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This operation manual applies to the following Models:

Category Model	Single channel series	16-channel series	32-channel series
Basic version	ADMT-150S-X	ADMT-300SX-16D	ADMT-400SX-32D
	ADMT-300S-X	ADMT-500SX-16D	ADMT-600SX-32D
	ADMT-600S-X	ADMT-1200SX-16D	ADMT-1200SX-32D
	ADMT-1200S-X	ADMT-2000SX-16D	ADMT-3000SX-32D
	ADMT-3000S-X	ADMT-3000SX-16D	ADMT-4000SX-32D
Professional version	ADMT-20K-X	ADMT-20K-16D	ADMT-60K-32D
	ADMT-60K-X	ADMT-60D-16D	ADMT-100D-32D
	ADMT-60D-X	ADMT-200AX-16D	ADMT-300AX-32D
	ADMT-100D-X	ADMT-500AX-16D	ADMT-600AX-32D
	ADMT-200AX		ADMT-1200AX-32D
	ADMT-500AX		ADMT-3000AX-32D
	ADMT-1200AX		ADMT-5000AX-32D
	ADMT-3000AX		
	ADMT-5000AX		

1 Instrument overview

The ADMT Android screen series product is a smart instrument that integrates data acquisition, real-time imaging, and data synchronization with multiple terminals. Equipped with 10-inch (5-inch or 7-inch for single channel), measurement board, and 1/16/32 channel MN electrodes input access. After data collection is completed, the instrument can check the data and form graph immediately.

Single channel series adopt 1 channel input measurement, equipped with 20m MN standard measuring line; 16 channel series adopt 16 channels input measurement at the same time, equipped with 16 channels MN input large line; 32 channel series adopt 32 channels input measurement at the same time, equipped with two 16 channels MN input big line. Both support MN electrode and TT probe measurement mode can be switched, data superposition filter can be set, can be equipped with wire electromagnetic probe through MN input or wireless Bluetooth connection to the gold hoop for data collection.

The 16 or 32 channel series respectively support 1-16, 1-32 channels, and multi-channel simultaneous input measurement, which solves the defect of the MT method field source changing at any time, can obtain a relatively stable field source, and repeat measurement consistency is very good. Through multi-channel

simultaneous input measurement, big data of high-density measurement can be obtained, which breaks through the depth limitation of traditional high-density electrical method, and enables the maximum exploration depth to reach 5000 meters. It is also possible to use three or more 32 channels of instruments in wireless networking to become 96 channels, 128 channels, 256 channels and 512 channels for large data collection, which greatly improves the accuracy of field data collection. ADMT series products have obtained a number of invention patents (patent numbers: 201310205318.9, 201110454869.X, 201320054153.5, 201120214308.8, 201120567915.2, 201320303919.9), and have been awarded the Shanghai High-tech Achievement Transformation Project since they went on the market. In practice for nearly 20 years, we have extensively compared the test with the artificial direct current method instrument, and obtained very good abnormal curve consistency. In some areas with poor grounding conditions, the abnormal curve is more realistic than the artificial direct current method instrument.,Get the general recognition and support of our customers.

2 Main features

2.1 Accurate and efficient:

Using 1-16, 1-32 channels to input measurement at the same time, to solve the defects of MT electrical field source changes, the accuracy rate is greatly improved, and the accuracy rate is 30-60% higher than that of the general single channel.

2.2 Smart and convenient:

Standard 7/10 inch touch screen for real-time drawing, and intercommunication with mobile phone or tablet computer, PC computer for data processing and drawing.

2.3 Depth adjustable:Optional depth within the maximum depth range of different models.

2.4 Channel optional:1,1~16,1~32 Any channel selection.

2.5 Flexible input:

It can input 1, 1-16, 1-32 channels of MN electrodes, and the MN spacing is flexibly variable from 1-5 meters. Electromagnetic sensor input can also be used to solve the measurement of special formations.

2.6 Advanced and stability:Multiple innovative designs obtained multiple invention patents.

3 Introduction of the working principle of the instrument

The AIDU series instruments use natural electromagnetic field of the earth as the working field source to study the electrical structure inside the earth. According to the principle that different frequencies of electromagnetic waves have different skin depths in the conductive coal, the surface is measured from high frequency to The low-frequency Earth electromagnetic response sequence studies the difference in electrical variation of geological bodies at different depths in the subsurface and determines the occurrence of underground geological bodies.

3.1 Electromagnetic wave propagation theory, Helmholtz equation

Ground electromagnetic waves are sent to the ground, and the propagation of electromagnetic waves in the earth and soil follows the Maxwell equation. If it is assumed that most of the subterranean geotechnical soil is non-magnetic and is uniformly conductive macroscopically, there is no charge accumulation, then the Maxwell equation can be simplified to:

$$\left. \begin{aligned} \nabla^2 H + k^2 H &= 0 \\ \nabla^2 E + k^2 E &= 0 \end{aligned} \right\} \quad (1)$$

(1) where k is called the wave number (or propagation coefficient)

$$k = [\omega^2 \mu \varepsilon - i \omega \sigma \mu]^{\frac{1}{2}} \quad (2)$$

Considering that the propagation coefficient k is a complex number, let $k = b + ia$, where: a is called the phase coefficient and b is called the absorption coefficient.

In the electromagnetic frequency range measured by the ADMT series of natural electric field geophysical instruments (0.1 Hz to 5 kHz), the displacement current can usually be ignored, and K is further simplified as:

$$k = -i \omega \mu \sigma \quad (3)$$

3.2 Wave group resistance and resistivity

A magnetic field with a change in the Helmholtz equation induces a changing electric field, and we have a magnetoelectric relationship:

$$\frac{E}{H} = -\frac{i \omega \rho}{k} \quad (4)$$

The surface impedance Z is defined as the ratio of the surface electric field and the horizontal component of the magnetic field. In the case of uniform earth, this

impedance is independent of the polarization of the incident field and is related to the earth resistivity and the frequency of the electromagnetic field:

$$Z = \frac{E}{H} = \sqrt{\omega \mu \rho} e^{i\pi/4} \quad (5)$$

(5) The formula can be used to determine the resistivity of the earth:

$$\rho = \frac{1}{5f} \left| \frac{E}{H} \right|^2 \quad (6)$$

3.3 Skin depth

In non-magnetic media, the skin depth formula is:

$$\delta \approx 503 \sqrt{\rho/f} \quad (7)$$

It can be seen from the above equation that the penetration depth of electromagnetic waves is related to frequency and resistivity. The frequency is certain, the higher the resistivity, the greater the penetration depth, the higher the resistivity, and the lower the frequency, the greater the penetration depth.

4 Instrument Instruction and Main parameters

4.1 Single Channel Instrument Instruction

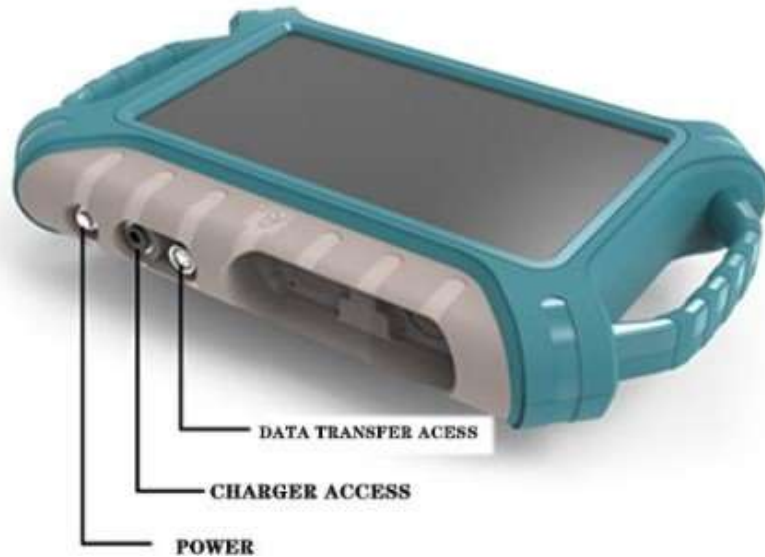


Figure 1



Figure 2

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4.2 16 channels instrument instruction



Figure 3

4.3 32 channels instrument instruction



Figure 4

4.4 Main parameters of basic model 1 and 16 channels

Parameter \ Model	ADMT-150S-X	ADMT-300S-X	ADMT-600S-X	ADMT-1200S-X	ADMT-3000S-X	ADMT-300SX-16D	ADMT-500SX-16D	ADMT-1200SX-16D	ADMT-2000SX-16D	ADMT-3000SX-16D
Maximum depth (m)	≤150	≤300	≤600	≤1200	≤3000	≤300	≤500	≤1200	≤2000	≤3000
Channel input	1 channel input simultaneous					16 channels input simultaneous, electrode distance ≤ 2.5m				
Channel option	1					1-14				
Adjustable depth	50-150	100-300	100-600	100-1200	100-3000	Maximum optional depth, 100/200/300/400/500/600/800/1200/2000/3000m				
layer division	10-60				10-80					
Connection	Serial port, WiFi, Bluetooth 4.0, USB(optional 4G communication)									
Display	7-inch IPS wide Angle, 178° visual touch screen					10.1-inch IPS wide Angle, 178° visual touch screen				
Operating system	Android 6.0.1									
CPU	ARM Cortex-A7, 8-core CPU, 2.0Hz									
GPU	OpenGL ES 2.0									
Main function	Depth optional, channel number optional, real-time 2D/3D drawing, battery removable									
Measure model	MN/TT									
Frequency range (Hz)	1-8K			0.01-6K		1-8K			0.01-6K	
Frequency selective	Preset frequency selection and intelligent frequency selection, analog + data filtering, 1-16 times stacking is optional									
Resolution	0.1mV±5%			0.01mV±2%		0.01mV±3%			0.01mV±2%	
Sampling time (s)	30-280			60-900		60-3600			120-5400	
Battery	600mA/H					800mA/H				
Weight	2.3kg					2.6kg				

Figure 5

4.5 Main parameters of basic model 32 channels

Parameter \ Model	ADMT-400SX-32D	ADMT-600SX-32D	ADMT-1200SX-32D	ADMT-3000SX-32D	ADMT-4000SX-32D
Maximum depth (m)	≤400	≤600	≤1200	≤3000	≤4000
Channel input	32 channels input simultaneous, electrode distance ≤ 5m				
Channel option	1-30				
Adjustable depth	Maximum optional depth, 100/200/300/400/500/600/800/1200/2000/3000/4000m				
layer division	40-160				
Connection	Serial port, WiFi, Bluetooth 4.0, USB				
Display	10.1 -inch, IPS wide Angle, 178° visual touch screen				
Operating system	Android6.0.1, running memory 1GB, memory 8GB (expandable 128GB)				
CPU	ARM Cortex-A7, 8-core CPU, 2.0Hz				
GPU	OpenGL ES 2.0				
Main function	Depth optional, channel number optional, real-time 2D/3D drawing, battery removable				
Measure model	MN/TT				
Frequency range (Hz)	0.001-7K				
Frequency selective	Preset frequency selection and intelligent frequency selection, analog + data filtering, 1-16 times stacking is optional				
Resolution	0.01mV±3%			0.01mV±1%	
Sampling time (s)	120-7200			160-9000	
Battery	900mA/H				
Weight	3kg				

