ZEO DETECT™

www.zeodetect.com

ZEO DETECT

GROUND SCAN 300/500
3D WATER DETECTOR

WITH REPORT GENERATION SYSTEM

ZEO DETECT

PRODUCT OVERVIEW

GROUND SCAN 300 & 500 geophysical prospecting instrument: the use of natural electric field source as a working farm, with resistivity contrasts underground rocks and minerals or groundwater, based on measuring the natural electric field on the surface of the N different frequency electric field component, according to their different variation to study Abnormal changes in geological bodies produce, reaching solve geological problems one electrical prospecting methods. Because this method measures the electrical component of the electromagnetic field of the earth, so called natural electric field method; and we chose the corresponding frequency as measured within -50 meters, that were selected frequency, so called frequency selection method, it is always referred to as natural potential frequency method. According to this theory the design and production of equipment called potential frequency of detecting instrument, referred to natural selected frequency electric field instrument or instruments for geological exploration work. Therefore, from a professional point of view to classify, geological equipment should belong to this category in the instrument geophysical equipment among electrical equipment. From the application point of view to classify, it can be called prospecting meter, water detector, empty detector, prospecting instrument, instrument engineering exploration, geothermal detector, archeology instrument, logging tools, measuring water detector, water detector, prospecting equipment, prospecting instrument. From the perspective of the measurement field source classification, also known as natural electric field instrument,audio electric field instrument, the earth audio instrument. The instrument is the use of natural earth field source without going through artificial field that is omitted clumsy power supply system in order to achieve the simple, light weight instrument. After data collection by the unique built-in computing functions, the instrument can automatically draw curve graph and profile map with one button, according to the profile map, you can clearly understand the geological structure and quickly determine the location of rock frame, karst cave, aquifer etc.

The Park Hotel, Apeejay Business Center,1st Floor,7th Cabin,
Raj bhavan Road, Somajiguda, Hyderabad -500082, India. www.Zeodetect.com

ZEO DETECT

ADVANTAGES

High Measurement Speed and high efficiency Complete more than 8000 meters profile measurement in one day to realize geological abnormality in different depth, the prospecting speed and efficiency is improved about 10 times more than traditional resistivity method.

CONVENIENT TO CARRY

Without heavy power supply, it uses low frequency signals in earth natural electric field as signal source, and the complete set weight is less than 2kgs so easy to carry.

SIMPLE OPERATION

Equipment is automatically controlled by micro PC. You can learn its operation in 10 minutes. It will take10 minutes for persons without prospecting experience to finish training.

GOOD PERFORMANCE AND HIGH ACCURACY.

The resolution of measurement is up to 0.001mV, and precision is 2%, It gains high stability and abnormity curves matching with that of traditional geo-electrical equipment in lots of field survey.

GOOD PERFORMANCE AND HIGH ACCURACY.

It has advanced anti-jamming technology and multiple anti-jamming designs. You can observe abnormity curves result with good repetition even in weak signal area, city, high electric jamming area and working area with other exterior interference via frequency selector and digital processing.

THE UNIQUE FEATURE OF AUTOMATIC GROUND SCAN MAPPING

This instrument can automatically form curve graph and profile map with one button after completed recording data, no need transfer the data to computer for drawing mapping.

INSTRUMENT HOST PANEL

1.LCD SCREEN

Display various operating states and the measurement results e.g., measuring data, curves graph and profile map. (Refer to the use of the Instrument)

2. MAIN SWITCH

Turns on the instrument power, if the indicator light on blue. Flashing indicate the normal operation of the system, a long light indicates the system is busy or halted, light off represent power of for low voltage automatic shutdown protection. Cable test indicator light: green.

3 .MN PORT

Input terminal, insert M, N electrode connector.

4. USB PORT

Insert connection cable to USB port for connecting the host machine to computer or with the OTG cable connecting to Android System mobile phone to output data files and curve and profile map (only a small part of the Android system mobile phone support OTG function).

