

# Golden Mask DEEP HUNTER Pro3



**Golden Mask Deep Hunter Pro3** is a professional metal detector designed to detect deeply buried large metal objects (larger than 8 cm). It has the ability to indicate the type of the metal (ferrous / non-ferrous) and a filter system to significantly reduce interferences caused by power lines.

**Golden Mask Deep Hunter Pro3** is an advanced version of the well-known Golden Mask Deep Hunter Pro2, with newly developed full range "automatic ground balance" and trash reject control, and with significantly improved performance based on an entirely new electronics.

**Golden Mask Deep Hunter Pro3** has remarkable stability, sensitivity and accuracy that can be achieved with very simple and intuitive settings. The machine provides a possibility of adjusting the frequency of the sound indication and the sensitivity; full range automatic ground balance; trash reject function; "Silent" mode with two tone indication of the type of the metal target, and further amplification of the received signal (Boost mode), that increases the depth of detecting of metal objects up to 20%.

## 1. The Pro3 set

**1.1. Electronic block** with built-in 12.0V/3700 mAh NiMH battery, providing ~12 hours of use per charge. The electronic block is placed in a specially designed leather case with a carrying strap.

***It is recommended not to remove the leather case for the entire lifetime of the device.***

### 1.2. Search coils (antennas)

The detector is delivered with a variety of antennas specified by the customer when ordering or additional purchased from an authorized dealer.

***The use of self-made antennas or other bands and models is strictly prohibited! There is real risk of damage! Damage, caused by using non-genuine antennas is not covered by the general conditions of the guarantee!***

The main search coils of **Golden Mask Deep Hunter Pro3** is a square frame. It is made from PVC pipes, flanges and bends  $d = 32$  mm, that form the coil support. The antenna is a special cable-like loop, that is attached to the support frame with Velcro straps. To work with this type of antennas, you need an assistant.

For individual work (without assistant), round (hand) coils are available. These are attached to a stick. These coils are suitable for areas where the movement of the frame is impossible, as well on residential buildings areas (walls, floors, ceilings), the vertical slopes of the terrain and other specific areas.

### 1.3. Golden Mask extra special battery charger.

### 1.4. This Instruction manual

**2. Principle of operation** - high-frequency pulse induction (advanced version) with full range flash automatic ground exclusion and multichannel signal processing to identify the type of the metal.

### 3. Settings

**Golden Mask Deep Hunter Pro3** has extremely simple and intuitive settings, that includes 4 knobs (of these: 2 with switching function - one for switching-on the unit and 1 for the special Silent mode), 2 buttons, 1 switch and 1 special indicator:

- "**VOLUME On/Off**" - knob for adjusting the volume and "switch On" - "switch Off" of the detector;
- "**SENSITIVITY**" - knob to adjust the sensitivity of the detector;
- "**CRACKLE On/Off**"- knob for adjusting the frequency of the sound in absence of metal within the area of the search antenna;

In position "On." the detector is in its core search mode. The knob is used to adjust the frequency of the sound indication in the absence of metal in the area of the antenna. This is strictly individual adjustment and relates exclusively to the individual auditory characteristics of the operator. It does not affect the performance of the detector and is designed solely to provide a better detection of weak signals.

In position "Off." the detector is switched to "**Silent**" mode, with this mode the detector does not emit a crackle sound during the search. The the presence of a metal object in the area of the antenna is indicated by a **low tone** (for ferromagnetic metals - iron) or **high tone** (non-ferromagnetic metals - ferrous metals). In this mode, the detector's sensitivity is lower, but it is suitable for work in conditions of heterogeneous and/or highly mineralized soil, including the presence of ceramic residues and/or small metal objects that are not subject to searching.

- "**TRASH**" - knob for rejecting the undesirable small pieces of metal and noise reduction in extremely high mineralized soils. A higher value rejects more objects.
- "**RETUNE**" - button for quick readjustment the detector and removing the interferences during the search process.

