PYLE®

PyleAudio.com

Metal Detector

Waterproof Search Coil,
Pin-Point Detect,
Adjustable Sensitivity,
Headphone Jack

Model:

PHMD68

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TERMINOLOGY

The following terms are the common terminologies among the metal detector.

Motion Mode

Continuously moving the search coil is one of the circuit operation modes within the metal detector's built-in detection technologies. You have to move the search coil during detecting -- preferably in a overlapping 'painting' pattern. Generally speaking, motion detection mode can reduce the effect of misleading / unwanted soil mineralization detection, and will have a better discrimination ability for more sought after findings.

Non-Motion Mode

This is your other metal detection option included within the detector's circuitry operation modes. When searching, you need not move the search coil continuously, as long as your hover to locate and zero-in on your finding. When the metal detector locates the object in non-motion mode, the detector cannot discriminate the metal categories -- in other words, the discrimination levels do not function as in motion mode.

Elimination

To eliminate a particular metal while detecting is based on the user's preference. While searching the operator can distinguish the specified metal, based on the metal detector's reaction to the search coil's response (a different sound in tone and/or lighting indication can be differentiated). Please note, not all metal detectors feature a diverse and/or wide array of detection elimination options and differentiation.

Discrimination

The detector creates sounds in different tones and/or gives different display and/or light indications to different metal types. Discrimination also has the somewhat similar ability to also eliminate or 'zero-in' on the location/detection of select metals. This is referred to as “discriminating”. Discrimination is one of the most important features of the metal detector (a different sound in tone and/or lighting indication can be differentiated). Please note, not all metal detectors feature a diverse and/or wide array of detection elimination options and differentiation..

Metals

The common metals are alloys, such as copper, due to the different character composition of different metals, they are most generally divided and grouped by categories like: red copper, brass, bronze, etc. However, the same metals can provide different detection / metal detector indication -- and vice versa, different metals can provide similar detection / metal detector indication. With a same metal, due to the different composition, shape and differences in the degree of oxidation, resulting in electrical conductivity or magnetic permeability are not the same, as in the metal detector, there are more often different responses.

Iron
Iron is a common metal, it’s usually not the dedicated detection target. Undesirable iron objects include iron nails, bolts, old cans, caps, etc. Valuable relics and sought after materials can also be composed of iron, such as old armaments, old armature, etc . So, it may be best to pay attention to everything you detect!

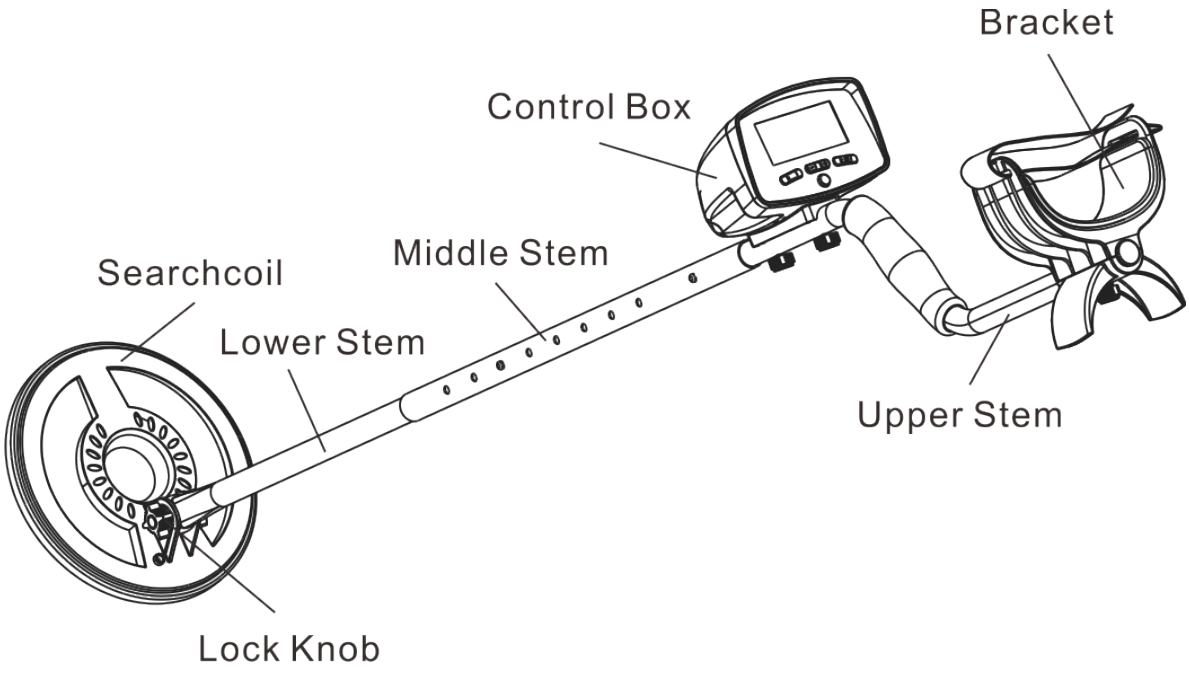
Ferrous Metals
It is the metal which is made of, or containing, iron.

