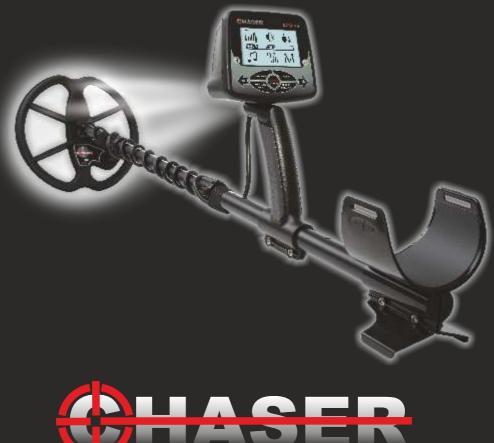


# PROFESSIONAL METAL DETECTOR **ALL TERRAIN**





INSTRUCTION MANUAL



# ASSEMBLING YOUR DETECTOR

Your detector is equipped with an entirely new type telescopic shaft. It consists of three parts: upper, middle and lower shaft. The lower shaft is made of fiber glass enforced polymer. The middle and upper shafts are made of 100% carbon, which makes them extremely strong, and very light at the same time. The shaft is designed in a way, that even very tall operators to be conveniently working with it in its full length position, and in maximum shorten position allows convenient operation even by children.

More data of the sizes you could find in the specifications chart.

The three parts of the handling are locked by two num-lock rings. These are made of enforced polymer. They tighten very well the three parts of the shaft and make the telescopic handling very stable while sweeping the coil.

The handle of the shaft is ergonomic, with continuously various regulation of the distance to the arm-rest, very well fitting to the hand. The arm-rest is padded with genuine leather and creates the sensation of pleasant touch, and limits hand's sweating. To the arm-rest there is an arm-rest strap for better tightening the arm-rest to the operator's hand.

The detector is extremely well balanced. It is easy for assembling and disassembling. Convenient for operation, and in folded position very convenient for transportation. In the next few steps we'll explain you how to assemble your detector in the easiest way.

- 1. Unscrew the num-lock ring of the upper shaft and pull out the middle shaft (it will move together with the lower shaft). Look for the coincidence of the white lines of the upper and the middle shaft. We recommend to pull out until the snap button clicks into the second(recommended) adjustment hole of the upper shaft. If the detector will be operated by a low height person the snap button could click into the first adjustment hole of the upper shaft (the nearest to the control box adjustment hole). After you have chosen the length of the handling you could tighten the locking ring of the upper shaft.
- 2. Unscrew the num-lock ring of the middle shaft and pull out the lower shaft. Connect the searchcoil and slightly tighten the thumb nut on the mounting screw. When pooling out the lower shaft its snap button will click into one of the six holes of the middle shaft. After you choose the necessary length tighten the num-lock ring of the middle shaft. Adjust the coil in working position toward the ground and tighten by hand the thumb nut on the mounting screw.
- 3. Check whether the cable is wrapped well, but not too tightly, around the shaft. Do not allow the cable to flop loosely over the searchcoil. Since the detector is sensitive enough a floppy cable can cause false signals, as the coil senses the moving wires of the cable. To secure the coil cable you should fix it to the lower and upper end of the handling with the two cable retainers.



Figure 1

# ASSEMBLING YOUR DETECTOR

The length of the handling should be adjusted so that the detector does not become tiring or uncomfortable after long use. The detector grip should rest in your hand with your arm relaxed, with the shaft extending out in front of you. You should be able to swing the detector back and forth in front of you, using relaxed shoulder movement. The search coil should not touch the ground during your sweep. The angle of the search coil should allow its bottom to be parallel to the ground. as shown on Figure 1.

