

**DSL-3020A**  
**xDSL Tester**  
**User Manual**

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V0.3



# Profile

Firstly, we are appreciated that you choose DADI DSL-3020A xDSL Tester.

This user manual contains tester function introduction, installation, connection and operation process, and problem solution. To ensure your easy operation, please read carefully this user manual, and hold it in case you refer to it anytime.

## Notice:

- Kindly notice that the future updating of function and performance can not be included in the user manual.
- To make the manual better, if you find some errors of the manual, please contact us via the contact information on cover page.
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# User Manual

The User Manual contains 8 chapters and 1 appendix.

Chapter	Items	Remarks
1	Overview	Introduction of the instrument
2	Unpacking and Inspection	Introduce all the parts in Package
3	Safety	Describe how to use DSL-3020A safely
4	General operation and user notes	Introduce the operation and user notes
5	System chart and instrument configuration	Introduce the system chart and instrument configuration.
6	Main Functions and Technical Parameters	Introduce the main functions and technical parameters
7	Operation	Describe how to operate DSL-3020A
8	Malfunction Analysis and Solution	Introduce the general malfunction, reason and solutions.
Appendix	Basic questions and solutions for xDSL	Introduce some basic questions and solutions for xDSL

## INDEX

1. OVERVIEW .....	1
2. UNPACKING AND INSPECTION .....	1
3. SAFTY .....	2
4. GENERAL OPERATION AND USER NOTES .....	3
4.1 OPERATION CRITERION .....	3
4.2 USER NOTES .....	3
5. INSTRUMENT CONFIGURATION .....	4
5.1 INSTRUMENT CONFIGURATION .....	4
5.1.1 Instrument Front View .....	4
5.2.2 Instrument Upside interface .....	5
5.2.3 Other Parts .....	5
6. MAIN FUNCTIONS AND TECHNICAL PARAMETERS .....	5
6.1 xDSL TEST .....	5
6.2 LAN TEST .....	6
6.3 COPPER TEST .....	6
6.4 MODEM EMULATION .....	7
6.5 DOCUMENT MANAGEMENT .....	7
6.6 HELP .....	7
6.7 OTHERS .....	7
7. OPERATION .....	7
7.1 POWER ON/OFF .....	7
7.2 LCD DISPLAY INTERFACE .....	8
7.3 xDSL TEST .....	12
7.3.1.1 Physical Layer Parameters .....	13
7.3.2 DSL Parameters Settings .....	18
7.3.3 MODEM EMULATION .....	19
7.3.4 PPPoE Properties .....	19
7.3.5 PPPoE Dial-up .....	21
7.3.6 ATM BER Test .....	22
7.3.7 Network Layer Test .....	22
7.3.7.1 Ping Test .....	23
7.3.7.2 Ipconfig Test .....	24
7.3.7.3 Route Test .....	25
7.3.7.4 Tracert Test .....	27
7.3.8 Web Browse .....	27
7.3.9 HTTP download speed Test .....	28
7.3.10 FTP speed Test .....	29
7.4 LAN TEST .....	30
7.4.1 Network Card Properties .....	31
7.4.2 PPPoE Property .....	32

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7.4.3 PPPoE Dial-up.....	33
7.4.4 Network Layer Test.....	34
7.4.5 Web Browse.....	34
7.4.6 Web Speed Test.....	34
7.4.7 FTP Speed Test.....	35
7.5 COPPER TEST.....	35
7.5.1 DMM Test.....	36
7.5.2 Tone Generator.....	38
7.6 EXPLORER.....	39
7.6.1 View Record.....	40
7.6.2 U Discs Storage.....	42
7.7 HELP.....	43
7.7.1 System Upgrade.....	44
7.7.2 User Notes.....	45
7.7.3 About Version.....	46
7.8 Settings.....	46
7.8.1 System Setup.....	47
7.8.2 Touch Screen Calibration.....	48
7.9 CHARGE THE INSTRUMENT.....	50
7.10 REPLACE BATTERY.....	50
8. MALFUNCTION ANALYSIS AND SOLUTION.....	51
APPENDIX XDSL BASIC PROBLEMS AND SOLUTIONS.....	52





## 1. Overview

DSL-3020A xDSL Tester is designed for the necessary diversified xDSL line(includes ADSL1/ADSL2/ADSL2+); DSL-3020A can test various parameters of xDSL physical layer, help you confirm whether the xDSL service go live for user circuit, and evaluate the service quality. Meanwhile, it supports PPPoE dial-up, IE Web Browse, emulate "PC + Modem" completely via user circuit by using built-in Modem, it is intended to verify connectivity from user to ISP service provider, to do network layer test after dial-up, including Ping, Ipconfig, Route, Tracert Test; the DSL-3020A xDSL Tester can emulate users' PC, test Broad Band IP circuit or PPPoE dial-up by user Modem, verify connectivity of Broad Band IP and malfunction of user Modem, and clarify whether there are some failure to browse website because of PC malfunction.

DSL-3020A xDSL Tester adopts 480×272 color TFT LCD, touch screen, embedded Windows CE operation system, user-friendly interface. It is easy to operate and view the test result, and it can meet the requirement of xDSL access and maintenance, which enables it to be pal in xDSL access and maintenance.

## 2. Unpacking and Inspection

Upon receiving the package, conduct a visual inspection of the box to see if it has suffered any damage. If not, proceed with unpacking and make sure the items in the packing list are included. Excessive shock and vibration should be avoided during shipping and unpacking. Please also check any extra accessories you purchased against the packing list. Contact your DADI TELECOM agent if anything is missing or damaged.

### Main Parts:

Please inspect that whether the type and code on the instrument matches the follows, Instrument:

Type	Code	Language
DSL-3020A	-CN	Chinese
	-EN	English

### Standard Accessories :

The following accessories should be included, please inspect if it has suffered any damage.

Item	Specs	Quantity
Stylus		1
RJ11 T0 Alligator Clip Cable	1.5m	1
Cross over Cat5 Ethernet Cable	1.5m	1

Power Supply	8.4V/2.0A	1
User Manual		1
Carrying Case/W Strap		1

### Optional Accessories:

The following options can be purchased.

Item	Specs	Quantity
Tone Tracer	TPT-8010A	
Mouse	USB port	
U Disk	1G	

## 3.Safety

Safety precautions should be observed at all times. DADI Telecom should not undertake any responsibility if clients operate wrong and damage the instrument.

Please comply with Safety precautions to avoid humans hurt or instrument damage.

### Warning

#### ➤ Charge Battery

To charge battery, it is supposed to use matched charger manufacturer provided, avoid using unauthorized charger. If not, it may lead to instrument damage or accident.

#### ➤ Replace Battery

Please use Lithium battery configured by Factory. Please comply with clause 7.10.

#### ➤ Do not Operate in Explosive Atmosphere

Do not use the instrument in Flammable/ Explosive Liquid and Atmosphere, to avoid any danger of using electric instruments in such atmosphere.

#### ➤ Do not Open the Back Cover

Unless replace modules, please do not open the Back Cover or the Bottom Cover. Only the technician that has been trained can operate it, for some parts of instrument are of high voltage, any improper operation will engender danger.

#### ➤ LCD Display

If LCD Display is damaged or liquid flows out, please do not suck in or touch. If liquid is spattered into eyes or mouth, please do wash with water and go to hospital to inspect; if spattered on skin or clothes, please wash with water or soap after alcohol washing. Besides, note that avoid skin (finger, hand, etc.) to be wounded by the glass fragments, avoid touching the fragments edge.

