INSTRUCTIONS FOR OPERATION WITH METALDETECTOR

„ Golden Mask 3+''

Power Box

Golden Mask 3+ Power Box - modification of the basic model **Golden Mask 3** with two additional features:

-DPT (dual power tehnology) Extra multifunctional, which allows increasing the depth of search with 30%. In this mode, the detector consumes additional power, but at the expense of this will be a finger in front of others.

- **Frequency adjustment -** This new feature allows you to adjust the frequency of work to eliminate unwanted interference of some industrial work or other metaldetectors near you.

Golden Mask 3+ Power Box is specifically designed to provide maximum efficiency in all types of soils. In practice, the machine represents a set of Golden Mask 1 and Golden Mask 2 in one metaldetector, and by switching you select modes of operations, automatical for strongly mineralized soils * and in the presence of iron pollutants or manually to achieve greater depth in soils with low mineralization. The detector uses search coil with a wide range of scanning (Double D) thanks to it the machine works much better in mineralized soil, and thanks to the geometry of the drill it allows better penetration into the ground. Golden Mask 3 + Power Box is made by quality components and materials to ensure maximum life of the detector.

mineralized soil * description of soil, which has natural magnetic features, or become so because of human activity(iron waste or terracotta). The term does not include beach sand, which is not magnetic, but only conductive.

QUALITIES

-New **10.5"** search coil, made by **ABS** and special design for better mechanical and temperature stability.

- Special cable made from high quality materials with total armour in order to provide greater mechanical strength and long operating life of the drill

-Light and strong boxes from **ABS**

-Light detector with perfect balance

-Strong handle

- Rod of three parts

- Lower rod of Carbonia

- Smart automatic charger specifically designed for metaldetectors **Golden Mask**
- 5 years warranty of electronics

SPECIFICATION

- Operating frequency - 8,2 kHz.
- Operation- with **motion**
- Automatic ground balance
- Manual ground balance
- Sound separation of metals
- Adjusting the degree of separation of metals
- Adjusting the depth of search
- Further increase the depth of slightly mineralized soil
- **DPT (dual power tehnology)**
- **Frequency adjustment**
- Volume adjusting
- New, fully redesigned electronics, combining efficiency and high level of sensitivity.
- Charger - 10 battery pack 1.2V AA / 2500mAh
- Time of working after charge - min. 10 h.
- LED control for the state of battery
- Headphones jack

4. Structure of the instrument

Metaldetector consists of five parts: **1**.coil, **2**. rack, connecting the coil to the electronic block, **3**. electronic block, **4**.arm support и **5**.battery box.

Standart coil

Standart coil of **Golden Mask 3+** is with size **10.5"** (26.5cm) DD. The construction of coil is plastic- **ABS** , and at the bottom is overflowed with epoxy resin, which creates more strength and hermetic sealing of the entire structure. Coil has a good sensitivity to both small and large objects to.

Additional coils

DD 12.5" (32см) 15"(38см).

Coils of small dimensions have better sensitivity for small objects (coins) and they are prefered to operat in highly polluted areas.The large drills(DD32,DD38см) have better sensitivity to large objects, suitable for quick search of buried objects and they have 10-20% better sensitivity than DD 26.6 cm.

rack

The rack is made of aluminum tube, which at the bottom to the coil is made of Carbonic (not metal), so it won't hinder the work of the drill.

Box of electronics

Made of ABS plastic and is very strong !

Arm support

It is made of aluminum profile for greater strength. In the front end of the handle is arm supporter which is lined with foam coverage.

Battery box

The box is made of plastic. There are a set of 10 batteries AA NiMh- 1,2V/2500mAh.

5 . Assembly and disassembly of the instrument

Take the bottom (rack of Carbonic) put rubber sealing in outlets of the rack and insert it in the crevice (ears) of the coil , till the outlets in the ears and the rack fall in. Insert the plastic bolt in the hole and strongly pinch him to get out from the other end, turn the plastic nut to tighten slightly.

Attention :

When the rubber sealings wear out they should be replaced, over tighting of nuts as a result of worn rubber seals leads to deformation of the ears and doubling of the search drill . Deformation of the drill greatly worsen parameters of the detector!