Swing the detector from side to side in about three foot arc, overlapping succeeding strokes well. The detector is designed to get maximum depth without the requirement for speed of sweeps, so go at a pace that is comfortable for you. In fact, trying to hunt too fast may even cause a loss of depth in heavily

mineralized locations. Regardless of which mode you are using, try to keep



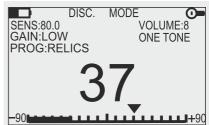
raise the coil at the end of the sweeps, much like a pendulum, especially if they are in a hurry (Figure 2) Try to avoid this as any increase in height from the ground will cause a corresponding loss of detection depth. This is easy in lawns, where you just allow the coil to rest on the grass as you sweep from side to side. In rough and rocky areas it is not so easy. Hitting the ground or rocks may cause false signals. The sharp lowering, pressing the coil to the ground, especially in wet and heavily mineralized grounds, could also cause false signals.

your search coil height constant and at about an inch over the ground surface. Most people tend to



# DISC MODE OF OPERATION

In this program, on the left part of the scale there is a black band, showing the level of audio discrimination, set for this program. This means that all the ferrous targets falling into this zone will be discriminated by sound, i.e. the operator won't hear any audio response for them. Over the scale there is a small triangular cursor, which always shows the conductivity of the detected target, no



matter what is the metal of the target and whether it falls into the black band zone. This program is useful for search of coins, jewelry and relics.

The next program is COINS. It is with a higher level of audio discrimination compared to RELICS. This is one of the most popular and used programs by the treasure hunters.

Immediately after it is the last program - BEACH, intended for beach hunting. It has even higher level of discrimination. You'll find more information about the types of search and the discrimination on the next pages of the manual. Each press of the PROGRAMS button will alternate each one of these four programs. If you wish you could change the level of discrimination of each of the programs using and buttons. With the "+" button you'll increase the level of audio discrimination, i.e. you'll reject more and more metals. With the "-" button you'll decrease the level of discrimination and you could even make any of the four programs with a zero discrimination.

NOTE: Mind that, while operating in DISC MODE (the already described one) there is no need of pressing GROUND BALANCE button for ground balance adjustment. The detector is with a fixed ground balance. The value of the ground balance is chosen in a way that will allow the detector to operate with maximum quality on whatever type of grounds.

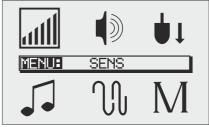
With a fixed ground balance the detector won't give you maximum depth of detection. For the professional TH-ers to reach the detector's maximum depth we would recommend to operate the detector after making automatic or manual ground balance. How to do that will be explained in the next pages of the manual (see page 10 of the manual).



Pressing the **MENU** button you'll enter the basic menu of the detector and

there you'll find six icons. By these icons you'll be able to control six functions.

The icon fenced with a square shows the current active function. In that case this is the icon for the sensitivity of the detector (sens). You could choose an other icon by the and buttons. When you choose an icon press MENU to enter the relevant function. Now by the "+" and the "-" arrow buttons you



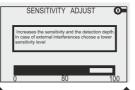
could change the level of the function, or activate/deactivate the function. We'll give you an example:



At the moment the first icon is fenced. If you want to choose an other icon/function, press "+" or "-" arrow buttons.



When you choose an icon press **MENU** to enter the relevant function.



By the "+" and "-" buttons you change the level or activate the chosen function.



If you want to get back to the operative screen press

If you press MENU you'll get back to the screen with the icons



If you wish, by the "+" and "-" buttons you could choose an other icon to change its setting. You should know that active are only the buttons "+", "-", MENU and DETECT.

If you have finished with the choice of functions press **DETECT** and you'll get back to the operative screen - **DISC MENU** 



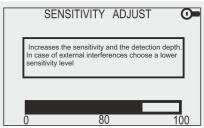
# FUNCTIONS - SENSITIVITY and GAIN

The first icon in the menu is the icon for detectors sensitivity.



