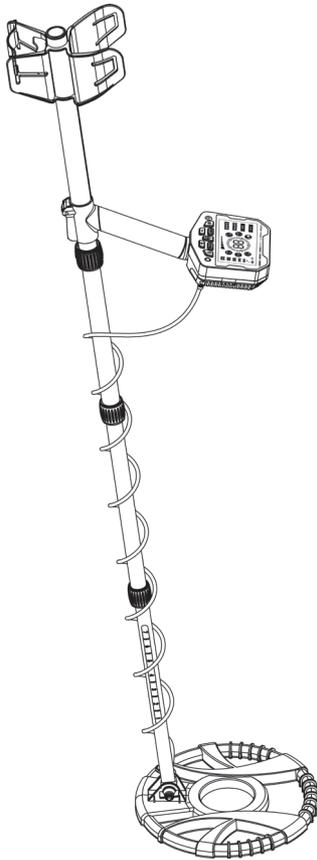


Raynesys Metal Detector

User Manual

Product Model: 1117



RoHS CE FCC

Thank you for choosing our metal detector. Please read this manual carefully and become familiar with the function of the detector before use. After reading, please keep it safe for future reference.

TIPS

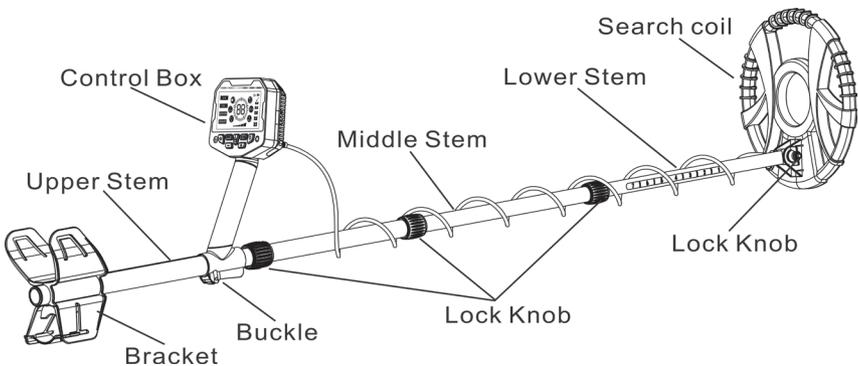
1. The detector is used for outdoors. There are too much interference indoors.
2. In the higher sensitivity range, the detector will be more sensitive to the electromagnetic interference. By reducing sensitivity you can get rid of interference.
3. When detecting, move the search coil at a constant speed. Let the search coil be parallel with the ground and about 1/2 inch from the surface, do not to swing it like a pendulum.
4. The depth indication is accurate for coin-sized objects. Large objects or irregularly-shaped objects will reduce accuracy.
5. Most of the valuable metal objects will send consistent signals. If the signal isn't consistent, it's mostly a false signal.
6. In order to save power and extend battery life, the backlight will automatically turn off in about 10 minutes, whatever it is working or standby.
7. The machine will automatically turn off when it is in standby mode after about 15 minutes.
8. If the P-P (pinpoint) mode malfunctioned, sending a signal even when not close to any metal, lift the detector in the air, press the P-P key button once to solve the problem.

SPECIFICATIONS

- Operation Mode: 4+1
Motion Mode: A-M, DISC, MEMORY, JEWELRY
Non-motion Mode: PINPOINT
- Coins Depth Indication: 5 grades
- Sensitivity Control: 5 grades
- Target Metals Discrimination: 6 kinds
0 to 99 double digits
- Signal Strength Indication: 5 grades
- Sound Frequency: 3 kinds of frequency indicating different metals
- Volume Indication: 3 grades
- LCD Backlight: white
- Battery Indication: 4 grades
- Search Coil: waterproof search coil
- Earphone Jack: 1/8 inch earphone jack
- Power Supply: two 9V alkaline battery

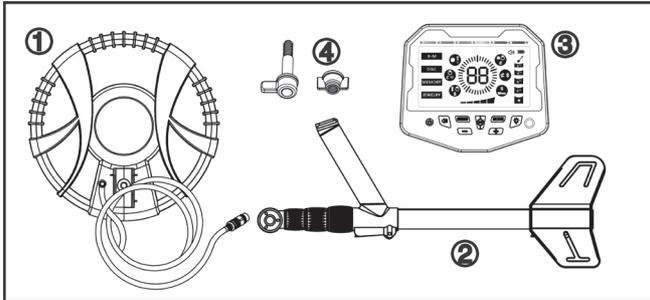
ASSEMBLY

The structure of detector is shown in the below.



