SENSITIVITY, DEPTH, LIGHT, SOUND

Pressing the Button will open the menu. When the menu is on, press the button to switch between the menus. Use and buttons to reduce and increase the values on the menu.

How the Detector operates ?

Metal detectors create an electromagnetic field that penetrates the ground. Metal objects cause a change in the area because they transmit electricity. The detector detects this change and gives a warning signal to the user

Metal detectors operate by transmitting an electromagnetic field from the search coil to the ground. Metal objects (targets) within this electromagnetic field are energized and generate their own circular electric currents (eddy currents) and transmit its own electromagnetic field. The detector's search coil detects this signal and warns the user. Golden Rain can discriminate (or distinguish) between different target types and can be set to ignore unwanted targets (Iron Reject)

1- Battery
The battery provides power to the detector.

2- Control Unit
This is the unit where the sending signal is generated and the receive signal is processed and converted into a target response.

Search Coil
The detector search coil transmits the electromagnetic field to the ground and retrieves the returning electromagnetic field from a target.

4- Electromagnetic Field Transmission
The transmitter (Tx) electromagnetic field energizes the targets to ensure that they are detected.

5- Finding
The finding is any object that can be detected by a metal detector.

6- Unwanted Targets
Unwanted targets (non-ferrous and mineral) can be turned off with Iron Reject Mode. Gold, Steel, Non-Ferrous and Space detection can be done as long as the function is active.

7- Electromagnetic Wave
Electromagnetic field of reception (Rx) is generated from energized targets and taken by the search coil

Basic Operation Principles of Detector

It is useful to understand the principle of several metal detection technologies, so you can choose the best settings for different detection conditions.

Frequency

The operating frequency of the metal detector is one of the main characteristics that determine how well targets can be detected. Golden Rain uses the frequency range of 11.5 kHz to 12.5 kHz

Ground Balance

Ground Balance is a variable setting that increases the detection depth by reducing the noise on the mineralized ground. The mineralized ground responds to the transmit area of the detector as a finding. Since there is a much larger mass than an embedded finding, the effect of mineralization can easily hide small targets.

Waste Metals

If you have found too much waste metal where you work, please remove the soil between 15-20cm on a large surface, and use your detector again because the small dense metal on the surface will prevent you from detecting deeper metals.

How to Look into excavated Pits ?

Do not insert search coil into excavated narrow pits. If you check the excavated narrow pits with a detector, these pits should be 150 cm in diameter. You can check inside the pit as well as the walls by making ground balance.

Caution!
If it is not possible to make ground balance, there may be metal. In that case, switch the device to discrimination section and approximate the device upwards and downwards without moving it to right or left until 15cm and check whether there is metal or not.

Spurious Signals

When the bars on the screen gives sound signal during the search after setting the ground, this signal may be spurious. As ground balance is an important element in the ground search detectors, the ground balance may be distorted as a result of frequent changes of the mineral and mineral structure in the soil and you can get these kinds of noise signals. Thus, you need to reset the device.

Detection Depth Factors

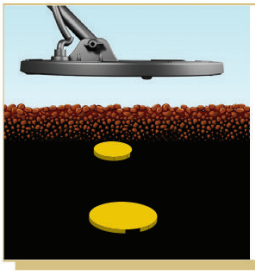
The most common question about metal detectors is ***"How deep can they go down?".***
Detectors with larger coils detects deeper. However, the detection depth also depends on detector technology and many environmental factors. The depth of the metal under the ground varies depending on residence in the ground (oxide). You may detect metals resided for a long time under the ground (oxidized) more easily than recently buries metals.

Double Signal

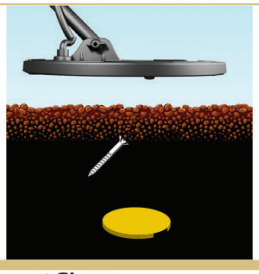
During the search, you will see that the line on the screen has risen twice as you detect the two metals standing side by side in the search section. When it goes past the first metal, the line will go upwards and downwards and when it goes past the other metal next to it, the line will go up and down again. This means there are two metals side by side. Construe the data obtained in discrimination mode accordingly.

Signal Confirmation

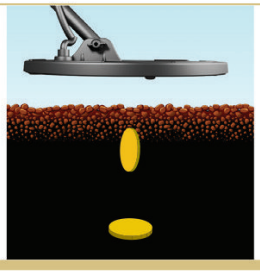
In general search mode, reset the search coil from the point where you received the signal, and move your search coil 3-4 times from where you receive the signal. If you receive the same signal each time, it is highly possible that there is metal. You can do the same in discrimination mode



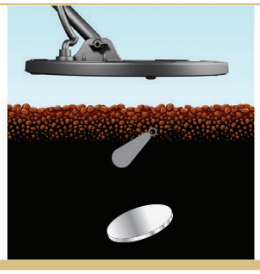
Target Size
Large targets can be detected deeper than smaller targets.