Then take the second part develop the plastic nut 6 and Insert it into carbon rack, with this telescopic connection you can adjust the total length of the rack depending on your height making sure the distance between the aluminum part and searching drill to be greater than 30 centimeters. Fixing the length is done by tightening the plastic nut.

Take part with the electronics, develop the large plastic nut 7 of the tube and insert in it the rack with the drill. Then back to the thread and screw it tight so that the Detector can not move to rack. Wind up the cable around the rack, and at the bottom end next to the rack put an "ear" of cable, so it should not be interrupted when the cable reel in the retraction of the transport situation.

Attention:

90% of the damage in detectors are becaouse of broken wires due to the negligent of the users!
then plug the cable in the socket of the detector and tighten it effortlessly. After this manipulation the detector is ready for use. Dismantling of the instrument is performed in reverse sequence.

6. Authorities to manage and operate the instrument**.**

Authorities for manage

- • switch,, GB"serves as a switching operation modes (manual and automatic ground balance)
- • Potentiometer,, THRESHOLD"- serves to set the required sound level and adjusts the depth of the detector;
- • Potentiometer,, SENS "- serves to further increase the depth of detection of metal objects in slightly mineralized soil ;
- • Potentiometer (located under the box with electronics) regulate working frequency of 200 Hz;

• switch (located under the box with electronics) used for inclusion and exclusion of high power radiated from the drill;

- • Potentiometer,, GROUND BALANCE "- serves to eliminate the influence of the soil on the work when in manual mode ground balance;
- • switch,, AUDIO DISC"- with him you determine the depth of segregation of metal objects in manual mode ground balance, 50% depth of discrimination under,, NORM "and 90% under,, FULL" ;
- • switch,, VCO DISC "- serves to include discrimination oф multy-toned manual mode ground balance.
- • Potentiometer,, DISC LEVEL "- adjusts the degree of rejection of the iron objects;
- • Potentiometer,, VOLUME "- serves as a trigger detector and determine the volume;
- • Plug,, HEADPHONES "- it includes where to put mono headset;
- • Led "LOW BATTERY"-indicator of the reduced voltage of the battery;

Working with the detector

Switching on the detector iis made by Potentiometer,, VOLUME ", and it also regulates the volume**.**
Choose the power that the detector will work - high power"(mode,, TURBO "), the switch is placed in a position to the search drill or in mode "normal power ", switch is placed in position to the operator - (Fig.1)

fig.1

1. Setup mode of the detector in mode," manual ground balance ".

Switch,, GB "is placed in position,, MANUAL ” .
he keys,, AUDIO DISC "and,, VCO DISC" is placed in position,, OFF ".
Potentiometer,, THRESHOLD "is placed in a situation where the detector may slightly make a little noise,,.
Potentiometer,, FREQUENCY ADJUSTMENT "under the box of electronics (Fig.1) must be turn to a situation in which the sound level is normal. Search coil begins to move vertically to the ground (top-down: 3 to 20 - 25 centimeters. Above the surface (Fig.2) and Potentiometer,, GROUND BALANCE"must be spinning slowly ....

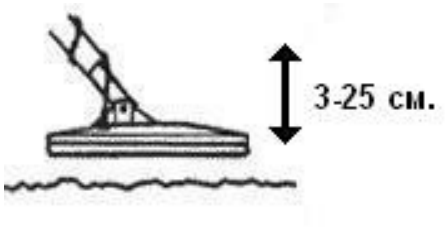

fig.2

In one extreme position of the volume is increased when approaching the head to the ground and the other away from the ground, Potentiometer is spinning until the sound ceases to be altered or changed minimally.

Attention:
If you have difficulty in balancing the detector, its good that the Potentiometer,, SENS "to be placed in, position 1,, on scale. In the work of mineralized soils is advisable to operate at low power!
In balancing the detector around it there should not be any metal objects!
If during the operation you change the working power detector, ground Balance must be adjusted again.