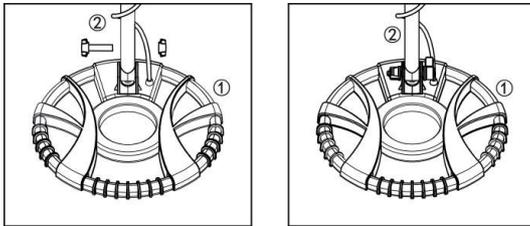
The following detector components are in the box:

1. Search coil
2. Retractable connection rod
- The controller handle
3. Control box
4. One wing nut, one threaded bolt

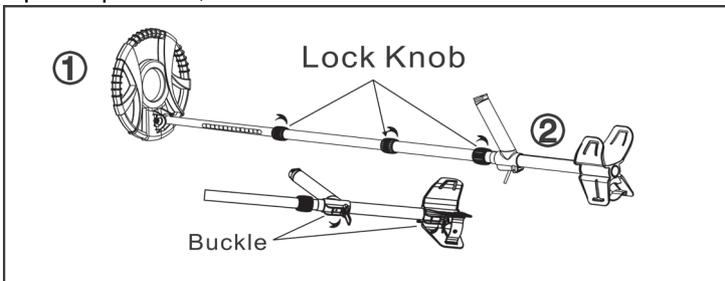


Assembling the detector

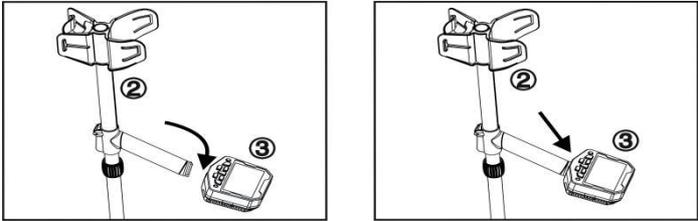
1. Fix the search coil (1) into the rod (2) through the nut screws, and tighten them.



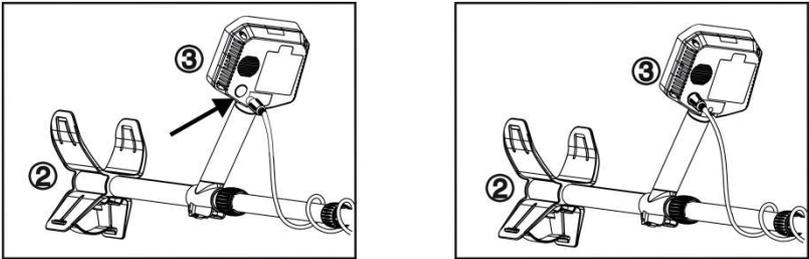
2. Loosen the three lock knob (2), and stretch the rod to the appropriate length, then tighten the lock knob.
Open the buckle on the bracket, stretch the bracket to the appropriate position, then close the buckle.



3. Align the slot of controller ③ with the slot of controller handle ②, and gently push controller ③ to the end.



4. Wind the cable of the search coil around the aluminum stem, elastic moderate, let it not sway. Plug the cable plot into top right corner of the control box, aim at the slot, and plug into the end. Note: do not pull the cable, pull the plug.



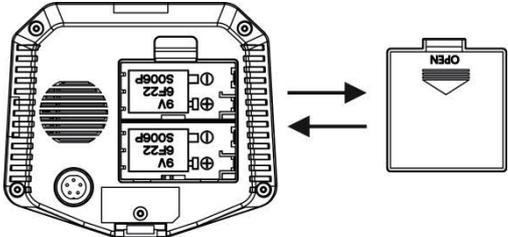
BATTERY

Remove the battery cover.