Figure 6

4.6 Main parameters of professional 1 and 16 channels

Parameter \ Model	ADMT-20K-X	ADMT-60K-X	ADMT-60D-X	ADMT-100D-X	ADMT-20K-16D	ADMT-60D-16D	ADMT-200AX	ADMT-500AX	ADMT-1200AX	ADMT-3000AX	ADMT-5000AX	ADMT-200AX-16D	ADMT-500AX-16D	
Maximum depth (m)	≤20	≤60	≤60	≤100	≤20	≤60	≤200	≤500	≤1200	≤3000	≤5000	≤200	≤500	
Channel input	1 channel input simultaneous				16 channels input simultaneous, electrode distance ≤ 5m			1 channel input simultaneous				16 channels input simultaneous, electrode distance ≤ 5m		
Channel option	1				1-14			1				1-14		
Adjustable depth	Maximum optional depth, 5/10/20/40/60/100/200/300/500/800/1200/2000/3000/4000/5000m													
layer division	5-60		5-100		5-60			10-100						
Connection	Serial port, WiFi, Bluetooth 4.0, USB													
Display	7 -inch, IPS wide Angle, 178° visual touch screen				10.1 -inch, IPS wide Angle, 178° visual touch screen			7 -inch, IPS wide Angle, 178° visual touch screen				10.1 -inch, IPS wide Angle, 178° visual touch screen		
Operating system	Android6.0.1, running memory 1GB, memory 8GB (expandable 128GB)													
CPU	ARM Cortex-A7, 8-core CPU, 2.0Hz													
GPU	OpenGL ES 2.0													
Main function	Depth optional, channel number optional, real-time 2D/3D drawing, battery removable													
Measure model	MN/TT													
Frequency range (Hz)	100-8K						1-8K		0.001-8K			1-8K		
Frequency selective	Preset frequency selection and intelligent frequency selection, analog + data filtering, 1-16 times stacking is optional													
Resolution	0.01mV±2%						0.1mV±2%		0.01mV±1%			0.01mV±2%		
Sampling time (s)	40-3600						100-360		120-1500			60-3600		
Battery	800mA/H				900mA/H			700mA/H				900mA/H		
Weight	2.3kg				2.8kg			2.3kg				2.8kg		

Figure 7

4.7 Main parameters of professional 32 channels

Parameter \ Model	ADMT-60K-32D	ADMT-100D-32D	ADMT-300AX-32D	ADMT-600AX-32D	ADMT-1200AX-32D	ADMT-3000AX-32D	ADMT-5000AX-32D
Maximum depth (m)	≤60	≤100	≤300	≤600	≤1200	≤3000	≤5000
Channel input	32 channels input simultaneous, electrode distance ≤ 5m						
Channel option	1-30						
Adjustable depth	Maximum optional depth, 5/10/20/40/60/100/200/300/500/800/1200/2000/3000/4000/5000m						
layer division	5-60	5-100	60-200				
Connection	Serial port, WiFi, Bluetooth 4.0, USB						
Display	10.1 -inch, IPS wide Angle, 178° visual touch screen						
Operating system	Android6.0.1, running memory 1GB, memory 8GB (expandable 128GB)						
CPU	ARM Cortex-A7, 8-core CPU, 2.0Hz						
GPU	OpenGL ES 2.0						
Main function	Depth optional, channel number optional, real-time 2D/3D drawing, battery removable						
Measure model	MN/TT						
Frequency range (Hz)	100-8K		0.001-7K				
Frequency selective	Preset frequency selection and intelligent frequency selection, analog + data filtering, 1-16 times stacking is optional						
Resolution	0.01mV±2%		0.001mV±2%			0.001mV±1%	
Sampling time (s)	40—3600		120—9000			280-14400	
Battery	1000mA/H		900mA/H		1100mA/H		
Weight	3kg						

Figure 8

5 Login and registration

5.1 System instruction and connection

After turning on the power of the instrument, the screen displays the serial port connection, touch export, folder, new measurement, parameter configuration, data processing and other menus (Figure 9).

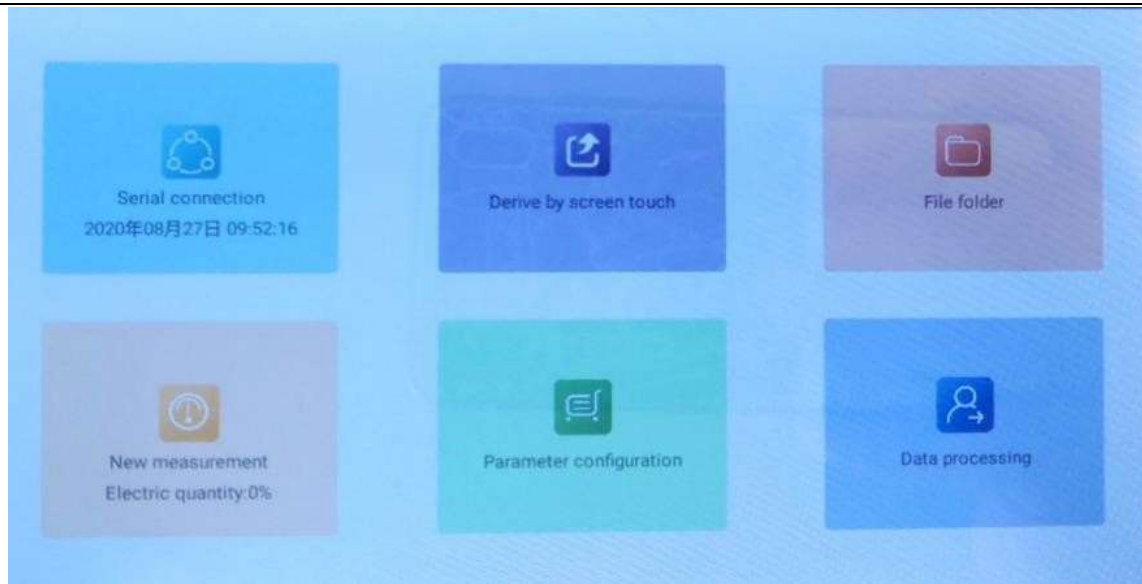


Figure 9

To use this instrument for the first time in an environment with a network, you need to use your mobile phone number to send verification login and log in after the registered account. The mobile phone number or registered account after login is a cloud data management account. You can log in to this account on your mobile phone or computer to achieve data synchronization analysis. If the instrument does not have a 4G network as standard, you need to provide a wireless network for the instrument in an environment with WiFi or use the mobile WiFi hotspot function.

The connection method is: touch the upper part of the left side of the screen with your finger, a little bit will pop up to hidden left menu, and swipe your finger to the right to bring up the left menu, select "Settings" and then click "System WiFi Settings" to search and connect nearby WiFi network. You can refer to this manual "11.3.3 System Settings", after registration is completed, except for data backup and synchronization, other operations do not require a network.

After the instrument is connected to the network, click any icon to log in and register (Figure 10). You can choose between "mobile phone number fast login" and "account password login". It is recommended to select "mobile phone number fast login" and enter your mobile phone number to send verification Code to log in, (the verification code is valid for 4 hours and supports logging in on other devices). Special reminder: Be sure to connect to the WiFi network or mobile WiFi hotspot to keep the instrument network open to send the verification code and login to be effective. If the network is not connected or the network is abnormal, it will be prompted to send the verification code failed.



Figure 10

5.2 Mobile Fast Login

Click "Mobile phone number fast login" to enter the mobile phone number (Figure 11), click "Get the verification code" to enter the verification code received by the mobile phone, and click Login to log in to the main interface of the system.

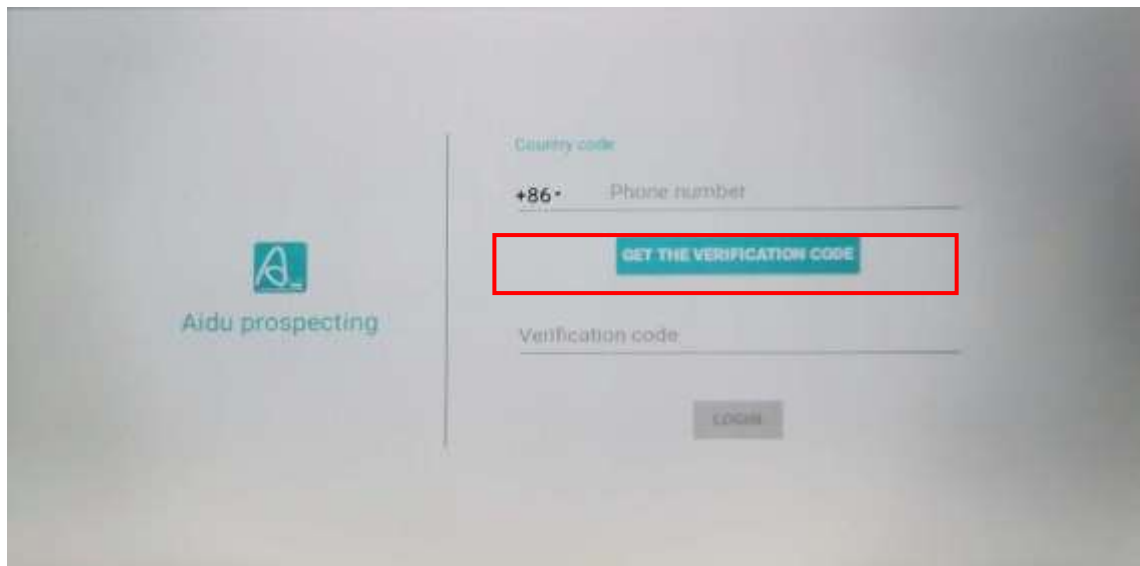


Figure 11

5.3 Account Password login

Click "Account Password Login" to pop up the login box (Figure 12), you need to

register an account for the first login, click "IMMEDIATE REGISTRATION" to jump to the registration interface (Figure 13), enter your phone number to get the verification code, enter your account number, and your password to complete the registration. After successful registration, click "Account Password Login" again, and enter the account and password to log in to the system.

