

DL400Pro

Intelligent screen tester

Instruction manual



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Product highlights

Accurate and comprehensive screen test, professional and stable functions, 2.8 inch large display, support high brush with the same screen, support original color repair, comprehensive upgrade system stability, support FOG test, easy to use, optimize battery management solutions, support remote upgrade, one key forced shutdown, small and portable appearance, multi-way professional after-sales

Main function of product

One machine with multiple functions

Can test iPhone, iWatch, MacBook, iPad, Huawei (P/Mate/Nova/Honor), OPPO, VIVO, Xiaomi, Samsung, Transtone, MOTOROLA and other series of brand screen test, no need to distinguish the original or assembled screen, can quickly identify different models of different types of cable, No need to switch systems, more models are continuously updated.....

The same 2.8 "large screen does not block

Operation tips at a glance

Line second recognition

Say goodbye to the annoyance of system switching

Display test

Display multiple pictures (system test picture and 1 user-defined picture) to comprehensively detect screen display problems; Display trial images can be quickly configured

Single FOG test

FOG can be tested individually, without backlight or touch

Touch warm tips: For TFT screens, an external backlight is required

Touch test

Automatic detection of hardware quality; Support simple and track two test modes; Toggable touch test interface background

3D Touch Test

Can test full-screen finger press pressure at any position, suitable for iPhone6s, 6sPlus, 7G, 7Plus, 8G, 8Plus, X, Xs, XsMax with 3D touch function screen

Fixed the original color display and ambient light auto adjustment function

Repair the original color display of the screen and automatically adjust the brightness data, the new screen can automatically adjust the brightness and original color display

Multiple IOS version testing:

Up to 7 different IOS versions are supported at the same time, and screen compatibility can be tested on various IOS versions

Software upgrade:

The system upgrade file is provided remotely for users to download software packages for system upgrade

Durable:

Well-designed low-power test mode combined with high-capacity battery to support more than four hours of use, support feed protection, and more durable battery

Product graphic description

DL400Pro

模式键

Original color restoration:
Press the mode key to
read the cover code
Switch iOS version
number:
Press the mode key
Green box or track mode
switch:
Long press the mode key
(on)

Test mode switch: Press
and hold the mode key

Highlight key

Display brightness brightest:
Press the brightest button
Touch the background color
is brightest:

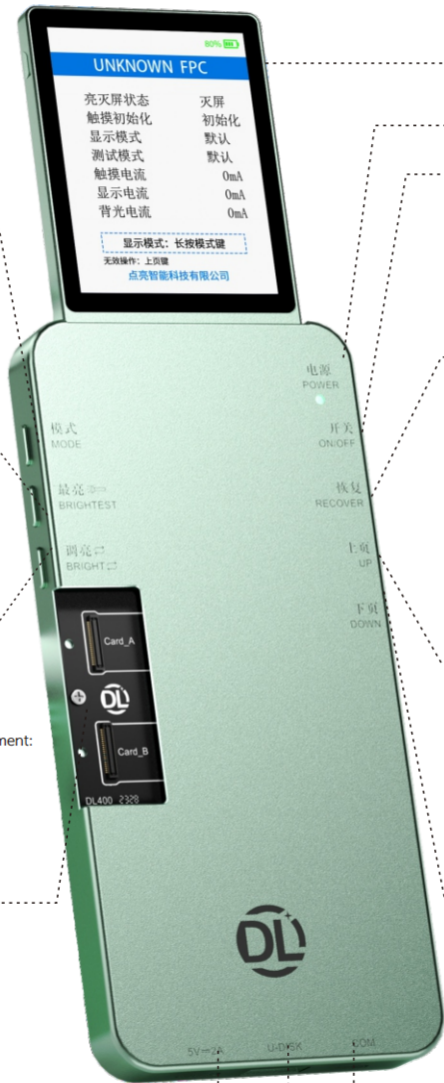
Long press the brightest key
flashlight:
Press and hold the brightest
key

Highlight key

Brightness adjustment:
Press the light button
Touch background color adjustment:

Press and hold the light button

Test pad



Display screen

Electric indicator light

On-off key

Switch on and off:
Press and hold the on key

On and off screen:
Press the on key

Reset key

System information:
Press the Restore
button

Clear touch trace:
Press the Restore
button
Original color
restoration:
Long press the recovery
key to write the cover
code to force shutdown
:
Press the Mode key +
Recovery key

Page up key

Page up:
Press the Up button
Image recovery:
Press and hold the Back key
Key function description:
Press the Up key + Down key to
switch between Chinese and
English:
Press the Mode key + Page Up
key

Next key

Next page:
Press the next page key

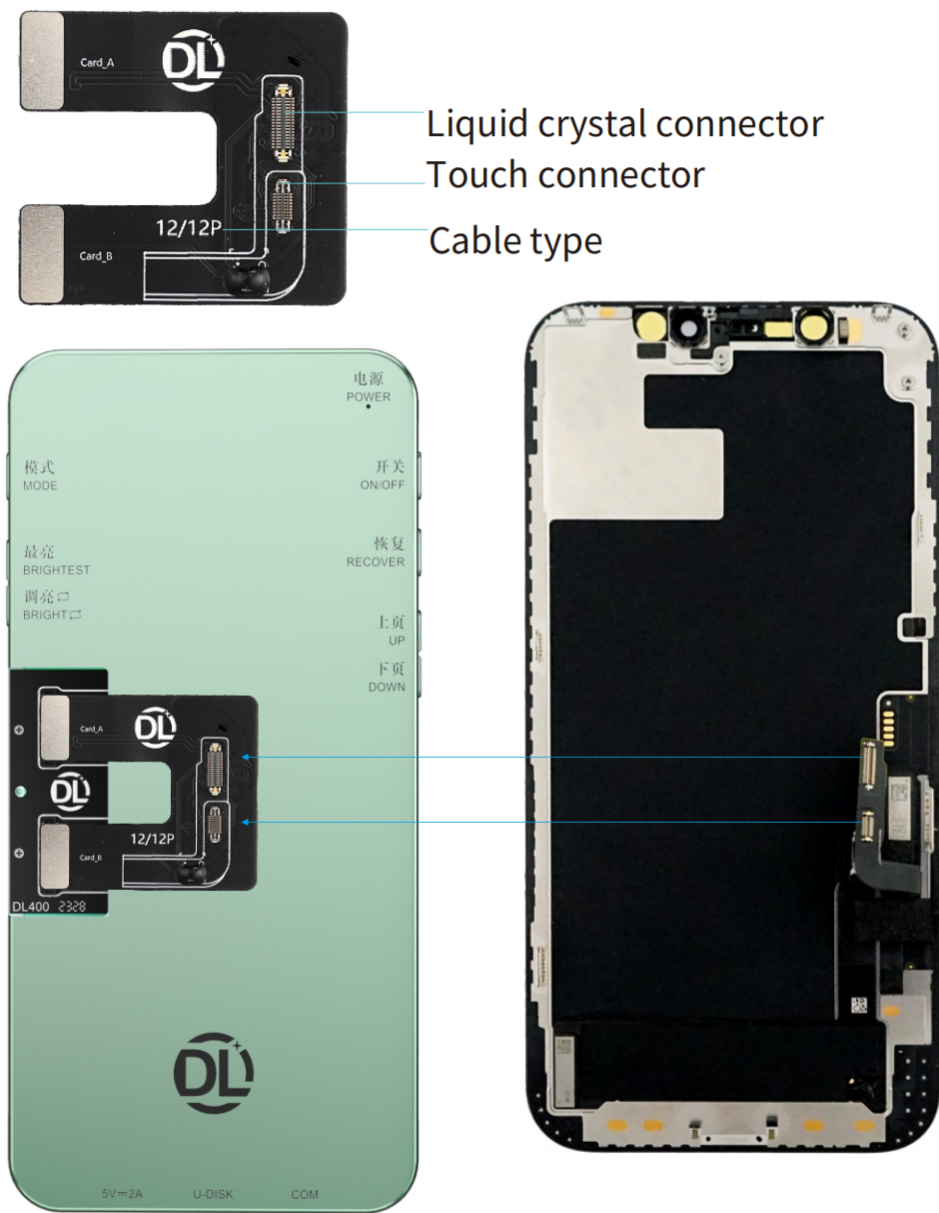
Image deletion: Long press
the Down button