- **"BOOST"** - switch the additional amplification of the received signal:

- **"OFF"** - *normal depth of detection;*

- **"ON"** - *about 20% extra depth of detection.*

(After turning the switch at "ON" position, the **"RETUNE"** must be pressed);

- **"SIGNAL"** – analogue meter indicating the strength of the received signal and the level of charge of the built-in battery; there are embedded 3 LEDs for indicating the type of the metal and the condition of the battery:

- **"Fe", "n-Fe"** - *LED indication of the type of metal* -

green for ferromagnetic metals and red for non-ferromagnetic metals;

- **"Battery!"** - LED for indicating less than 10% residual charge of the built-in battery, whereby it must be loaded (see #11);

- **"Battery Check"** - button to check the level of battery charge. This button can be used at any time. When the arrow is in the red sector, the battery should be charged!

#### **4. Eliminating the influence of soil (ground balance).**

**Golden Mask Deep Hunter Pro3** uses full range automatic ground balance based on the "flash auto ground balance" system - unique to this model. It doesn't need any settings and continuously rejects the signals generated by the soil during the searching. In extremely high mineralized soils the noises can be reduced by the **"TRASH"** control knob or by reducing the sensitivity of the detector - decrease the **"SENSITIVITY"** value and/or switch **Off** the **"BOOST"**.

#### **5. Search for metal objects with frame search coil**

**Golden Mask Deep Hunter Pro3** is designed to be used with big size search coils type "frame". This is the main way to search for deeply buried metal objects. The search coil is moved slowly at a constant height (**10 cm or more**) above the ground. Coils of type "frame" are delivered in the form of "coil-cable loop" in length corresponding to the respective size of the supporting frame and a set of plastic pipes and fittings for assembling the supporting structure of the frame.

The "coil-cable" is composed of series-connected conductors in multi-conductor special cable, which form a coil with certain parameters. It is mounted onto a frame of PVC pipes, joints and elbows, and fixed using the enclosed cable connections of type "Velcro". The connecting cable is plugged into the connector labeled **"Coil"**, which is mounted on the right edge of the front panel of the electronic block. The connector ring must be tightened after placing connector.

The search with a "frame" needs an assistant who helps the horizontal movement of the frame, using one of the enclosed belts. With another belt the operator brings the detector and determines the height and direction of movement.

There are other ways for individual work with search coil type "frame" in which the operator stands inside it and thus moves, holding both belts.

***Categorically prohibits the use of this method, and "entry" of the operator or another assistant inside the "frame" of a metal detector Golden Mask Deep Hunter detector while in working stage! Adverse effects of the electromagnetic field can lead to serious health problems and/or injuries!***

If you have not the possibility to use an assistant, a "dragging" of the search coil is recommended. For this purpose can be used a device of type "sledge", made of non-metallic materials. The sledge must provide a constant height (about 10 cm) of the frame from the ground surface.

The search should always begin with a brief pressing of the **"RETUNE"** button, the same is recommended to be carried out periodically during the search, in order to maintain maximum stability and sensitivity.

The movement of the antenna must be carried out in parallel strips (bands) that overlap by up to 30% in order not to miss a portion of the field. The speed of the movement should be up to 1m/s.

## 6. Search for metal objects with round (hand) antennas

When the terrain does not allow to search a "frame" coil, **Golden Mask Deep Hunter Pro3** can be used with round hand-held search coils (antennas) mounted on a special stick. Search with such antennas does not differ from the search with a "frame".

Since the detector is not designed to detect coins and small metal objects, with "hand" antenna should not be expected a detection of such objects. The main purpose of the round coil is to replace the "frame" in inaccessible areas and provide an opportunity for individual work (without assistant).

The movement with "hand" antenna should be done very slowly. Unlike traditional VLF metal detectors, using the principle of inductive balance, **Golden Mask Deep Hunter Pro3** can detect metal objects without motion. The movement is only necessary to identify the type of metal, a speed of about 1 m/s is sufficient for the discrimination system to function properly. The search height above the ground surface with "hand" antenna **must be 5 cm or more**. If you hold the coil too low or touch the ground, you will experience faulty signals.

All activities recommended for the use with antennas of type "frame" apply to the work with "hand" antennas.

## 7. Indication of the presence of a metal object in the antenna area

The signal from a metal object, located in the area of the search coil is indicated by increasing the frequency of the sound signal (the crackle).