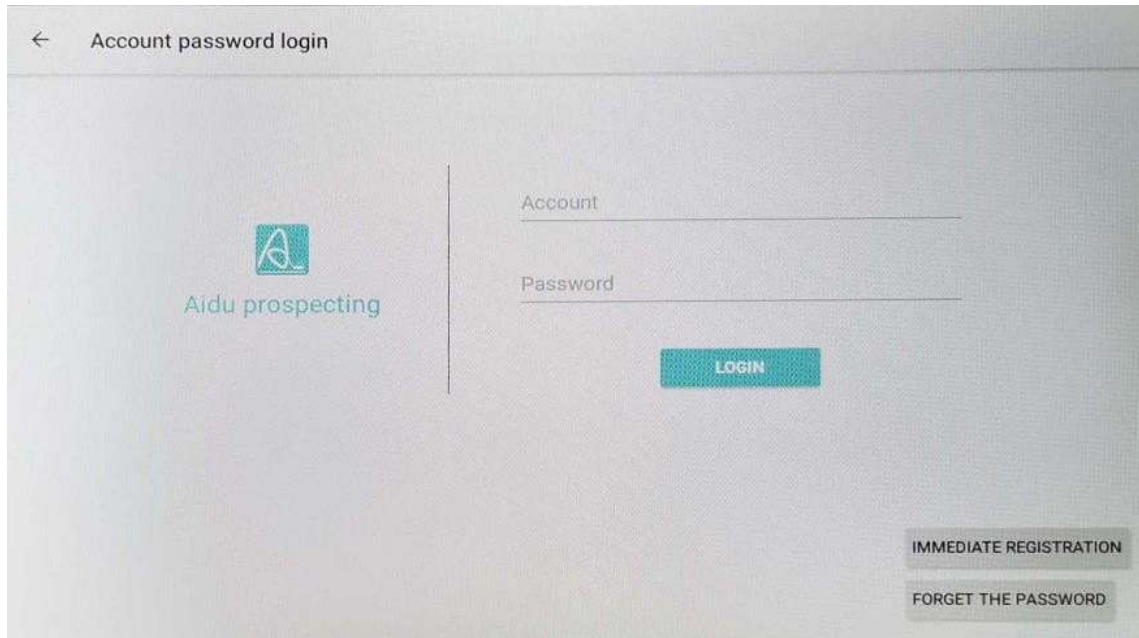


Figure 12

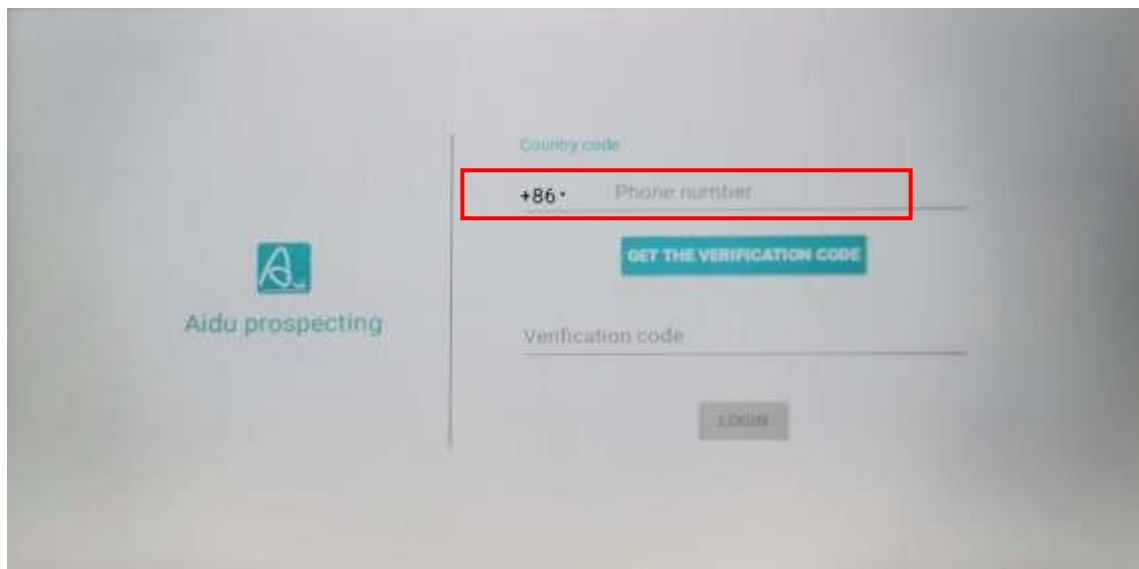


Figure 13

Language switch: Click "Language switch" in the upper right corner of the screen to switch to the corresponding national language interface as needed.

6 New Measurement

6.1 New Measurement

Click "New Measurement" to enter the measurement interface (as shown in Figure 14), enter the survey line name (can be entered in Chinese, numbers, and English), and the default X coordinate of the drawing is 10. Generally, there is no need to change it. The larger the value, the wider the display of the drawing X coordinate. The system supports modification as needed after the measurement is completed.

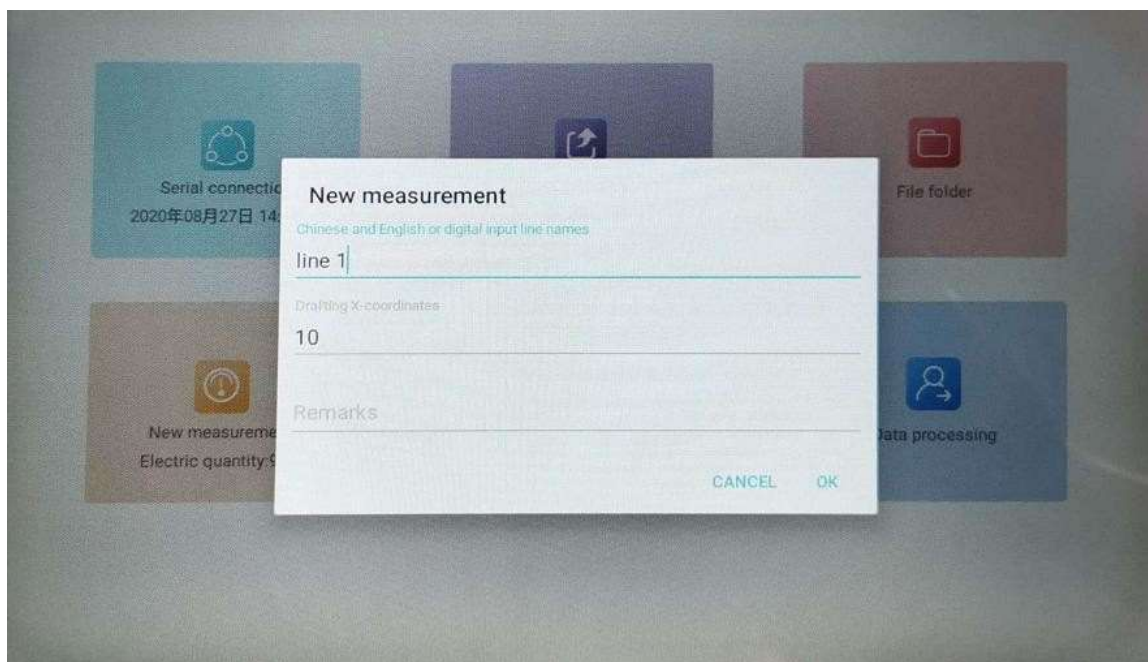


Figure 14

Click OK to enter the measurement setting interface, and then the measurement parameter interface will pop up to set the relevant parameters (Figure 15).

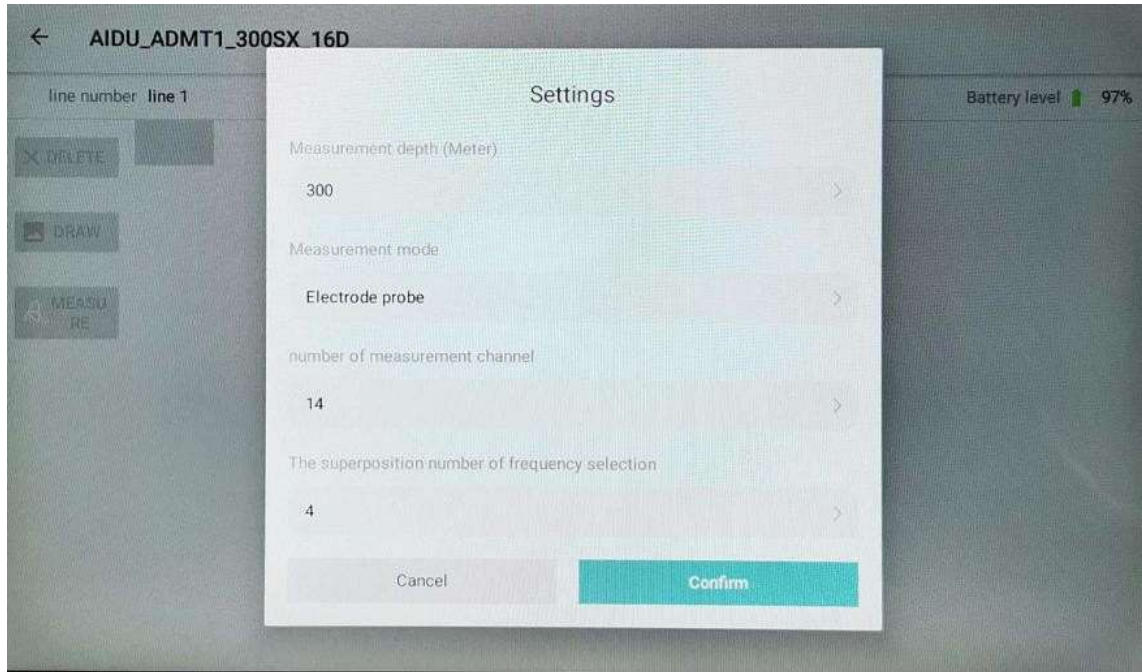


Figure 15

6.2 Parameter setting description

6.2.1 Measuring depth (meter):

Select the depth you need to measure. Generally, the default value is the maximum depth that this model can measure. A variety of depths are provided for users to choose from within the range of the maximum depth.

6.2.2 Measurement mode:

Two measurement modes of TT (electromagnetic probe) and MN (electrode) are available for selection, and users can choose according to the actual signal input type.

6.2.3 Number of measurement channel:

The default number of single-channel instruments is 1 and there is no need to change; the default number of 16-channel instruments is 14, which can be arbitrarily selected from 1-14; the default number of 32-channel instruments is 30, which can be arbitrarily selected from 1-30 channels; simple understanding The number of measurement channels can be arbitrarily selected within the maximum number of channels supported by this model instrument.

6.2.4 The superposition of frequency selection:

Different types of products can choose different times, generally 4-6, 4-10, 4-16 times can be selected. Generally, the larger the number of stacking times, the longer the

measurement time, the stronger the anti-interference ability, and the more stable and reliable data.

Click "OK" to enter the measurement interface.

6.3 Measure

After entering the measurement interface, click the "Measure" button on the left side of the screen to collect data, and the measurement progress bar will reach 100% to complete the current measurement point data acquisition (Figure 16).

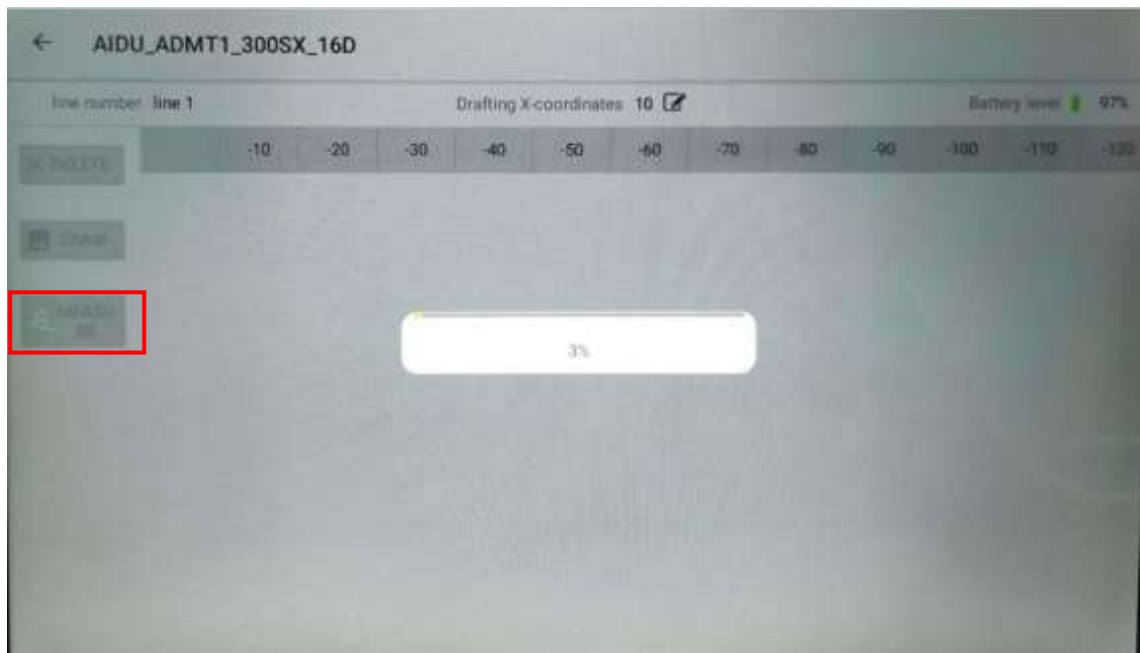


Figure 16

Click "Confirm" to save the data, and click "Measure again" to re-measure the point (Figure 17).

