a medium tone instead of the high tone of copper pennies, quarters, and dimes.

6. Do not swing the coil, or the test object, too quickly or it may give you a false signal. When repetitively passing the coil over the object, allow a few seconds to pass to give the detector a chance to recover from its last reading.

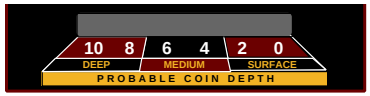
NOTCH:
It is often desirable to eliminate some pull tabs without rejecting nickels, since many types of gold rings are also rejected along with the nickel.
This can be done by setting the POWER switch to 'NOTCH'. The DISC / NOTCH control now functions as a variable notch rejection window. The notch can then be adjusted to reject, or 'notch out', selected types of pull tabs or other trash.

When using the notch feature, most iron and small foil will be automatically rejected by the discrimination circuits. To set the notch, use a pull tab of the type to be rejected. Adjust the NOTCH control to the point (around the area marked PULL TAB on the control) at which the tab is notched out, or rejected. Now check a nickel to be sure it is still accepted. Note that some pull tabs or tab pieces have nearly the same detection properties as nickels and some gold rings. These items can not be separated.

AUTO NOTCH:
In the AUTO NOTCH position iron and most pull tabs will automatically be rejected; thus, the detector will generally respond to coins, including nickels. The DISC / NOTCH control will now function as a notch width control. As the control is turned higher, additional items will be rejected up to and including zinc pennies. A truly remarkable and useful feature.



LCD DISPLAY: The Target LCD Display with Dual Readout will "lock" onto a target and hold. If the ID does not "lock", the Sensitivity control setting should be lowered slightly until a satisfactory ID "lock" is achieved. The target ID is most accurate between 4 to 8 inches.



DEPTH INDICATOR: The Depth Indicator will give the approximate depth for coin sized objects. The Depth Indicator does "lock" as does the Target ID.

The Target ID and Depth readings generally will not unlock from the previous Target until a new target is detected.

When searching in the **ALL METAL** Mode it is important that the detector be ground balanced, to offset the effects of any minerals present in the soil or to balance the effects of saltwater when you search near the ocean.

1. Begin with **GND / salt ADJ** adjusted to **Preset** and lift the searchcoil about waist high in the air.
2. Push the toggle switch toward **TUNE** and release. The toggle switch will spring back to the middle position.
3. Lower the searchcoil to about one inch above the ground. If a tone is not being emitted, then the **Preset** position is proper ground balance for that area. If a tone is being emitted by the detector, proceed by lifting the searchcoil waist high in the air again.
NOTE: Always be careful that there is no metal on top of or under the ground where you will be ground balancing, otherwise you will not be able to determine if the tone being emitted is caused by mineralization or metal. If you think you might be over metal, move to another spot and proceed.
4. Turn the **GND / salt ADJ** counterclockwise slightly, about an eighth of a turn. Push the toggle switch toward **TUNE** once again and release. Lower the searchcoil as described in Step 3. If the detector still emits a tone, repeat this procedure. When the detector no longer emits a tone upon lowering the searchcoil to the ground, then it is properly ground balanced for that area.
IMPORTANT: When adjusting the **GND / salt ADJ** counterclockwise, be careful to turn it in small increments—This will assure that you achieve an optimum threshold level. If you feel you've turned the **GND / salt ADJ** too far counterclockwise, you can turn the **GND / salt ADJ** clockwise using the same ground balancing procedure until a tone is being emitted and then cut it back counterclockwise slightly until a tone is no longer being emitted.