Charging interface

Expansion equipment

Battery/software upgrade

Wiring diagram and screen connection description



Wiring diagram and screen connection description





Battery display

- ◎ The battery status bar at the top right corner of the test box display will show the battery level status
- ◎ The battery status bar shows red indicating low power, and the instrument will accompany the alarm to prompt the need to access the external power supply, otherwise 10 seconds later into the battery feed protection, forced shutdown, need to charge as soon as possible, the test box can be used normally for more than 4 hours on full charge

Charging instructions

- ◎ Please use the equipped charger and data cable to avoid unnecessary damage to the test box
- ◎ Connect the charger to the socket, and connect the data cable to the charger and TYPE-C interface as shown on the left
- ◎ The power connection is successful, the battery status bar at the top right of the display screen will be charged, indicating that the machine is being charged
- ◎ After charging, the screen will display 100%, and it takes about 1 hour to fully charge
- ◎ The test box can continue to be used during charging

Warm reminder: In an emergency situation, the test box can act as a charging bank

Turn on operation

◎ When the battery is powered, long press the ON/OFF button to start the power, or access the external power supply to automatically start the power ◎ The power indicator will blink when the power is started, and the power indicator will be green after the power is started

◎ If a connected cable is turned on, the test box screen will display the cable model, and after identification, there will be a prompt tone and test can be conducted

Tips: Boot operation only starts the test box, will not light up the screen to be tested

Shutdown operation

◎ Long press the switch (ON/OFF) key to shut down, and the power light will turn off after shutdown

◎ Battery powered state, if the screen is not used within 30 minutes, the test box will automatically shut down

◎ Battery powered state, if there is no operation within 3 minutes after the screen is off, the test box will automatically turn off the display; Later, you can wake up and light up by any key

Tips: Can not be turned off when there is a charging cable inserted;

Flashlight operation

◎ When the screen is off, long press the brightest button to turn on/off the flashlight with the body

Light up the screen

Test box starts,

- ② Connect the cable corresponding to the screen model
- ③ Fasten the screen
- ④ Press the ON/OFF button/UP button/DOWN button/BRIGHTEST button/BRIGHT button to light up the screen

Tips: Please do not press any button in the recognition screen of the test box.

If the screen to be tested is not lit up, the cause of the anomaly will be displayed on the display

Turn off the screen

- ◎ Double finger tap at the bottom of the screen (this way is quick and convenient)
- ◎ Short press the switch (ON/OFF) button when the screen is on
- ◎ Unplug the screen directly from the connector (unconventional operation, not recommended) Warm tips: The power light and test box display will not go out after the screen is off

Adjust screen brightness

- ◎ The brightness of the screen can be adjusted by short pressing the BRIGHT key. The brightness is divided into 5 levels, and the brightness increases once every time you press it (it will become the lowest brightness after the highest brightness).
- ◎ Short press the BRIGHTEST button to directly adjust the screen to the brightest

Switch display interface

"Swipe from right to left" or "Swipe from left to right" at the bottom of the screen to switch the display interface forward or backward; You can also press the UP and DOWN keys to switch between the front and back screens

Tip: When TP touches the simple test interface, you cannot swipe from left to right through the bottom of the screen to switch the interface

Configuration display interface

Long press the DOWN key to delete the current display interface; Press and hold the UP key to display the interface to restore factory Settings

Mode switching

◎ Mode switching: When you see the content of "test mode" on the expansion screen is displayed in green, it means that there are other modes to switch to enhance the compatibility of each scheme.