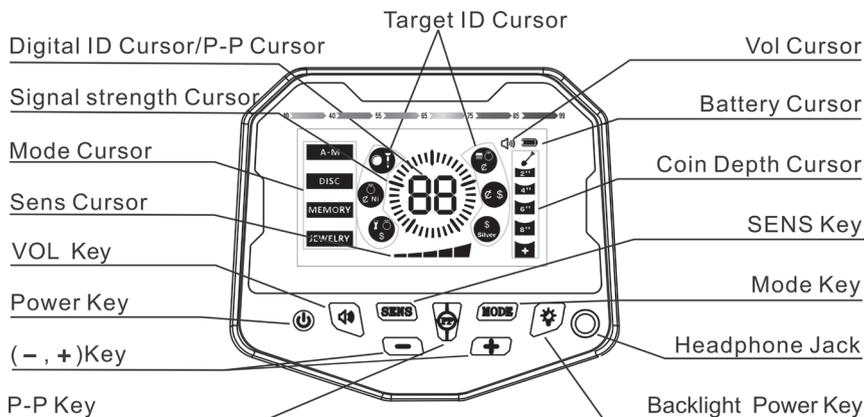
Install two 9V batteries according to the polarity label on the battery box, and place the ribbon under the batteries.

Replace the battery cover.

CAUTION: Turn off the detector before changing the batteries.



PANEL(LCD and Button)



LCD

- Mode Cursor: indicate the operation mode, altogether divided into four kinds.
- Target ID Cursor: divided into 6 categories, it is used to indicate the target metals.
- Digital ID Cursor/Pinpoint Cursor: two digits of 01 to 99 accurately indicate the metal material. It also acts as a P-P cursor, when P-P showing, it enters the pinpoint mode.
- Coin Depth Cursor: divided into five grades, indicates the approximate depth of 25 ¢ silver coin in neutral soil.
- Signal Strength Cursor: indicates the signal strength when in the pinpoint mode.
- Volume Cursor: indicates the volume.
- Sensitivity Indication Cursor: divided into five grades, sensitivity is highest when all cursor light.
- Battery Power Cursor: divided into four grades, indicating battery power. When the battery pattern is flashing, which means the battery should be replaced.

Button

1. **POWER Key:** As on/off power supply.
2. **VOL Key:** Press circularly to regulate the volume.
3. **Backlight Power Key:** As on/off backlight
4. **SENS Key:** Press the SENS Key, (-, +) Key to adjust the sensitivity.
5. (-, +) Key: There are two functions.
 - a. Press SENS Key, the sensitivity cursor will flash, and the (-, +) Key is used to adjust sensitivity.
 - b. In DISC mode, the (-, +) button is used to set the discrimination targets.
6. **MODE Key:**

Press the MODE Key, cycle selection in four modes.

 - 1) **A-M:** All metal mode, the detector will respond to all metal.
 - 2) **DISC:** Discrimination mode, in this mode you can eliminate certain kind of metal then the detector won't respond to it.
 - 3) **MEMORY:** Remember some kind of metals you choose, and will only respond to this metal.
 - 4) **JEWELRY:** Eliminate iron, it won't respond to iron, but it will V respond to other metals.
7. **PP Key:** Press the "PP" Key, and the detector will convert to PINPOINT mode, to locate the target accurately. Press the "PP" Key once again, to exit the PINPOINT mode.

QUICK- START

1. Lay the detector

Put the detector on a wooden or plastic table, and let the search coil stretch out of the table about 30cm, keep away from walls, ceilings and floors, turn off all kinds of electrical appliances that will cause electromagnetic interference, remove watches and rings from hands.



2. Turn on

Press the POWER button, the detector will sound two moo tones, and all LCD patterns will be lit for a moment. And the detector is set by default last shutdown.

3. ALL METAL mode test

Press the MODE button, the A-M cursor will light. Sweep six sample metals (iron nail, 5 ¢ nickel coin, pull-tab, 1 ¢ Zinc coin, 25 US cents to 1\$ copper coin and 50 US cents to 1\$ silver coin) above the search coil 7-10cm respectively.