ZEO DETECT

TECHNICAL PARAMETER

Model no	Depth	Accuracy	Channel	Frequency	LCD	PS	OTHERS
GROUND SCAN 300 **100/150/300**	Meters 100 Meters 150 Meters 300	0.001m v	2 4 6	Fast Track and 33 frequency Fast Track and 40 Frequency Fast Track and 56 Frequency	Industrial 7-inch HD touch screen	DC12V 5000mAh Built-in Battery	1. Automatic noise reduction, strong anti jamming ability. 2.User-friendly interactive interface, high- Speed CPU control and menu prompting. 3. Automatic measurement and storage of data. 4. Automatic drawing curve graph and drawing profile map in the water detector, no need output data to computer for Drawing map.
GROUND SCAN 500 **100/150/300/ 500**	Meters 100 Meters 150 Meters 300 Meters 500	0.001m v	2 4 6	Fast Track and 33 Frequency Fast Track and 40 Frequency Fast Track and 56 Frequency	Industrial 7-inch HD touch screen	DC12V 5000mAh Built-in Battery	5. The data will be saved automatically after power off. 6. Store 999 measuring lines data and record 999 measuring point's data each line. 7. The data could be directly formed curve graph or map in the detector or output data to computer for drawing map. 8. Using rechargeable batteries stand by time more than12 hours.

WORKING PRINCIPLE OF THE INSTRUMENT

Geophysical exploration is detecting stratigraphic rocks, geological structure and other geological conditions through the study and observation of changes in a variety of geophysical fields. commonly used geophysical exploration methods include gravity exploration, DC exploration, alternating current survey exploration, magnetic exploration, sonic exploration, seismic exploration, radio active exploration, At present, the main geological exploration instrument is electricity exploration in the market. And most of the instruments with features of complex operation, heavy weight, too complex Post-data processing, The users must be many-year experienced technician who have to be professionally trained before the operation of electricity exploration instrument.

Zeo Detect Ground Scan Water Detector is the natural Electric field geophysical exploration underground water detector is the latest product which research and development by our company.

INSTRUMENT WORKS INTRODUCTION

By the M, N electrode probe (transducer) via a cable earth's magnetic field to electrical signal input to high impedance input stage, after the anti-jamming exchange amplification, frequency selection, select the desired operating frequency, and then by the A/ D sampling, central processor (CPU) for data processing. Where in the entire measurement process, high-speed central processing unit (CPU) of the control, instrumentation automatic range conversion and automatic frequency selection. Finally display the measured data and curves graph, and then click “IMAGE” the instrument will automatically draw Ground Structure Image directly on the LCD of instrument, also can output measurement data, curve graph and IMAGE by USB cable to computer for analysis and making geological conclusion.

After connecting the instrument by straps, back in the body for convenient use. Turn on the main switch, after display boot system information, LOGO and company information, automatically enters root menu interface and operating mode.

MAIN SCREEN DESCRIPTION

Boot into the boot screen, after a successful start into the main screen.