The search for metal objects is made by movement of the search drill against the ground (fig.3, fig.4). Always move the search drill close to the ground, lifting reduces the depth of search! Movement should be as smooth as possible, In the fast movements of the search coil (fig.3) is located on easy surface metals, slow movements are suitable for quick search of deep buried metal objects.

фиг.3

фиг.4

The exact location of the metal is made with the movement of searching coil in two perpendicular axes (Fig. 5).

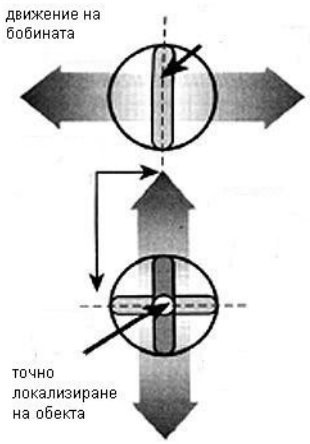

fig. 5

Separation of metals takes place through two sound discriminators.

1. Operating with audio discriminator.
- The key,, VCO DISC "is placed in position,, OFF" and,, AUDIO DISC "in the heading,, NORM" or,, FULL " (for better discrimination of deeply buried iron objects), Potentiometer,, DISC LEVEL"in position 4. In the greater number of,, DISC LEVEL"the separation of metal is better! If you want to discriminate against most non-ferrous metals on the surface (modern pollutants), the situation of Potentiometer must be over 7. In case of non-ferrous metals (gold, silver, copper, bronze) resonant sound is heard, and in the presence of black metal (iron) is heard tear or pop sound.

2. Operating with,, VCO "discriminator.
- the key,, VCO DISC "is placed in position,, ON", a,, AUDIO DISC "in position,, OFF", Potentiometer,, DISC LEVEL"in position 4. If you want to discriminate most of the non-ferrous metal on the surface (modern pollutants) Potentiometer position should be above 7. In case of non-ferrous metals (gold, silver, copper, bronze)high-tone is heard, and in the presence of black metal (iron) is heard a low tone.

2. Setting the Detector in mode, automatic ground balance.

Setting the power of the detector that will work - mode,, TURBO "(switch is placed in a position to demand searching drill) or mode, normal power (switch is placed in position the to operator) (Fig.1)
Switch,, GB "is placed in position,, AUTO ” .
keys,, AUDIO DISC "and,, VCO DISC" are placed in position,, OFF". In this mode the potentiometer,, GROUND BALANCE "and,, SENS" do not work, ie no matter in what position they are.
The depth of detection of metal objects depends on the position of the Potentiometer,, THRESHOLD " For maximum depth, the potentiometer must turned right to the maximum sound level**.**

The power of separation of the metals is determined by the Potentiometer,, DISC LEVEL "(greater position of the metals division is better), in the presence of non-ferrous metals (gold, silver, copper, bronze) resonant sound is heard, and in the presence of black metal (iron) could be heard crackling sound or tear. If you want to eliminate most pollutants from modern non-ferrous metals (foil caps, etc..) position of the Potentiometer should be 8-10 scale.
Searching for metal objects is made through movement of the search rack against the ground (fig.3, fig.4). Always move the search rack close to the ground, lifting reduces the depth of search! Movement should be made smoothly , In the fast movements of the search rack (fig.3)are easyly located surface metals, slow movements are suitable for searching of buried metal objects.
The exact location of the metal is made by the movement of searching head in two perpendicular axes (Fig. 5).

7. Depth of detection of metal objects

The depth of detection of metal objects dependents on several factors.

1 .The higher the area of the metal object is, the depth of detection is greater!

2. From location against the searching drill

Horizontally located coins (objects) are detected in greater depth!

3. The type of soil

In mineralized soil depth the detection is less, respectively in sandy soil depth is greater!

4. By power of discrimination

Each metal detector regardless of the model has the most depth in mode without discrimination (mode ALL METAL). As more is the separation of metals (discrimination) more is reduced the depth of detection. In soils with low mineralization, the power of discrimination affects less the ie depth indicators are very similar to those in mode,, ALL METALL"!

5. The size of the search coil

Small search drills find better small metal objects (coins). Large drills> 32 cm are appropriate and have a greater depth of search for large objects!

