Golden Mask
4Xtreme

User Guide

Golden Mask 4Xtreme User Guide - ver. 1.1 (last updated: February 2025)

Detector Overview

The Golden Mask 4Xtreme is the most powerful detector in the Golden Mask series to date. It is designed to be easy to use, making it suitable for both professional and beginner treasure hunters.

The Golden Mask 4Xtreme utilizes Multiple-Pulse Width Modulation technology, enabling the detector to achieve exceptional depth of detection while maintaining a lightning-fast recovery speed at the same time.

A common drawback of modern metal detectors is the trade-off between depth and recovery speed. When set for a fast recovery speed (Park mode), detectors typically sacrifice depth. Conversely, when set for greater depth (Field mode), recovery speed is often reduced. Some models offer multiple profiles for each mode, which can lead to confusion about which profile to use for optimal performance in a given area. The treasure hunters may end up switching between profiles, hunting the same area multiple times.

The Golden Mask 4Xtreme was created by an experienced treasure hunter who understands the needs of fellow enthusiasts. It combines both great depth and fast recovery speed into a single device, ensuring maximum efficiency. You no longer need to switch profiles or worry about whether the selected program is the best for the specific soil conditions, or if you've missed targets because of the chosen program. Using a Golden Mask 4Xtreme gurantees all the targets are pulled-out with ease.

The Golden Mask 4Xtreme has been tested in challenging conditions, including areas with volcanic rocks (hot rocks) and soils with a high content of ancient Roman pottery. It has demonstrated excellent depth and performance in these environments.

Search coils

- 5x7'' PWM Fighter S
- 9.5'' PWM Fighter S
- 13x11'' PWM Fighter S
- 18'' PWM Fighter S

All the PWM search coils are delivered with search coil protector.

WARNING!
The PWM Fighter S search coils are NOT compatible with the VLF and Pulse Induction (PI) Golden Mask models!

Using the Detector

Assembly

The detector comes to you with detached search coil and separated into two parts shaft to reduce the transport charges.

First, attach the two parts of the shaft. The lower part goes inside the upper part tube and is secured with the locking screw, just as the other two parts. Then attach the search coil using the supplied plastic bolt and nut. Be aware not to lose the two rubber washers that are positioned on both sides of the shaft tip at the coil side.

While using the detector, it is a good practice to tighten the locking screws periodically to ensure stability and long life ot the shaft.

Switching on the detector

The detector is switched on via the On/Off VOLUME knob. Turn it clockwise to start the detector and adjust the sound volume to the desired level.

The Detector Controls

Setting the detector is fairly easy and is done via five potentiometers and two switches. Below you will find info about every knob/setting and how it affects the detector behaviour.

DISC. LEVEL

Controls the discrimination level. The default value is 3 (marked). At lower settings the detector detects deeper, but some rusty iron targets could be indicated as non-ferrous. In opposite, if you increase the Disc. Level value, the detector will react only on targets, that are purely non-ferrous, but the depth of detection decreases and you will loose some non-ferrous targets, mainly tiny ones and ones that are made of low-conducting metal. Unfortunately Gold is a low-conductive metal and if you increase the discrimination level above the default level, you could easily skip some gold targets.

AUDIO FREQ.

Controls the audio output frequency. Does not affect the performance of the detector, it's a mater of personal preference on where you set this knob.

POWER LEVEL

Determines the power of the electromagnetic field of the detector search coil and thus affects the depth of detection. At higher values, the detector detects deeper, but with some limitation. There is a threshold that cannot be surpassed, e.g. you cannot set the detector above the threshold, because it will self-trigger and emit a continuous sound that will mask the sound from targets. The working range is marked in yellow, but better find the threshold and set the detector just below it – with such adjustment, the detector will have maximum depth, while maintain good stability.

GROUND BALANCE

Sets the ground exclusion balance, known in metal detecting as Ground Balance. This is an adaptation of the detector to the current soil conditions.

See the next chapter for detailed explanation on how to set the ground balance.

On/Off VOLUME

This knob switches the detector on and off and sets the sound volume level by turning the potentiometer clockwise for Volume UP and counterclockwise for Volume DOWN.

SPEAKER / HEADPHONES SELECTOR

This 2-way switch routes the output audio to the headphones or the speaker.

AUDIO MODE SELECTOR

This 2-way switch toggles between mono-tone and bi-tonal audio mode.

