QZ80

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QZ

User Manual

User manual for the QZ device from VOGEL, the latest device to detect and distinguish between different metals.

Metal and Water Finder

VÖGEL

IMPORTANT NOTES

In the case of tampering with the device, the device will lose its security.

The device must be connected to the searching coil during operation

Do not store the device in a place with high temperatures and humidity.

The user strips himself of metal, such as rings watch, or a metal belt

- The user should practice on how to use the device before setting off for detection and search operations.
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TECHNICAL SPECIFICATIONS

search for:	Searching for metals, gold and blanks.
searching system:	Very low frequency VLF system
Operator	mikrocontroller
Operating system	A system for measuring and processing levels of the electromagnetic field formed around the target and the receiver through the reception coil in the search coil, analyzing these results and showing them through sound alerts and color graphic indicators on the screen.
Whireless	**NO**
Automated and intelligent guidance system:	**NO**
Sound alert	**YES**
vibration alert	**NO**
Power	**Three cells Li-ion 3.7 V, 3000 mA Power output 8.4 V**
working hours	**10 hours**
Charger	**12 volts 2 amps / charging time 2 hours**
Display	**3.5 inch color TFT screen.**

Operating temperature:	From -15 °C to 60 °C
storage temperature:	From -15 °C to 40 °C
Humidity :	It can be stored and operated at an average air humidity of 5% to 80%.
weight:	5 Kg
Dimensions:	4.6X5.7X9 cm
Bag dimensions:	66X41X17 cm

Introduction

The QZ80, produced by the German company VÖGEL, is one of the company's best in metal detector technology. This device is characterized by different systems and multiple search options in order to reach the most accurate results in the search for targets. The QZ80, through its unique search systems, facilitates the work of prospectors and shortens the effort and time spent during difficult excavations through various analysis algorithms of the earth to reveal the contents of the soil and its different targets. It is also characterized by advanced search settings that allow to ignore unwanted targets during the search, which facilitates the work of prospectors.
The QZ80 is equipped with four different search modes for each system.
Individual features to display search results on the screen through interactive graphical interfaces and alerts.
General search mode.
- Treasures Mode
- coins and nuggets mode.
- Depth mode
The device allows the user to adjust the search settings to suit the search requirements:
Desensitization to iron.
- Increase or decrease the sensitivity in proportion to the electromagnetic nature of the soil.
Increasing or decreasing the gain of the reception file in the search disk in proportion to the nature of the soil.

QZ80 Characteristics

Dear customer, we appreciate your trust in us and your acceptance of a new and unique experience in the world of metal detectors by owning one of our products.

The QZ80 has a number of features including:

- The special design of the Double D-shaped search coil to avoid magnetic anomalies caused by metallic minerals.
- The ability to isolate mineral and rocky soils (cancellation of magnetic noise) without affecting sensitivity, thus giving greater effectiveness and a more accurate allergic field during the research.
- Complete the search task without interruption due to the unique feature in the number of continuous working hours, which

Up to ten hours straight.

Fast Charging: The QZ80 only needs 2 hours to fully charge.

- High-resolution color interactive interfaces to give the search process a lively character.

-When you acquire the QZ80 device, you do not need to calibrate the soil for the same search area every time you search, as the device stores the magnetic harmonic value even after turning off the device, so you can return to the area and start the search directly.

- Searching coils are identified for each device upon sale. When consuming search coils and requesting new coils, you need to identify these coils by pressing the scroll button down during turning the device on, so that the frequency of the coil appears at the bottom of the screen.

Device components

carry handle

Main Unit

Device Bag

Searching coil - 33 cm
Designed to Standards
to detect the small and medium size pieces.

Searching coil - 21cm
Designed to standard sensing small sized parts and nuggets.

Warranty card

User Manual

Charger

Headphons

Main Unit

1. Power button ON/OFF
2. Move buttons
3. OK button
4. Back button
5. Charger socket
6. Calibration button
7. Pinpoint button
8. searching coil socket
9. TFT display
10. Hedphone socket
11. speaker

ASSEMBLY

1- We open the handle locks to calibrate the length of the handle.

2- Lengthening or shortening both arms of the carrying handle in proportion to the user.

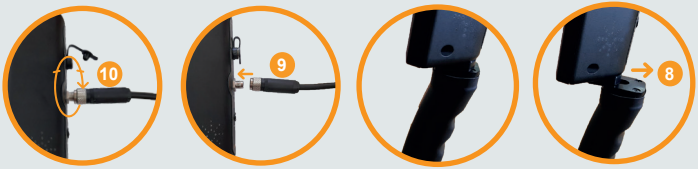
3- When determining the appropriate length for each of the forearms, we close the locks to give them movement.

4- Putting rubber protection to prevent friction between the handle and the search disk.

5- Place the contact head of the handle in the place designated for it in the search coil.