Trash metals
Caps, pull-tabs, s-caps from beverage containers are the most bothersome trash items for treasure hunters while metal detecting, you should wish, to preferably, eliminate them when searching and detection. But some other valuable objects may have a magnetic signature similar to the above trash metals, and will also be eliminated when selecting discriminating levels. Discriminate carefully and once again, it may be best to pay attention to everything you detect!

Pinpoint Targeting
Pinpoint targeting is the process of determining the exact location of a buried metal object. As in the motion detection mode, you need move the search coil continuously when searching and it’s hard to determine the exact location of the buried metals during pinpoint targeting. Using the non-motion detection technology, it allows the search coil to center align with the location of the buried metal and narrow-down a more relevant and exact location of your finding.

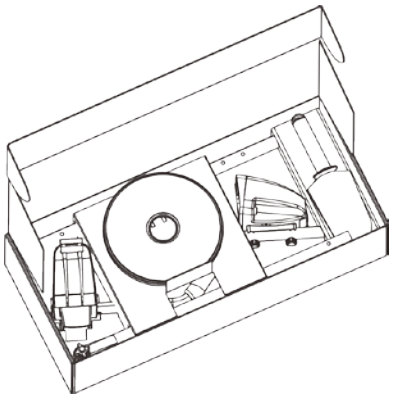
Ground Balance
Because the metals and objects are buried in the earth, the mineralization that occurs in the soil will affect the detection ability and signal frequency. The integrated ground balance detector technology will, to the best of it's ability, eliminate or weaken the shielding effect of the mineralized soil. The ground balance system contains an internal ground balance adjustment for regulation of such instances (a different sound in tone and/or lighting indication can be differentiated). Please note, not all metal detectors feature a diverse and/or wide array of detection elimination options and differentiation..

Note: when you initially power on the metal detector, the unit will go into the self-inspection boot process. Do not press any buttons or perform any operations, until the self-inspection program has been completed.

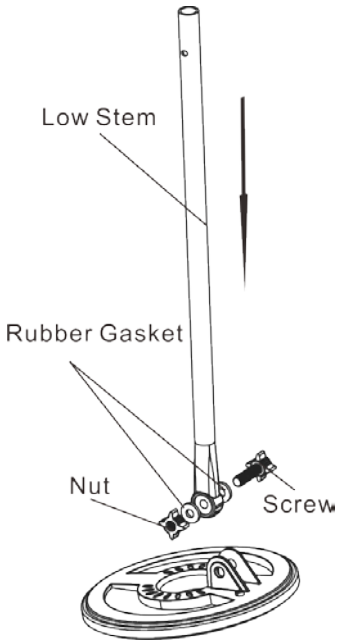


Assembly

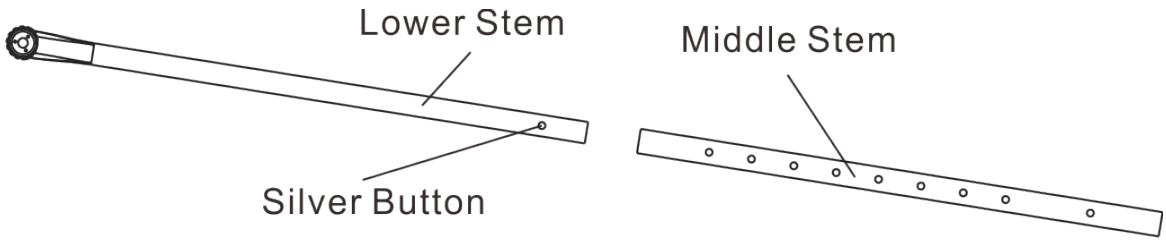
1. Open the packing box.