At the first mode, the detector emits a sound for non-ferrous targets only, while ferrous ones are ignored or indicated with a cracking sound. In this mode you could achieve better depth, but have to listen to the sound very carefully and gain some experience before be able to securely identify targets.

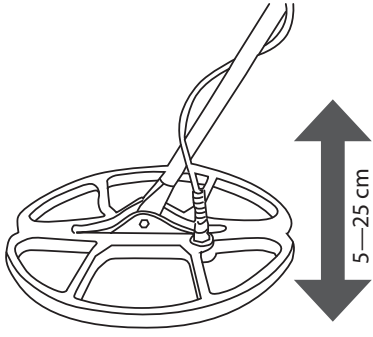
In bi-tonal mode, the detector emits a low sound for the ferrous targets and a high frequency signal for non-ferrous targets. This mode is good for beginners in metal detecting.

Ground Balance

The 4Xtreme has manual ground balance only. A proper ground balance could dramatically increase the performance and depth of detection compared to a non-balanced machine. Balancing is quite easy. First, set the detector to multi-tone (dual-tone) mode. Now find a place without metal objects and start to "pump" the coil over the ground surface. Moving it 20 cm up and down is enough, but without touching the ground. If the machine is not balanced, you will hear a sound while the coil is going up or down. While "pumping", turn the GROUND BALANCE knob until the sound disappears or is slightly audible but equal with the movement of the coil in both directions.

NOTE: You should keep turning the GB knob slowly while pumping. If you stop turning it, the detector emits a beep, this is a PWM technology particularity- and could mislead you the balance is not done well.

If the sound is present while the coil goes up, you should turn the knob clockwise and vice versa. When the sound disappears or is equally slightly audible in both directions move the detector is ground-balanced. You can start your search.



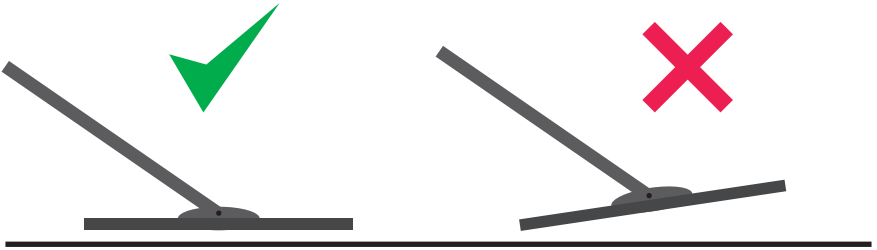
Have in mind that the ground mineralization in not uniform even on small surface spots, so when you go to another area or start experiencing instability or false signals, you shall perform a new ground balance.

At full left turn of the Ground Balance knob (HR – Hot Rocks position), the detector acts as a fixed ground balance machine - an universal GB, at which the detector is most stable. Turning the GB knob in the red (HR) position, you will gain maximum stability, no matter what type of soil you are on.

Searching for metal objects

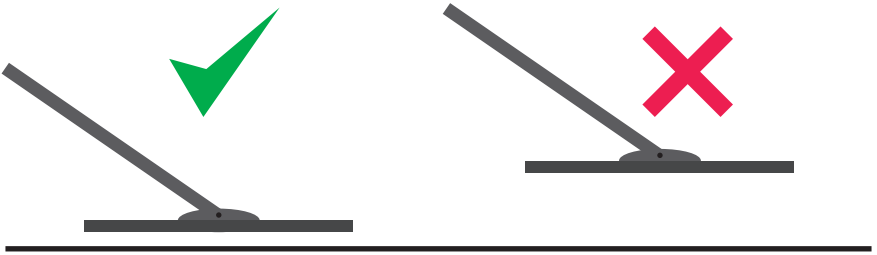
The detector is of type "MOTION". This means it could indicate a target only while the coil is moving. The search process with the detector is performed by swiping the coil left-right just over the ground surface and slowly walking forward so you made overlapping snake-type trajectory of the coil, ensuring you totally cover the space you walked over. This ensures you will not left undiscovered targets behind you.

The coil should be kept paralel to the ground surface during the search. This position ensures best depth and stability of operation.



The movement of the coil must not be too slow, nor too fast. You will find the appropriate speed with time. Slower is usually more efficient than faster swiping.

If you hold the coil too far from the ground, you will loose depth, so keep it as close to the ground as possible.