## 4. General Operation and User Notes

### 4.1 Operation Criterion

➤ **Test Interface**

Please connect test line with the instrument interface, then connect with the tested circuit; please do not touch the bare metal parts of the test nip to prevent from electric shock if high voltage in circuit.

➤ **USB interface**

Please do not join electric equipment into USB interface, and do not short-circuit interface with metals, otherwise the inner circuit will be destroyed.

➤ **Display**

Please tear out protective film enclosed for delivery before using instrument.

➤ **Cleaning**

The instrument cover, mainly made of plastics, should be cleaned by soft dry cloth, remember not to use volatile chemicals. Otherwise, it may decolor or shape-distorted.

➤ **Cover and Panel Protection**

Please do not sprinkle volatile chemicals on cover or panel, and do not touch Rubber or Polyvinyl Chloride with cover or panel in long time, to prevent malfunctions.

➤ **Instrument Movement**

When the instrument should be moved, please ensure that power line and connection cable disconnected with instrument, then take up the instrument. Please unplug the cable after using.

➤ **Battery Maintenance**

When the instrument will not be used for a long time, the battery will deteriorate and battery should be charged for a long time. If it takes short time to charge and sustain for a short time, the battery should be replaced.

➤ **Malfunction**

If there are abnormal sound, smell or smog, please shut down machine and unplug the power line, and remember to contact DADI TELECOM.

### 4.2 User Notes

➤ For the first time to use it, please full charge instrument before using, and to make sure full charge before using each time. Please refer to clause 7.9 to charge instrument.

➤ Please touch mildly the LCD screen when using touch pen, avoid damage.

➤ If some abnormal interface emerges, system halted, etc, please reboot after power off.

➤ Please do not put instrument in the sun or near heat source, otherwise it will have negative influence on circuit and cover of the instrument.

➤ Condensation may occur if the instrument is moved to higher temperature place or temperature variable place. Under this circumstance, it would be better for the instrument to adapt to the temperature for more than one hour before using.

# 5. Instrument Configuration

## 5.1 Instrument Configuration

### 5.1.1 Instrument Front View



#### ① Indicator Light

- Mainly includes: Power Indicator Lighter, Ethernet Indicator Lighter, xDSL LINK Indicator Lighter, xDSL ACT Indicator Lighter. Specifications are as follows:
- Power Indicator Light: constant red light, suggests power up.
- Modem power Indicator Light: constant blue light, suggests embedded xDSL modem power up.
- DSL LINK Indicator Light: low speed blink green light, suggests that it is seeking xDSL signal; fast speed blink green light, suggests xDSL training; constant green light, suggests that xDSL links have been established.
- LAN LINK Indicator Light: constant orange light, suggests Ethernet links have been established.
- LAN ACT Indicator Light: blink green light, suggests that Ethernet has data stream.

#### ② Keystroke

Mainly include on-off key, on-off soft key and switch key for transverse and vertical. Specifications for each key are as follows:

- Power Key: Power on or off, press key to close the instrument when the instrument is working, while press it for 1 second to close the instrument. If the system does not work, please press the key and hold on for 5 seconds, then the power can be shut off.
- Soft key On-off: in operation interface, press it to switch soft keyboard or close it.
- Help/ transverse and vertical Screen Switch: To operate WEB Browser, press this key to switch between transverse and vertical Screen. Besides, press the key to consult to system help.

#### ③ LCD Display

The TFT color LCD Display, is touch screen with dot-matrix 480×272.

## 5.2.2 Instrument Upside interface

### ① Touch Pen

Touch Pen, as the accessory of the instrument, is used to click and operate on the screen.

### ② Ethernet Interface

RJ45 interface that comply with Ethernet interface standard, is used to connect with Ethernet cable or RJ45 cable plug for Broad Band IP. The interface supports auto crossover detection function.

### ③ xDSL Interface

xDSL interface is xDSL user line interface, it is also input interface of DMM.

### ④ Power Supply Interface

The input electricity is 50Hz AC220V, input error range is  $\pm 10\%$ , output voltage is 8.4V.

### ⑤ USB Interface

USB interface use for USB Disk and USB mouse.

## 5.2.3 Other Parts

### ① xDSL Test Line

The instrument connects with xDSL user line, one end plugs in test sockets, another end connects with the tested line. During operation, please do not touch the bare metal of alligator, for there may be high voltage on the line.

### ② Ethernet Cable

The configured cable can be connected with IP-PBX or Hub; the instrument can connect with twisted cable, it can connect directly with Ethernet interface of the instrument when it connect with cable of Broad Band IP, indicator light on the interface will work when Ethernet links.

## 6. Main Functions and Technical Parameters

### 6.1 xDSL Test

DSL-3020A can emulate Modem + PC function through inner xDSL Modem, complete physical layer parameters test, network layer test and application layer test of xDSL subscriber line, thus verify the circuit quality.

#### 1. Physical Layer Test:

##### ADSL2+:

- 1) Comply with: ITU G.994.1 (G.hs) , ITU G.992.5, ITU G.992.5 Annex L, the max connecting distance: 6.5km. ADSL, ADSL2, READSL compatible.
- 2) Test DSL Transmission Parameter:
  - DSL upstream channel speed(mixed mode/ Quick Mode): 0~1.2Mbps
  - DSL downstream channel speed(mixed mode/ Quick Mode): 0~24 Mbps
  - DSL attenuation: 0~63.5dB
  - DSL noise margin: 0~32dB

- DSL output power: -32~31.5 dBm
- DSL up/downstream maximum speed and channel utilization rate
- Bits on DMT subchannel: 0~15, subchannels frequency quantity.
- DSL circuit errors quantity (CRC, HEC, FEC, NCD, OCD)
- Display status on DSL circuit: LOSS, Links failure
- Display DSL circuit link mode

## 2. Modem Emulation

Can emulate Modem completely, user can dial-up and link to internet through the instrument, and verify whether there is problem for user Modem.

## 3. PPPoE dial-up and modify PPPoE dial-up properties

Simulate subscriber Modem and PC, PPPoE dial-up, verify the connectivity between subscriber and ISP service provider.

## 4. Network Layer Test: Ping, Ipconfig, Route, Router trace, etc.

## 5. Application Layer Test: Web Browse, Network Speed Measurement, FTP Speed Measurement, etc.

## 6.2 LAN Test

It can complete LAN or Broad Band PPPoE dial-up test, LAN network layer test and application test. LAN Test includes the following functions:

- DHCP subscriber end test
- PPPoE dial-up and modify PPPoE dial-up properties, verify if there is trouble in Broad Band IP or LAN.
- Network Layer Test: Ping, Ipconfig, Route, Router trace, etc.
- Application Layer Test: Web Browse, Network Speed Measurement, FTP Speed Measurement, etc.

## 6.3 Copper Test

### 1. DMM Test

Test the DC/AC, Circuit loop resistance, Circuit capacitance, Circuit insulation.

DMM test parameters as follows:

Item	Unit	Test Range	Relative error
Voltage Test	V	0--110 DC	±5%±2V
	V	0—110 AC	±5%±2V
Loop Resistance Test	Ω	0--10	±2Ω
		10—5000	±5%
Capacitance Test	nF	0--10	±2nF
		10--500	±10%
Insulation Test	MΩ	0—1.0	±0.1MΩ
		1.0—50	±10%±0.5MΩ

## 2. Tone generator

Inserted audio signal generator send signal at one end of the twisted pair, meanwhile use an optional tone tracer device to find the corresponding pair at the other end.

## 6.4 MODEM Emulation

It can completely replace user's Modem, subscriber can regard DSL-3020A as Modem to dial-up and surf website to verify if some trouble exist for user's Modem.

## 6.5 Document Management

It can complete the browsing of test record, store record in U discs, document management.