On the **SENSITIVITY ADJUST** screen you see a scale of 0 to 100 units. The change of these units increases or decreases the sensitivity of the detector. If you are close to sources of electromagnetic interferences you could be forced to decrease the sensitivity level

of the detector

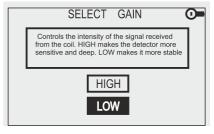


The spade icon is the icon of the  ${\bf GAIN}$  function. The  ${\bf LOW}$  setting of this function is for stable operation,



while the **HIGH** setting is for maximum sensitivity and detection depth.

For normal searching we would recommend the **LOW** setting of **GAIN**. The beginners could use it and increase the sensitivity level to the boundary where the detector remains quiet and stable. For the very experienced TH-ers we would recommend the **HIGH** setting of the **GAIN** function. For maximum



depth and sensitivity they could then increase the level of sensitivity until they hear rare, interrupted tones from the speaker of the detector. When they start sweeping the coil these tones will be oppressed by the ground, and the operator will hear only the useful responses from targets in the ground.

The use of **HIGH** setting should be made if the ground and atmosphere interferences are normal. If the ground is heavily mineralized, or if there are too many electromagnetic interferences, the **LOW** setting should be used. With a **HIGH** setting of **GAIN** you could make the detector stable in such conditions by decreasing the sensitivity level.

When testing the detector in built-up places you won't be able to increase too much the sensitivity level because of the many electromagnetic interferences there. That is why for tests of the real parameters and qualities of the detector we recommend you the field testing.



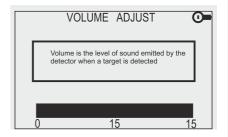
# FUNCTIONS - VOLUME and TONE

An other function in the menu is **VOLUME** - you see its icon on the display.



With this function you could increase or decrease the volume of the sound coming from the detector's speaker, when you pass over a metal target. We would recommend you always operate with increased at maximum volume of the sound, i.e. at 15 units on the function's scale.

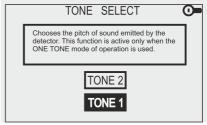
If you operate the detector using headphones you could be forced to decrease the volume of the sound.



An other function in the menu is **TONE SELECT** - at right you'll see its symbol.



This function does not affect the quality of operation and the sensitivity of the detector. It is for making choice of the frequency of the sound coming from detector's speaker when passing over a metal target. **TONE 1** is for the lower 570Hz frequency of the sound, and **TONE 2** is for the higher 1140Hz frequency of the speaker's sound. Of course, every operator chooses



the sound frequency he prefers to hear when passing over a metal target.

NOTE: Please, have in mind that if you have chosen MIXED or TONE ID audio modes of operation you won't be able to use this function - trying to do that you will only hear a warning signal from the detector's speaker.



# **FUNCTIONS - FREQUENCY SELECT and MEMORY**

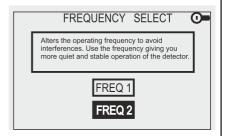
The symbol at the right of the page is for the next function in the menu - FREQUENCY SELECT.



This function is for choosing one of two operation frequencies. The normal is the **FREQ1** choice.

In case you have some interferences, coming from a source nearby, you could choose the frequency where the detector is less noisy.

This function is useful for elimination of the radio-frequency interferences mainly in competition hunting or when searching in close proximity to an other detector with a similar operating frequency.



The last function in the detector's menu is **MEMORY**, its symbol is the **M** at the right of the page.

Here you have two choices. If the function is **OFF** the detector won't remember the last settings which you have used. And when you turn off and then turn the detector on again the detector will come back to the standard factory preset adjustments.

If you want your detector to remember all the settings which you have made (changes in menu functions, changes of the discrimination level, choice of audio mode) please, turn

**ON** the function. More of the professional treasure hunters would probably choose the turned **ON** MEMORY function.

MEMORY

If you turn this function on the detector will remember the last settings which you have made. If the function iss off, the detector will remember only the factory settings.