Most weak signals an operator is able to register, are captured by doubling the preset frequency of the sound with the **"CRACKLE On/Off"** knob. This is perceived accurately by the human ear and therefore it needs to be set very precisely, so that the sound frequency without the presence of a signal to be only a few Hz (sounds like crackles).

Each "signal" has "start" and "end". **Golden Mask Deep Hunter Pro3** has a very well expressed "zone" indication from deeply buried metal objects with the use of a frame. The length of this "zone" is a guide to the depth/size of the metal objects. When this length is greater than the size of the search antenna and has an expressed peak in the

middle – this certainly refers to a deeply buried object. If the signal is of a short duration (area), but captures only a central part of the antenna, then you can also expect a deeply buried metal object. Two-time audible indication corresponding to the passage of the sides of the "frame" over the metal object are a sure indication of shallow buried and relatively small metal object.

The use of a round (hand) antenna gives a slightly different (more "short") signal compared to the frame.

After reaching a certain level of the signal level (which will be indicated on the indicator "**SIGNAL**"), the identification of the type of the metal through the LEDs mounted in the indicating "**SIGNAL**" will start to work. The **red color** indicates a non-ferromagnetic metals and **green** - for ferromagnetic metals (iron).

***The Discrimination function with PI detectors is not as secure as with the VLF detectors, this is a limitation of the technology that could not be surpassed. It is normal that a PI machine will not always show correctly the type of the metal.***

When you detect a target, move the antenna outside the target zone, press the "**RETUNE**" button and then pass the antenna over the target from a different direction. Repeat as many times as you want to identify more securely the type of the metal.

With the acquisition of some experience anyone can learn to recognize the nature of the various signals, which will lead to better use of the capabilities of the device.

## **8. The additional signal amplification ( "BOOST")**

The additional amplification of the received signal provides increased depth of detection (about 20%), but its use is recommended only after acquiring some experience in working with the unit, since increased sensitivity could lead to increased number of ghost signals.

Setting different values of the "**SENSITIVITY**", and using the extra gain with the "**BOOST**" button lead to different behavior of the device. You will better learn this with experience.

## 9. "Silent" mode

In "**silent**" mode the detector can be switched with the "**CRACKLE On/Off.**" knob, when it is set to "**Off**". This mode can be chosen at any time.

In "**silent**" mode the crackles are not heard and the presence of metal target will be indicated with a dual tone - "**high**" for **non-ferrous** metals, and "**low**" for ferrous metals.

In this mode the sensitivity is lower, but this mode is very suitable for highly "polluted" sites (where some small, mainly iron metal objects are present, and these objects are not a subject of the search ).

In "silent" mode, the detector achieves a better "rejection" of adverse metals (junk) and much more efficient search of objects with large size.

## 10. Rejection of small metal objects

Often, in the area where large metal objects are searched and the metal detector is set to high sensitivity, many (unwanted) small metal pieces could be indicated. Decreasing the sensitivity and/or use of "silent" mode sometimes could return acceptable results, but Golden Mask Deep Hunter Pro 3 provides the ability to eliminate small metal objects without reducing the sensitivity. For this purpose the "TRASH" knob is used. The lower the value selected with this knob, the smaller metal objects are detected. After doing some tests with multiple "samples" of different metallic objects, you will find out which values of the "TRASH" setting are best for your needs.

## 11. Charging the built-in battery

To ensure longer life of the built-in battery it must be charged only the supplied charger ***Golden Mask extra special battery charger.***

You should regularly check the charge level of the built-in battery with the button "**Battery Check**" (inspection is possible only when the detector is switched "On") and you have to stop the device after the red LED "Battery" (located in the lower right corner of the indicator) is lit.



***To charge the built battery:***

1. Turn "Off." the detector, remove the antenna jack and plug the charger jack in the connector labeled "Charge" on the front panel of the device.

2. Place the detector in an upright position near a power outlet with voltage 90 ÷ 240V and connect the automatic charger into the outlet.

The charging is indicated with a RED-color LED light on the charger housing.

When the charging process is completed, the LED light turns **blue**.

The duration of charge of an empty battery is about **10 ÷ 12 hours**.