## 6.6 Help

System software can be updated on line, and manual is supported on line, power off settings and touch screen stylus calibration are included, the instrument software can be also updated through U discs.

## 6.7 Others

- Adopt 480×272 TFT color LCD, with touch screen.
- Adopt embedded operation system, Windows interface that display operation.
- 2000 records can be saved and it can help users store test record and exchange test data by U discs.
- 7.4V 4000 mAh chargeable Li-ion battery, max power 6.5W.
- Dimension: 185mm×110mm×60mm
- Weight: 0.8kg

## 7. Operation

### 7.1 Power On/Off

- 1) Power On: Press the power key and the instrument begins to work, Logo displays on the screen, then operation interface displays as follows:

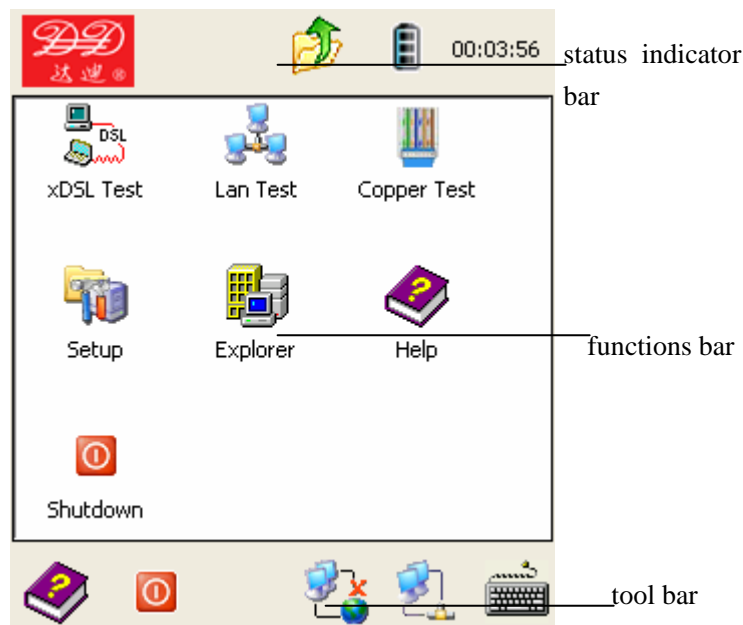


2) Normal Power Off: Click the Shutdown key or press the power key, a window will emerge to suggest whether you would like to shut down, then confirm it to shut off.




3) Forced Power Off: When the instrument can not be shut down by system window or shutdown key, please shut down power(hold on 5 seconds).

## 7.2 LCD Display Interface

When power on, instrument enters the main interface. Main interface includes 3 parts: status indicator bar, functions bar, tool bar.

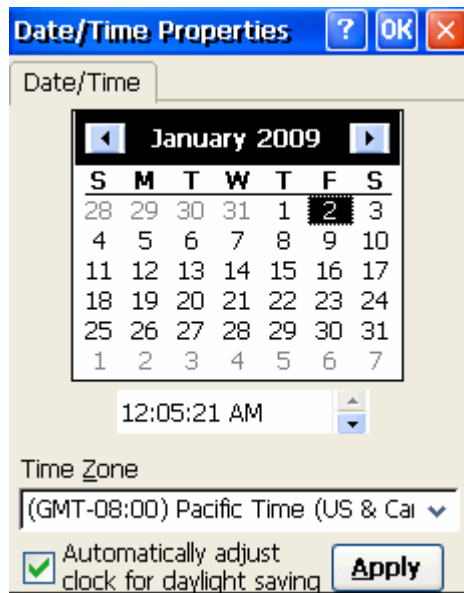


### 1. Status Indicator Bar


The bar includes the present time indicator,  battery capacitance indicator,  return indicator and  U discs indicator.



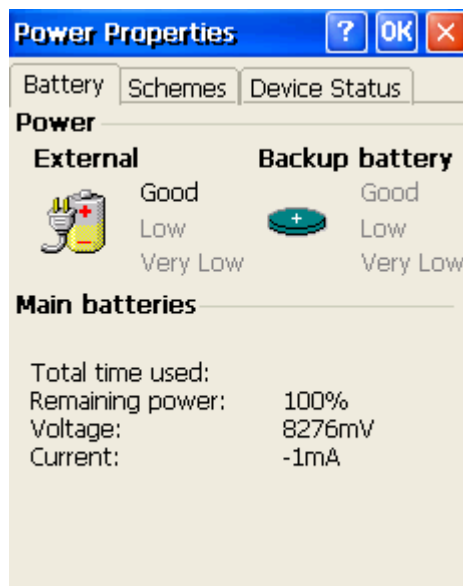
- indicate the present time, click it, then time and date will display, you can modify and check time and date.





You can modify time and date by touch pen, then press “Apply” to complete it.

-  Battery capacitance indicator: Indicate the present capacitance status including 3 grid: full grid means full capacitance; 2 grid means medium; 1 grid means little capacitance that require charging; empty grid is the status of voltage lack, battery icon blinks and waiting for charging. Click the icon to see the power setting.

Double click the battery capacitance indicator icon, the system will enter Power Properties Interface. It displays detailed information of the battery, including remained capacitance, present voltage and current, etc.








-  is return button, press it and the interface will return to the upper operation interface.


-  is U discs indicator icon, if plugged, the icon will display, if not, the icon will disappear, it will generate storage management windows only if it is clicked.

**2. Functions Icon Bar**



This bar includes series of functions icons, each represents one function, press the icon and enter the function interface.




**3. Tool Bar**

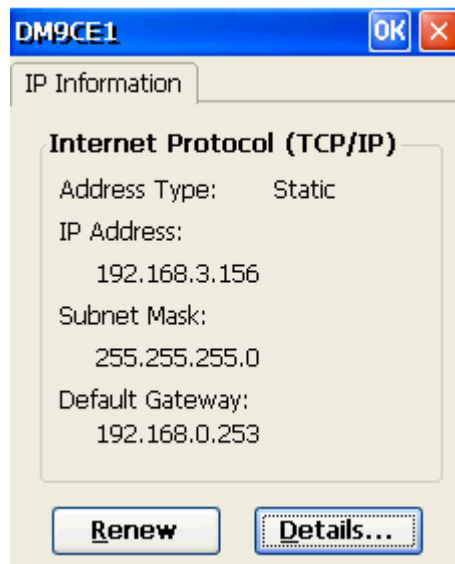
 PPPoE link/dis-link,  LAN link/dis-link,  (SIP) soft key on/off,  PPPoE status after link,  Help.


-  is PPPoE dis-link icon, press it and network password window emerge.





After PPPoE dial-up, it emerges , press the  to suggest the link window, check the link information or disconnect PPPoE.

-  is LAN dis-link, after the LAN link, it becomes , press  to check the detailed link information.



➤  is soft keyboard (SIP), it can control the display or hiding of the soft keyboard, user notes are as follows:



If there is not input panel, press  and the LCD will suggest soft input panel, then after that, press  to shut down the soft input panel on the LCD Display. Soft input panel includes basic letter and number and special sign, as follows:



Soft input panel and PC keyboard have same functions basically, enter and displays as the above picture. In the status, you can input lowercase letter, number, and some punctuation sign, you can use touch pen to click key of soft input panel, CAP is capital letter switch key, Shift key function is same as in the PC. Press Shift key and the panel will be as follows:



In this status, it is mainly used to input capital letter and some special sign and punctuation sign.

-  is PPPoE link status, which appears when linked, press it and the IP Properties bar comes and displays the acquired IP address and DNS information.
-  is Help, press it to enter Help service window.