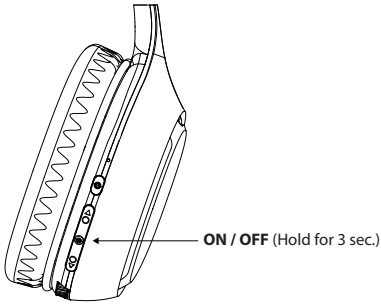


While swiping the coil, if a metal object is present under the coil, the detector will emit a sound. The sound type depends on the audio mode you use at the moment.

Using the wireless headphones

Your Golden Mask 4Xtreme could be ordered with optional low-latency wireless (WS) headphones. The detector is WS-ready, so even if you order it without headphones, you can order the headphones later and pair them with the detector. The Golden Mask 4Xtreme has no a port to use wired headphones!

To use the wireless headphones, you just set the switch on the front panel to "WS HEADPHONES" position and the sound goes to the wireless transmitter. Now you have to switch-on the headphones by pressing and holding for 3 seconds the on/off button. When the headphones are ready to work, a blue light will start to blink.



The sound volume is controlled by the VOLUME knob on the detector front panel the same way you do it while you're on speaker.

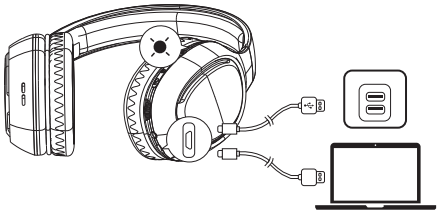
Pairing the WS headphones with the detector

The newest WS headphones (starting from WS107) are paired automatically with the detector transmitter when the headphones and the detector are switched-on and you place the headphones close to the detector - the so-called "proximity pairing".

To pair the headphones with the detector, the proper way is to first switch-on the detector and switch it to WS HEADPHONES mode. Then switch-on the headphones.

Charging the headphones battery

The wireless headphones are powered by an internal irreplaceable battery. The headphones are charged through an USB cable (supplied within the package) by connecting it to a supplied wall socket USB charger or any other USB port providing at least 2A amperage.



The charging process is indicated by a blue light on the headphones. When the light turns off, the charging is complete and you can disconnect the USB cable and start using the headphones.

Flashing Red Light Twice Every 30 Seconds	Low battery
Steady Red Light	Being charged
Light Off	Fully charged

Charging the detector battery

The Golden Mask 4Xtreme is delivered with a pre-installed 3.7V 5000mAh Li-Ion battery, incorporated in the detector handle. The battery provides enough power for a minimum of 35 hours continous work. Have in mind that at low temperatures (below 10°C) the actual capacity of the battery is lowered and the working time will be reduced. At temperature just below the zero (0°C), the actual capacity drops by 50%. When the temperature is rising, the battery returns to its normal capacity.

When you receive your detector, the battery is charged at around 20% of it's normal capacity. Before using the detetor, you should first charge the battery as described below.

You should charge your detector after you have using it for more than 8-10 hours to be sure you will have enough power for your next outing. The Li-Ion battery do not have the so-called "memory effect", so you can recharge it at any time and any discharge level.

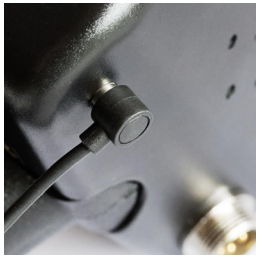
You should charge the battery when the battery LED on the top-right corner of the front panel (LOW BAT.) start to flash. When the LED start to flash, you have remaining power for at least 30 minutes of operation.

On the back-side of the electronic block you will find a magnetic charging socket and a LED charging indicator.

The charging is done using the supplied wall-socket (EU type) charger. It has 3 independent USB ports, so you coul charge the detector and the headphones simultaneously.

Magnetic charging cable

The magnetic charging cable connected to the charging socket of the detector



To charge the detector battery, connect the supplied magnetic cable to the charging port of the detector on the backside of the control box and plug the USB connector of the cable into one of the USB ports of the charger or other USB power source with at least 2A amperage. The LED charging indicator on the back of the detector control box will be lit RED. After the charging is complete, the light will turn to GREEN. You can now disconnect the charging cable and start detecting. It is not necessary to disconnect the charger immediately after the LED turns green, the detector has disconnects itself after the charge is complete. However, it is good to unplug the charger from the wall socket after the charge is complete to save energy.

When you connect the charger to the detector, please pay attention on the charger display. **Proper charging starts at ~1.1A**, gets lower during the charging process, measuring ~500mA at the middle of the charging cycle, and at the final stage of the charging it goes down to 30-40mA.