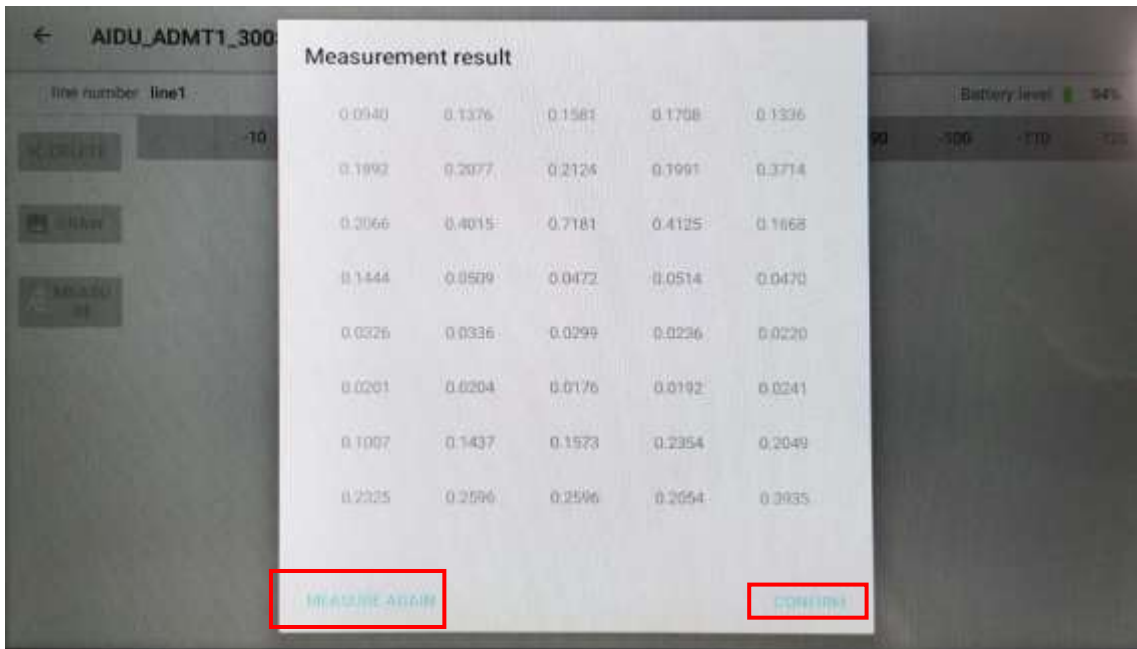


Figure 17

Select "Delete" to delete the last measurement data. If you don't need to delete it, move the device to the next measurement point and click "Measure" to measure the next set of data, and so on to complete the measurement collection of the entire profile (Figure 18). Do not click "Draw" during the process of completing the entire profile data measurement, because the data processing after selecting the drawing may affect the data accuracy.



Figure 18

6.4 Check the channel

If an error message appears during the measurement process (as shown in Figure 19), please click "Check the Channel" to return to the measurement interface, and check whether the MN is properly grounded or the measurement cable is connected to the instrument. Normal measurement can only be performed if the signal input is normal. The "Forced Measurement" instrument will measure the data normally, but the data may be inaccurate. If you can't solve it by yourself, please contact the manufacturer and dealer.

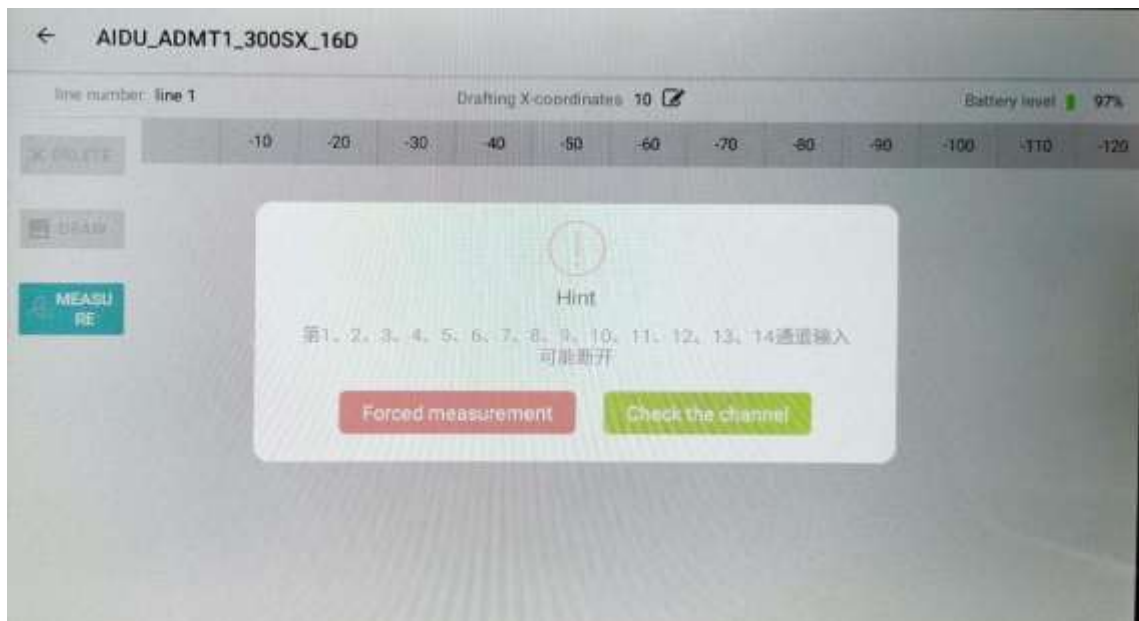


Figure 19

7 Drawing operation method

7.1 Basic drawing operations

During measurement, when the number of measurement points exceeds 6 points, the "Draw" button on the left side of the screen will turn blue. At this time, you can click to draw (Figure 20). It is recommended that you do not draw halfway when the entire profile measurement is not completed. May affect the accuracy of the data.

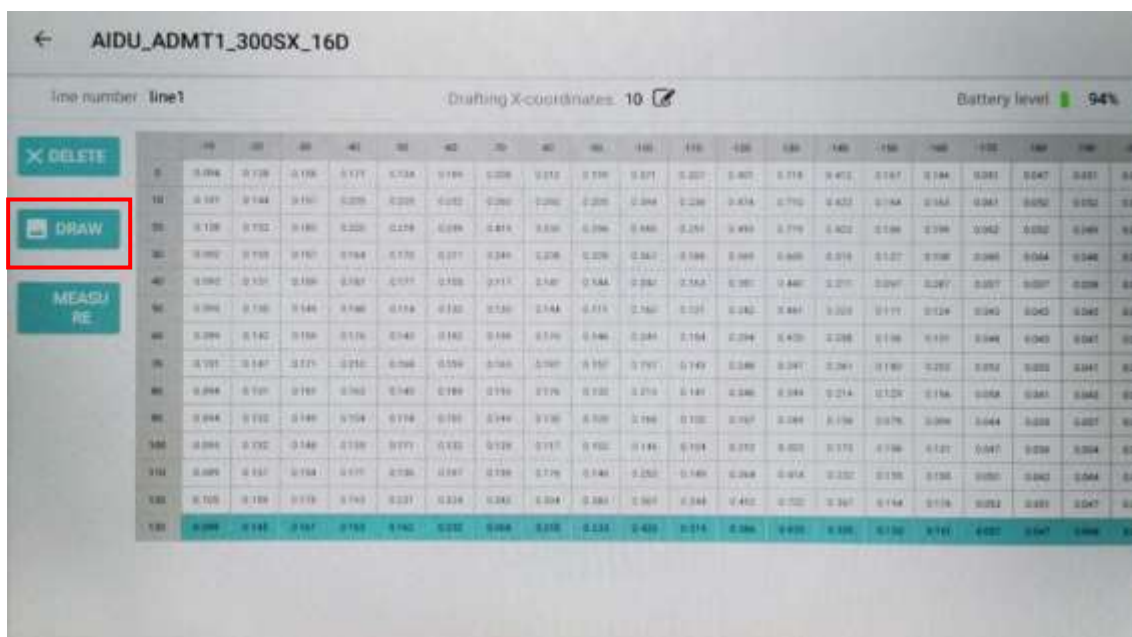


Figure 20

After selecting the drawing, you can choose to draw "isoline graph" and "graph" (Figure 21), and select the type of graphics according to actual needs. Choosing "Isoline graph" for the first time may prompt to install "Aidu Drawing", just install it according to the prompts, because selecting "Isoline Graph" will jump to the drawing in the "Aidu Drawing" program, and sometimes click on "Isoline graph" "Will prompt "Aidu Mapping has stopped running" and other error prompts, which are caused by system conflicts, and can generally be recovered by exiting and re-entering or restarting the instrument.



Figure 21

7.2 Draw 2D, 3D, etc. line graphs

Select "Isoline graph" and the system will automatically generate Isoline graph (Figure 22).

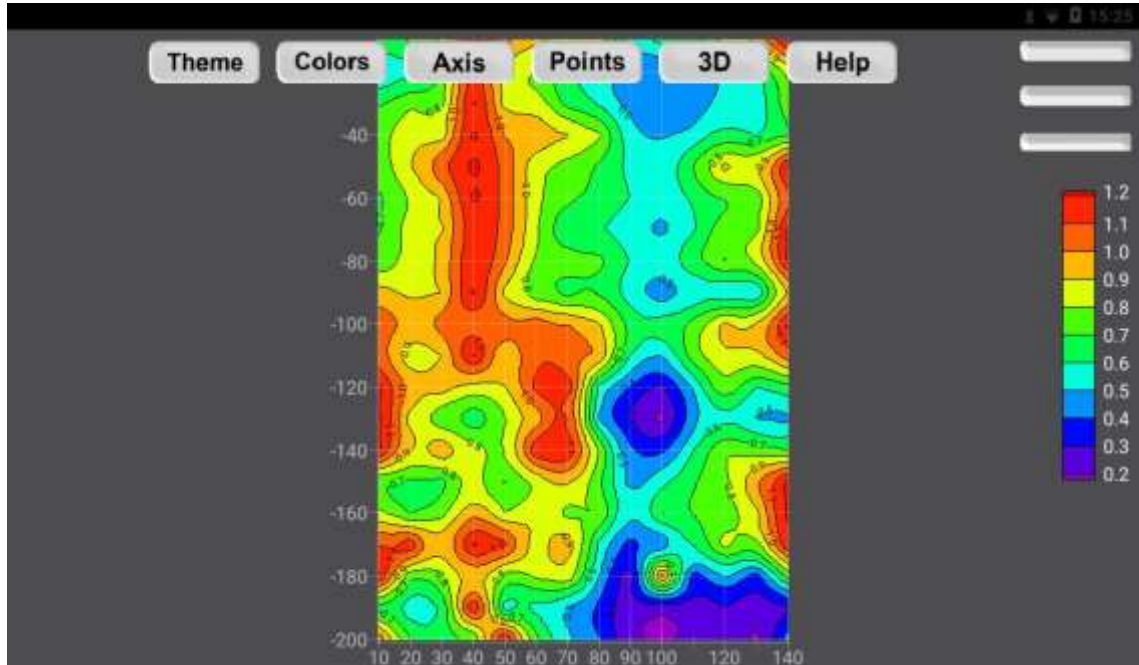



Figure 22

Click the "3D" or "2D" icon at the top of the drawing interface to switch between 2D and 3D (Figure 23), and click the icon in the upper right corner of the drawing interface  to set the color scale. Generally, the default is 5 without changing the setting. Click "Save Picture" and confirm to save the effect picture directly to the system file device name, click "Exit" to return to the measurement data interface.

