

GOLDEN MASK DEEP HUNTER PRO



Golden mask Deep Hunter pro is a professional metal detector designed specifically to detect deeply buried larger metal objects (such sizes larger than 8 cm). He has the ability to indicate the type of metal and system to significantly reduce interference caused by power lines.

Golden mask Deep Hunter pro is our well-known pulse detector now with new front panel design and significantly improved performance based on an entirely new electronics.

Golden mask Deep Hunter pro has remarkable stability, sensitivity and accuracy that can be achieved with very simple and intuitive settings. The apparatus provides a possibility of adjusting the frequency of the sound indication and sensitivity; ground balance; "Silent" mode with two tone

indication of the type of metal, and further amplify the received signal, which increases the depth of detecting metal objects up to 20%.

1. Complete the device

1.1. Electronic block with built 12.0V/2500 mAh NiMH battery provides about 8 hours of use per charge. The electronic block is placed in a specially designed leather case with a handy carrying strap during operation.

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

1.2. Search coils (antennas)

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

Not recommended the use of self-made antennas or other models like the original! There is a real risk of damage that is not covered by the general conditions of the guarantee!

The main antenna of **Golden mask Deep Hunter pro** is a square frame. It is made from PVC pipes, flanges and bends $d = 32$ mm, on which with the help of cable ties Velcro type mounted antenna, which is made of special multi-conductor cable. To work with this antenna you need an assistant.

Individual work with the appliance are available round (hand) antennas that attach to stick to wear. These antennas are suitable for areas where the movement frame is impossible, as well as demand in residential buildings (walls, floors, ceilings), the vertical slopes of the terrain and other specific areas to search for buried metal objects.

1.3. Golden Mask extra special battery charger.

1.4. This Instruction

2. Principle of operation - high-frequency pulse induction (advanced version) with multi-channel signal processing to identify the type of metal.

3. Settings and display

Golden mask Deep Hunter pro uses extremely simple intuitive operation, which includes 4 potentiometer (of these 2 with keys - one for switching the unit and 1 for the inclusion of special modes), 2 buttons, 1 switch and 1 special indicator:

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

In position "On." Detector is in its core search mode. The potentiometer 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, in which during the search does not provide an audible sound and 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 detectors 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.

- **"GROUND"** – precise 10 - turn potentiometer for setting the system to eliminate the influence of ground.

- **"RETUNE"** - button for quick readjustment of the detector and remove the interference in the searching process.

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

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

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

(After turning in the "ON" position must be made initial system setup to eliminate the influence of ground);

- **"SIGNAL"** – analogue meter indicating the strength of the received signal and level of charge the built-in battery; there are embedded 3 LEDs for indicating the type of 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 the built-in battery, whereby it must be loaded (see item 8);

- **"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).

Using manual method to eliminate the influence of ground requires an initial setup. The purpose of this adjustment is to remove the signal caused by soil which for the detector is a "subject" similar to metal. The device is able to subsequently fine-automatically be retuned to changes in the level of soil signal

(the signal from the ground), but it is necessary to set the initial level, which in different areas may be different. This is done in order to exploit the maximum sensitivity of the device in all areas. The process is known as "Ground Balance" and have to be done mandatory before beginning of work, no matter what the environment in which we are looking for metal objects.

This process includes the following activities:

1. Search antenna must be placed on the ground in an area where it is assumed that no buried metal objects.

2. The potentiometer "**CRACKLE On/Off**" should be set to "**5**".

3. Set the value of the desired sensitivity of the device (depth of detection) with potentiometer "**SENSITIVITY**" (larger values provide high sensitivity).

The values that are selected depend on the nature of the environment in which will be done searching - in "light" soil can be initiated with values around "**7**" ÷ "**9**"; in "heavier" soil it is better to choose the value "**5**" or less in the scale of the potentiometer. Subsequently, this value can be increased to the maximum possible for the conditions.