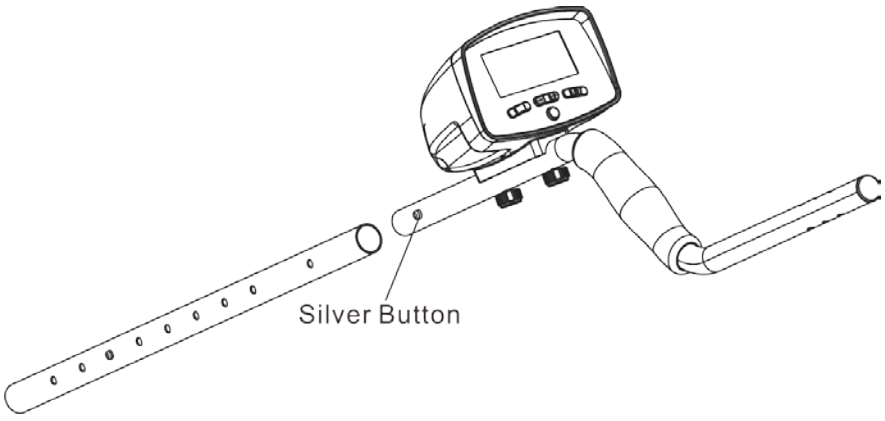
2. Loosen the locking knob on the lower stem, and loosen the bolt. Insert the lower stem to the search coil, and tighten the connection. Don't forget to insert the rubber gaskets on each side.