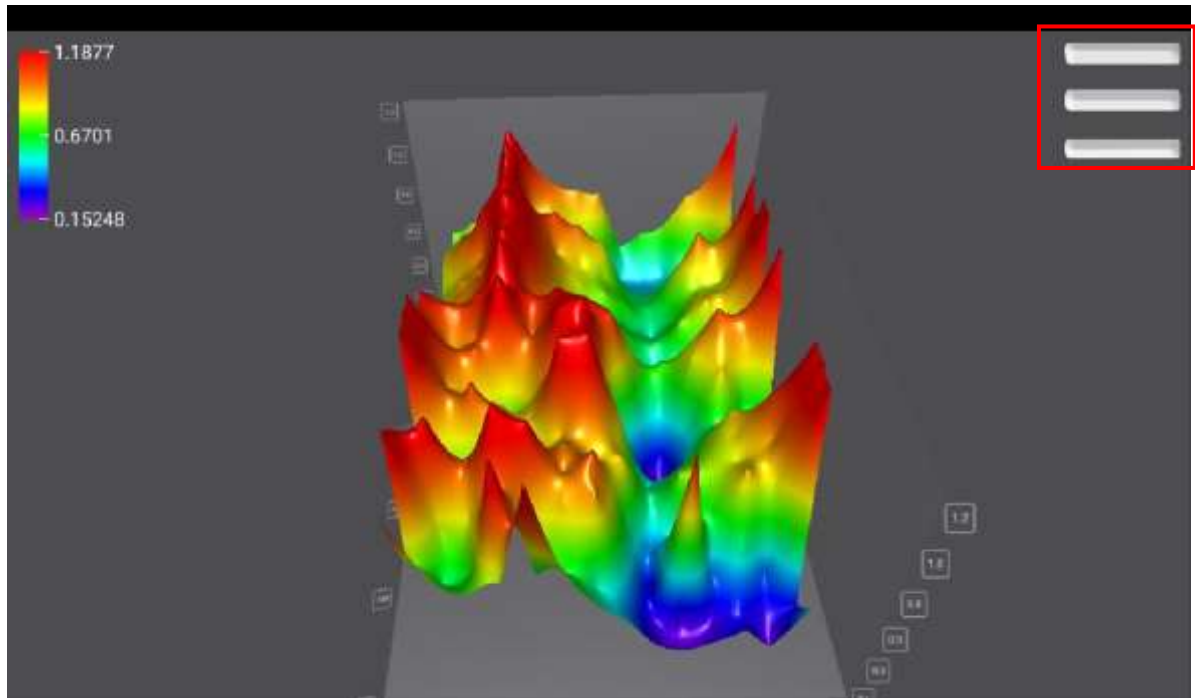


Figure 23

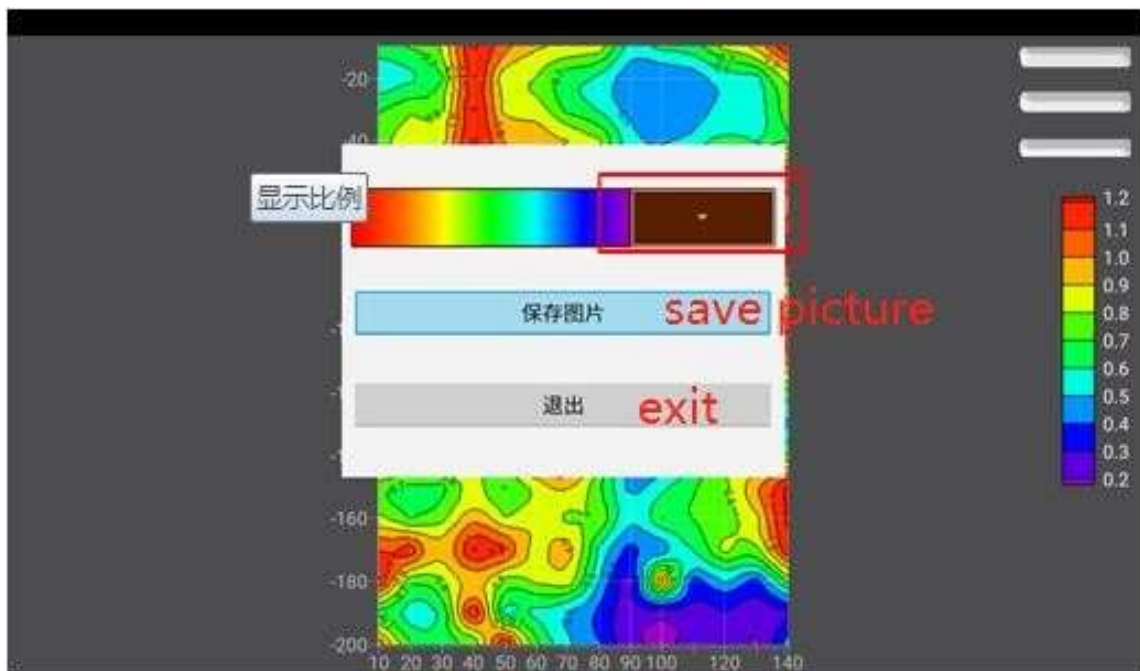


Figure 24

7.3 Drawing Graph

If you choose "graph", the system will automatically generate a graph (Figure 25).

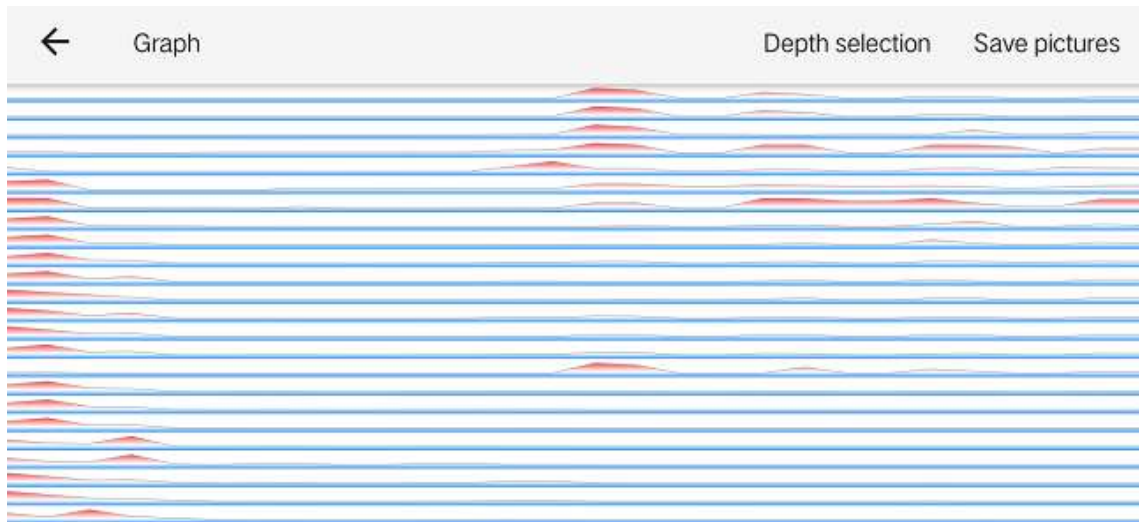


Figure 25

You can independently select the corresponding depth curve display by clicking "Depth Selection" in the upper right corner (Figure 26).

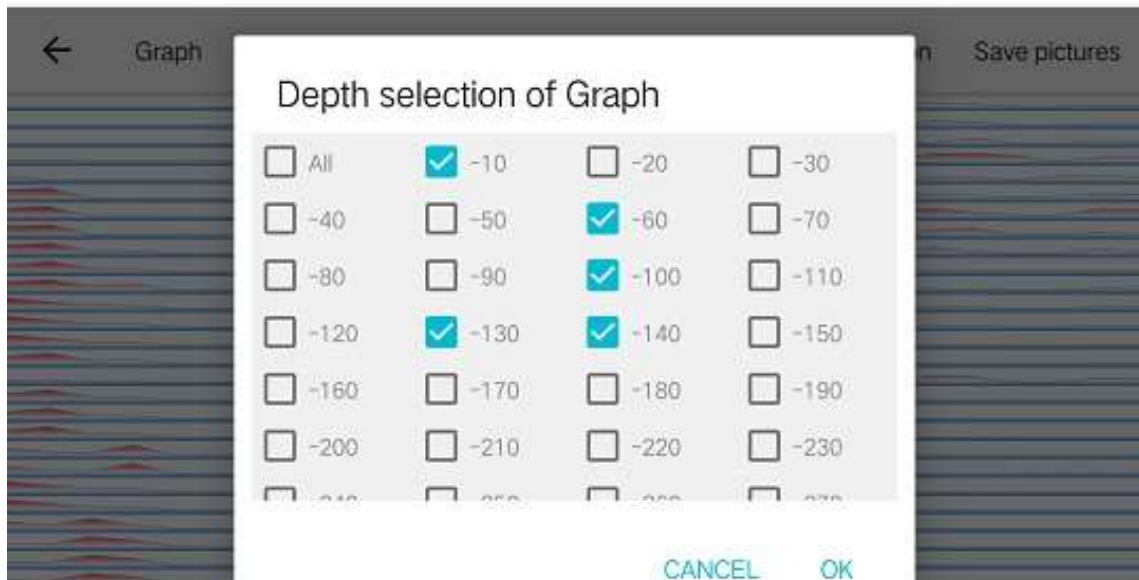


Figure 26

Select "Save Pictures" to save the graph to a folder (Figure 27).



Figure 27

7.4 Drawing in a folder

By selecting the file name in the folder that needs to be viewed and drawn (Figure 28), you can directly "Vi " and "Connect " (Figure 29), select "Vi " to go to the data page (Figure 25), select the "Connec " section of the instrument to support supplementary measurement functions, and continue the measurement of the line.