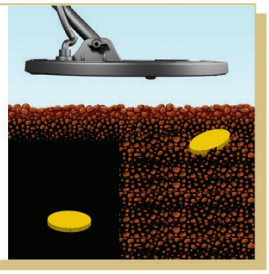
Target Shape
Circular shapes (eg coins and rings)can be detected deeper than long thin shapes (for example nails and screws) (when standing flat) (eg nails or screws) can be detected more deeply.



Target Angle
A horizontal coin (for example, when standing flat) can be detected deeper than a vertical coin



Target Type
High conductive metals (eg silver) can be detected deeper than less conductive metals (eg lead)



Soil Mineralization
A target in a benign (non-mineralized) site can be detected deeper than a target in a heavy mineral place.

Detection Technique

The accurate detection technique is important to get the most out of your detector. The techniques described will give you the best chance of success.

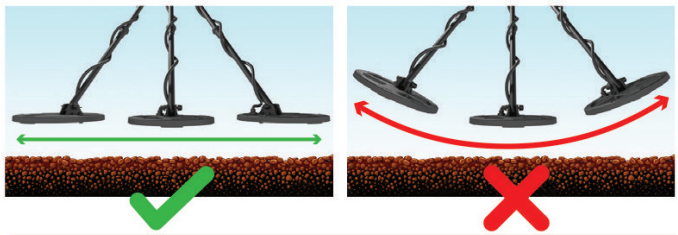
Holding the Detector

Place your elbow in the armrest. The correct position of the armrest allows you to hold the handle comfortably.

Long-term use does not tire your arm.

Parallel Screening

When the coil is 10 cm above the ground and parallel to the ground, it gives the best performance. The Lower Shaft can be adjusted between several setting lengths Adjust the length setting to your own preference.



Adjusting the Length of Shafts

The lower shaft can be adjusted between several adjustment lengths. Adjust according to your request.

Adjusting the Coil Angle

1. Loosen the plastic screw that joins the handle with the coil.

2.Hold the detector in the search position straight / parallel to the ground.

3.After adjusting the position of the coil, tighten the plastic screw

Finding

Detections are called findings.
Gold, Non-ferrous (Silver, Copper, Bronze, etc.), Steel (Heat- treated metals), Ferrous (Iron, etc.), Space, Mineral are the findings that you can detect with your device.

Swinging the Coil

Even if the coil is held constant on a target, it will continue to detect. Failing to do right movement of the coil, may cause you to miss the targets or generates wrong signals.

Detector Sounds

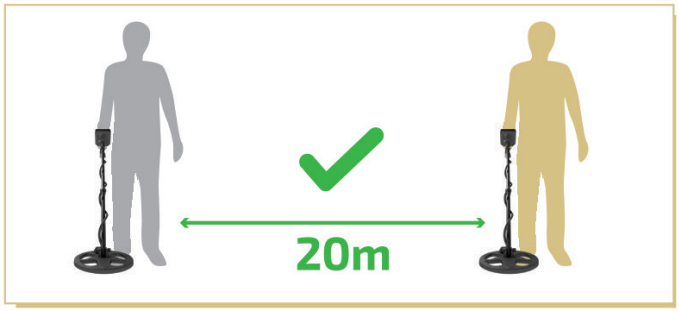
Golden Rain produces different sounds.

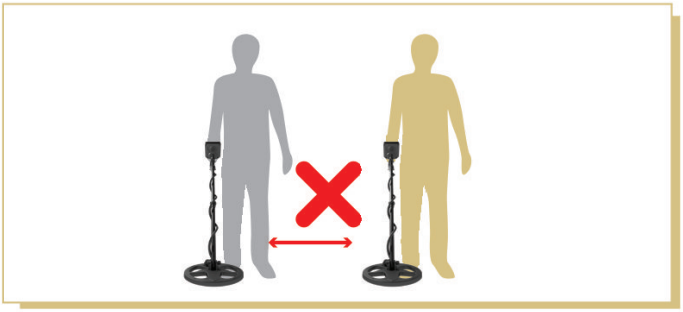
Results

When a finding is detected, Golden Rain will give you signals in different tones.

Noise / False Signals

The detector can receive unwanted noise signals from the air or from the ground. These false signals can be reduced by using the Ground Balance, Sensitivity and Depth Setting. Reducing the sensitivity allows you to operate the detector effectively in difficult (or noisy) locations as well. For the two devices to work at the same time, take care to keep 20m away from users. Otherwise, you may receive noise and incorrect signals.





Simple Detection Exercise

It is important to understand how to interpret the audible and visual signals of the detector before attempting to find real targets.