Figure 1 : Start Interface

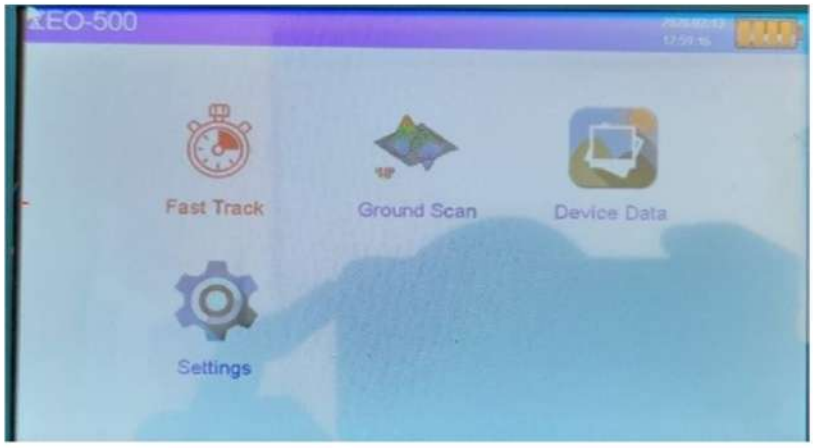
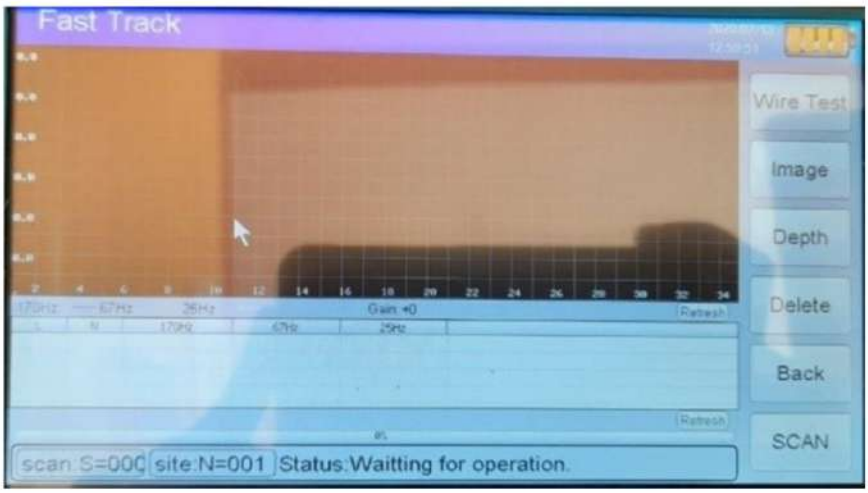


Figure 2 : Main screen displays the contents of the boot

FAST TRACK STATE:

Enter Fast Track measurement state, LCD display is shown below Fast



Track Photo

(1) **Wire Test:** (Cable Test)
Check whether prospecting instrument can work normally or not before measurement. Cross these two connected copper electrodes and put them together, click on the " Wire Test ", if the detection indicator (green) light, it's Line normal. Without light, It is a cable fault, need to repair or replace the cable.

(2) **Image Processing:** (The function suit for Ground Scan)

(3) **Options**: Click the" Options " button, then pop-up " Options" dialog box instrument can store 999 measurement lines, each measuring line can store 999 measurement site.
"Gain": The default "0X", in the field of weak areas according to the actual situation adjusted to "1X", "2X" enhanced field source signal. During the measurement of a line, it is not allowed to shift, otherwise it will cause data disorder. Press "OK" to save the "options" and return.

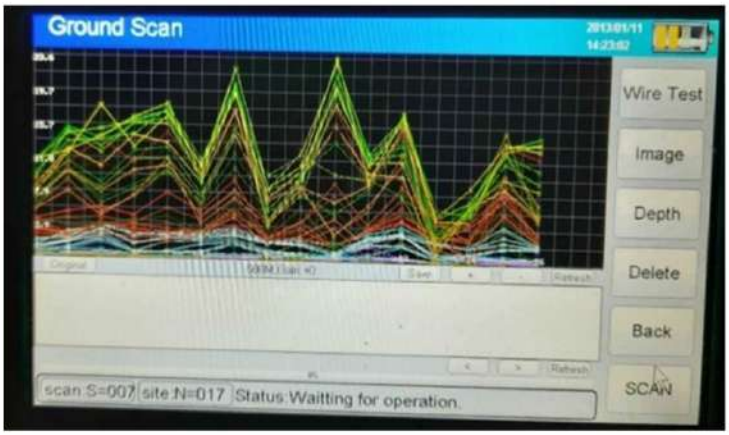
(4) **Delete**: In the process of measurement, if the case of accidents or data mutations occur can, not be determined, the data of last measuring site need to be deleted, you can click on the "delete" button, delete the last column in the table, while the number behind "Site: N = " minus 1 , indicating that the measuring Site data is deleted. Click once to delete a set of measuring Point data.