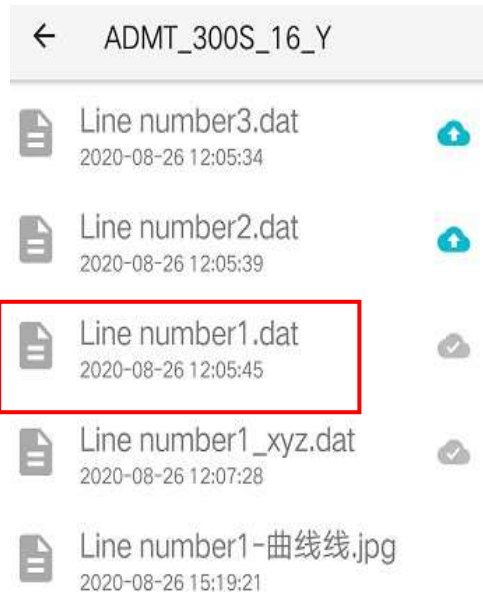


Figure 28





Figure 29

8 Folder operation method

8.1 folder Basic operation

The folder is the entrance to all data viewing and drawing. The file is first named according to the time the file was created, such as 20200808. The data measured by the instrument, the synchronized data and the data transferred by other methods can be viewed and drawn in the "File Folder", View and submit expert analysis, etc.

Click "File Folder" to see all files, and the data will be automatically arranged according to the time of addition (Figure 30). Click "←" in the upper left corner to return to the previous interface, click "" in the upper right corner, data file name keywords can search for files. Click the date folder to query all data files under that date (Figure 31). Click in the network environment  icon, Upload the file to be uploaded to the cloud mark  Files with such icons, Description has been backed up in the cloud, You can download and view drawings simultaneously on your mobile phone and computer.

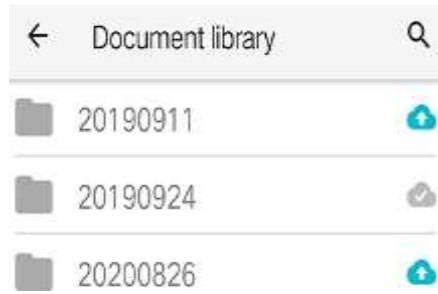


Figure 30



Figure 31

8.2 Expert analysis submission

Long press the data file that needs to be processed, the long-pressed file is highlighted and enters the multi-selection state (Figure 32), click "Expert Analysis" to jump to the expert analysis submission interface (Figure 33), you can submit this data to the background Online expert points, at the same time can explain the measurement picture, measurement site video, measurement point distance and other information of this data, click "Save" and submit it to Aidu Exploration Expert backstage. After the expert analyzes, the analysis result will be fed back to the system. 11.2.5. "Expert Analysis" to check.

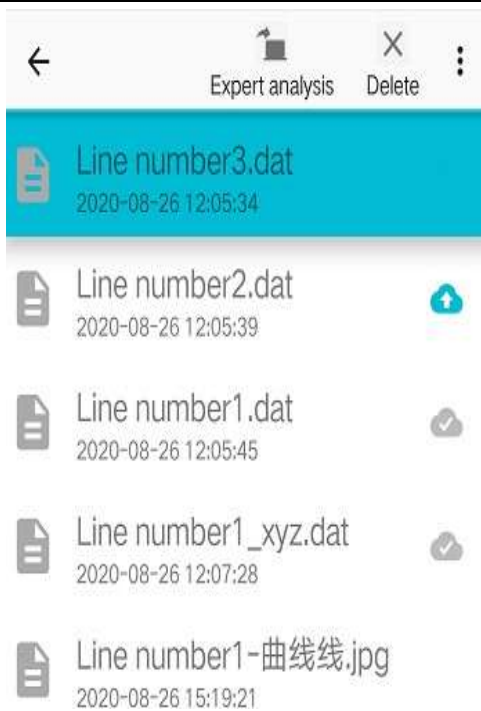


Figure 32



Figure 33

8.3 Data deletion and export

Long-press data files that need to be processed, long-pressed files are highlighted and enter a multi-select state (Figure 34), and selecting Delete prompts For “local deletion” and “Cloud deletion”. Select Cloud deletion to delete backup data in the cloud, and local deletion to delete data kept by this device.

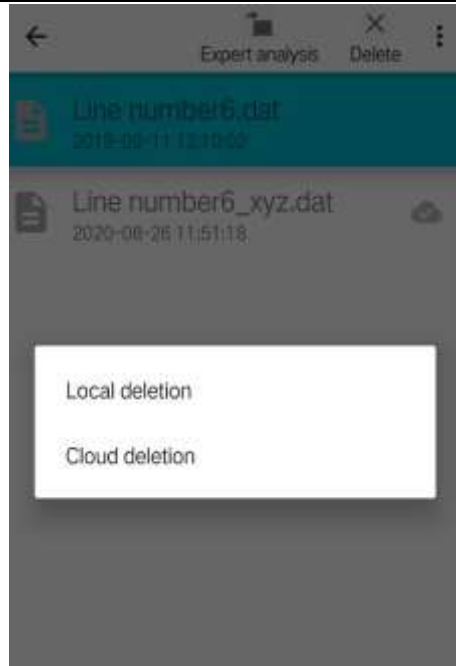


Figure 34

9 Parameter configuration operation method

Click "Parameter Configuration" on the main screen to enter the parameter configuration interface, as shown in the figure below (Figure 35):

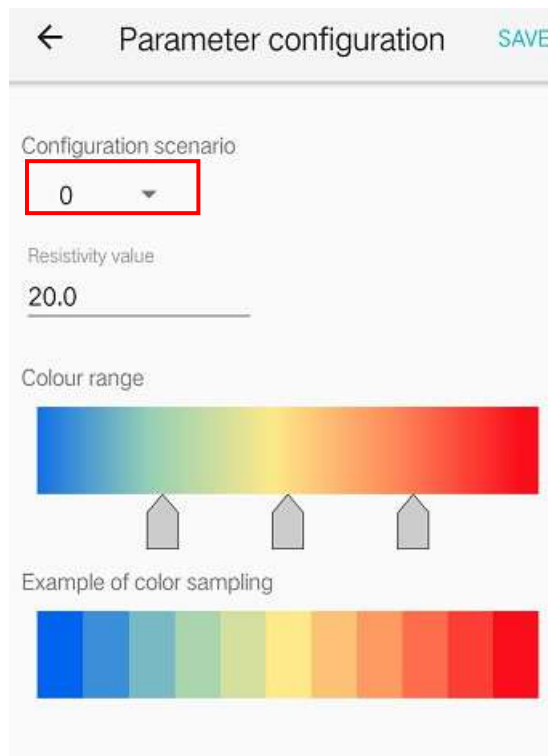


Figure 35

Click the small arrow next to the configuration plan to choose different parameter configurations. The same set of data can choose different parameter configurations to draw different renderings. Different parameters can be applied to different regions and application scenarios. The user can freely choose according to the actual use and area, and abide by the basic principle of geophysical prospecting: "Know the unknown" principle. After measuring on a known target, select different parameters to draw, and confirm the parameter configuration scheme by the degree of conformity between the view shape and the actual situation. The parameter configuration scheme selection is a summary of long-term experience to optimize the selection configuration, which can be more accurately applied to different regions and application scenarios. Some advanced users can choose option 8 to set the parameters themselves (normal users use it with caution). Recommended parameter configuration options:

Scheme 0 is a general parameter, which can match most areas.

Option 1 can be applied to water search in northern China, with good geological stratification.

Option 2 can be applied to search for water in southern China, with general geological stratification, which is convenient for judging fractures and karst structures.

Option 3 can be applied to deep exploration, such as geothermal hot springs, geological structures and general surveys.

Option 4 can be applied to caverns, archaeology and some shallow exploration work.

Option 5 can be applied to water conservancy projects, dyke piping detection, slope disasters, etc.

Option 6 can be applied to urban engineering geophysical prospecting, environmental protection, dams and engineering construction.

Option 7 can be applied to professional geophysical prospecting, taking into account the effects of shallow and middle layers, and for prospecting.

Program 8 professional mode, users need to set the parameters by themselves (use with caution).

The configuration scheme may be adjusted according to actual application scenarios, please pay attention to the update of Aidu system.

10 Data processing operation method

On the main screen, click "Data Processing" to enter the data processing interface (Figure 36).



Figure 36

10.1 Data reorganization

This function can reorganize the survey data of different sections at the same depth and draw the plane section diagram. Click "Data Reorganization" to enter the data reorganization operation interface (Figure 37), click the "+" sign on the right to select multiple survey line data to be processed, enter the measurement depth to be reorganized, and click "Confirm" to complete the data reorganization.

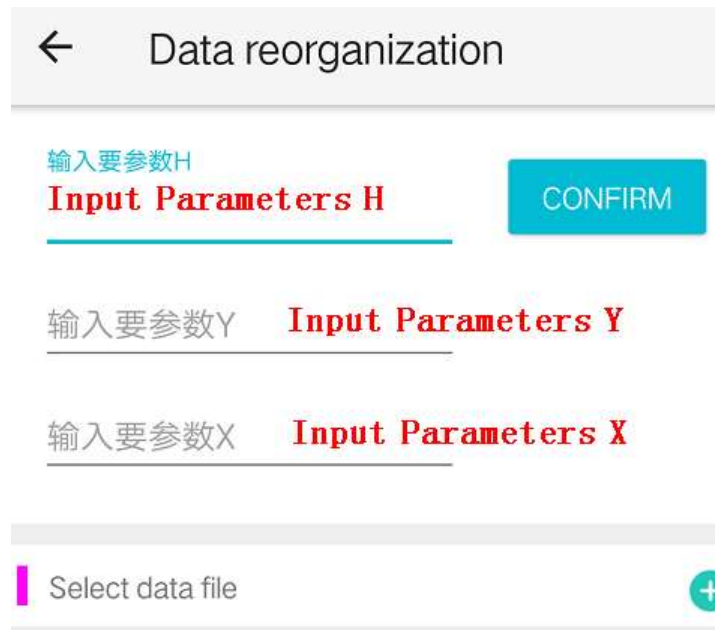


Figure 37

10.2 Format conversion

This function can convert the measurement data format into other high-density instrument drawing software formats, which is convenient for interactive use.

10.3 Data download

This function can download all cloud data on the currently logged-in account to the local, realizing multi-terminal data synchronization.

11 Operation method of other functions of the instrument

11.1 Touch screen export operation method

When the host connection mode is "Serial connection" and "WiFi connection", the touch screen export function cannot be used. When the connection mode is changed to the "Bluetooth connection" mode, and the Bluetooth connection with the external

touch screen measurement host can import the external host measurement data To the system folder of this instrument (for the specific export method, please refer to the introduction of "Bluetooth Transmission" in the ADMT series product operation manual and contact the manufacturer).

11.2 Operation method of the hidden menu on the side of the host

Touch the upper part of the left side of the screen with the belly of your finger to pop up a little bit to hide the left menu, and slide your finger to the right to bring up the left menu (Figure 38).