6. From the time that is overripe metal objects in the ground.

Signals from a metal objects resident more than 5-6 months. is 2-3% more intense than at the time of burial!

7. The experience and skills of the operator!

8. Charging the batteries.

Charging of the battery can be

The batteries have about 500-600 charge cycles - before discharge damage, however that's values achievable in ideal laboratory terms.

The detector is complete with 2500 mAh NiMH batteries. Before you start working batteries must be charged. Charging is made by the automatic charger offered in sets. With one charging the detector can operate 10h. in mode, high power " (**TURBO**) And 50 h under normal power. (use of headsets significantly extends the time of work**)**.

If progress of working the lamp "Low battery" lights, this should be a signal to terminate the work and charge the battery. Plug the charger to the socket "CHARGE" and turn the device to a network of 220V Indicator of the presence of charge is a red led on the charger. Charging continues 5h depending on the degree of discharge of the battery and its capacity, after its

finished the charge diodes begin to shine in green. It is not necessary to monitor the charger as it is with automatically shut down and the battery won't be damaged, no matter how many hours will be charged.
Back row switch off the network of 220V and remove from socket "CHARGE **"**.
Battery can be charged by the lighter of your car by special charger! Follow the instructions for operating with the charger.
To ensure maximum life of your rechargeable battery:

- Don't disconnect the battery charge before it is completed
- charge the battery when it is completely down
- Use only chargers which are equipped with detector

Charger has the following additional options:
- indication of polarization of the battery or short circuit in the cable-blinking red LED.

9. Practical advice

Keep your detector of penetration of water (rain or snow) in the box with electronics and the boz with the batteries, that can damage your detector! It can be used safely in wet grass because of the hermetic searching drill.

Attention:

Avoid leaving the detector on wet grass or snow, because of the possibility of penetration of moisture in the block of electronics and especially in the box of batteries!
When assembling the detector in terms of dew or snow keep the cable from wetting!

Working with the detector in urban and industrial areas may be hampered due to electromagnetic interference and a modern iron contaminants, for normal operation of the detector it is necessary to reduce the sound threshold (THRESHOLD) and increasing the power of discrimination (**DISC LEVEL**) which in turn leads to reduced depth of the search.

Use only high quality headphones, preferably with built-in Potentiometer for adjusting the sound

It's possible after working long and repeated inclusion and exclusion of the cable to the plug receptacle on the box to deteriorate the contact between them (if gentle touch of the plug of the cable with a hand the detector make a sound like its metal). It is necessary to carefully clean the contact plates of the plug of the cable with a thin needle, for more good contact slightly tide in all openings of the plug.

Do not switch on the detector when there are large amplitudes in temperature outside and inside the warm room. Wait about 20-30 minutes, until the machine is tempered and then started.

Do not switch on the detector at a time when the batteries are charging. This can damage electronics.

After working with the detector blow dust and sand on it and wipe with a wet cloth. Do not use cleaning alcohol, petrol , koreselin or other solvents, because it will remove the credits on the electronic panel. If you work in areas where they can be localized ammunition or other explosives, be careful with the excavation because the manufacturer is not responsible for your actions and deeds.

10. Accessories

1. Additional coils:

- DD 10.5"(26,6см)
- DD 12.5" (32см) 15"(38см)

2. Automatic charger for 220V
2. Charger for 12V car cigarette lighter
3. Rechargeable batteries 2500 mAh (increased time to work up to 50ch.)
4. Bag for transport and storage

11 . Warranty and maintenance service

Detector Golden Mask 3 + has 5 years warranty on electronics for work and materials, for damages not caused deliberately or irresponsibly.

The warranty is void if failure of the relevant mechanical components, improper unauthorized use or access and repair (opening of the electronic block, opening the power block, wear out, destruction or injury of the search drill, the cable receptacle or its plug, the battery as a result of charge with other chargers, equipment damage due to inconsistent inclusion of search drill).

To be repaired in warranty, it must be delivered to our service. All costs of delivery and transport are for the customer.

12 LEGISLATION

Possession and use of e detector is completely legal, long as they comply with existing legislation. For this case, do not search in private property without the consent of the owner, national parks and archeological reserves!