- a)The detector sounds three different tones in turn.
- b)The depth cursor indicates the second grade.
- c)The target cursor flashes respectively. The digital cursor shows the corresponding number.

As shown in the table:

Sample	Iron nail	5 ¢ nickel Gold	Aluminum metal Gold	1 ¢ zinc coin	25 ¢ to 1\$ Gold Silver	50 ¢ to 1\$ silver
Tone	Low tone	Low tone	Middle tone	Middle tone	High tone	High tone
Identification cursor indication						
Digital cursor indication	01-40	41-55	56-65	66-75	76-85	86-99

(take iron nail as an example)



4. DISC mode test

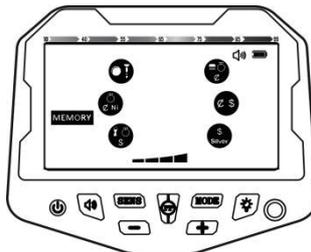
- Press the MODE button again, the DISC cursor is lighted.
- Press (-, +) button, set the discrimination target, to eliminate some metals which do not need to be detected. For example, to reject three kinds of metals such as iron, nickel and aluminum metal. Press the (-, +) button, making the three target cursors on the left removed.
- Sweep the six metal samples about 7 to 10cm above the search coil in turn.
- When sweeping the iron nail, 5 ¢ nickel coin and aluminum metal. The detector will not respond, they are eliminated.

- e) When sweeping the other three samples, the corresponding target cursor flashes, and the digital cursor shows the corresponding number.
 (take 25 ¢ silver coin as an example)



5. MEMORY mode test

- a) Press the MODE button again, the MEMORY cursor is lighted.
 And the target discrimination cursor is all lighted.



- b) If you want to search 50 ¢ silver coin and eliminate the other metals, you can follow the procedure below:
 Let the 50 ¢ silver coin scan above the search coil about 7-10cm, the target discrimination cursor that the 50 ¢ silver coin cursor consistently lighting, while the other discrimination cursors are removed.



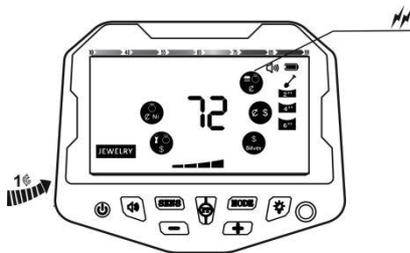
- c) Sweep the six samples about 7-10cm above the search coil.
- d) When sweeping the 50 ¢ silver coin, the detector responds, indicating that the detector has memorized the 50 ¢ silver coin. When sweeping the other five samples, the detector does not respond. (take the 50 ¢ silver coin as an example)



- e) If you want to search other material metals, press the “MODE” button again. The MEMORY cursor still lights up. Then repeat the above operation.
- f) To quit the MEMORY mode, press twice MODE button, to quit the MEMORY mode, and enter the next operation mode.

6. JEWELRY mode test

Press the MODE button again, the JEWELRY cursor is lighted. The first target cursor on the left removed, showing that the iron is eliminate. It only responds to other metals. (take 1 ¢ zinc coin as an example)



7. PINPOINT mode test

a) Press the “P-P” button lightly, and the PP cursor lights and flashes. The detector completes the balance, and the PP cursor stops flashing.

The identify cursor and digital cursor are extinguished, the depth cursor is full, and the detector sounds a slight single frequency tone.



b) Take a 25 ¢ silver coin and let it approach the search coil slowly. At the position of about “7” to “8”, the first set of signal strength cursor begins to appear, the sound becomes louder and the tone becomes higher. Continue to move the 25 ¢ silver coin, the signal strength cursor is fast full, the sound is louder, and then the depth cursor indicates the depth down until only one is left, indicating that the metal is gradually approaching the center of the search coil.



c) Press the “P-P” button lightly again, the PP cursor will be removed, and exit the PP mode.

Done this step, you has a basic knowledge to the detector, and you can move to next step of basic operation.

BASIC OPERATION

The detector is used for outdoors. There are too many objects indoors, and all kinds of electrical equipment that will bring interference signals. So it is not fit for using the detector indoors.