WARNING: If the charging amperage is abnormal (see the above paragraph), this means bad connection between the charger and the battery.

Bad connection is caused by dirt, mainly. If you notice charging values far bellow the normal ones, disconnect and connect again the magnetic connector. This solves the problem in 99% of the cases. When the problem with the lower amperage persist after several connect/disconnect attempts, you have to carefully clean the contacts of the cable and the detector.

Do not turn on the detector until the charging process is finished and the charger is disconnected! Otherwise the detector electronics may be damaged!

You can charge the detector while you're on the field using car USB charger or Power Bank - these are not supplied with the detector.

The battery life is aproximately 1000-1200 cycles, if used and stored properly..

Taking care of the batteries

To keep the battery in good health, you should follow these simple rules:

• Do not charge the battery at low temperatures (below 5° C). After using the detector in cold weather, first keep it in a room for 3-6 hours to temperate and then charge it.

• Store the detector/battery at temperatures between 5 °C and 25 °C.

• Do not leave the detector battery unused for extended periods of time. If the detector has been unused for 6 months, check the charge status and charge it if needed. Charge or discharge the battery to approximately 50% of capacity before long term storage.

• Charge the battery to approximately 50% of capacity at least once every six months.

• Carefully monitor the battery that is approaching the end of its estimated life. The typical estimated life of a Li-Ion battery is about two to three years or 300 to 500 charge cycles.

• The battery is self-discharging during storage. Higher temperatures (above 20 °C or 68 °F) reduce the battery storage life.

Li-Ion battery safety rules

• Do not disassemble, crush, or puncture the battery.

• Do not short the external contacts on a battery.

• Do not dispose of a battery in fire or water.

• Do not expose a battery to temperatures above 60 °C (140 °F).

• Avoid exposing the battery to excessive shock or vibration.

• Do not use a damaged battery.

• If your detector is stored or unused for an extended period, be sure to follow the storage instructions in this manual. If you do not stictly follow the instructions, and the battery has no charge remaining when you check it, consider it to be damaged. Do not attempt to recharge it or to use it. Contact your dealer for instructions about how to replace the battery.

• Consider replacing the battery with a new one if you note the battery run time drops below 70% of the original run time at normal temperature or the battery charge time increases significantly.

• In case of eye contact with fluid leaking from battery, do not rub eyes. Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the fluid remains. Seek medical attention.

• Always check all applicable local, national, and international regulations before transporting a Lithium-Ion battery.

• Transporting an end-of-life, damaged, or recalled battery may, in certain cases, be specifically limited or prohibited.

• Lithium-Ion batteries are subject to disposal and recycling regulations that vary by country and region. Always check and follow your applicable regulations before disposing of any battery. Contact Rechargeable Battery Recycling Corporation (www.rbrc.org) for USA and Canada, or your local battery recycling organization.

Some advices

Do not try to test the detector at home - in every house or even far from a house there are always too many electromagnetic interference (EMI) fields that will disturb the detector and you may think something's wrong.

Try to swipe the coil near the ground, but without touching it. Do not move it too fast. With practice, you will find the appropriate speed.

Respect the private property. Do not search in private property without permission - this could lead to serious legal, financial or other type of punishment.

Respect the law in your country about the protection of historical heritage and archeological sites. In all countries in Europe it is strictly prohibited to do metal detecting on or nearby archeological sites.

Good Luck!

TECHNICAL SPECIFICATIONS	
Operating Principle	PWM (Multiple-Pulse Width Modulation)
Wireless headphones 2.4gHz (optional)	Real time audio (Low Latency 12ms)
Audio tones	Mono or Bi-Tonal (user selectable)
Audio output	Speaker ot Wireless Headphones
Search Coils	PWM Fighter S: 5x7, 9.5, 13x11 and 18 inches
Weight	1.2 kg with 9.5 PWM Fighter S
Shaft length	adjustable
Battery (main)	Li-ION 5000 mAh
Power Authonomy (detector)	Up to 16 Hours (temperature depending)
Power Authonomy (WS107)	Up to 45 Hours (temperature depending)
Battery charging time	10-70% - 60 min. 10-80% - 90 min 10-100% - 240 min. 0-100% - 360 min.
Warranty	5 Year Warranty - the electronics 2 Year Warranty - the battery and the coil(s)
Charger	Two-port USB charger 5V, 3A with LCD with EU-standard wall socket
Operating Temperature Range	-10°C to +40°C (+14°F to +104°F)