3. Press down the locking spring (silver button) on the lower stem, and insert into the middle stem.

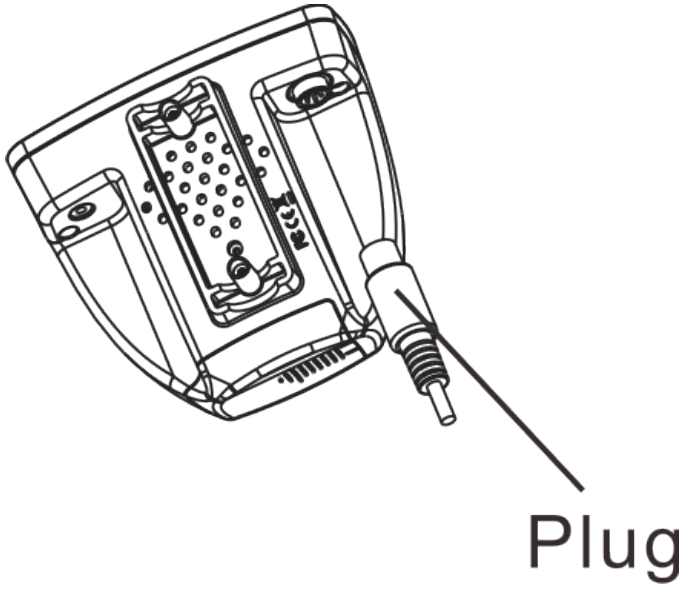


4. Press down the silver button on the upper arm and insert it to the other side of the middle stem.



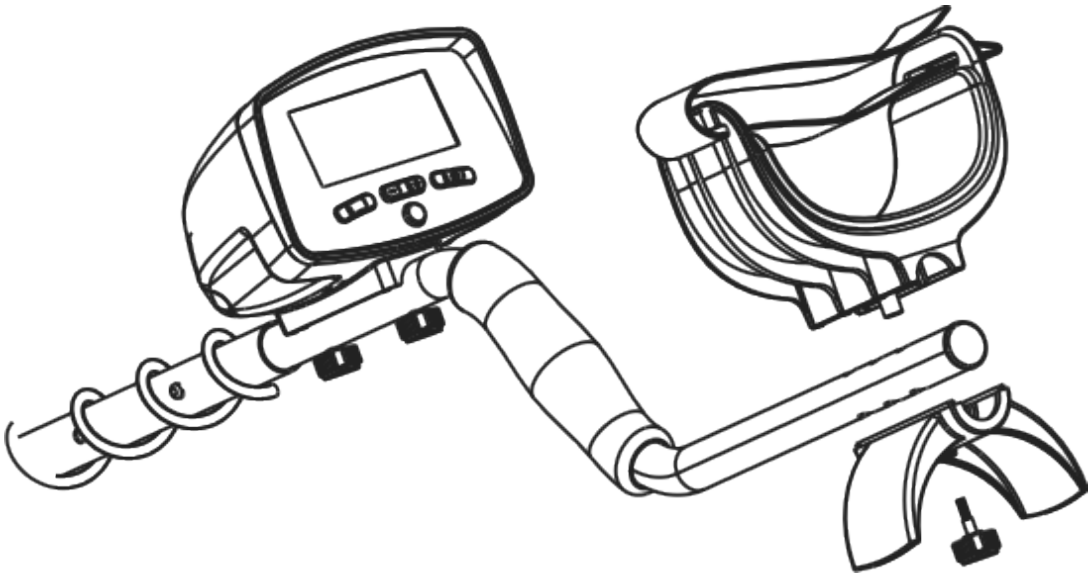
Assembly...

5. Coil the cable line of the search coil onto the tube pole arm, keep the cable moderate loose but wrapped around enough, so that the cable line won't sway or dangle in the way, then insert the cable plug to the connector located on the lower right jack of the control box. Note: when disconnecting or inserting the cable, make sure you connect / disconnect via holding onto the connector, not the cable itself.



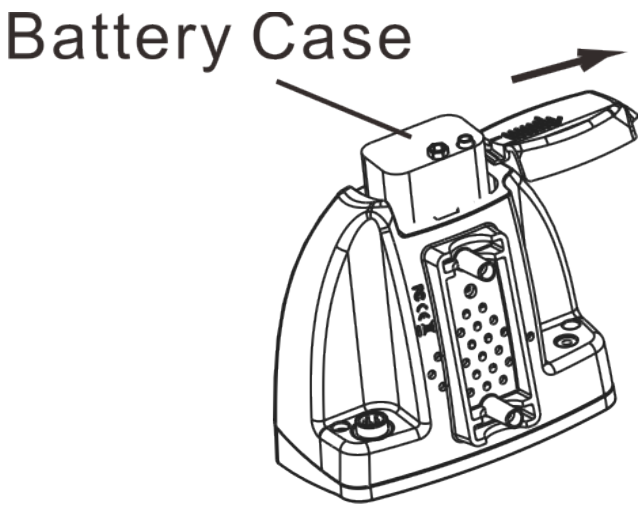
Make sure when setting the length of the metal detector, to set accordingly at a comfortable and proper height from the ground floor surface.

6. The arm support brace has three positions. When adjusting, tighten the triangular fastening screw under the arm support bracket accordingly.