OFF

ON

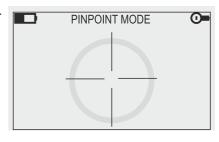
NOTE: When you turn the detector on this will be probably on another terrain, where the ground will be with another ground mineralization. And if you have decided to operate the detector using Automatic or Manual Ground balance you will have to make a new ground balance setting.



# PINPOINT MODE ONE TONE/MIXED MODE

Your detector has a **PINPOINT** mode. It is activated by pressing the **PINPOINT** button, but only if the detector is with its operative screen.

Once you have decided to dig you should find the exact location of the metal target in the ground. Move the coil off to one side of target area, press and hold the **PINPOINT** button, and slowly, carefully keeping the coil at a constant



height over the ground surface, pass the coil over the spot you believe the target to be. A continuous tone will be heard as long as the coil is over the target. The loudest and the highest pitch sound coming from the speaker indicates the exact center of the target. The better we center the smaller the circle becomes.

#### ONE TONE/MIXED/TONE ID

The detector has three sound modes - single tone, dual tone (mixed) and tone ID (multi-tone) mode. You could choose one of these modes by pressing ONE TONE/MIXED button. If you choose ONE TONE mode when the detector registers a target, no matter what conductivity it has, you'll hear it with one and the same tone of the audio signal. When you choose a MIXED mode, the detector separates the metal targets by different tones of audio signal. The ferrous targets will be registered with a low pitched tone, and the nonferrous targets will be registered with a high pitched tone. To have such a tone identification of the targets you should be in the DISC. ZERO program of the **DISC** mode of operation, i.e. the level of discrimination should be zero. If you have turned on a program which discriminates the ferrous targets you'll hear only the high pitched tone for the non-ferrous targets. If you choose the **TONE** ID (multi-tone) mode, the ferrous targets will be indicated with a low-pitched tone, and the higher is the conductivity of the non-ferrous target the higher pitched tone will be heard from the speaker and the higher will be the target ID number, appearing on the display.

We would recommend the operator start his training using the **ONE TONE** function.

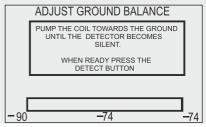
The experienced hunters use the mixed mode to study certain unknown terrains to receive better information about the degree of pollution of the area with ferrous junk. Please, have in mind that on heavy grounds the small deep golden nuggets will be registered by all detectors as ferrous targets. If in such a case you use mixed mode of tone identification the detector will register these small deep nuggets as ferrous targets, i.e. with low pitched tone.



# DISC.MODE G.B.

Your detector gives you the possibility, if you wish, to make a ground balance adjustment. To activate this function press the button **GROUND** 

BALANCE. On the display ADJUST GROUND BALANCE will appear and the detector is ready to start your ground balance procedure. Raise and hold your coil about 10 inches off the ground and parallel to the grounds surface. You should be away from metal objects. Lower the coil to about 1 inch off the ground - the



the tone from the speaker will change while nearing the coil to the ground surface. Repeat this (pumping the coil towards the ground) until the detector become silent. At this point the detector is balanced for the particular ground conditions and is ready to hunt. Press the DETECT button to activate the **DISC.MODE G.B.** mode. You'll note that from left to right on the display a black band will move to a number, which shows the mineralization of the ground.

The perfect ground balance of the detector makes it perform in the best way and reach its maximum depth capabilities.

The hole affect. When you operate the detector on heavy and wet grounds especially when you are with bigger sized coils, while passing over an open hole you could hear audio signal from the detector, even if in the hole there is no any metal object. To avoid this unpleasant affect activate the GROUND BALANCE function again and sweep the coil over the hole until the detector becomes silent when passing the coil over the hole.

If you have made a good adjustment of the ground balance for a certain area, and it is rich of hot rocks, these hot rocks will give a quite specific negative response. To overcome this take and place together some of these hot rocks, turn on the GROUND BALANCE function, and sweep the coil at 2-3 inches over the rocks until the detector becomes silent.