((5) Click the "**BACK**" button to return to the main screen

(6) **SCAN**: Click on the "SCAN" button, the instrument can be measured operations, the screen below the status bar displays the "Waiting for operation" to " Scanning Freq1 Data ." Then DATA column shows the data of frequencies. After the sampling is completed which display “record completed”. Click the "Scanning " button again, the number after the " Site: N= " will plus 1, and then measured the data of next point. You can repeat this step until you complete a measuring line (N ≤ 999). Since the instrument stores up to 999 measuring points each measuring line , so when the number of sites is 999 ("N = 999"), then click on the "Record" button, the instrument will cover the previous measurement site. Now you must press the " Options" button after entering, re-select the " Line: 002 ", and then keep going the measuring operation. “stop”:click "Record", the screen show "Stop", During the record process, if the electrode rods contact with the ground is not good, there is no plug firmly, the operator need to stop something, etc. can press the "stop" button, and then start record.

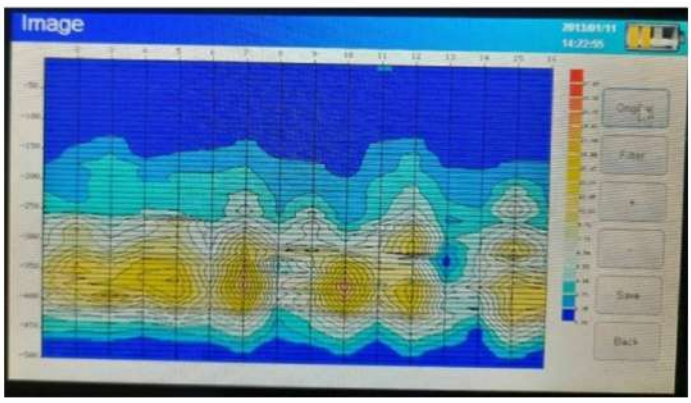
IMAGE PROCESSING MEASUREMENT STATE

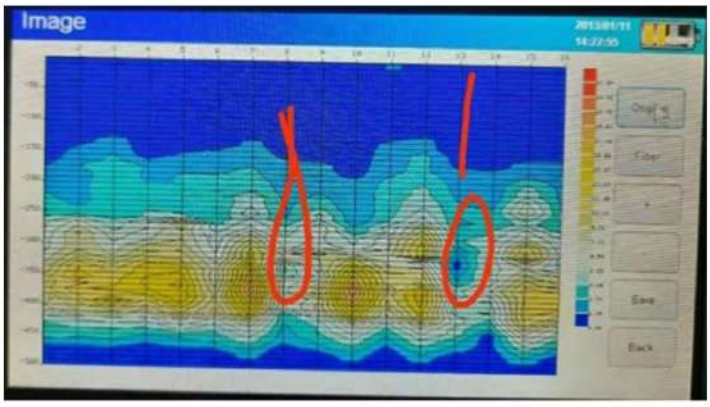
Enter Image Processing measurement state, LCD display is shown below

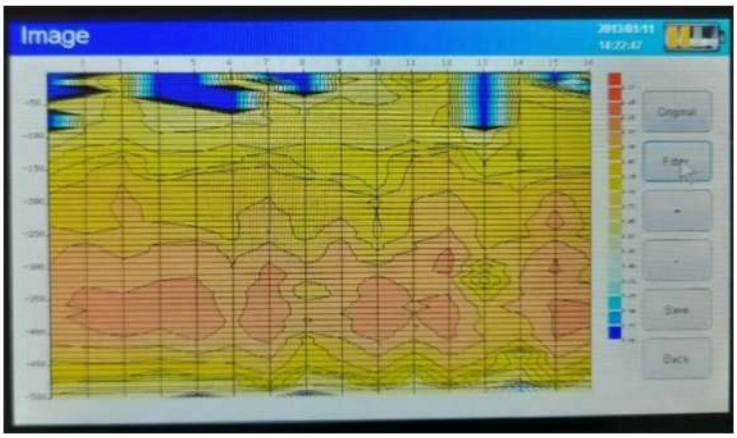


Curve Graph : In the current survey line, each measuring a measuring site, the system automatically generates the curve, the measurement is complete, you can click “+” to appropriate size ,Click "Export" button, the system will automatically save the curve to "File Explorer" with in the current line, with the data saved together.