4. Turn potentiometer "**GROUND**" in the direction counterclockwise to stop. Then turn it in the direction clockwise to do 5 turns. Such way it will be set it in its middle position.

5. Turn the "**VOLUME On/Off**" in a clockwise direction to be switched "**On**" the detector and set the level of the volume. Values around "**6**" ÷ "**8**" on the scale of the potentiometer are usually sufficient for the job.

6. Turn "**GROUND**" in the direction counterclockwise to the emergence of sound - "hum" or "pop" (setup known as "threshold").

Achieving such a setup is very important for a successful operation and maximize the potential of the detector.

7. Lift the antenna above ground surface to the height at which it will be used during the search (about **10 cm**).

If after lifting the antenna needle on the meter "**SIGNAL**" deviate to the left of the position "0", this means that under the antenna was metallic object and the initial setting is not performed correctly. *Move the antenna to another location and repeat actions 1 to 7.*

8. Press and relies button "**RETUNE**".

9. By the potentiometer "**CRACKLE On/Off**" can be tuned the frequency of the sound that will be heard during the searching when there are no metal in the antenna area.

When there are the presence of a metal object within the scope of the search antenna this sound began to increase in frequency. In order to detect the smallest changes in the frequency of the sound indication it is very important the choice of initial frequency tuning. This setting is highly individualized and performed "by ear." While working with the accumulation of experience operator will establish the most appropriate setting for yourself.

10. Again pressure for a short time and release button "**RETUNE**".

After completion of the above actions setting is completed and the detector can be used to detect metal objects.

5. Search for metal objects with frame antenna

Golden mask Deep Hunter pro is designed to be used with big size antenna type "frame". This is the main way to search for deeply buried metal objects. The antenna should be moved slowly at a constant height (**about 10 cm or more**) above the ground. Antennas type "frame" is delivered in the form of

"antenna cable" in length corresponding to the respective size of the frame and a set of plastic pipes and fittings for assembling the supporting structure of the frame.

The "antenna - cable" is composed of series-connected conductors in multi-conductor special cable, which form a coil with certain parameters. It is mounted onto frame of PVC pipes, joints and elbows, and fixed using the enclosed cable connections 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. Connecting cable must be tightened after placing connector.

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

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

Categorically prohibits the use of this method, and "entry" to the operator or another assistant on the "framework" of a metal detector Golden mask Deep Hunter pro detector in working!

Adverse effects of the electromagnetic field can lead to serious health problems and / or injuries!

Failing to work with assistant recommended "dragging" of the antenna for this purpose can be used device type "sledge" made of non-metallic materials. This device must provide a constant height (about 10 cm) frame above the ground.

Demand should always begin with a brief pressing the "**RETUNE**", which is recommended to be carried out periodically during the search, in order to maintain maximum sensitivity.

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

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

When the terrain does not allow search "frame" **Golden mask Deep Hunter pro** can be used with smaller (round, "hand") searching coils (antennas) mounted on a special stick for individual work. Search with such antennas does not differ materially search "frame".

Since the detector is not designed to detect coins and small metal objects with "hand" antenna should not be expected to detect these objects. Its purpose is to replace the "frame" in inaccessible areas and provide an opportunity for individual work (without assistant).

Moving with "hand" antenna should be carried out very slowly. Unlike traditional VLF metal detectors using the principle of inductive balance, **Golden mask Deep Hunter pro** can detect metal objects without motion. The movement is only necessary to identify the type of metal, such as speed of about 1 m/s is sufficient. The search height above surface with "hand" antenna **must be about 5 cm or more.**

All activities recommended for use with antenna type "frame" apply to work with "hand" antenna.

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

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

Most weak signals, the operator can register are captured by doubling the preset frequency of sound with **"CRACKLE On/Off"**. 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 pro** has very well expressed "zone" indication signals from deeply buried metal objects in search with frame. The length of this "zone" is a guide to the depth of the metal objects. When this length is greater than the size of the search antenna and has a characteristic peak in the middle - 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 also expected discovery of deeply buried metal object. Two-time audible indication corresponding to the passage of the sides of the "frame" over the metal object are sure indication of shallow buried small metal objects.