## 7.3 xDSL Test

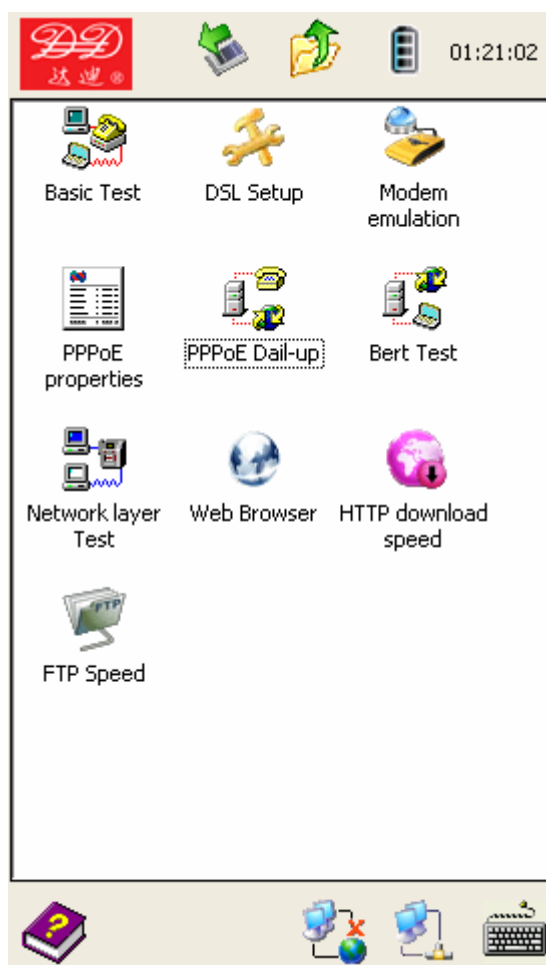
### Functions Introduction:

- It connects and tests xDSL line and verify dial-up through built-in Modem. As an integrated test, it includes physical layer test, DSL parameter settings, PPPoE properties, PPPoE dial-up, network layer test, Web Browse, ATM loopback test, Network Speed Measurement, FTP Speed Measurement, etc. It can emulate user end equipment to achieve PPPoE dial-up, network layer test and Web Browser, then acquire physical layer parameters of the line link and verify line quality.

This function is helpful to verify the subscriber line and solve the problem resulted from Modem and PC.

### How to Use:

The tested xDSL line pair directly plugs in RJ11 port of the instrument or connects it with xDSL splitter, then press  to enter xDSL test window, as follows:



xDSL test function includes: physical layer test, DSL parameter settings, Modem emulation, PPPoE properties, PPPoE dial-up, ATM loopback test, network layer test, Web Browse,

Network Speed Measurement, FTP Speed Measurement, etc.

If only test whether the built-in Modem connects with xDSL station equipment, settings are not required. If connected, the instrument indicator light on, click to enter interface when you would like to check the physical layer parameters.

To test whether xDSL can log in website, the procedures are: set Modem parameter (VPI/VCI) →set PPPoE properties (can be skipped) →PPPoE dial-up (when xDSL LINK light on, do PPPoE dial-up, required to input user name/ password) , then Web Browse.


## 7.3.1 Physical Layer Test

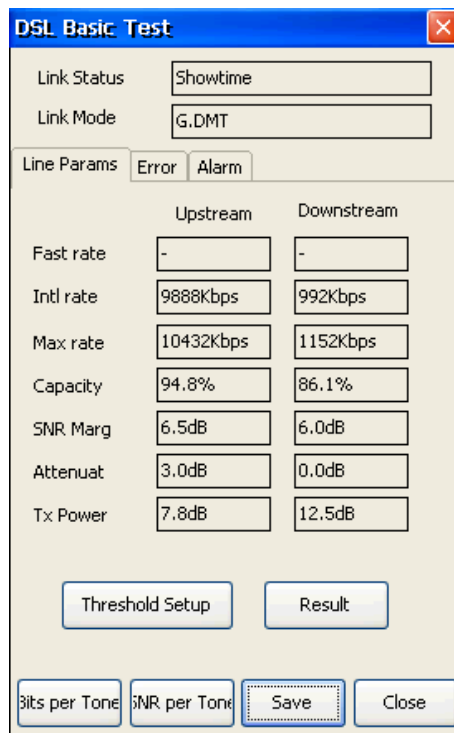
### 7.3.1.1 Physical Layer Parameters

#### Functions Introduction:

It is used to test physical layer parameters, including: xDSL link status, link mode, upstream rate, downstream rate, maximum speed, channel utilization rate, noise margin, line attenuation, output power, errors CRC/HEC/FEC/OCD/NCD, activation times, duration, Bits per tone diagram and SNR per tone diagram(test parameters differs according to module).

#### How to Use:

To check physical layer parameters of xDSL line, please click basic test icon  to enter the test interface, as follows:



**DSL Basic Test**

Link Status: Showtime

Link Mode: G.DMT

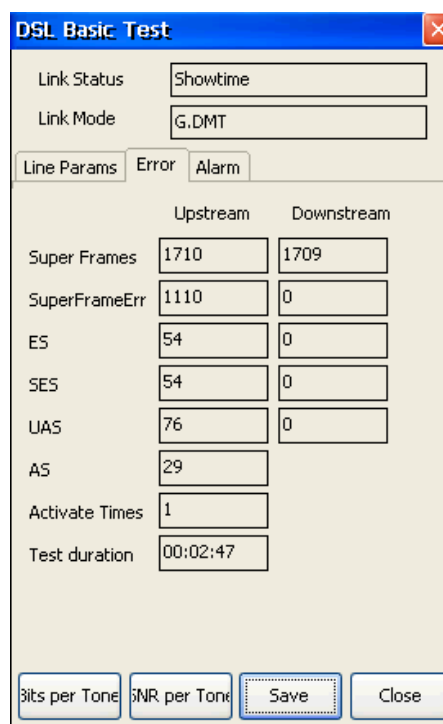
Line Params | Error | Alarm

	Upstream	Downstream
Fast rate	-	-
Intl rate	9888Kbps	992Kbps
Max rate	10432Kbps	1152Kbps
Capacity	94.8%	86.1%
SNR Marg	6.5dB	6.0dB
Attenuat	3.0dB	0.0dB
Tx Power	7.8dB	12.5dB

Threshold Setup | Result

Bits per Tone | SNR per Tone | Save | Close

DSL Line Parameters



**DSL Basic Test**

Link Status: Showtime

Link Mode: G.DMT

Line Params | Error | Alarm

	Upstream	Downstream
Super Frames	1710	1709
SuperFrameErr	1110	0
ES	54	0
SES	54	0
UAS	76	0
AS	29	
Activate Times	1	
Test duration	00:02:47	

Bits per Tone | SNR per Tone | Save | Close

DSL Error Statistics

The screenshot shows a window titled "DSL Basic Test" with a close button in the top right corner. Below the title bar, there are two input fields: "Link Status" containing "G.992 Started" and "Link Mode" containing "-". Below these fields are three tabs: "Line Params", "Error", and "Alarm", with "Alarm" currently selected. The main area contains a table of error metrics:

	Downstream	Upstream
Bit Error	-	-
HEC	-	-
OCD	-	-
LCD	-	-
LOS	-	
LOF	-	
CRC	-	

At the bottom of the window, there are four buttons: "Bits per Tone", "SNR per Tone", "Save", and "Close". The "Save" button is highlighted with a dashed border.

#### DSL Alarm

Parameters will be displayed on the interface, values being updated real-time to feedback the status.

Through the xDSL present status, you can see the link process between xDSL and station equipment, link mode is as the present mode.