IMAGE Click “IMAGE” button, The system automatically generates the IMAGE, then we can click on "+" the picture adjust to enlarge, click on “-” the picture adjust to narrow Click "Export" the system will automatically draw the picture is saved to the "File Explorer "in the current line of the folder within the line, and the data curve saved together with the drawing of the IMAGE. As shown in Below Image

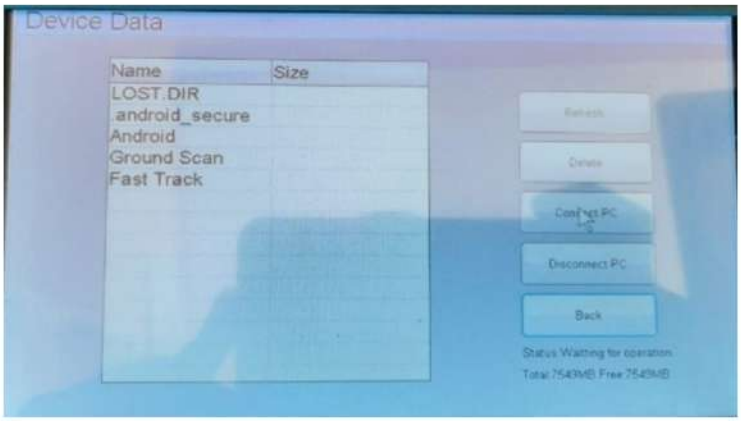






Filter Image

Device Data: Click the Device Data for files as figure as below:



Note: The folder in the Ground Scan is divided by the line number, eg "L1", "L2", "L3", and so on. After the measurement is complete, simply click on the "Device Data" and "Image" of the curve Graph. There will be Two files in each line folder: System volume inf , Ground Scan ,Fast Track . Click on the "connect PC" through the data cable connected to the computer, copy to the computer open for analysis. If your phone is an Android system and supports "OTG" function, you can use the "OTG" cable in the package to connect the data cable to your mobile phone, and copy the data to your mobile phone.

WIRING METHOD

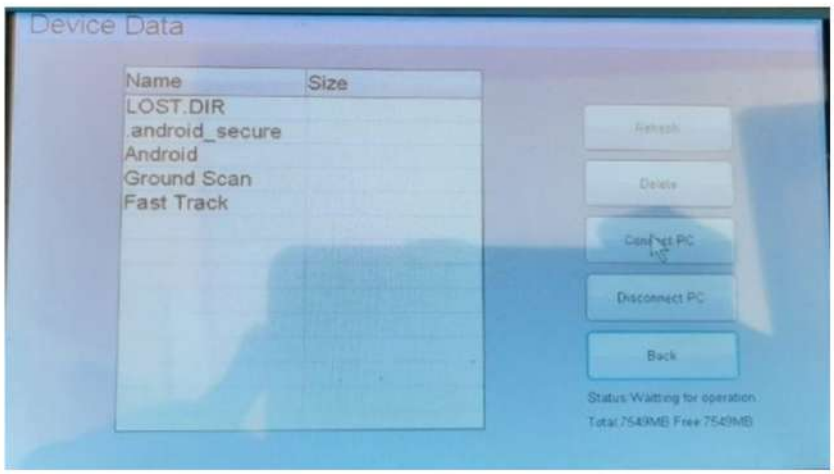
WIRING DIRECTION & LOCATION

Geophysical lines are generally arranged perpendicular to the line to be constructed, can detect tectonic crushed zone on both sides of the border and its different physical characteristics, contrast is strong, crushing width, extending distinctive characteristics. In order to accurately locate, confirmed the location of the abnormal ground point, generally use measuring rope (or tape) pull straight line, and mark with paint at the beginning of the measuring line, so that find measure position according to the test results of drawing later. The collected data each time is the data of midpoint between two electrode data, the point O is the first set of data as shown below in figure. Electrode spacing is generally 10m, dot spacing is generally about 1m, electrode spacing and dot spacing must keep the same distance for one measuring line.