6- Inserting the fixing shaft into the channel designated for fixing the handle to the search coil.

7- Turn the locking nut clockwise.

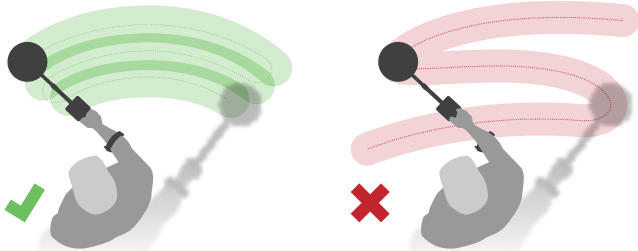


8- Connect the device to the carrying handle by sliding the device in the place designated for it on the handle to the other.

9- Align the coil plug and insert it into the socket on the side of the unit Main.

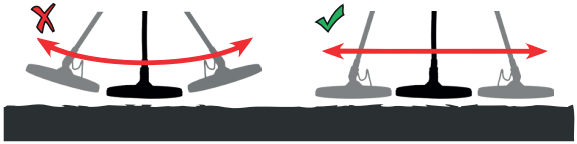
10- Tighten the retaining ring slightly clockwise to fix the cable.

GETTING STARTED



In order for the search to be complete and without leaving unchecked areas, it is not possible to move and move randomly, but by moving it from side to side, moving forward slowly at the end of each scanning movement. Overlap a little with the previous sweep to make sure the floor is completely covered. So that the average speed of a single scan movement is 2 to 3 seconds from right to left to right.

Wiping should be done by keeping the search coil parallel to the soil surface while avoiding excessive rubbing of the coil on the floor as shown in the figure.



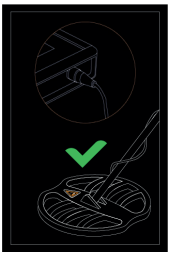
When moving the search coil during the search, the search coil must be kept perpendicular to the surface of the soil, as this will increase the depth of detection and improve the detector's response to small objects.

Note: Scanning is slow when using graph mode and treasure hunt mode

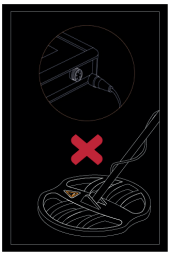
MAIN UNIT SETUP AND START WORKING

- Turn on the device by pressing the Power Button

- The boot screen will appear and then the interface of the connection mode with the search coil



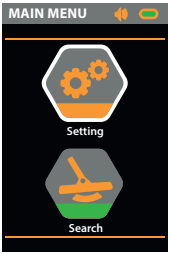
This status appears if the search coil is connected



This condition appears if the search coil is not connected

❖The main interface contains two icons. Search to enter the search and settings menu to adjust the device settings and an indicator of the battery charge level is present in all interfaces. Moving between icons is done by pressing the Move buttons. To confirm one of the two options, press the OK button

When selecting the search icon



When selecting the Setting icon

SETTING

- When choosing the settings icon and pressing the enter button, we will see a settings interface that enables us to reset the device. It contains options for adjusting the brightness, sound, and language of the device, in addition to the possibility of restoring the device to factory settings.

- volume setting: when selecting the volume icon, the volume is changed by pressing the Enter button. To change the volume according to eight levels, we press the increase and decrease buttons

- brightness setting: When selecting the brightness icon, the screen brightness value is changed by pressing the OK button. The brightness value changes according to eight brightness levels from 10% to 100%. We press the increase and decrease buttons

❖ Language setting: When selecting the language icon to change the language, we press the enter button to go to the languages interface. The device has six languages: English, German, French, Arabic, Spanish and Russian. The transition between these languages is done through the navigation buttons, and to confirm one of the languages, we press the OK button

❖ Factory reset: When selecting the factory reset icon, factory settings can be restored by pressing the OK button

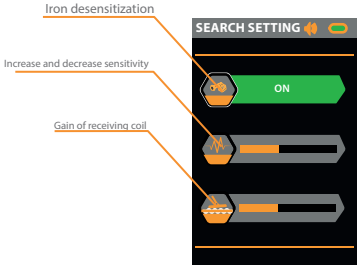
❖ To return to the settings interface, press the Back button

SEARCH SETTING

❖ When selecting the search icon and pressing the OK button, the search menu appears, which contains the search Mode and search settings, to enter to the search setting press OK.

❖ Search settings: To adjust the search settings, there are three options
- The option to cancel or activate the sensitivity to iron wich work for the General mode and Treasures mode.
- The option to decrease or increase the sensitivity level within ten levels of sensitivity
- Manual or automatic calibration option

The transition between these options is done by pressing the scroll buttons, and to confirm one of the options, we press the confirmation button



❖ To return to the settings interface, press the Back button.