If you start hearing parasitic signals during operation and feel that your detector has lost its stability most probably the soil has changed significantly. You should ground balance the detector again for the changed soil conditions.

Some professional TH-ers, after the automatic ground balance, could make the detector more sensitive (but more nervous towards the ground) pressing some times the "+" button. And respectively - more stable to the ground mineralization - pressing some times the "-" button. This should be done only by very experienced TH-ers, knowing well the effects of the ground mineralization.

If you want to come back to the preset fixed ground balance(DISC MODE), press the PROGRAM button.



# **PROGRAMS**

The first program loaded by the detector is **DISC.ZERO**. In it the detector has no audio discrimination - all metal targets will produce a single tone audio response (if you activate the audio modes MIXED/TONE ID, in this program you'll hear the ferrous targets with a low pitched tone). You should remember that in heavily mineralized grounds the tiny pieces of gold can sometimes look like iron to the metal detector, and small iron pieces look like gold. The professional TH-ers use this mode of operation to study the new sites they are working on. The advantage of the **DISC.ZERO** program is that you won't miss any metal target in the ground. The bad thing is that you'll have to loose some time for digging unwanted ferrous targets like pieces of wire, nails, etc. We would recommend this program for nugget hunting and prospecting.

This is the program where the detector has the greatest depth of detection for ferrous, and for non-ferrous targets!

Pressing the **PROGRAMS** button you could choose the next program of the **DISC.MODE** - the **RELICS** program. In this program the detector will eliminate only the tiny pieces of wire. All the bigger sized metal targets will be accepted. Most professionals prefer operation in this program, because the detector is really deep with such a low discrimination level. On the left part of the scale in the bottom of the display there is a black band, showing the level of audio discrimination - all the ferrous targets falling into the black zone will be discriminated by sound, i.e. the operator won't hear any audio response for them. The small triangular cursor always shows the conductivity of the metal target detected. This program is very useful for search of relics, coins, jewelry.

The **COINS** program is with a higher level of discrimination, and is one of the most popular and used program among the treasure hunters. With it you'll have a good rejection of the unwanted ferrous targets, and you will accept all the non-ferrous targets. We would recommend the use of this program for searching areas littered with iron trash. If you have too many pieces of foils you could raise slightly the discrimination level pressing the "+" button, but have in mind that the categorical foil rejection would bring you to the rejection of some thin golden jewelry. If you decide to use even higher level of discrimination of the detector it will keep its good response to more of the coins like 1 cent, dime, quarter, and even the lower conductivity ancient Greek obols, diobols, Roman asses, follises will produce nice, smooth response. But a big part of the jewelry would be rejected, as well as the thin small gold coins. That is why we would not recommend such high levels of discrimination. Have in mind, that even with the highest discrimination level the big oxidized irons will not be discriminated. Though they produce a loud response the more experienced detectorists manage to discern them and avoid their digging.

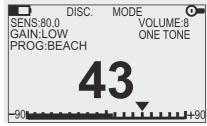


#### **BEACH HUNTING**

For beach hunting you have the **BEACH** program.

The normal, dry beaches are the easiest for searching, and allow the

highest sensitivity levels, even **HIGH GAIN** adjustments. Of course, if there are no strong electromagnetic fields nearby. On the beaches the most valuable finds are the golden rings, earrings, golden chains. The thin gold jewelry is low conductivity, so not to miss it, we would recommend a level of discrimination a little lower than that of the **COINS** program. If you



increase the discrimination level beyond the level of the **COINS** program the detector will start rejecting the tiniest golden chains.

**NOTE**: In the middle of the operative screen will appear VDI number, showing the conductivity of the registered target.

Searching on salt wet sand beaches. In such conditions to have a smooth operation of the detector, without false signals, first choose the LOW setting of GAIN. Then don't choose too high levels of the sensitivity. And the most important - while sweeping the coil over the wet sand increase the level of discrimination until the parasitic signals, caused by the conductivity of the wet sand disappear. Usually the rejection of these parasitic signals is active with discrimination levels higher than the levels of the COINS program. To keep good sensitivity to the targets in the wet sand it is very important to stop raising the discrimination level exactly at the point where the parasitic signals are rejected. If you pass this point you won't hear any more parasitic signals, but will reject some good targets.