When the charge is completed, remove the charger from the power socket and then remove the charger jack from the connector "Charge".

3. Turn "On" the detector and check the charge level by pressing "**Battery Check**" button. With a properly charged battery, the arm of the indicator must show a value greater than "7".

***If the reading is lower than 7, reconnect the charger and repeat the charging process!***

**12. Replacement of the built-in battery**

To replace the battery, you should contact the dealer the device was purchased from. The dealer will provide information on the rules and the conditions for battery replacement - warranty and post warranty.

Never replace the battery without consulting your dealer. Replacing the battery with a non-genuine one could damage the detector and leads to warranty void!

**13. Relative depth of detecting of metal objects in different modes**

**Golden Mask Deep Hunter Pro3** enables the operator to combine the settings of the device and its use in **4 different modes** of operation.

When working on "heavy soil" sites, modes with a lower number are preferred.

<b>Mode</b>	<b>CRACKLE</b>	<b>BOOST</b>	<b>Depth [%]</b>
1	Off.	Off.	65%
3	Off.	On.	75%
5.	On.	Off.	100%
8.	On.	On.	120%

**NOTES:**

**1.** If, at time of search, random disturbances or prolonged change the frequency of the sound signal (false signals) appear – the RETUNE must be pressed.

This action can be repeated several times to ensure complete elimination of the interference. Reducing the sensitivity and/or exclude the additional signal amplification "**BOOST**" will also reduce interferences.

**2.** To maximize the sensitivity and the stability of the device during operation, it is advisable to press the "**RETUNE**" button every 30-90 seconds.

**3.** When switching "Off" the detector, the red LED "**Battery!**" will be lit for a second or two. This is not a problem with the battery. Only when this LED lights-up when the detector is turned "On" (running), then you should proceed to charge the battery.

**4.** Keep permanent height of the coil above the surface during the search to ensure optimal functioning of the systems to eliminate the influence of the ground and the maximum depth of detecting.

5. Do not use (or leave) the detector in a humid environment, wet bushes, snow and/or water – the electronic block could be damaged (it is not sealed). When you connect the antenna to the electronics, you should prevent the ingress of water or moisture in and around the contact pins of the connectors.
6. Work with the detector in industrial areas and places with a large amount of metal junk in the soil, and with presence of industrial electromagnetic interferences, can lead to instability and/or inability to work. This requires reducing the sensitivity of the device with the "**SENSITIVITY**" knob, which will reduce the depth of detection, but this is the only way to achieve stability in such conditions.
7. After extensive work with the detector, with repeatedly accession and separation of the search coil (antenna) connector, the connector could be damaged, that's why these activities should be carried out very precisely and carefully. Contact points of the connector should be kept clean and dry.
8. If the indicator "**SIGNAL**" shows a negative value (arrow deviates to the left of zero) after lifting the antenna from the ground, this means that under the antenna was a metallic object. In such case, move the antenna to another location, turn on the device again, press briefly the "**RETUNE**" button and start the search.
9. Switch-on the detector for about 15 minutes in the area of search before starting to search for metal objects. During this time the Deep Hunter electronics are self-adjusted to the ambient temperature and the detector reaches its optimum parameters.
10. Do not attempt to use the detector after the built-in battery is discharged. This can result to damage of the battery and/or the electronics.

**11.** Always keep the electronics clean from dust, moisture and fat. Use only dry and soft cotton cloth for cleaning.

**12.** *If you use the detector in war areas - where it is possible the presence of buried weapons and/or explosives, you must provide all precautions. The manufacturer and the dealers are not responsible for the consequences resulting from such use of the detector.*

**13.** If you are looking for metal objects in areas where there could be underground lines, you must call the relevant authorities responsible for the maintenance of these lines for a permission. Do not perform excavation without their permission. This is especially important for regions in and around the settlements and industrial sites. The same goes for underground gas supply installations, oil and/or fuel pipes etc.

**14.** The use of high-quality headphones (not supplied with the detector) connected to the socket "**PHONES**" will help achieve better results.

***The manufacturer and dealer are not liable for damages or injuries that could result from digging up the soil.***

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