The electrode with alloy rods and copper electrodes. Usage: to connect a hand-held alloy rod with copper electrode inserted in to the soil, the puddled soil is recommended in each insertion. Before click on the "SCAN" ,Press "WIRE TEST" firstly, judged good grounding, Indicator lights up and then process measuring.

WIRING DIRECTION & LOCATION

To Generate the Report Turn on the Tab and open Ground Scan App in TAB & click on Device Data in Ground Scan Main Device see the image below.



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Device Data: Click the Device Data for files as figure as below:

Need to Enter Details like below

Customer Name :

Surveyor Name :

Line Number :

And selected depth :

Click on Generate Survey Report

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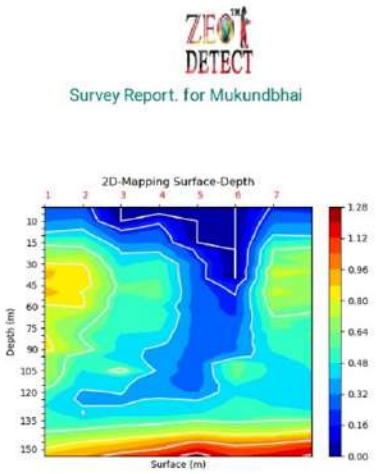

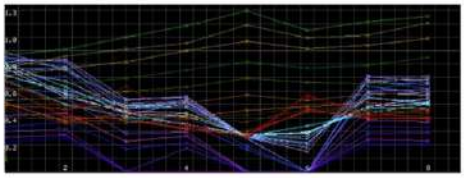

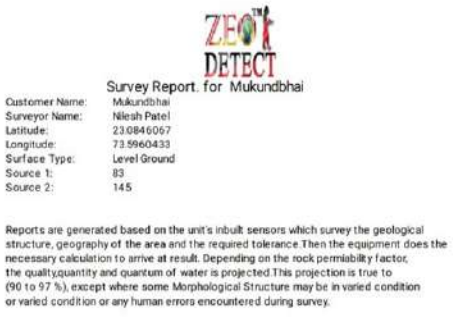

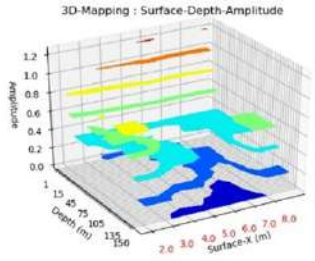

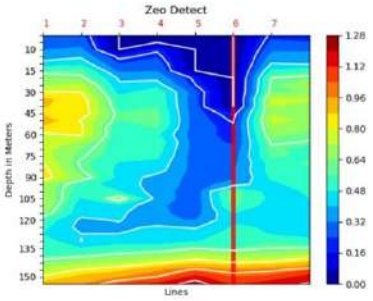

Generated survey report

NOTE: On dry and hard ground, it's difficult to use hand to penetrate the electrode, Please never hammer the electrode into ground, it will broke the machine function. You can mix some water, salt and soil in a barrel, then put the mud on the hard point so that you can insert the electrode. Meanwhile, you need cover the line that you will measure with salt water to improve the Electrical conductivity.