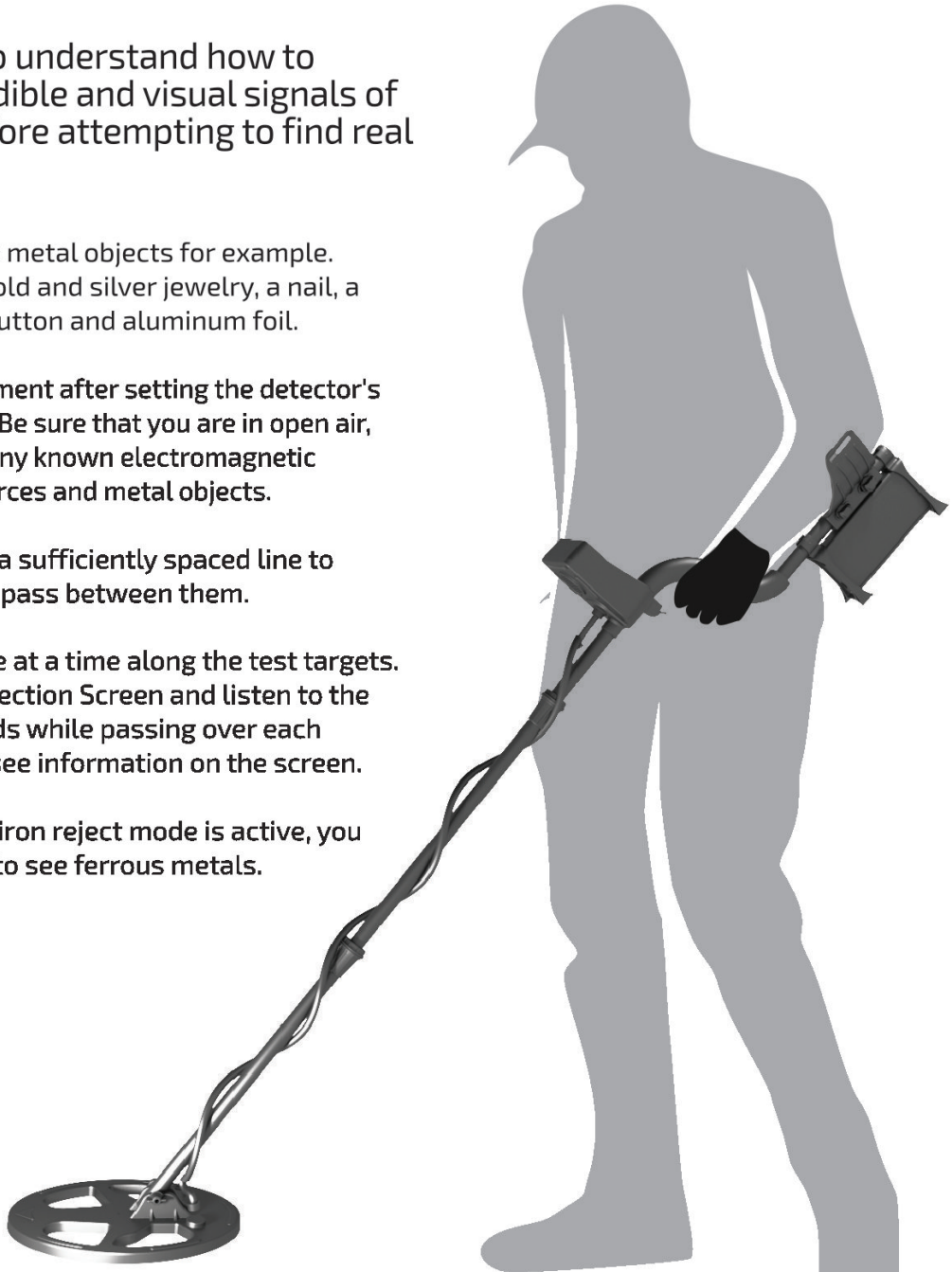
1. Collect different metal objects for example. Various coins, gold and silver jewelry, a nail, a pull tab, brass button and aluminum foil.

2. Start the experiment after setting the detector's ground balance. Be sure that you are in open air, and away from any known electromagnetic interference sources and metal objects.

3. Place objects in a sufficiently spaced line to allow the coil to pass between them.

4. Slide the coil one at a time along the test targets. Observe the Detection Screen and listen to the detector's sounds while passing over each object. You will see information on the screen.

5. Note that if the iron reject mode is active, you will not be able to see ferrous metals.



Single Coin
Depth:25cm

Gold Bracelet∅ 7cm
Depth:45cm

Copper Cup ∅20cm
Depth:60cm

Plate ∅20cm
Depth:60cm