#### **Present status:**

Idle: not linked;

G.994 Training: training;

G.992 Started: initialization;

G.992 Channel Analysis: channel analysis;

Showtime: links.

#### **Link mode:**

G.DMT: ITU-T G992.1;

G.LITE: ITU-T G992.2;

T1.413: T1.413;

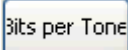
G.DMT.BIS: ITU-T G992.3;

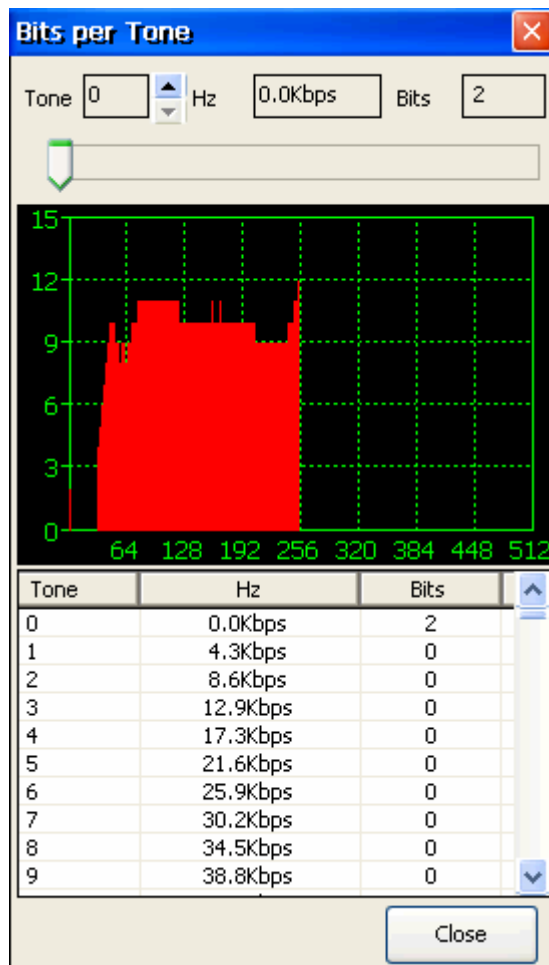
G.DMT.BISPLUS: ITU-T G992.5.

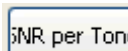
#### Physical Layer Parameters:

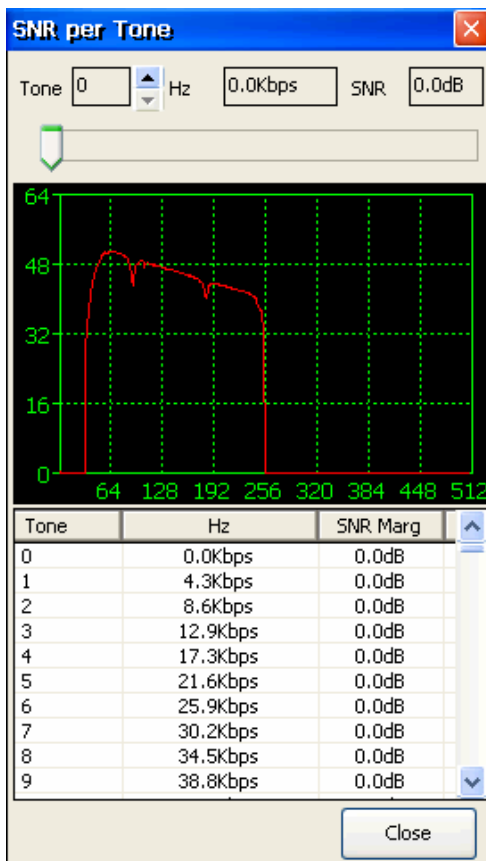
Activation times: from beginning to present time, Modem activation total times.

Test time length: Modem initiated and enter physical layer test, time length starts to account.

Click  to enter Bits per Tone window, user can check the bits value that is displayed in diagram, as follows:



Click  to enter SNR per Tone window, you can check the value that is displayed in diagram, as follows:



Click  to enter Save Record window, as follows:

The 'Save Record' window contains the following text and fields:

Rules for naming files:  
File name is composed to 8-bit symbol identifiers and 3-bit sequence numbers which are inputted by your own. Recommend that you use the testing date or telephone number as symbol identifiers.

Please input this file name:

Identifier:  - Index:

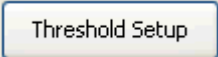
file name: 00000001001.dsl

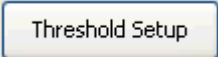
progress:

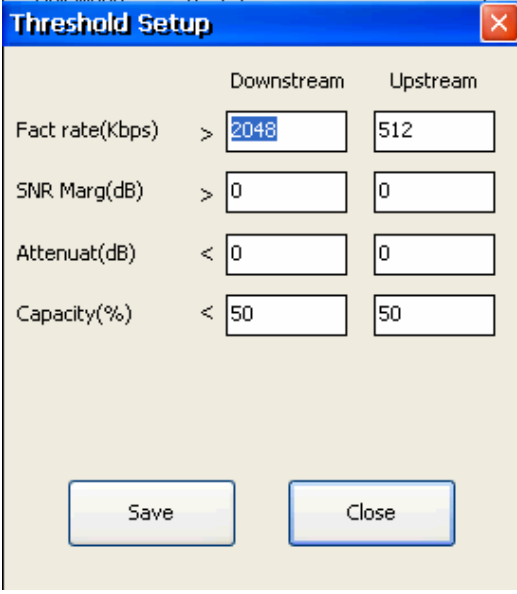
Buttons: OK, Close

Save record and document name is xxxxxxxx-xxx.dsl, x is values, you can revise line sign to line call No.(easy to remember and keep record), number and index can be revised while the number will add one for each saving.





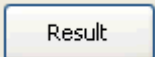
Click  to enter threshold setup window, for you to set up default parameters to decide if the line is qualified, as follows:

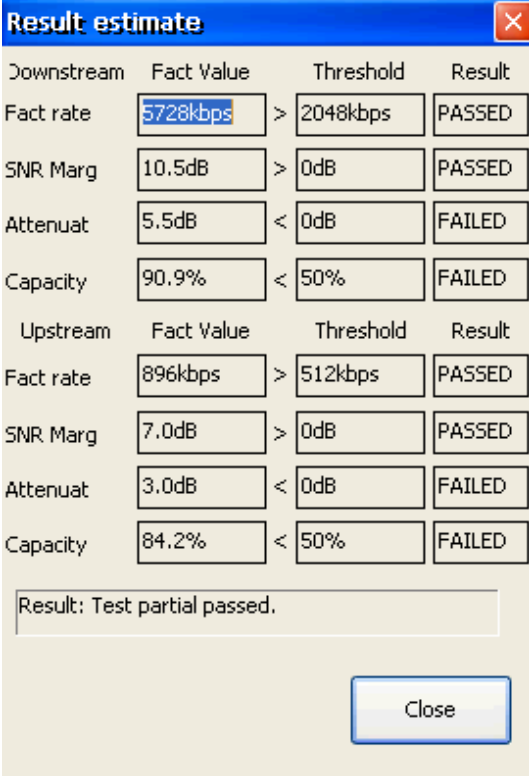


	Downstream	Upstream
Fact rate(Kbps)	> 2048	512
SNR Marg(dB)	> 0	0
Attenuat(dB)	< 0	0
Capacity(%)	< 50	50

Save Close



Click  to enter Result estimate window, you can set up line parameters and threshold value to decide if the line is qualified, as follows:



Downstream	Fact Value	Threshold	Result
Fact rate	5728kbps	> 2048kbps	PASSED
SNR Marg	10.5dB	> 0dB	PASSED
Attenuat	5.5dB	< 0dB	FAILED
Capacity	90.9%	< 50%	FAILED
Upstream	Fact Value	Threshold	Result
Fact rate	896kbps	> 512kbps	PASSED
SNR Marg	7.0dB	> 0dB	PASSED
Attenuat	3.0dB	< 0dB	FAILED
Capacity	84.2%	< 50%	FAILED

Result: Test partial passed.