**Searching on black sands.** These sands contain high percentage of magnetic negative iron oxides. In such conditions many of the low conductivity non-ferrous targets look like ferrous for the detectors. That is why for such black sands hunting we would recommend decreased levels of discrimination, **LOW** setting of **GAIN**, and low sensitivity levels. Do not worry to decrease the discrimination level too much- on the beaches the ferrous targets are rarely met.



# **FALSE SIGNALS AND SOLUTIONS**

A false signal occurs when something sounds like a good target, but it is not. These signals are produced by undesirable or discriminated targets like large pieces of iron, hot rocks or by electrical pulse-type electromagnetic interference. Your detector has a very good discrimination, but some bad "targets" with similar electrical characteristics could fool it. Some items very close to the search-coil could sound good, as well as large pieces of trash. The experience is the best teacher. With more practice you'll soon learn how to distinguish the false signals. At first, when you get a good response you'll find that crossing over the target once or twice more the signal would break up or completely disappear.

The sources of false signals could be:

- **Electrical interference**, caused by high voltage power lines, TV and radio towers, electricity transformers, cells of mobile phone operators or other detectors. Move farther away from the source of interference, lower the sensitivity level. Choose the **LOW** setting of **GAIN** function. The use of smaller sized coil is also a good solution.
- **Highly mineralized soils** (with high iron or salt content). In such conditions reduce the sensitivity and increase the level of discrimination. The smaller sized coils are possible solutions.
- **Extremely trashy areas** may cause a lot of "chatter". Increase the discrimination level or reduce the sensitivity, choose the **LOW** setting of **GAIN.** In some trashy areas the smaller sized coil would be beneficial for target separation.
- **Metal interference**. The detector picks up metals above and on the side of the search coil, as well as beneath it. Be careful for your digging tool, metals in shoes, and your coil cable hanging loose above the coil. Pay attention to be away from railings, ferro-concrete poles, etc.



# **SEARCHCOILS**

Your detector is equipped with the NEW Ultimate searchcoils. These coils are the best performance coils. Compared to the Double D coils they have better ground balance, more stable operation, better depth of penetration, better pinpointing, more accurate target identification. The new Ultimate coils have even better sensitivity, higher temperature stability, even better pinpointing. If Your detector is operating at 14kHz, its standard package includes a 9" Ultimate coil.

The 9" Ultimate is the most universal size of searchcoil, and it is hardly a coincidence that almost all detectors on the market are equipped with such size of coil. This searchcoil has very good sensitivity - to small and to bigger sized targets. It is the ultimate coil for search of jewelry, coins, and for relic hunting. It is designed for best all-arround performance, in all types of detecting.

An accessory coil for the detector is the 13" Ultimate searchcoil. We would recommend it to treasure hunters who have already accumulated experience in operating the Chaser detector. The advantages of this coil are its better sensitivity and detection depth, especially for the bigger sized targets, and the more ground this searchcoil covers. The coil is more nervous in mineralized and trashy areas, with slightly erratic operation on salt wet sand beaches. As every bigger sized coils sometimes it groups targets situated closely together.

The smaller sized searchcoils give better target separation, i.e. more distinct target response for metal objects buried closely together, which is very useful when operating the detector in trashy areas. Such an accessory coil is the 7" Ultimate searchcoil.

Selecting the right searchcoil depends on the the factors such as what are you searching for and search site conditions.

If your detector is with 4.8 kHz operating frequency it is standardly equipped with a 13"Ultimate coil, and as accessory searchcoils are offered 7" Ultimate, 15" Ultimate and 18x15"SEF coils.