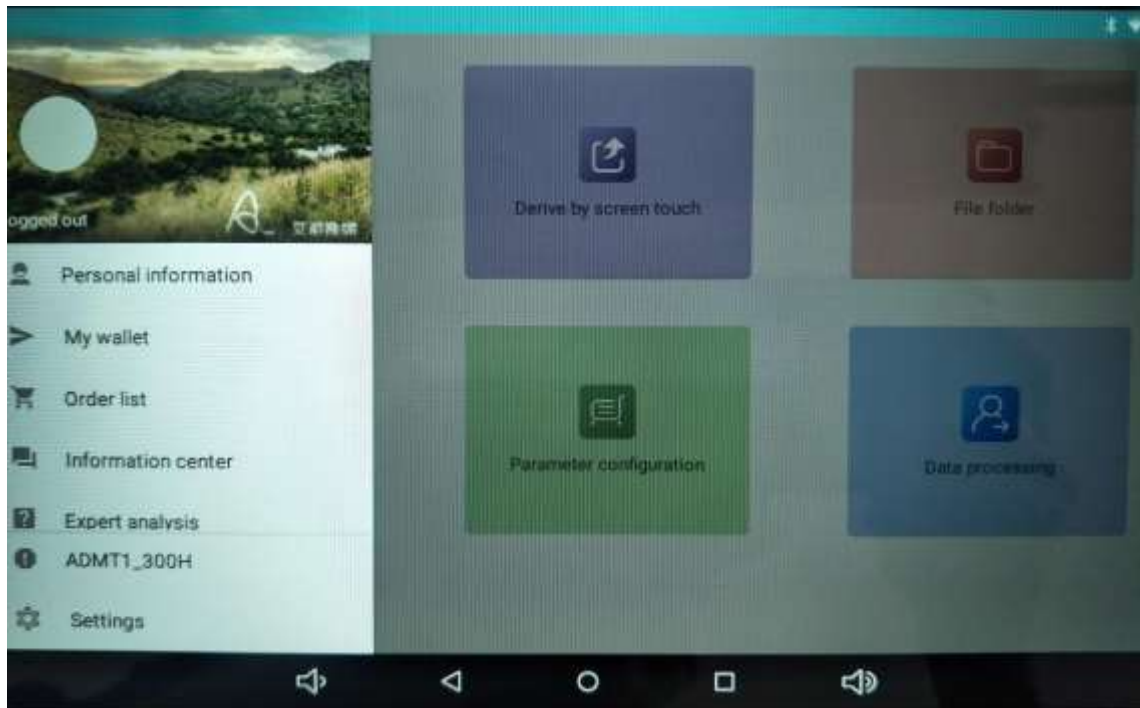


Figure 38

11.2.1 Personal information

Click "Personal Information" to view and edit personal information.

11.2.2 My Wallet

Click "My Wallet" to view personal points data.

11.2.3 Order List

Click "Order List", it is not currently supported.

11.2.4 Information Center

Click the Information center to view system messages.

11.2.5 Expert analysis

You can view the expert analysis results of the APP background, and you need to submit the data in the folder to the experts for analysis. For specific operations, refer to "8.2 Expert Analysis Submit"

11.2.6 My supply and demand information

Supply and demand information can be released, but it is temporarily not supported.

11.2.7 Click to connect device

Click to view the instrument model and device number. Only the Bluetooth mode is displayed.

11.2.8 Settings

Click Settings to enter the system settings interface (Figure 39).



Figure 39

11.3 System Settings

11.3.1 Language selection: Click "Language" to switch between Chinese and other languages.

11.3.2 Connection mode: Click to select "Bluetooth connection", "Serial connection", and "WiFi connection" according to the instrument model specifications. Generally, the connection mode has been set at the factory and does not need to be changed. However, the system provides optional connection methods for other purposes. Bluetooth connection can be used to connect to other external hosts, and WiFi connection can be used for wireless networking to achieve 1-200 simultaneous measurements. Please confirm with the manufacturer whether the instrument you purchased supports and is compatible with this function.

11.3.3 System settings: Click " Bluetooth Settings" to connect and operate Aidu's series of Bluetooth instruments; click " WiFi Settings" to search for and connect to

nearby wireless network signals, and provide a network for the instrument to facilitate user login, registration, and data backup synchronization; Click "Screen Brightness Settings" to set the screen display brightness, open and hide the system status bar and navigation bar parameters.

11.3.4 Others

Registration agreement: Click to view the host-related usage agreement.

Privacy policy: Click to view the company's privacy protection policy for customers who use the instrument.

Check for update: Click to check the system version when there is a network, and you can update to the latest version of the software.

About: Click to view the APP version number of this instrument.

Logout: Click to log out of the currently logged-in account.

12 Field connection method of the instrument

12.1 Single channel connection

12.1.1 Wired electrode connection mode:

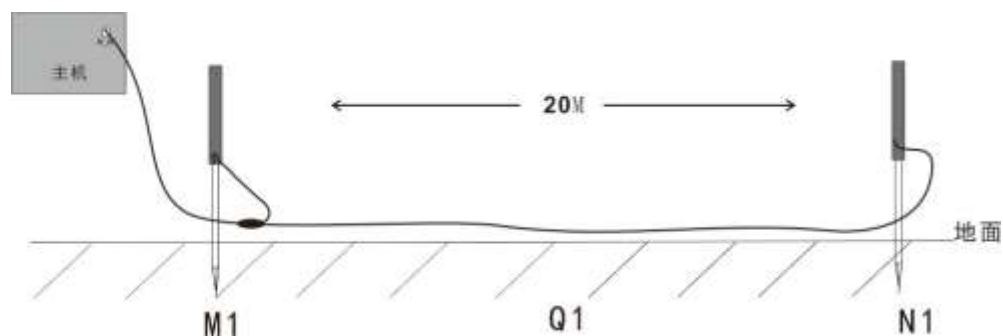


Figure 40

After the instrument is turned on, connect the instrument as shown in the figure above (Figure 40), plug the M and N measuring electrodes into the ground, and start sampling. The measuring point is at the center of the two M and N electrode rods. After sampling at this point, move the M and N electrodes in the same direction at a certain point distance to perform the second measurement point sampling measurement (Figure 41). And so on, until the entire profile measurement is completed.

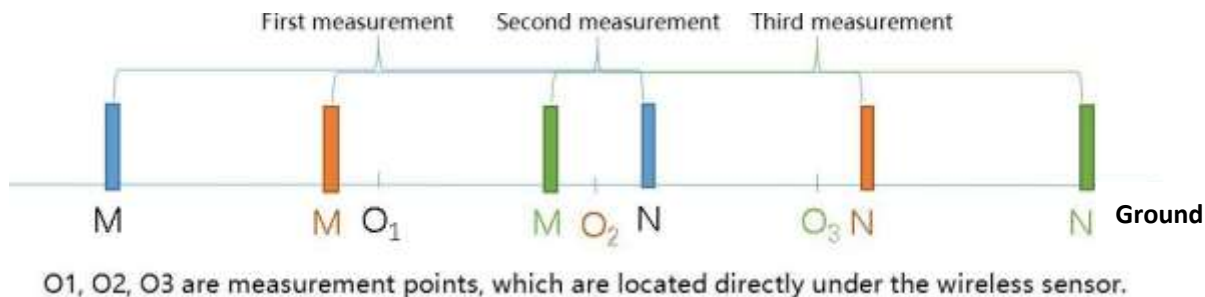


Figure 41

12.1.2 Wired magnetic sensor connection method (optional)

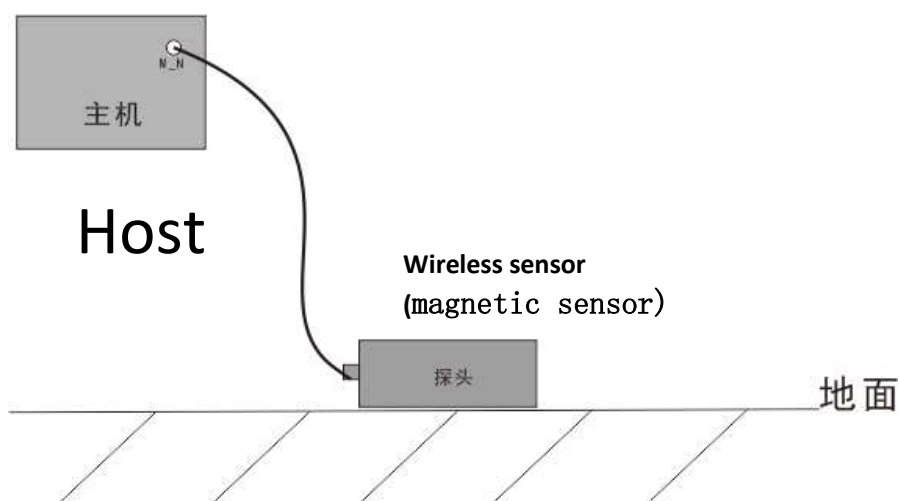


Figure 42

After the instrument is turned on, connect the instrument as shown in the figure above (Figure 42), place the sensor on the ground, and start sampling. The measurement point is directly below the sensor. The sensor placement direction is not required, but the placement direction of each measuring point sensor on a survey line is required to be consistent. After sampling at this point, move the sensor in the same direction at a certain point distance to perform sampling measurement at the second measurement point. And so on, until the entire profile measurement is completed.

12.1.3 Connection mode of wireless magnetic sensor(optional).



Figure 43

After the instrument is turned on, the instrument is connected to the wireless host via Bluetooth. Place the wireless host on the ground and start sampling. The measuring point is directly below the wireless host. After sampling at this point, move the wireless host in the same direction at a certain point distance to perform sampling measurement at the second measurement point (Figure 43). And so on, until the entire profile measurement is completed.

12.2 16-channel (ADMT-16D STYLE) instrument connection mode

12.2.1 Basic connection method of 16-channel series:

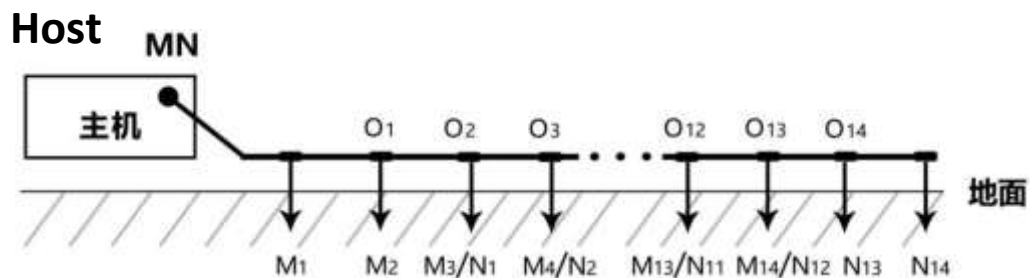


Figure 44

After the instrument is turned on, connect the instrument as shown in the figure above (Figure 44), spread the measuring cable along the measuring line, insert the electrode into the ground, and connect the electrode to the measuring cable by pulling out the card. Get ready to start sampling. The 16-channel instrument can

complete data acquisition of 14 measuring points at the same time in one measurement. The measuring point is the center point of the MN electrode, that is, the second electrode is the position of the first measuring point, and the third electrode is the position of the second measuring point. By analogy, the last measurement point is at the penultimate electrode. After the measurement is completed, the second profile can be sampled and measured. And so on, until the entire profile measurement is completed.

12.2.2 16-channel instrument wired electromagnetic sensor connection mode:



Figure 45

After the instrument is turned on, connect the instrument as shown in the figure above (Figure 45), and spread the measuring cable along the measuring line. The sensor is flat on the ground. There is no requirement for its placement direction, but the placement direction of each sensor on the survey line. The requirements are consistent.

Sampling can be started after connecting the sensor and the measuring cable by pulling out the card. The 16-channel instrument can complete the data collection of 8 measuring points at the same time in one measurement. The measuring point is directly below the sensor. After the measurement is completed, the second profile can be sampled and measured. And so on, until the entire profile measurement is completed.