Close




Click  to close the window.

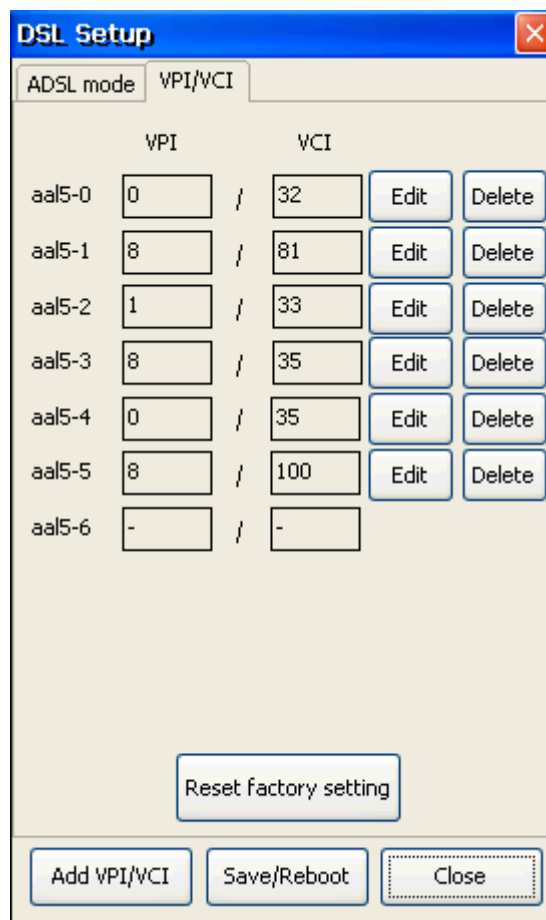
## 7.3.2 DSL Parameters Settings

### Functions Introduction:

It is used to revise xDSL Modem parameters, mainly VPI/VCI value.

### How to Use:

To revise xDSL Modem parameters, please click  to enter DSL setup interface to set parameters, as follows:



ADSL mode	VPI/VCI			
	VPI	/	VCI	
aal5-0	0	/	32	Edit Delete
aal5-1	8	/	81	Edit Delete
aal5-2	1	/	33	Edit Delete
aal5-3	8	/	35	Edit Delete
aal5-4	0	/	35	Edit Delete
aal5-5	8	/	100	Edit Delete
aal5-6	-	/	-	

Reset factory setting

Add VPI/VCI    Save/Reboot    Close

Enter the interface, the instrument will display former 8 series of VPI/VCI parameters, you can revise any series of VPI/VCI according to your requirement, input VPI/VCI revised value in the VPI/VCI input bar, and press reset setting key, the new value will generate(not lost even if power off)

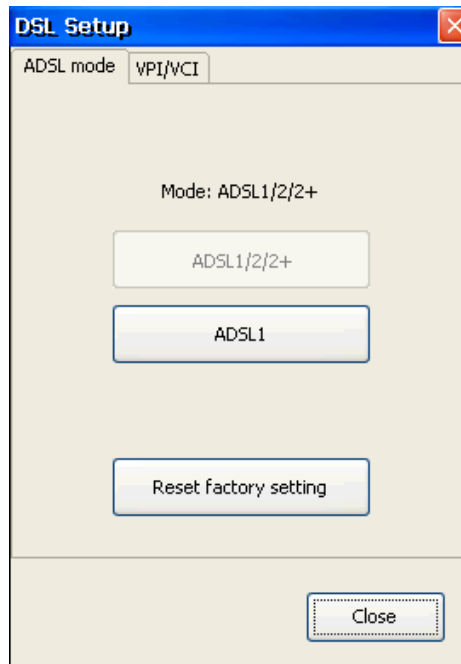
When Modem of the instrument is ADSL2+, ADSL2+ Modem can be set up as ADSL compatible mode, modes description is as follows:

ADSL1/2/2+ mode: ADSL2+ standard mode, it can set automatically the present link mode according to the station mode, ADSL2 + mode is at prior status. When station end can not link to ADSL2+ mode, it automatically switch ADSL mode, but ADSL mode can only be compatible with parts of ADSL line, parts of ADSL line not compatible.

ADSL1 mode: the instrument can not support ADSL2+ link mode, only support ADSL mode line.

Present mode: display the present setup mode of the built-in Modem.

Setup Interface as follows:




After the reset from a Modem mode to another mode, it will automatically reboot Modem module to activate it.

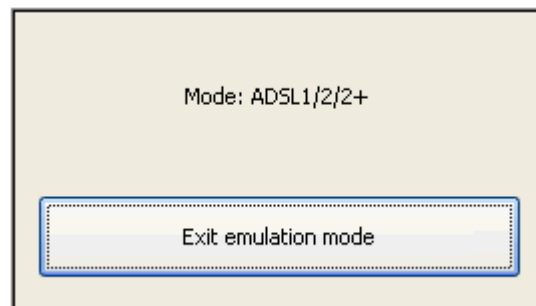
### 7.3.3 Modem Emulation

#### Functions Introduction:

It is used to emulate user Modem to replace it, and decide if some problems for it.

#### How to Use:

Click  Modem emulation icon to enter Modem emulation window, as follows:




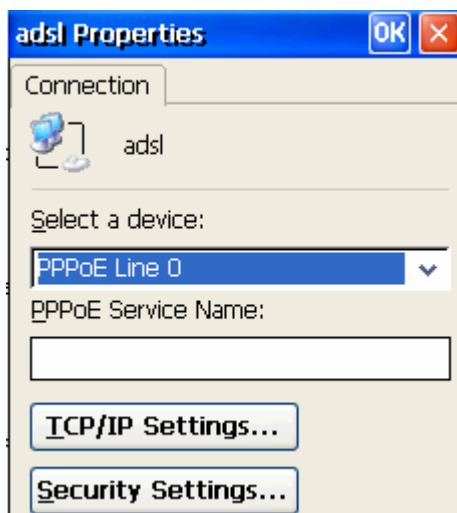
### 7.3.4 PPPoE Properties

#### Functions Introduction:

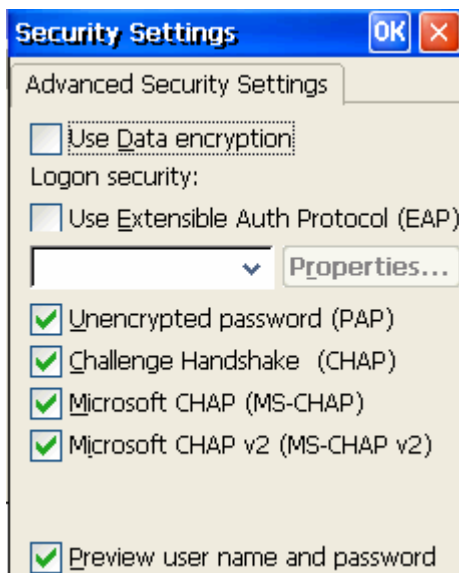
It is used to revise PPPoE dial-up properties, mainly revise the security settings.

#### How to Use:

Click  PPPoE properties icon to enter PPPoE link window, as follows:



Then click security settings button to enter security settings window, as follows:



Revise security settings according to linked verified mode, adopt non-protective password (PAP). Select it, select CHAP, Microsoft CHAP (MS-CHAP) and Microsoft CHAP v2 (MS-CHAP v2), the preview user name and password (P), conceal other items, click close and the interface will be as the above picture. Press OK to complete the settings, then click close at PPPoE link window. The PPPoE properties setup is completed until now.