When the screen is off, press the MODE key to switch between different display modes. In this case, you can see the change of the display content

Tips: When you encounter incompatible screens, and there is a mode to switch, you can try to use the way to switch modes to test

Enter the test interface

The user can switch to the touch test interface by pressing the UP or DOWN key and sliding left or right at the bottom of the screen

Touch test for IOS version

- ◎ It supports up to 7 different IOS versions at the same time, and can test the compatibility of touch on different IOS versions
- ◎ Short press the MODE key in the touch test interface to switch the IOS version, and the IOS version information (IOS version (current IOS version number, total number of iOS versions)) will be displayed at the top of the screen
- ◎ 11 series and other original screens will have encryption chips, these types of screens without encryption chips IOS version will be displayed as "00.0.0"
- ◎ For Android models, there is no system difference, the system version information is "00.0.0"

Simple test mode and trajectory test mode

- ◎ Simple test mode is specially designed for the factory, draw a circle along the edge of the touch counterclockwise to test the touch quality (the touch position will show a green bar), the simple test mode can also show the touch point by touching the position cross (for checking the accuracy of the touch point and whether the spot is wrong)
 - ◎ The track test mode can check the accuracy of the touch point and whether the spot is wrong through the "touch position cross display function". It can also check the speed of the touch line and the shape of the line through the "touch track display function". The drawn track can be cleared by tapping the RECOVER key
 - ◎ Test interface long press the MODE key for "Easy test mode" and "trajectory test mode"
- Type "switch"
- ◎ For high-brush models, touch information cannot be displayed on the same screen, you need to test touch by viewing the track on the display screen

Testing 3D Touch

- ◎ The 3D Touch function can be tested in the touch test interface. When the user presses anywhere on the screen, the pressure value will be generated. As the pressure value increases, the screen will change from a small red square to a large green square
- ◎ This function works on iPhone 6S, 6SPlus, 7G, 7Plus, 8G, 8Plus, X, XS, XsMax has a 3D touch screen

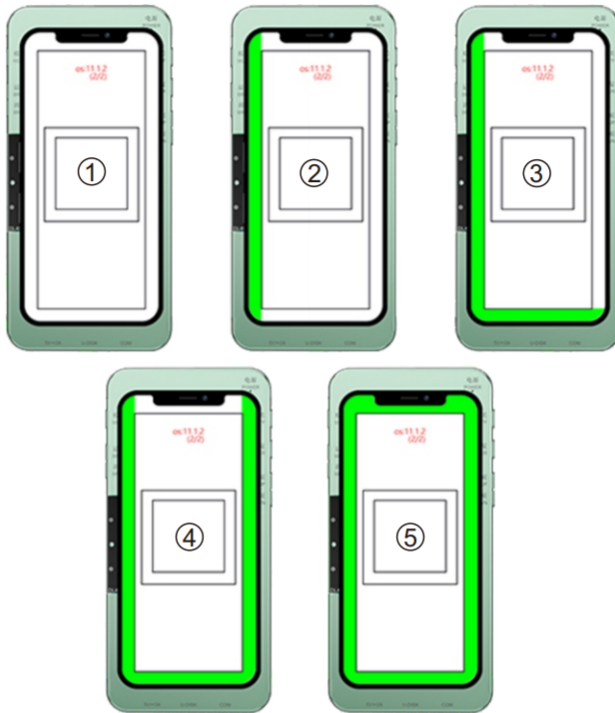
Test interface background changes

There are 4 backgrounds from light to dark. Long press the "BRIGHTEST" button on the left side of the touch test screen to switch to the lightest test screen background. Long press the " BRIGHT "button on the left side to switch the back of the test screen

Test interface introduction

In the simple test mode, the edge counterclockwise track is displayed in green bar, Touch point cross is displayed, touch track display and 3D Touch test are shown in the picture on the next page

Touch test in easy mode



As shown in Figure (1), the interface is a touch test interface, which can be used by "short press UP or DOWN".