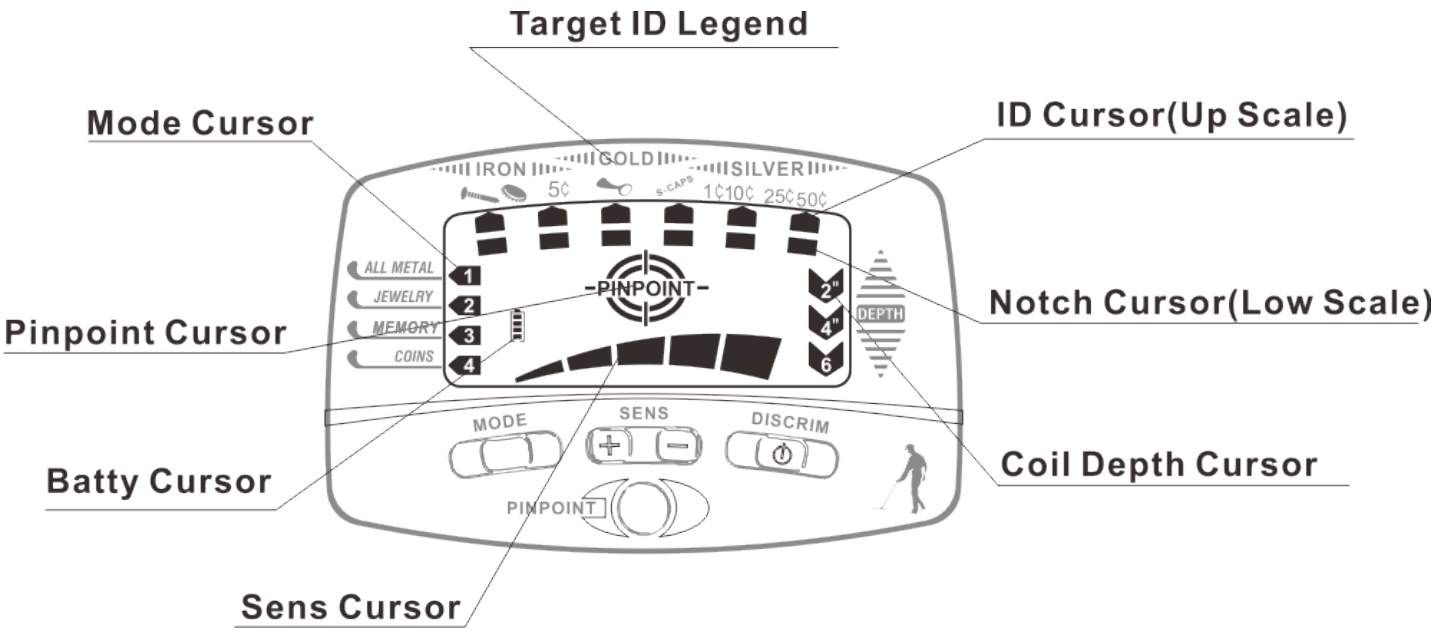
Battery

Slide open the battery tray cover, then insert the 6 x 'AA' batteries into the compartment as indicated by the polarity symbols marked inside the compartment. Align the two guide bars on the battery cover with the two guide grooves on the battery cavity. Be sure to observe proper polarity when inserting batteries.



Once the batteries are inserted correctly, replace the battery cover. Don’t mix the new and old batteries.
If you don’t use the detector for a long time, please remove the batteries from the battery box.

Control Panel and LCD screen



LCD Digital Display Screen & Control

Mode Indication Cursor: indicates the four operation modes. Make changes through the MODE button.

Target ID Legend: Indicates the wanted target metals. When detecting a metal target, the target ID cursor (upper scale) will appear on the LCD display.

Target ID Cursor (upper scale): Scale consists of the 6 upper segments. When the target ID cursor is lit on the LCD display, it indicates the probable type of the detected metal.

Target Discrimination Cursor (lower scale): Scale consists of the 6 lower segments. It indicates the material types of the detected target objects. In the ALL-METAL mode, the 6 segments are all lit. While in other modes, when a certain target discrimination cursor is extinguished, which indicates this metal type isn't in the detection range, and it indicates that this metal type is eliminated.

Coin Depth Cursor: Indicates detected object depth: contains 2",4" and 6+" three segments. It indicates the approximate depth of the object found.

Sensitivity Indication 'Sens' Cursor: Divided into 5 segments. When they are all lit, the sensitivity is at the highest setting / value. Adjust the sensitivity by pressing the SENS "+" or SENS "–" buttons.

Pinpoint Cursor: Press and hold down the "PINPOINT" button, the PINPOINT cursor will be lit on the LCD display screen and the detector goes into 'NON-MOTION' Mode, it applies to locate the detected object accurately once you have 'zeroed in' on your detection.

Battery Power Cursor: Four segments indicate the battery power.

*__Pinpoint__ mode can also be referred to as '__Non-Motion__' Mode.