If your detector is operating at 28 kHz its standard package includes 9"Ultimate coil, and as accessory coil is offered 7"Ultimate coil.

All the searchcoils are light for their sizes, very well electrostatic shielded, resistant to shocks and shakes, perfectly balanced and waterproof. They are easy to mount and require no special tools.

#### Coil covers

All searchcoils come standardly with coil covers. They are very useful to protect your coils at any time, and we would warmly recommend their constant use



# **BATTERIES**

Your detector is standardly powered by 4 Ni-MH batteries, size AA (R6), 2200 mAh, which allow you to use the detector for 20-30 hours. The time of use depends on how many signals your detector will locate and process and whether you use headphones. The use of headphones will increase the time of battery use.

On the operative screen of the detector there is an icon which always shows the condition of the batteries..

If in the process of operation of the detector the batteries are discharged you'll hear a warning audio signal and on the display will appear a text advising you to replace the batteries. If you do not turn off the detector, it will turn off automatically in a while.

To remove the batteries, make the following:

Remove the lid of the battery compartment on the backside of the control box. You'll see the batteries. In the bottom of the compartment are described schematically 4 batteries and the direction of their location.

If the batteries are rechargeable, put them into the charger, of course, keeping in mind the direction of their position in the charger. For a full charge of your 2200 mAh batteries you'll need about 15 hours. After the batteries are recharged, or if you are going to use new alkaline batteries, put them into the battery compartment, making certain to match the battery polarity with the markings indicated on the bottom of the compartment..

WARNING: Be very careful to install correctly the batteries in the battery compartment.

You should know that your detector has illumination of the display, and an innovative lightening of the coil and the terrain in front of the operator, functions, which are very useful for night hunting. For turning the display illumination on, just press the button with a lamp symbol. At the right upper part of the illuminated display will appear a small lamp symbol. The second press of the button on the panel will turn on the LED torches, and the illumination of the display will be off. With the next pressing the button on the panel, both the LED torches and the illumination of the display will be on. The fourth pressing of the button will turn off the LED torches and the illumination of the display.



# **MAINTENANCE**

Your detector is a high quality electronic instrument. Though ruggedly constructed and designed to withstand the normal treasure hunting demands proper care is essential.

Operate your detector as recommended in this instruction manual.

Remove the batteries from the detector if you are not going to use it for extended period of time. This will prevent the detector from batteries leakage damage.

Sweep the searchcoil carefully and avoid hitting it against rocks, trees and other hard surfaces.

The use of coil cover is highly recommended to protect the searchcoil from abrasion.

The searchcoil is waterproof, but the electronics are not. Always prevent any moisture or water from entering the control box of the detector.

Protect your detector from dust, moisture, and extreme temperatures. Keep it clean and dry and avoid getting sand and grit into the shafts or the tightening nuts.

Do not use solvents to clean the detector.

Keep the coil cable properly wound around the shaft and protect it. Floppy, pinched cable may short, causing erratic noises or unnecessary replacement of the searchcoil.

Do not attempt to modify or repair the detector's electronics as this will void your detector's warranty.



# SPECIFICATIONS

Operating Frequency	Freq.1 - 13	8.89 kHz; Freq.2 - 13.83 kHz
Maximum Operative Len Minimum Operative Len Folded in Transport Pos Standard Searchcoil	ngth gth ition	
Headphones	Impedance .	8 - 32 Ohms
	Mono / Stereo Jack .	1/8"
Optional		1/8" wireless
		wireless
Batteries	Standard	
Batteries Ni-MH battery Life	Standard	wireless 4 Ni-MH , 2200 mAh
Ni-MH battery Life Low Battery Alert	Standard	wireless 4 Ni-MH , 2200 mAh 20 - 30 hours
Ni-MH battery Life Low Battery Alert	Standard	wireless 4 Ni-MH , 2200 mAh



# PROFESSIONAL METAL DETECTOR ALL TERRAIN