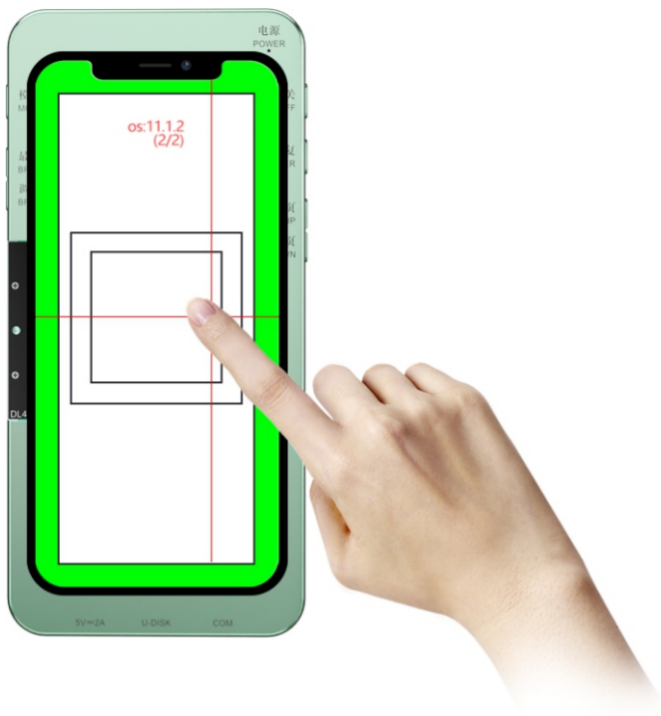
Key, touch the bottom of the screen and swipe left or right to switch to this interface

As shown in Figure (2), slide your finger down from the top of the left edge in the direction of the arrow until it ends at the bottom of the left edge

As shown in Figure (3), (4) and (5), slide along the arrow line respectively. Note that each slide must be from the beginning position of the edge to the end position of the edge, and there should be no untested position on each edge

As shown in Figure (5), the closed loop formed by the green box means that the test is passed, and any interruption or jitter of the green track is the touch

Touch location cross display in easy mode



As shown in the figure, if you touch the screen at any position on the screen, the cross will be displayed. If the cross display is stable, the current touch position is normal. If the hand does not touch the cross, it means that there is a random alarm point error

The touch point cross can quickly and effectively test the touch effectiveness, accuracy, stability and whether there is a random point of the touch screen