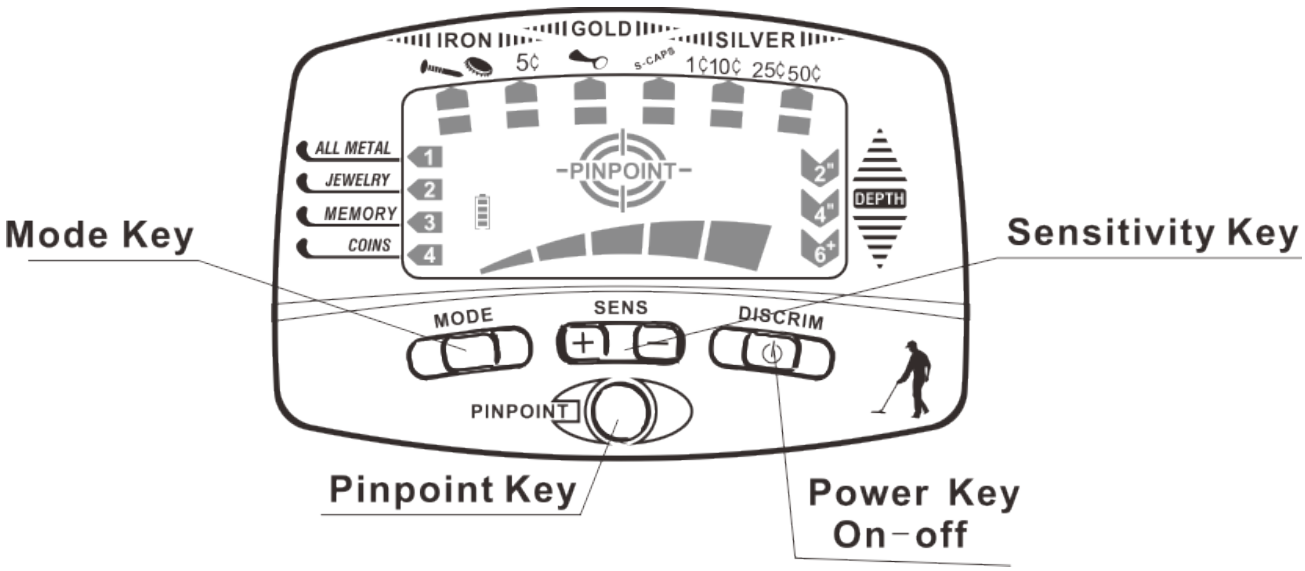
*In the PINPOINT mode, the target discrimination cursor is useless.

*In the PINPOINT mode, the sensitivity adjustment operation is useless.

*In the PINPOINT mode, the depth indication cursor also turns into the signal strength cursor. The depth indication cursor, cooperating with the 6-segment upper cursor, indicate the distance between the target object and the search coil.

*Please note, factors including the size, angle and material of the target found, along with the composition and type of the soil, will all affect the indication values.

LCD Digital Display Screen & Control



Power Button: Power the unit ON and OFF
Mode Button: Choose between the four operation modes:

1.ALL METAL: The detector will respond to all kinds of metals.
2.JEWELRY: Eliminates iron targets automatically, and respond to all other metals.
3.MEMORY: detects a metal, and then only indicates or responds when that similar metal is found
4.COINS: Used specifically for coin detection (eliminates the iron, pull-tabs, trash metals, etc.)

Sensitivity 'Sens' Button: Choose between the 5 levels of sensitivity with **SENS** " + " or " - " buttons. Boot setting remain in the third level setting. The highest sensitivity is the fifth level -- and the first as the lowest. When you encounter signal interference, you can set the sensitivity lower accordingly.

Pinpoint Button: Press and hold the "**PINPOINT**" button and the detector converts into the non-motion mode ,and it no longer has discrimination ability, but has the highest sensitivity. At this time, the **PINPOINT** cursor is lit on the LCD display screen. At the same time, the Target ID cursor is rendered useless, and the lower cursor Target Discrimination cursor turns into the signal strength indication cursor. The more closer to the metal target, the higher the strength cursor will indicate. Audible warnings will also sound louder and louder with the strength cursor gaining strength.

Press the **PINPOINT** button on the handle, and the **PINPOINT** cursor will appear on the digital display. The metal detector will now be in the '**Non-Motion**' mode, you should be able to locate and pinpoint the metal target beneath the search coil.

*When detecting objects with the **PINPOINT** Mode, the closer your search coil center comes to the object, and the closer in distance between the center of the search coil and the sought-after object, the louder audible frequency tone will be heard from the metal detector's speakers.