**Note:**

1. If improper PPPoE settings, PPPoE dial-up will not link. PPPoE security settings should comply with the password mode of the telecom operators, please revise PPPoE settings after read carefully.


2. Please do not revise or conceal any other item except PPPoE, for the completed setup needn't revising. Only for PPPoE, user can set according to PPPoE links attributes, Alert: if revise other item except PPPoE, network card may be invalid or PPPoE dial-up can not link.

### 7.3.5 PPPoE Dial-up

#### Functions Introduction:

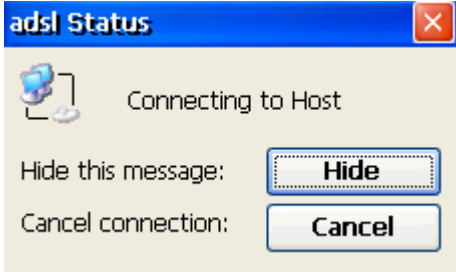
PPPoE dial-up through built-in xDSL Modem, set up PPPoE dial-up links.




#### How to Use:

When xDSL LINK light on, click  and the system will generate PPPoE dial-up window, as follows:



User name and password should be input, D item should be blank without word, click OK after complete it, dial-up will link soon. As follows:



After PPPoE dial-up link,  becomes  , if you would disconnect it, please click  , click cancel to disconnect PPPoE.

#### Note:


1. Only after xDSL LINK light on, you can do PPPoE dial-up, otherwise, dial-up will not succeed.
2. PPPoE security settings should comply with the password mode of the telecom operators, please ensure PPPoE settings correct to make successful links.
3. User name and password should be input and be consistent with the line.
4. D(Domain) item should be blank without word, otherwise, dial-up will not link.

### 7.3.6 ATM BER Test

#### Functions Introduction:

Testing the bit error rate of the DSL line to estimate the line's transmission qualification.

#### How to Use:

Click  Bert Test icon to Bert test window. Select test time and then click "start" to do the Bert test.

#### Note:


Bert test need Modem's link status is showtime.

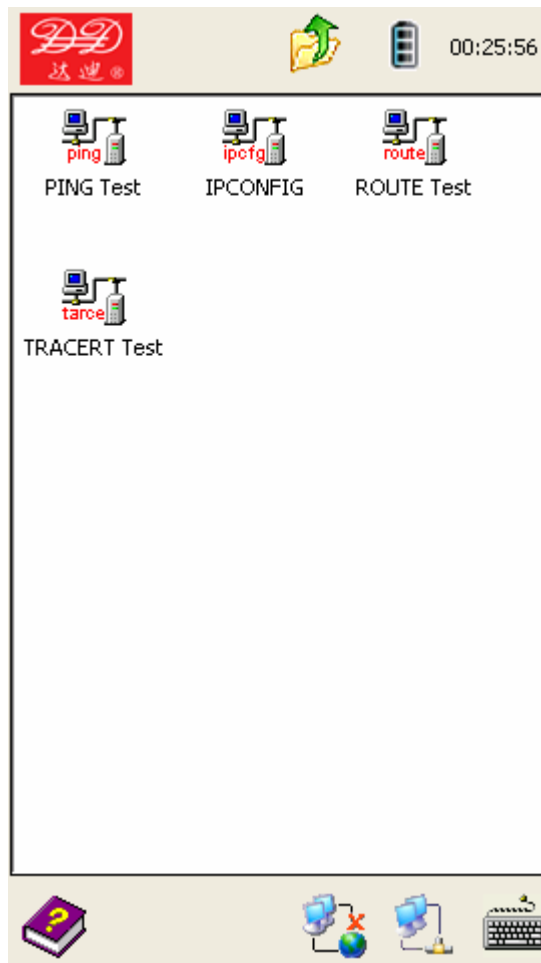
### 7.3.7 Network Layer Test

#### Functions Introduction:

After PPPoE dial-up link through built-in xDSL Modem, do Ping, Ipconfig, Tracert, and Route Test of the Network Layer.

#### How to Use:

Click  Network Layer test icon to enter Network Layer test window as follows:



Click the tested item to enter the corresponding window.

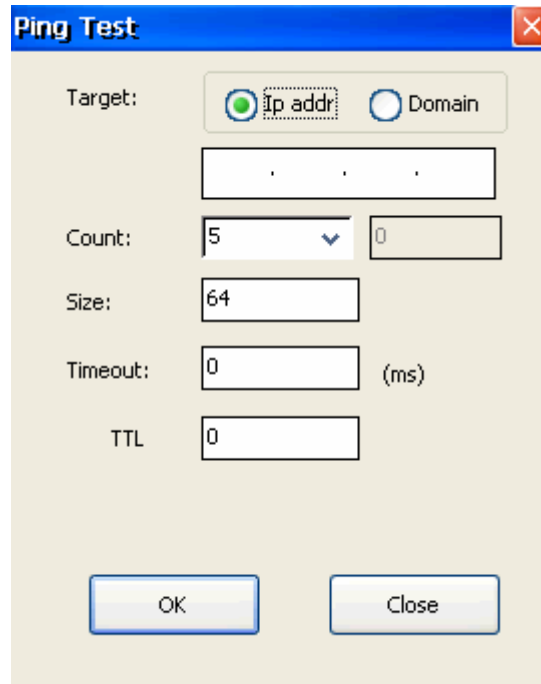
### 7.3.7.1 Ping Test

#### Functions Introduction:

To verify the IP connection with another TCP/IP PC through sending Information Control Protocol (ICMP) feedback request information. The receiving status of the feedback request, and the return times will display. Ping is the main TCP/IP command to test the network connectivity, achievement, problems of name interpretation.

#### How to Use:

Click  to enter Ping test window, as follows:



Target address should input the Ping IP address or website,  
Tx time: data wrap sending times, defaults 5 times.

Data size: the Tx data size 64;

Timeout: timeout exceed settings(unit: ms)

TTL: Total time length.


Press OK after settings to check the test window, press Close to cancel test.

### 7.3.7.2 Ipconfig Test

#### Functions Introduction:

It displays all the present TCP/IP configuration value, updating DHCP and DNS setup. All TCP/IP configuration information of the adaptor is available.

#### How to Use:

Click  Ipconfig test icon, as follows:



```

Pocket CMD v 6.00
\> Ipconfig /all
Windows IP configuration

Ethernet adapter Local Area Connect
    IP Address . . . . . : 192.
    Subnet Mask . . . . . : 255.
    Default Gateway . . . : 192.
    Adapter Name . . . . . : LAN9
    Description . . . . . : LAN9
    Adapter Index . . . . . : 2621
    Address . . . . . : 02 2
    DHCP Enabled . . . . . : NO
    Primary WinsServer :
    Secondary WinsServer:

    Host name . . . . . : Wind
    Domain Name . . . . . :
    DNS Servers . . . . . : 202.
    NODETYPE . . . . . : 8
    Proxy Enabled . . . . . : NO

\>

```

### 7.3.7.3 Route Test

#### Functions Introduction:

Displays items in the local IP route list.

**Command Item and Optional Parameters Description**

**Command Item**

Commands supposed to work, the following list displays effective commands.

Command	Destination
<b>Add</b>	Add route
<b>Change</b>	Change current route
<b>Delete</b>	Delete route
<b>Print</b>	Print route

**Optional Parameters**

**Destination**

The network target address of the designated route. Target address can be an IP address(host machine address is set as 0), host machine route is IP address, default route is 0.0.0.0.