Touch trace display

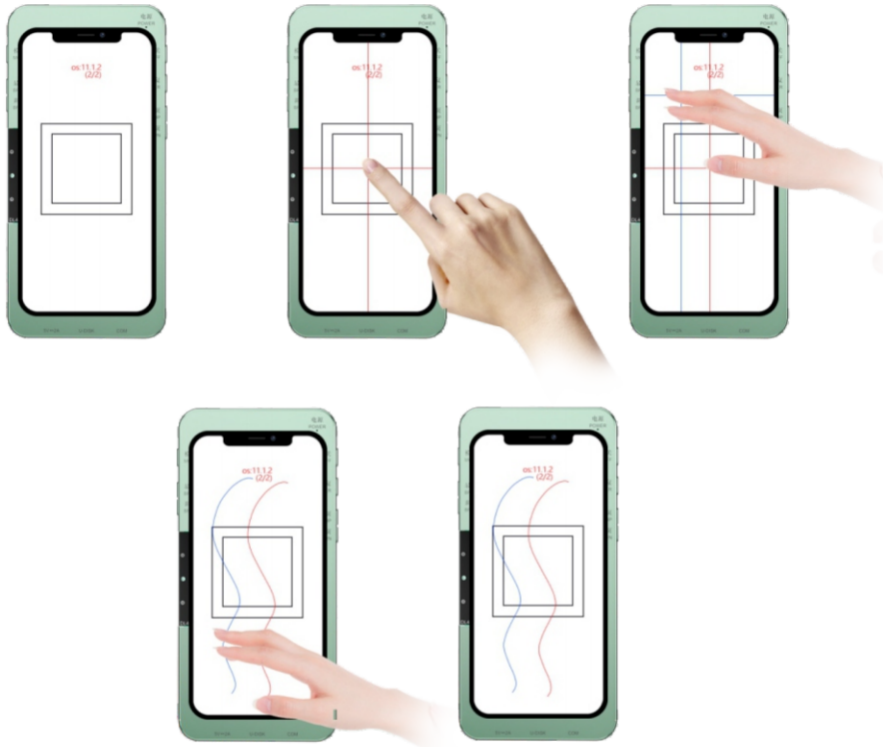


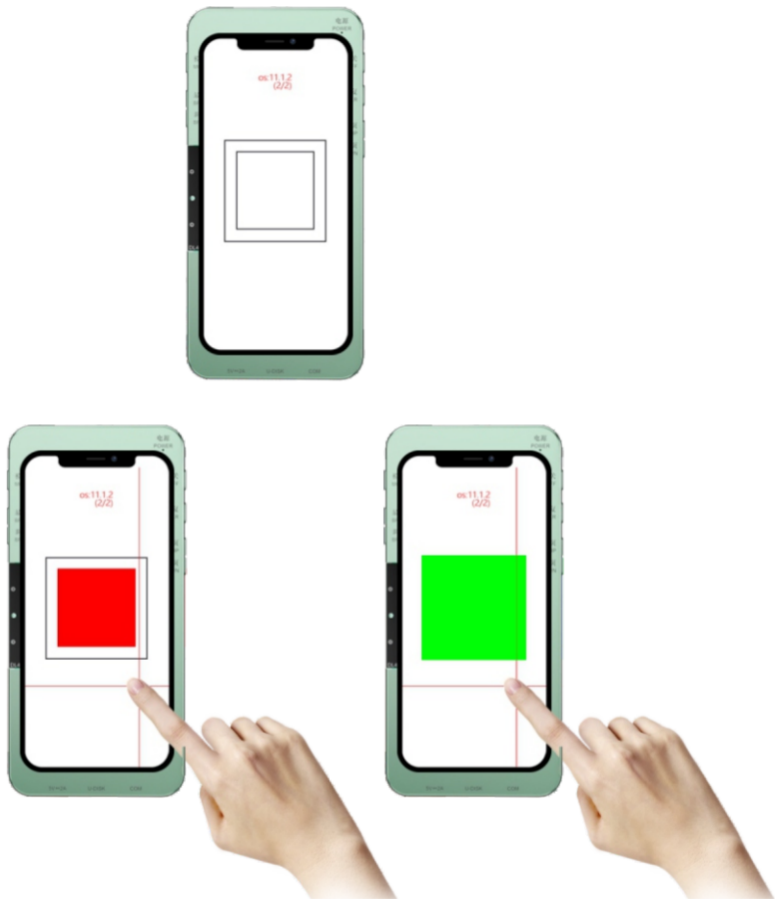
Figure (1) shows the interface of touch track test MODE. Long press "Mode" to switch between simple test mode and touch track test mode

As shown in Figure (2) and (3) touch slide will display the touch position cross and touch movement track, the cross is stable and the touch track can be displayed on the full screen, and the touch function is normal (usually the double-layer sensor can be tested completely by drawing down the horizontal and vertical directions, but the single-layer sensor should be tested at all positions in principle).

As shown in Figure (4) and (5), the touch track test can record the test track, which is convenient for users to judge whether the touch supports multiple points/whether the track follows the hand/whether the track is smooth/whether the track has broken lines and other problems

On the trajectory test screen, press the RECOVER key to clear the generated trajectory

3D Touch Test



3D Touch test interface: Press TP at any position of your finger, and the pressure is displayed in a hierarchy from small to large (as shown in the figure). The red box is naturally and smoothly changed to the green box. The 3D Touch function is normal

The iPhone 6S, 6SPlus, 7G, 7Plus, 8G, 8Plus, X, XS, XsMax have 3D touch features the screen



点亮智能助手



沙漏验机助手

Lighting assistant introduction:

An intelligent operating software developed to run on PC, currently supports iPhone original color repair (DL400, F210, DLX000 series), remote upgrade, F3XX series battery efficiency parameter setting

Fixed primary color display and auto brightness

Original screen original color restoration

- ◎ The test box is turned on, and the touch bar of the "original screen" is fastened (only the touch bar is fastened, and the screen is not lit).
- ◎ Press the MODE key to enter the original color interface
- ◎ Press the MODE key to read the cover code. After the cover code is successfully read, remove the original screen and button the screen to be written into the original color
- ◎ Long press the RECOVER key to write the cover code. When writing the cover code, the screen will display the progress bar of writing the cover code. After writing, it will prompt: "Write successfully".