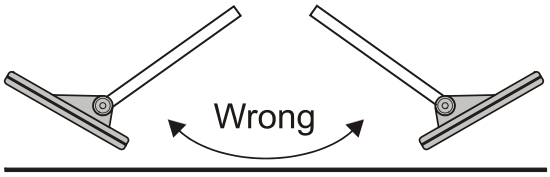
*The metal detector also features a low battery indication cursor, this displays and warns you of low battery.

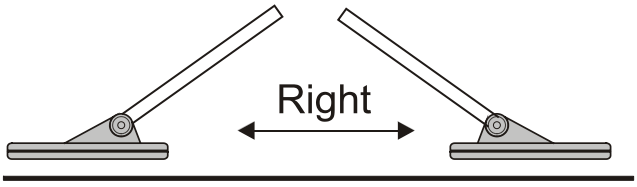
Operation
The metal detector powers on in the thirds sensitivity level and the operation mode is set to ALL METAL. At this time, the detector will make discrimination responses to all kinds of metals that are detected.

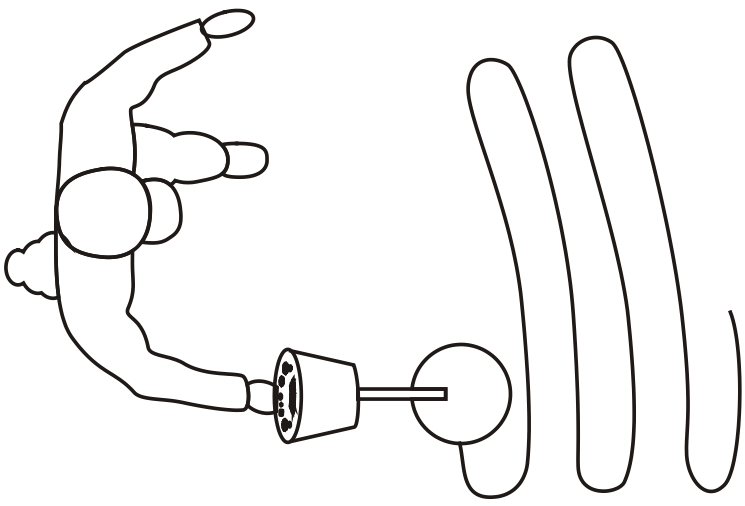
Sensitivity Adjustment
Generally, treasure hunters set sensitivity settings to the highest level, if there is much electromagnetic interference around or the soil is highly mineralized, the detector will sound an erratic tone, and if this happens, then you should reduce the detector's sensitivity. When the metal detector is set in a higher sensitivity range setting, the detector will be sensitive to the electromagnetic interference that comes from foreign or 'known' objects within the environment of detecting (ei. power lines, cables, pipes, etc.). It is also possible to receive false metal detector readings from abnormal soil conditions, including the mineralization of soil or electrical conductivity of the soil type. If you move the search coil in the detection area,and the detector sends an unstable 'false' signal, decrease and adjust the sensitivity accordingly.

*When operating the metal detector, be sure to avoid close proximity with familiar and known metal objects - as you intend to find unknown or hidden metal objects. The metal detector is also prone to interference from electronic device and frequency wave generating technologies. Avoid electro-magnetic interference and keep the unit away from cellphones, smart devices, TVs, computers, etc.

Motion Detection - 'Motion Mode'
When detecting using the moving 'Motion Mode', you should sweep the search coil at a constant (fairly slow and steady) speed, and let the search coil remain parallel with the ground floor surface. Preferred height distance of the coil from the ground floor surface is about 1/2 inches (1.5cm) directly above the ground surface.





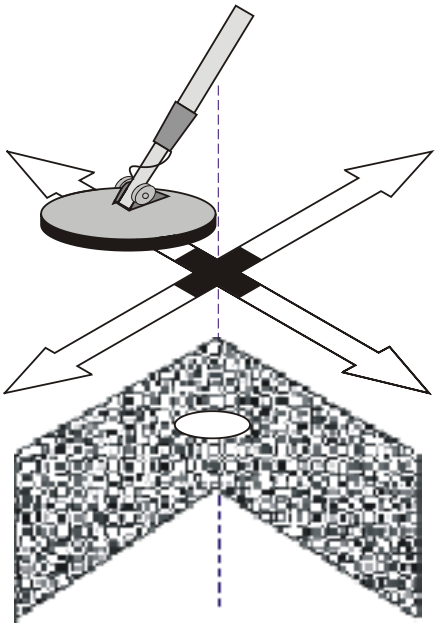


Motion Detection - 'Motion Mode'
*For optimum metal detecting performance, never sweep the search coil as if it were a pendulum. Avoid 'angling' the search coil from the detecting ground floor surface.