Field detection is more complicated, the composition of the regional soil, the component, size, shape and the oxidation degree of the underground metals will all affect the detection results. This chapter is only the general steps of the field detection. You should operate again and again, accumulate experience to achieve good results.

1. Turn on

Hold the detector, keep the search coil be away from the ground. Press the Power button, the detector will sound two moo tones, and all the LCD patterns are lighted for a while. And the detector is restored to the setting of last time.

2. Set the operation mode

In general, the user could choose the ALL METAL mode. At this time, the detector will respond to all kinds of metals.

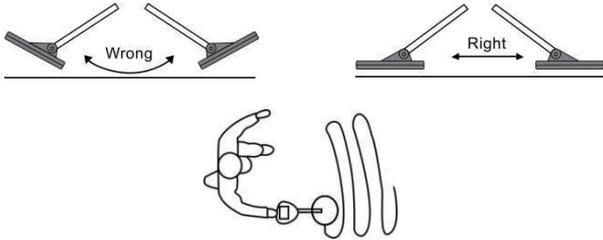
3. Choose the sensitivity

The user always expects to set the sensitivity higher. However, in the higher sensitivity range, the detector will be more sensitive to the electromagnetic interference that comes from the power lines or cables around, and it will react abnormally to the mineralization soil or electrical conductivity soil. If you move the search coil in the detection area, and the detector sends an unstable false signal, please decrease the sensitivity.

If you operate the detector with your partner at the same time, please pay attention to keep more than 10 meters away from each other, and decrease the sensitivity appropriately.

4. Move the search coil

When detecting, move the search coil at a constant speed, not unsteadily. Let the search coil be parallel with and about 1/2 inch from the surface, not to swing it like a pendulum high and low above the ground.



Most of valuable metal objects will send repeatable signals. If the signal isn't repeatable, it's mostly a false signal. When there is a clear sound instructing the buried targets. You could read out the approximate target type and depth on the LCD screen. And you could also move the search coil above the target objects fast, in order to get a more stable signal.

5. Make use of the sound, to help discrimination

In the process of detection, you needn't always watch the screen. And the sound identification system will sound three frequency tones to help discriminate the targets.

Low pitch-- 5 ¢ nickel coin and so on.

Meddle pitch-- pull-tab, soda bottle and zinc coin.

High pitch-- copper, aluminum and silver metal, such as 1 ¢, 10 ¢, 25 ¢ and so on.

6. Make use of the digital cursor, to help discrimination

The following table is used as a preliminary guide. The approximate ranges of US dollar and pound sterling coins are listed in the table. When detecting, there may be some changes in the number, depending on the composition, size, shape, distance from the search coil and speed of scanning. The surrounding soil also affects the numerical value. There are differences in casting coins in different years. The values in the table are the only reference. Gold has a wide numerical range, a thin ring is about 45, and a rough ring and gold coin may up to 70-80.

Number Range	Possible Metal	Dollar Coin	Pound Coin
01--40	Iron		1P,5P
41--55	Nickel	5 ¢	5P,10P,20P
56--65	Aluminum metal		20P,50P
66--75	Zinc	1 ¢	1£,2P
76--85	Copper, Silver	10 ¢ , 25 ¢	2£
86--99	Silver	50 ¢ , 1\$	

7. Depth indication

The depth indication is accurate for coin-sized objects. Large objects or irregularly-shaped objects will yield less reliable depth readings. If sweeping at the same place for several times, but shows the same depth, and it is the more accurate detection. If the depth indication varies, try to change the angle of sweep. There may be more than one target present.

8. PINPOINT

When detecting in the motion mode, as you should persistently move the search coil, so although you find some area that burying metals, it's not easy for you to determine the exact location, it is difficult to find correct digging place. At this time, you should convert to the PINPOINT mode.