No original screen write original color operation

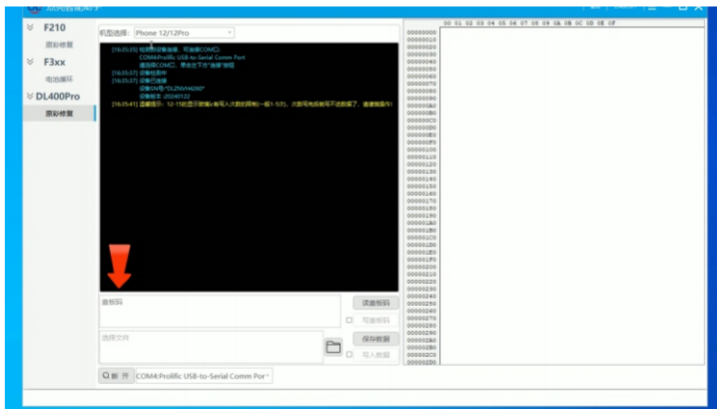
Download and install the "Light up Intelligent Assistant" on the official website and the "Hourglass inspection machine Assistant" on Baidu;

Preparation: iPhone, Apple data cable, to be repaired screen, corresponding model original color repair cable, DL400Pro and Type-C data cable;

Connect the Apple phone to the computer through the Apple data cable, open the Shark leak inspection assistant in the computer, and display the connection success , click the device details, copy the cover code inside;

Connect the original color repair cable to DL400Pro, and then connect the screen to be repaired. DL400Pro is connected to the computer through the Type-C data cable;

Open the "Light up Intelligent Assistant" tool, select the original color restoration option of DL400Pro, click Connect, after the connection is successful, click the model at the top to select the model of the screen model, paste the cover code here, check the option of "write cover code" on the right, and then click "write cover code", wait for the writing success, the cover code is displayed as written, go to the base board verification.



Note: If there is no original screen or the original screen data is lost, the original data needs to be recovered

The mobile phone may have been connected to the "Ace Assistant" or "Hourglass inspection machine assistant", etc., from which the cover plate code and LCD code can be obtained;

② After the mobile phone is jailbroken, connect the platform such as "Ace Assistant" or "Hourglass inspection Assistant" to read the cover plate code and LCD code.

Tips: This operation is only for models above Apple 12, if it is a model below Apple 12 can directly read the cover code, do not need to connect Aisi Assistant, hourglass inspection assistant or jailbreak

Upgrade content

This includes updates to the latest version of the software, user-defined image writing, and the addition of a testable screen

(To add a new screen, you need to purchase the corresponding FPC and the latest license document, please contact our after-sales service for details)

Obtain the native serial number

The screen can display the serial number of the machine when starting

② After starting up, press the recovery key to view the serial number and software version number of the machine

Obtaining the upgrade package

Please follow the "Light up Smart DIANL" public account to get the software package upgrade to the latest version

Method 1:

Follow the wechat public account of "DIANL", enter the dialog box to send "Upgrade" to obtain the download link of the software package or toolkit;

Method 2:

Directly contact after-sales customer service to obtain upgrade package for upgrade;

Level up song

After the software package is decompressed on the computer, the decompressed file is saved in the root directory of the empty USB drive in FAT32 format (note that it is not a compressed package).

U disk format view: right click U disk - properties - General - File system: XX; XX is the file system format.