Certification & Inspection

Certificate of Compliance

CE

We hereby declare that the technical file of product complied with the requirement of directives low voltage directive (LVD) (2014/35/EU) and electromagnetic Compatibility (EMC) Directive 2014/30/EU

Certificate No.: CE-10136

Manufacturer

Name	: **ZEO DETECT**
Address	: **7TH CABIN, 1ST FLOOR, APEEJAY BUSINESS CENTER, RAJ BHAVAN ROAD, THE PARK HOTEL, SOMAJIGUDA, HYDERABAD TELANGANA, 500082**
Products	: **GROUND WATER DETECTOR**
Model	: **POOL FINDER, POOL FINDER PLUS, ZEO DUAL, GROUND SCAN 500, GROUND SCAN 300**

The Certification body has performed an audit of the above product quality system covering the design, manufacture and final inspection of the certified product. The quality system has been assessed, approved and is subject to continuous surveillance according to Directive low voltage directive (LVD) (2014/35/EU) and electromagnetic Compatibility (EMC) Directive 2014/30/EU

This certificate is issued under the following conditions:

1. It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design or type-examination procedures, if requested.
2. The certificate remains valid until the manufacturing conditions or the quality systems are changed.
3. The certificate validity is conditioned by positive results or surveillance audits.

The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of conformity and compliance with all relevant EC Directives. The statement is based on a single evaluation of one sample of above mentioned product. It does not imply an assessment of the whole production.

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification	27th December 2021
1st Surveillance Audit Due	26th December 2022
2nd Surveillance Audit Due	26th December 2023
Certificate Expiry (subject to the company maintaining its system to the required standard)	26th December 2024

Authorised Signatory

UK Certification & Inspection Ltd.

This certificate is the property of UK Certification & Inspection Limited and shall be returned immediately on request.
71-75 Shelton Street, Covent Garden, London, WC2H 9JQ, United Kingdom
Website:- www.ukcertifications.org.uk, email:- info@ukcertifications.org.uk
Company No. 11847851

Certification & Inspection

Certificate of Registration

This is to certify that the
Quality Management System
of

ZEO DETECT

at

7TH CABIN, 1ST FLOOR, APEEJAY BUSINESS CENTER, RAJ BHAVAN ROAD, THE PARK HOTEL, SOMAJIGUDA, HYDERABAD, HYDERABAD, TELANGANA, 500082

has been independently assessed and
is compliant with the requirements of:

ISO 9001:2015

For the following scope of activities:

MANUFACTURER OF GROUND WATER DETECTOR

Certificate Number: UQ-201912272706

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification	27th December 2021
1st Surveillance Audit Due	26th December 2022
2nd Surveillance Audit Due	26th December 2023
Certificate Expiry (subject to the company maintaining its system to the required standard)	26th December 2024

Authorised Signatory

UKAF

UK Certification & Inspection Ltd.

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71-75 Shelton Street, Covent Garden, London, WC2H 9JQ, United Kingdom
Website:- www.ukcertifications.org.uk, email:- info@ukcertifications.org.uk
Company No. 11847851

Certification & Inspection

Certificate of Compliance

FCC

Was evaluated and confirmed to comply with the requirement of

FCC PART 15A & 15B

Certificate No.: UQ-201912272708

Applicant

Name : ZEO DETECT

Address : 7TH CABIN, 1ST FLOOR, APEEJAY BUSINESS CENTER, RAJ BHAVAN ROAD, THE PARK HOTEL, SOMAJIGUDA, HYDERABAD TELANGANA, 500082

Product : GROUND WATER DETECTOR

Model : POOL FINDER, POOL FINDER PLUS, ZEO DUAL, GROUND SCAN 500, GROUND SCAN 300

The Certification body has performed an audit of the above product quality system covering the design, manufacture and final inspection of the certified product. The quality system has been assessed, approved and is subject to continuous surveillance according to rules of PART 15A & 15B of FCC Rules.

This certificate is issued under the following conditions:

1. It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design or type-examination procedures, if requested.
2. The certificate remains valid until the manufacturing conditions or the quality systems are changed.
3. The certificate validity is conditioned by positive results or surveillance audits.
4. The Devices complies with Part 15A & 15B of the FCC Rules. Operation is subject to the following two conditions: 1) This Devices may not cause harmful interference, and 2) The Devices must accept any interference received, including interference that may cause undesired operation.