Most worthwhile metal objects will provide a repeatable signal, if the signal will not be repeated when hovering over, it is more than likely trash metals (or possibly over-oxidized materials). When a clear sounding tone is heard, you can get the approximate target type and target depth on the LCD digital display screen.

Some practice and experience may be needed to develop the proper metal detector 'sweeping' style. Just like your fingerprint, your sweeping / metal detector scanning movement will develop over time and will help to optimize your metal detector's performance and your technique in general. If the search coil is swept too slowly, the unearthed objects may not respond or be recognized by the metal detector -- the same goes if you sweep too quickly past the objects. Another re-sweep or 'pass-over' can always help confirm the presence of an existing metal but a unique and ideal sweeping style is what you're after. Proper scanning also involves smooth, even swipes of the search coil, that includes overlapping already partially scanned areas as you continue moving forward. Take the time to practice and experiment the ideal sweeping speed and style. Learning, experimenting and discovering is all a part of the experience and you will gradually develop metal detecting skills and sought-after habits over time.

Pinpoint your finding
When there is a clear signal to show you the location of the buried target objects, you can make an “X” scan at this zone, generally the bottom of the intersection point is the target object.



Pinpointing and PINPOINT Mode
While searching in the motion mode, you should move the search coil evenly, consistently and persistently. However, if you run into an instance where you cannot determine exactly where to dig, or to narrow down the area, and determine a more exact location of the object, you can refer to the PINPOINT mode.

Metal Detector Signals

*Most valuable metal objects detected will send repeatable signals, as you scan over the ground surface area containing the object. If the signal is not repeated after your 're-scan' the ground floor surface area, it is most likely a false signal. When there is a clear sound instructing the buried targets, you can read out the approximate target type and depth on the LCD display screen. Then, hovering the search coil over the target object again can confirm the presence of a metal object. Along with the visual indication, the metal detector will provide audible frequency tones -- that also insist the presence of a detected metal object.

Depth and Target Indication (only in the motion mode)

Depending on the operation mode selected, the LCD digital display screen will show the predicted metal target types and the estimated target depth. When in neutral soil environments, the discrimination indication is more accurate, while in the mineralization or the discrimination indication will have various degrees of deviation.

Caution

In areas with heavy traffic, please do not wear earphones while detecting, in case an accident occurs.
Always obtain permission before searching any site.
Keep away from the areas that may have buried electrical or gas lines / cables.
Do not detect in private property, military owned areas or where you do not receive permission to detect.
When digging out the target, use a reasonable digging method that will not damage or cause harm to yourself or any possible object within the surface area.
Try your best as to not destroy the vegetation, cause damage to any animals / insects.
Take care of mother nature!

Troubleshooting

SYMPTOM	SOLUTION
No power, there is no indication on the LCD display, there is no sound when powering on	1.Be sure batteries are installed correctly. 2.Be sure battery cover is closed correctly. 3.Replace the batteries.
Sound heard is an irregular tone, or the target identification cursor chatters / distorts	Make sure there are no electromagnetic interference sources present, such as power lines, cables, electronic fences, etc. Keep away from areas that are prone to cause interference or you can reduce the detector's sensitivity.
The signal is unstable and the position of the target identification cursor is changing	1.Scan at a different angle, in order to determine whether you can get a more stable signal. 2.If the target is buried deeply, you could try to increase the sensitivity or speed up the search coil scanning speed, hovering over the designated area. . 3.Maybe more than one metal targets are buried, you could try to increase the sensitivity or set different discrimination ranges when scanning. 4.Maybe you found a severely oxidated target, or the ground contains some type of magnetic field or mineralized content. Attempt to decrease the sensitivity and continue scanning.
Using PINPOINT mode. when approaching the ground, the unit automatically sounds a tone	1.The soil is magnetic, Press the PINPOINT button again, and reduce the sensitivity -- and scan the area again. 2.There are large metal objects under the ground.

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