The use of round (hand) antenna gives a slightly different (more "short") signal compared to the frame. This is due to the physical size of the antenna and must be considered in determining the area where the expected opening of the metal object.

After reaching a certain level of the signal (which will be observed in the indicator "**SIGNAL**"), it will be carried out indication of the type of the metal through the LEDs mounted in the indicating "**SIGNAL**". The **red color** indicates a non-ferromagnetic metals and **green** - for ferromagnetic metals (iron).

There may be a discrepancy and indication of the type of metal as it depends on many factors which impulse metal detectors can not always be accounted for properly.

Once "detected" metal object is repeated over alleged passing zone, outside zone press briefly and relies button "**RETUNE**" and then passes from different directions.

With the acquisition of some experience anyone can learn to recognize the nature of the various signals, which will guide him in making better use of the capabilities of the device. It depends to some extent and precise adjustment of the ground balance and properly selected starting frequency sound indication.

8. The additional signal amplification ("BOOST")

The additional amplification of the received signal provides increased depth of detection, but its use is recommended only after acquiring some experience in working with the unit.

After turning **"ON"** the **"BOOST"** set potentiometer **"SENSITIVITY"** to **"5"**. All settings are carried out as specified in item 4.

Turn clockwise **"SENSITIVITY"** to the highest value which is possible to achieve the setting "threshold".

It should be recognized that setting the apparatus of "threshold" can be performed by **"GROUND"**, and/or by **"SENSITIVITY"**, and depending on whether it is included further amplification of the signal, the set-point will be different.

Working with different values of **"SENSITIVITY"**, and using the extra gain with **"BOOST"** assume different behavior of the device.

9. "Silent" mode

In **"silent"** mode detector can be switched with potentiometer **"CRACKLE On/Off."** set to **"Off"**. This mode can be choose at any time of searching process.

In **"silent"** mode the crackles are not hear and presents of metal will be indicate with dual tone - **"high"** - for **non-ferrous** metals and **"low"** - for ferrous metals.

In this mode the sensitivity is lower, but this mode is particularly suitable for highly "polluted" sites (where available numerous small, mainly iron, metal objects that are not subject of searching).

In "silent" mode achieves a "rejection" of adverse metals and much more efficient search of objects with larger sizes.

10. Charging the built-in battery

To ensure maximum longevity of the built-in battery it has to use to charge only the supplied charger *Golden Mask extra special battery charger*.

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

To make a charging built battery:

1. Turn "Off." the detector, remove the antenna jack of "Coil" and turn charger jack in connector labeled "Charge" on the front panel of device.
2. Place the detector in an upright position near the contact voltage $90 \div 240V$ and connect the automatic charger into an outlet.

It flashing LED mounted in the housing charger in **red** color..

In this state the LED remains until the charging process is complete, then it turns **blue** color.

The duration of charge when worn battery is about **6 ÷ 8 hours**.

Remove the charger from the socket and then remove its jack from the connector "Charge".

3. Turn "On" the detector and check the charge level by pressing "**Battery Check**" button.

When properly flowed process of loading arms indicator must show a value greater than "7".

If the reading is lower reconnect the charger and repeat charging.

11. Replace the built-in battery

To replace the battery should contact the dealer from whom it was purchased metal detector. It will provide information on how the rules and conditions for replacement - warranty and post warranty.

Categorically prohibit any attempts to be replaced with integrated battery other than those offered by the manufacturer batteries.

10. Relativity depth of detecting metal objects in different modes

Golden Mask Deep Hunter pro 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 are preferred modes with a lower number.

The relative depth of detection is determined based **mode №3** at equal values of the potentiometer for adjusting the sensitivity **SENSITIVITY**.