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

Date of Certification	27th December 2021
1st Surveillance Audit Due	26th December 2022
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Website:- www.ukcertifications.org.uk, email:- info@ukcertifications.org.uk
Company No. 11847851

Certification & Inspection

Certificate of Compliance

RoHS Directive (2011/65/EU) as Amended (EU) 2015/863 of the European Parliament and of the Council on the restriction of use of certain Hazardous Substances.

Certificate No.: UQ-201912272707

Manufacturer

Name : **ZEO DETECT**

Address : **7TH CABIN, 1ST FLOOR, APEEJAY BUSINESS CENTER, RAJ BHAVAN ROAD, THE PARK HOTEL, SOMAJIGUDA, HYDERABAD, TELANGANA, 500082**

Products : **GROUND WATER DETECTOR**

Model : **POOL FINDER, POOL FINDER PLUS, ZEO DUAL, GROUND SCAN 500, GROUND SCAN 300**

This is to state that the above mentioned product is in compliance with RoHS Directive (2011/65/EU) as Amended (EU) 2015/863 of the European Parliament and Commission Decision 2005/618/EC on the restriction of use of certain Hazardous Substances [Lead (Pb): < 1000 ppm, Mercury (Hg): < 100 ppm, Cadmium (Cd): < 100 ppm, Hexavalent Chromium (Cr VI) < 1000 ppm, Polybrominated Biphenyls (PBB): 1000 ppm, Polybrominated Diphenyl Ethers (PBDE): < 1000 ppm, Bis(2-Ethylhexyl) phthalate (DEHP): < 1000 ppm, Benzyl butyl phthalate (BBP): < 1000 ppm, Dibutyl phthalate (DBP): < 1000 ppm, Diisobutyl phthalate (DIBP): < 1000 ppm]

Statement:

This certificate declares that the product type / model described above complies with the mentioned above European Standard(s).

Remarks:

This certificate of complies is based on the evaluation of a sample of the above mentioned products. It does not imply and assessment of the mass-production of the product. This certificate holder may use this certificate in connection with the test report. The certification body should be informed (revision of technical file) for any modification or alterations made to the aforementioned product type(s), including design and manufacture and /or extension to the existing scope of application.

The certificate is valid for three years if the company applies the technical construction file which has been stored in UKCert office. This certificate includes declaration of manufacturer. Certificate remains property of UKCert (UK Certification and Inspection Ltd.) to whom it must be returned upon request. The certificate validity is conditioned by positive results or surveillance audits.

Validity of this certificate can be verified at www.ukcertifications.org.uk/verify

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Authorised Signatory

UK Certification & Inspection Ltd.

RoHS compliant

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Company No. 11847851

ZEO DETECT™

www.zeodetect.com

WARRANTY
Certificate

CUSTOMER NAME: _____

ADDRESS : _____

MODEL NO. _____ SERIAL NO. _____

PURCHASE DATE: _____ INVOICE NO. _____

Warranty period will not be extended due to the exchange, repari, or resale and shall be applicable only from the original date of purchase of the product. Exchange/Return of product after repair to the customer shall be done at a resonable period. This card includes 1 Year Guarantee and 3 Years Warranty

Director

ZEO DETECT

WORLD'S BEST SCIENTIFIC WATER DETECTORS

ZEO DETECT company is an aspiring start-up, led by dedicated engineers and enthusiastic Geologist. We established our enterprise to design, develop and market a new generation of geophysical detection devices, including long range water and 3D Water detectors. This is our business idea, and we are proud to be able to support geologists and civil engineers worldwide in their work, and to help them to discover underground water and such as aquifers, fractures, faults, and caves in the ground.

CONTACT US

ZEO DETECT

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Hyderabad, Telangana, India

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