The way of U disk formatting: right click U disk - Format - Change the file system to FAT32- Start; Wait lattice

Formalization completed;

② When the test box is off, insert the USB flash drive with the extracted upgrade software data;

③ Plug in the power cord and power on (see the flashing of the upgrade light and U disk light at this time, which means that the upgrade is in the upgrade) *** When the upgrade light and U disk light are steady on, it means that the upgrade is successful ***

Product parameter

Product model: DL400Pro

Color: Green

Material: Metal

Product size: 75* 156*

12MM Battery capacity:

3460mAh

Product weight: 220G

Input voltage: DC5V~2A

Charging port: TYPE-C

Working humidity: <90%

RH;

Operating temperature :-

20C~85C;

Packing list

Accessories details: EVA environmental protection packaging box *1, test box *

1, Type-C charging cable *1, U disk *1, silicone sleeve *1, transfer board *2

* The packing list in the above example is for reference only. Please refer to the actual packing list

WARNING Warning

- 1, do not disassemble, repair and transform this product
2. Do not expose this product to rain or damp environment
- 3, shall not make the product accept mechanical impact
4. Do not expose this product to heat source, fire source or high temperature environment, avoid storing in direct sunlight

Warranty regulations

1. Within 7 days from the day after you sign, the product has a performance failure of paid maintenance service

The performance failure listed in the table is determined by the light after-sales service center and can be enjoyed free of charge

Return and repair services

2. Within 8-15 days from the day after you sign for the product, the performance failure listed in the "Product Performance Failure Table" of this product will be determined by the detection of the dot modification label and the anti-counterfeiting mark light after-sales service center

For a replacement or repair service

3. Within 6 months from the day after you sign, the product has a performance failure listed in the Product Performance Failure Table

Non-warranty regulations:

1, without the company's permission, consumers disassemble, repair, misuse, change or improper storage caused by machine failure

2, incorrect use of non-product accessories, or tear, alter the label, anti-counterfeiting marks

3. It has exceeded the validity period of three packages

4. Damage caused by natural disasters or force majeure

5, does not meet the "product performance failure table" listed in the performance failure situation

6, with a charger not provided by our company, resulting in short circuit

Product performance fault table:

Name: DL400Pro

Performance failure: Cracked housing due to structural or material factors

* Within the scope permitted by law, the right of interpretation belongs to Shenzhen Light Intelligent Technology Co., LTD

1. Check that the power supply voltage matches the rated voltage of the device and then turn on the power switch
2. When starting the test, please confirm whether the interface wire and adapter board are correct
- 3, before removing and inserting the host wire, please pay attention to whether the machine is in the closed state, improper operations will cause permanent damage to the equipment
- 4, please use the original charger
- 5, this equipment should not be used in high temperature, humid environment , so as not to reduce the service life of the equipment or cause damage
- 6, the input and output interfaces of the equipment have clear identification and specifications, do not connect to the wrong interface during use
- 7, do not disassemble the equipment, in order to cause damage to the equipment and affect the test effect

Company profile

Light Intelligent Technology Co., Ltd. is a technology research and development enterprise focusing on research and development, production and sales of intelligent production test equipment. The company's core members and R & D team focus on the research and development of test equipment, and keep improving the control of product quality. The development of the first generation of products DL100, put on the market has been praised by users in the maintenance industry, lighting products have also been widely recognized in the industry.

Adhering to the principle of serving customers and prioritising demand, Light Intelligent has developed an upgraded version of the second generation product DL200 and the third generation product DL400Pro on the basis of the first generation product DL100 and the second generation product DL200. On the basis of the performance of the first generation product DL100 and the second generation product DL200, DL400Pro has achieved a multi-test. 2.8 inch large display, system stability, seamless switching test models, support for remote upgrade, more compact appearance and easy to carry, etc., in product performance and service to further meet the needs of our customers.

Light intelligent always puts customer needs in the first place, humorously listens to user feedback, follows the trend of rapid development of the industry, and insists on providing customers with more intelligent, more efficient and easy-to-use testing tools through intelligent manufacturing and testing equipment.

Light intelligent technology Co., LTD

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