Calibration

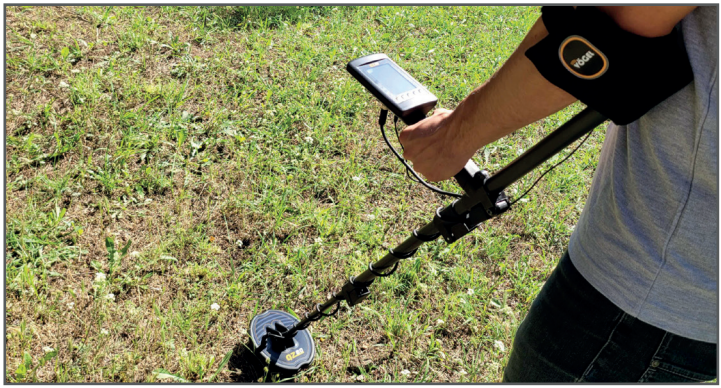
The calibration process must be performed before starting the research process,by pressing Calibratition button.

In the ground calibration settings interface, the user is asked to down the search coil from the horizontal position to vertical with a height of 10 cm from the surface of the ground and then scroll it right and left to complete the automatic calibration of the soil by analyzing the magnetic nature of the soil to obtain the magnetic harmonic.

When the process is completed, a message appears on the screen stating that the ground calibration is finished, and the user is asked to press Enter to return to the search interface.

Note: If the calibration is not achieved, the user must repeat the previous steps.

Search Modes



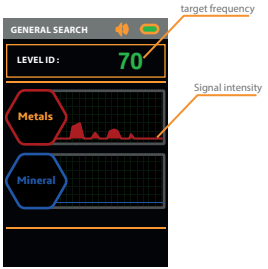
When entering the search interface, we press the move button (move) to detect the search mode icon then press the OK button to enter the search mode interface, which contains four different search modes.

Note: When the device exposed to transient signals (magnetic noise), which appears either in the form of an audio alert or indicators on the screen. The user must raise the device 40 cm from earth, then press the enter button periodically if the effect continues, to reconfigure the signal during the search.

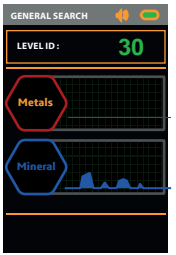
General Mode

we can enter to the general search mode by pressing the Enter button, and the general search pattern interface appears.

The general search interface contains two graphs, the first showing the results of precious metals in the search area, while the second shows the results of non-precious metals. in addition to the target frequency, whose value increases by approaching the target.



When a valuable target is found, the graph appears as in the illustration so that the signal value increases as the target is near the surface of the earth



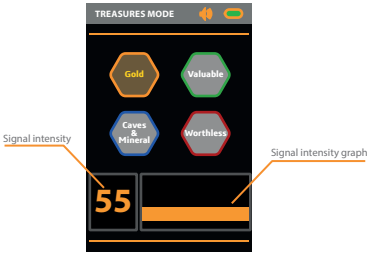
When a non-valuable target is found, the graph appears as in the illustration so that the signal value increases as the target is near the surface of the Earth

Note: Calibration can be performed by pressing the Calibration button to go to the Calibration Settings interface.

Treasures Mode

When selecting the treasure search mode, we press the OK button to show the treasures mode interface, which contains a chart for the graphic analysis of the search process in addition to the list of targets that the device can detect.

The device, through the treasure search pattern, directly analyzes the soil under the search coil to distinguish the type of target, if it is found, through a graph to show the intensity of the signal, thus the depth of the target. It also shows color discrimination between the different targets if found during the search process. when a target appears during the search process, the icon corresponding to the target type is selected from the list of targets on the interface and also shows the signal of the graph with the same color consistency in addition to a percentage of the intensity of the target signal. In the graph, the signal intensity gradually increases as the target depth approaches the search coil.



Signal form in case of gold/zinc.

Signal form in case of precious metals.

Signal form in the case of caves and minerals.

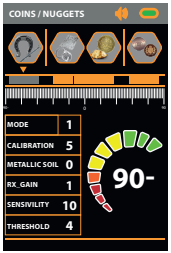
Signal form in case of non-precious metals.

Signal form in case no target.

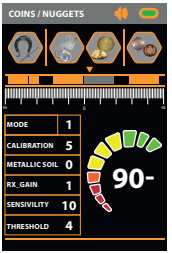
Search mode for nuggets and coins

When selecting the nuggets and coins search mode, we press the Enter button to show the nuggets and coins style interface, which contains a list of targets that the device can detect. When a target is present, the magnetic intensity of the signal is shown that fluctuates between -90 and +90, thus the type of target detected.

The list contains four groups of different goals, each group divided into three levels. These levels can be canceled or activated by pressing the move button to draw a triangle above the level
Press Enter to activate or deactivate the level. You can move between levels by pressing the jump buttons.