- a) Press the PINPOINT button, the PINPOINT cursor is lighted, the depth cursor will be full scale, and the detector will sound a low single-frequency tone, the sensitivity is in the highest state.
- b) Let the search coil approach the ground, move the search coil slowly in the searching area, where you find the target. In the position where the single frequency tone turns louder, and the signal strength cursor begins to appear. Continue moving the search coil slowly until the sound turns louder, the signal strength cursor is full scale, and the depth cursor is the lowest. Now, you have locked the target location roughly.
- c) If the area with the strongest signal is larger and the location is not accurate enough, you can keep the location of the search coil unchangeable and exit the PP mode. Then press the PP button again and repeat the above operation. Until you move the search coil slightly, and the strongest signal will be smaller. Now, the position of the metal target has been locked. You can mark on the ground by the center of the open search coil, to begin the digging.

9. If there are more scrap metals in the detection area, you can choose the DISC mode to eliminate the metals that do not need to be detected. Remind you once again, when detecting in the wild area, due to the influence of the different conditions conditions, the discrimination indication and depth indication will be different. The composition, dimension and oxidation of the metals will all affect the indication result. It's necessary for you to consider these factors before choosing elimination a certain metal or determining whether there are precious metals.

In fact, the sensitivity in the non-motion mode is high, search metals directly using non-motion mode is also a choice. In some regions, the ground is too narrow to sweep search coil, you could choose the PINPOINT mode. In the severe mineralization or salinization region, you could try to sweep using PINPOINT directly.

CAUTION

- 1) In areas with heavy traffic, please not wear earphone, in case an accident occurs.
- 2) Always obtain permission before searching any site.
- 3) Keep away from the area where may bury the electrical line, cable line or pipeline, in particular, the pipes that are full of flammable gases and liquids.
- 4) Do not detect in the military area where may bury bombs or gas explosives.
- 5) When digging the target, use the reasonable method, not destroy the vegetation. Leave the land and vegetation as it was, fill in the holes after the digging.

TROUBLE SHOOTING GUIDE

SYMPTOM	SOLUTION
No power, no boot sound, and the LCD has no indication.	1.Be sure that the batteries are installed correctly. 2.Replace the old batteries with new ones.
Sound a successive "DI" "DI" tone	1.Make sure that there is no other metal detector around. 2.Adjust the sensitivity properly.
The LCD displays normal, but the unit has no detection function.	The connection of the search coil is bad. Plug in the cable plug.
The LCD displays normal, but the sensitivity is very low.	When turning on, there is metal near the search coil. Let the search coil be far away from any potential metals in ground, wall, table, etc and then turn on the unit again.

<p>Sound an irregular tone, or the target identification cursor chatters.</p>	<ol style="list-style-type: none"> 1. Don't use it indoors, because there is many metals there. 2. Make sure whether there is electromagnetic interference source, such as power lines, cables, electronic fences and so on. Keep away from these areas, or try to reduce sensitivity.
<p>The signal is unstable, and the position of the target identification cursor is changing.</p>	<ol style="list-style-type: none"> 1. Sweep 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 speed of sweeping the search coil, in order to get a more stable signal. 3. Maybe more than one metal targets buried there, try to increase the sensitivity or set different discrimination range to sweep. Maybe you find a severe oxidation target, or the ground is serious magnetic, you should try to decrease the sensitivity.
<p>Using PINPOINT, when the search coil approach the ground, the unit will sound a tone.</p>	<ol style="list-style-type: none"> 1. The ground is serious magnetic in the position near the ground, start the PINPOINT mode, to reduce the sensitivity. 2. There is large metal under the ground.

CARE AND MAINTENANCE

Your metal detector is an example of superior design and craftsmanship. The following suggestions will help you care for your metal detector so you can enjoy it for years.



Handle the detector gently and carefully. Dropping it can damage circuit boards and cases and can cause the detector to work improperly.



Use the detector only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage the cases of the detector.



Wipe the detector with a damp cloth occasionally to keep it look new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the detector.



Keep the detector away from dust and dirt, which decrease the sensitivity or accuracy.



Thank You for Your Order

Dear Customer,

Thank you for choosing Raynesys! Your trust is our greatest motivation. We are committed to providing high-quality, cost-effective products designed to solve your problems and make your life easier and more enjoyable.

If you have any questions while using our product, please scan the QR code below to submit your inquiry, or email us at the address below. Our professional service team is here to assist you.

Wishing you sunny and happy days! We look forward to your next visit and your valuable feedback.



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