12.3 32-channel instrument connection mode

12.3.1 Basic connection method of 32-channel instrument:

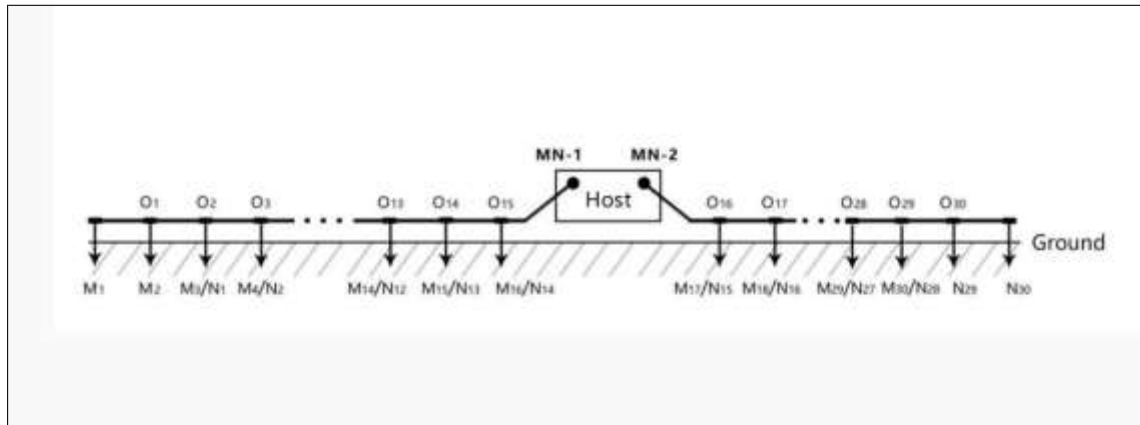


Figure 46

Lay out the two 16-channel measuring cables along the measuring line, put the instrument host in the middle of the two cables, insert the electrode into the ground, and connect the electrode and the measuring cable by pulling out the card (Figure 46, 47). Get ready to start sampling.

The 32-channel instrument can complete the data acquisition of 30 measuring points at the same time in one measurement; the site limit can also only be arranged with one cable, and the cable interface needs to be connected with the M_N_1 interface. The starting electrode of the measurement line is the end of the M_N_1 cable, and the measurement point is the midpoint of the M N electrode, that is, the second electrode at the end of the M_N_1 cable is the position of the first measurement point, and the third electrode is the second measurement point Position, and so on, the last measurement point is at the penultimate electrode. After the measurement is completed, the sampling measurement of the second profile can be performed, and so on, until the entire profile measurement is completed.



Figure 47

12.3.2 32-channel instrument wired electromagnetic sensor connection mode:



Figure 48

After the instrument is turned on, connect the instrument as shown in the figure above (Figure 48), and spread the measuring cable along the measuring line. The instrument is placed between the two cables. The electromagnetic sensor is flat on the ground. The orientation of the sensor is not required. However, the placement direction of each sensor on a measurement line is required to be consistent, and the sensor and the measurement cable are connected by pulling out the card.

The 32-channel instrument can complete the data acquisition of 16 measuring points at one time. There can also be only one cable laid out due to site restrictions, and the cable interface needs to be connected to the M_N_1 interface. The starting point of the measuring line is the end of the M_N_1 cable, and the position of the measuring point is directly below the sensor. After the measurement is completed, the second profile can be sampled and measured. And so on, until the entire profile measurement is completed.

13 On-site survey line layout method

The survey line layout is a very important part of the exploration. The quality of survey line layout will directly affect the measurement accuracy and improve the anti-interference ability. The basic principle is that the survey line direction should be perpendicular to the direction of the exploration target, and the straight section should be straight and circular. Try to be as round as possible and the ground as flat as possible. Choose different survey line layout methods according to the actual topography.

13.1 Parallel layout method of straight section

Straight-line profile is the most commonly used layout method, and multiple straight-line profiles are formed in parallel by multiple straight-line profiles. This method can quickly determine the direction of exploration targets.

First, assume and judge the direction of the exploration target, and arrange the survey line perpendicular to the direction of the exploration target (Figure 49). One or more linear profiles can be laid out. Generally, 2-3 can be used to quickly the direction of anomalous objects, according to the exploration target. Multiple straight-line sections are laid out based on the length of the object. The direct distance of each straight-line section is called the line distance. The line distance is generally \leq the length of the exploration target, in meters.

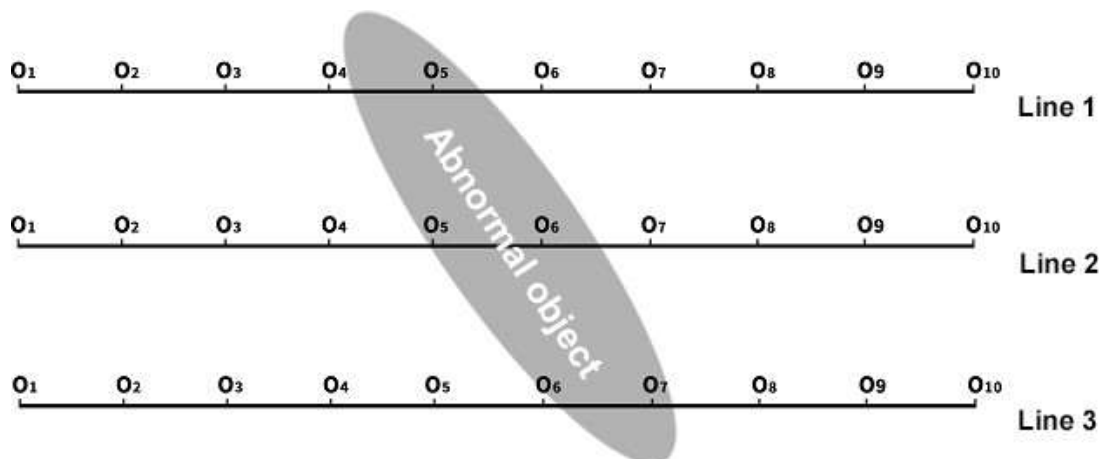


Figure 49

13.2 Layout method of cross or diagonal cross of straight section

After measuring one straight line section, it is found that there is an abnormal body or the site is relatively limited. When it is difficult to lay out multiple straight line sections, you can use cross (Figure 50) or diagonal crossing (Figure 51) to lay out the second line. The anomalous areas of the two straight line profiles can repeatedly confirm the existence of the exploration target, and can also assist in judging and confirming the approximate direction of the exploration target.

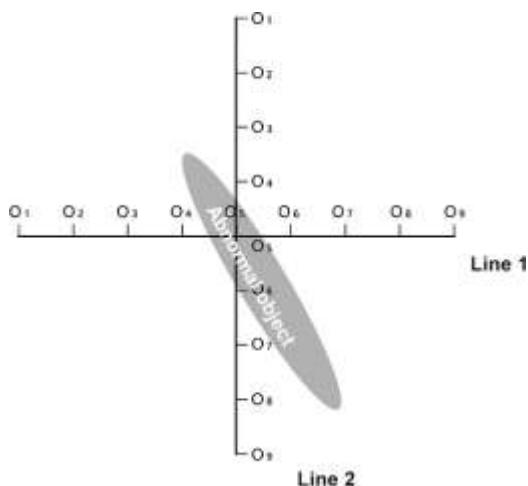


Figure 50

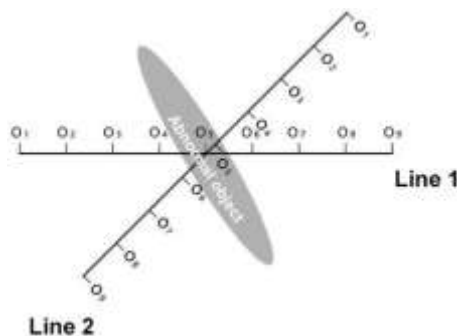


Figure 51

13.3 Layout method of circular section

When the survey site in some areas is really narrow or there are point interferences like transformers, signal transmission towers, etc. nearby, make a circle (Figure 52) or semicircle (Figure 53) with the site or interference as the center to measure. , Can also quickly track the direction and location of exploration target objects (water veins, mineral veins, etc.).

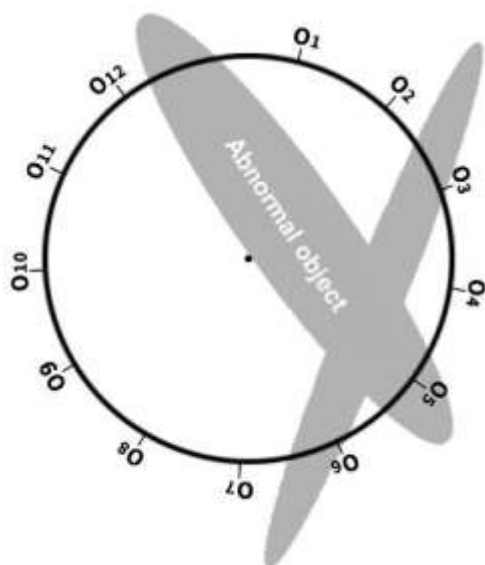


Figure 52

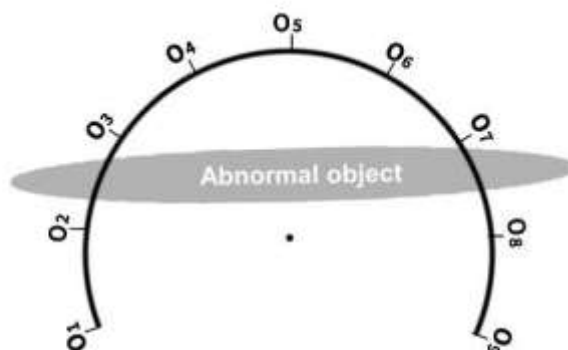


Figure 53

13.4 The high-density layout method of 96-512 channel matrix composed of multiple 32 channels

In order to make data acquisition more accurate and efficient, 3 or more 32-channel instruments can be used to form a matrix high-density measurement method. Please contact the manufacturer separately for details.

13.5 Wiring Principle

1. The survey line layout should be as vertical as possible to the direction of the abnormal body, the linear section should be as straight as possible, the circular section as round as possible, and the ground as flat as possible. You can make sure that the survey line is as straight as possible by using a compass or a benchmark with three points and one line.
2. When measuring on a mountain slope, try to choose the same altitude layout. When the same height layout is not possible, try to choose the same slope or a gentle slope direction as possible. The height difference between adjacent points should preferably not exceed 2 meters.
3. The measuring line should be as far away as possible from high-voltage transmission lines and telephone lines. When not far away, the wiring direction should be as parallel as possible.
4. When measuring, make sure that the M and N electrodes are on the same plane as much as possible, and the recording point is the center point of the M and N electrodes or below the device sensor.
5. In the same measurement area, the point distance should be kept the same as far as possible, and the line distance should be kept the same to facilitate recording and analysis.
6. Try to keep the grounding consistency of M and N electrodes when measuring in MN electrode mode.

14 Precautions for using the instrument

1. Please check the battery level of the device regularly and charge it regularly. Maintain sufficient power during working hours and turn off the power promptly after work.
2. The equipment should be kept by a dedicated person during transportation or use to avoid severe vibration, impact, and moisture ingress.
3. After each work, keep the equipment and MN electrode clean and place them in a ventilated and dry place.
4. If the MN electrode or electromagnetic sensor is not connected or disconnected, it will prompt measurement failure. Please check whether the line is connected.
5. When the measurement data of each measuring point is too small and the value is basically the same in the equipment measurement, the instrument may be malfunctioning, please contact the after-sales confirmation.

Note: The product manual may change with the optimization and improvement of the company's products. If there is any change, the electronic version of our company's manual shall prevail.

Looking forward to more cooperation with you