If iron levels are omitted, then desensitization to magnetic materials.

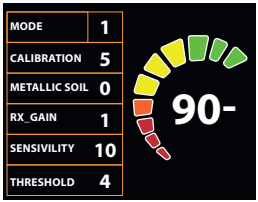


In the case of deleting the levels of gold and copper, thus desensitizing them.

Note: It is not possible to activate or activate a level unless the selection triangle ▼ is visible above the level.

Manual search settings

The device has been provided with the feature of manual adjustment of the search values to get rid of the instability of the device after performing the calibration as a result of several factors affecting the search coil, including normal and abnormal ones. This is done by pressing and holding the back button until the search values are selected in gray. The transition between these values is done by pressing the back button. To change the value, we press the increase and decrease buttons.



search parameters:

1- Pattern: The device has two response patterns

- The zero mode (basic) search showing the response to the presence of the target through the numeric value and the difference in the alert tone.

- The frist mode shows the response by the numerical value in addition to the overlay of two alert tones Discrimination and tone associated with the intensity of the signal and thus the distance of the target from the search coil.

2- Calibration: in which we change the value from zero to 10 until the device is stable, thus obtaining the correct magnetic harmonic.

3- Mineral soil:We have 6 different values for soil, according to the proportion of the mixture of metallic minerals in it. As we increase the value, the sensitivity area narrows (the sensitivity decreases) to metals and iron impurities, and the response to precious metals remains only. Therefore, it is preferable to gradually increase it in proportion to the soil and not increase it to the maximum value, except in the case of searching for gold nuggets only.

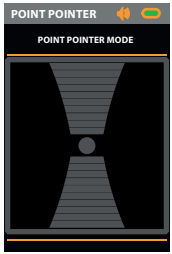
4- Gain stability file: which increases the signal-to-noise ratio according to 9 levels so as to increase the stability of the device.

5- Sensitivity: Raising or decreasing sensitivity according to 20 levels also helps in stabilizing the signal.

6- Threshold: It contains 20 threshold levels where increasing or decreasing the sensitivity threshold affects the stability of the search.

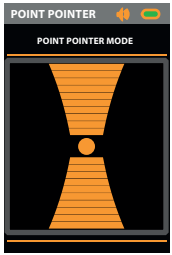
Pinpoint detection

When you have finished selecting the desired levels, wait for three seconds for the selection triangle to disappear. When the triangle disappears and the Pinpointer button is pressed, it will go to the point search interface.

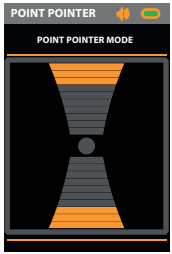


Point search, which expresses the position of the target relative to the disc. If the target is below the middle of the search coil, the signal is maximum in the search area and decreases in the direction towards the ends of the search coil.

Pinpoint mode also turns off motion detection, so the target signal can be heard even if the coil is stationary. Pinpoint mode covers the target's response by reducing sensitivity with each scanning movement, so the target's response remains from a very narrow area. This helps determine the exact location of the target. In pinpoint mode, target response indicates the signal strength of the target located directly below the coil. The voice response of the precise positioning through indicators on the screen and the frequency of the alarm tone to help you determine the location and depth of the target.



In the pointer option, which expresses the position of the target in relation to the disc, if the target is below the middle of the search coil, the signal is maximum in the search area and decreases in the direction towards the ends of the search coil.



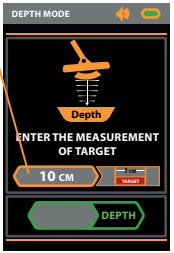
The target is under the disc in the middle

To deactivate the pointer, press the Pinpoint button.

Depth Mode

This mode depends on the latest analysis and processing algorithms for the data generated during the search process to determine the depth of the target discovered through the search using one of the previous search modes. When a target is detected, we have to measure the dimensions of the target by defining the starting point and the endpoint. Then go to the depth mode, by detect on the depth mode icon and then press the enter button to show the depth mode interface, which asks the user to enter the length of the approximate distance by pressing the move buttons to increase or decrease the value by 10 cm and then press the enter button to show the expected depth value for the detected target.

Change the target distance length



Show the expected value of target depth.

Charging

It is preferable to turn off the device during the charging process. The total charging process takes two hours.
When the charging process is finished, the color of the LED on the charger will change from red to blue.

NOTES

1- The user must connect the search coil to the device before turning it on.

2- When an unused button is pressed in one of the search modes, a different beep sounds.

3- The device must be turned off during the charging process.

4- Use the charger that came with the device.

5- The small search coil is used to detect relatively small targets, and the large search coil is used to detect relatively large targets.

6- Not to tamper with the device or any of its components so that the device does not lose its warranty.

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