Mode	CRACKLE	BOOST	Depth [%]
1	Off.	Off.	70%
2	Off.	On.	80%
3	On.	Off.	100%
4	On.	On.	120%

NOTES:

1. After the initial ground balance was done the value of potentiometer "**GROUND**" may be increased to one - two graduations on the scale. This setting is made more "rough" sensitivity of the device and depth decreases slightly, but achieved greater stability and higher accuracy readings of the system to recognize the type of metal.

2. During the initial setup ground balance do not switch the detector in "**silent**" mode!

3. Use the further gain of the received signal "**BOOST**" requires mandatory doing a new initial setup.

4. If at work appear random disturbances or prolonged change the frequency of the sound signal (false signals) - must be pressed briefly "**RETUNE**".

This action can be repeated several times until no interference to carry out a new initial setting in "manual ground balance" or reduce the sensitivity and/or exclude additional signal amplification "**BOOST**" in "automatic ground balance" (item 4).

5. When switch "Off" detector can be observed for some time lights LED "**Battery!**". This is not a problem with the battery. Only when this indicator lights up when turned "On" (running) machine, then you should proceed to charge the built-in battery.

6. To maximize the potential of the device during operation it is advisable to pressure short "**RETUNE**" from time to time.

7. Keeping permanent height above surface during the search will ensure optimal functioning of the systems to eliminate the influence of ground and thus the maximum depth of detecting metal objects.

8. Do not use (or leave) the detector in a humid environment, wet bushes, snow and/or water – it cannot work stability and can be damaged electronic block (not sealed) and built-in battery. When you connect the antenna to the electronics must prevent the ingress of water or moisture in and around the contact pins of the connectors.

9. Work with the detector in industrial areas and places with a large amount of scrap metal in the soil, and presence of industrial electromagnetic interference can manifest instability and/or inability to work. This necessarily requires reducing the sensitivity of the device with the potentiometer "**SENSITIVITY**", which will reduce the depth of detection, but this is the only way to achieve stability and demand in such conditions.

10. After extensive work with the detector, suggesting repeatedly accession and separation of the antenna may appear defect connectors, which is why these activities should be carried out very precisely and carefully. Contact points should be kept clean and dry.

11. If after lifting the antenna from the ground indicator "**SIGNAL**" show a negative value (arrow deviates to the left of zero), this means that under the antenna was metallic object during the preparation of the unit to work.

In such a case - move the antenna to another location, turn on the device again and do again initial settings (item 4), then press briefly button "RETUNE" and continue the search.

12. Please leave the detector switched "On" for about 15 minutes in the area of work before it can be used to search for metal objects. During this time the electronics are "self-adjust" to the ambient temperature and the detector reaches optimum operation.

13. Do not attempt to use the detector after tripping indication consumed charge the built-in battery. This can result in damage to electronics.

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

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

16. If you are looking for metal objects in areas where it is possible to be laid underground lines on the grid - must call the relevant authorities responsible for the maintenance of these lines or 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 of oil and/or fuel and other underground facilities.

17. The use of high-quality headphones (not available at box) connected to the socket "PHONES" helps achieve even results.

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

WARRANTY AND SERVICE

Warranty card № _____ / Date: _____

User: _____

Dealer: _____

The **Golden Mask Deep Hunter *pro*** metal detector has a **5-year** warranty of the electronics covering the labor costs and materials, and damages not resulting from deliberate or negligent actions.

The warranty is voided in the cases of mechanical damage to the respective components, incorrect use or unauthorized access and repair (opening of the electronic block or the power block, wearing, breaking or damaging the search coil, the cable and cable plug, damaging the battery as a result of using other chargers, using incompatible search coils). To undergo repair under warranty, the metal detector must be shipped to our service office.

All shipment and delivery fees are paid by the customer.

Description of warranty problems:

№	Date	Description of a problem	Solution