**netmask**

Designate the netmask related to network target address(same as subnet mask). Netmask can be a proper one to IP network address, while is 255.255.255.255 for host machine route, is 0.0.0.0 for default route. If disregarded, it can use 255.255.255.255. To define route is on the basis of the relationship between target address and netmask, target address should not be more detailed than the corresponding netmask. On the other word, if one number of the netmask is 0, the corresponding place of netmask should not be set as 1.

#### Gateway

Designate IP address of the former or later one hop of the attainable address set that exceeds the defining of netmask and network target. For the local netmask route, gateway address should be allotted to IP address connected with netmask port. For the remote route attainable by one or several routes, gateway address is an IP address designated to adjacent route.

#### Metric

It should be the integer of the required hop designated by route(range is 1~9999). From the routes of surface route set, it is used to select the most matched route with the target address in the transfer wrap. The selected route should have the least hops. Hops can reflect hop quantity, route speed, route reliability, route throughput and management attributes.

#### Interface

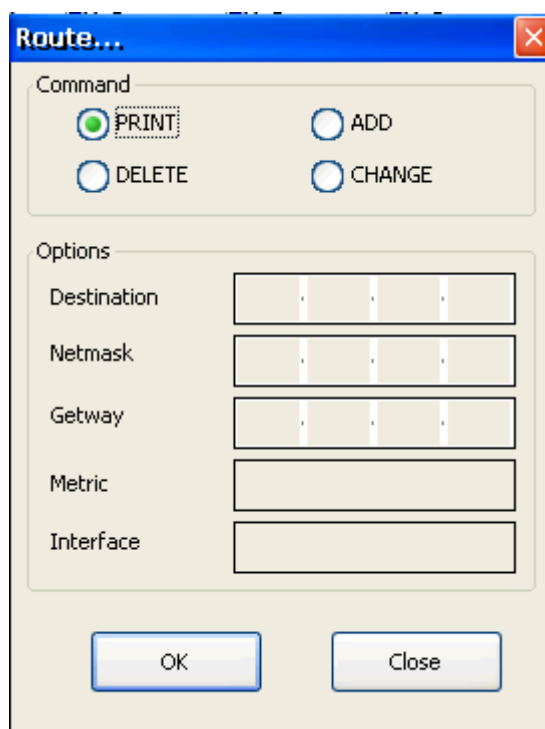
The interface index that help designated target attain interface. Use Route print command can display interface and corresponding interface index list. For index you can use decimal or hex system value. For hex system value, 0x should be added in front of the value. When parameter if is neglected, interface should be fixed by gateway address.

#### How to Use:



Click  Route test icon to enter Route test window, as follows:

Select Route parameter and click OK to start the Route test. Click close button to cancel. If click OK button it will pop up a test window and display the test results.




The screenshot shows a dialog box titled "Route...". It has a "Command" section with four radio buttons: "PRINT" (selected), "ADD", "DELETE", and "CHANGE". Below this is an "Options" section with five input fields: "Destination", "Netmask", "Gateway", "Metric", and "Interface". At the bottom of the dialog are two buttons: "OK" and "Close".

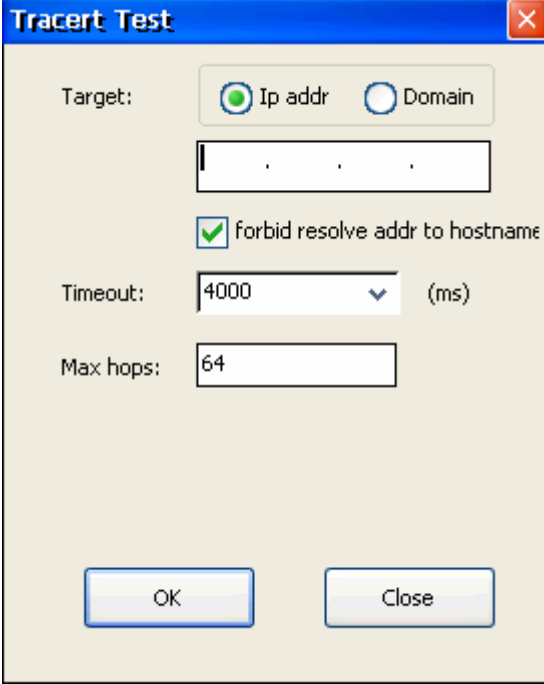
### 7.3.7.4 Tracert Test

#### Functions Introduction:

Through the increment TTL value, the “Internet Control Message Protocol (ICMP) ERQ” message will be sent to the specific path. All displayed path is in proximal router sockets which is located between source host and target host.

#### How to Use:

Click  Tracert test icon, access to Tracert test window as below.



The screenshot shows a dialog box titled "Tracert Test". It features a "Target:" section with two radio buttons: "Ip addr" (selected) and "Domain". Below this is a text input field for the target address. A checked checkbox labeled "forbid resolve addr to hostname" is present. The "Timeout:" is a dropdown menu set to "4000" with "(ms)" next to it. The "Max hops:" is a text input field set to "64". At the bottom are "OK" and "Close" buttons.

Input Tracert IP address and website at target address column.

Forbid resolve address to hostname to reduce waiting time.

Timeout setup: Setup the timeout value (ms)

Max hops: Setup the max hops the default value is 64


Click OK pop up a test window, otherwise click close to cancel test.

### 7.3.8 Web Browse

#### Functions Introduction:

It is used for website logon and web browse functions.

#### How to Use:

Click  web browse icon to open the web browse as below.




Select the frequency use website in address bar.

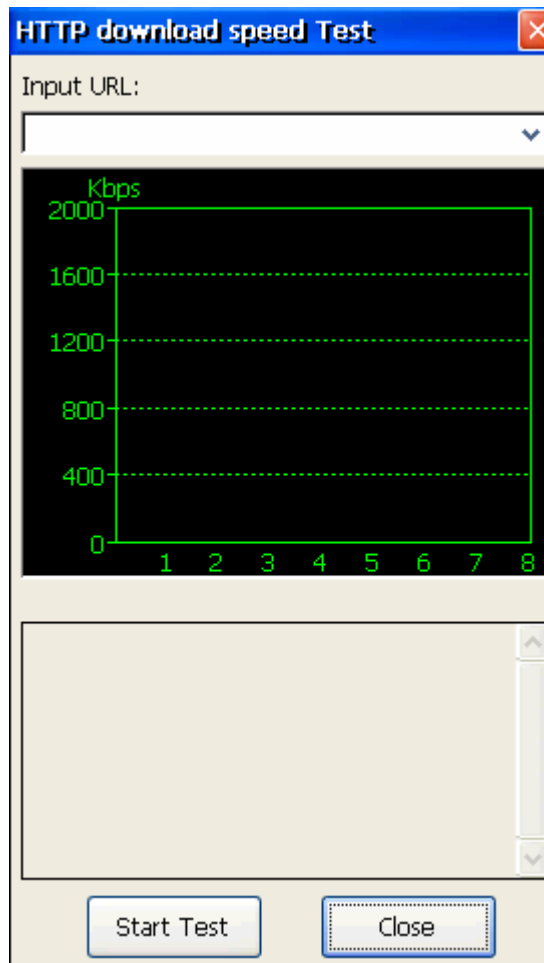
### 7.3.9 HTTP download speed Test

#### Functions Introduction:

By providing the HTTP download speed test functions in order to evaluate the speed to access the appointed website.

#### How to Use:

Click  HTTP download speed test icon, it will open a HTTP download speed test window as below.



Input the website address or select a commonly used address from the drop down list in address bar, click beneath Start Test button that may generate the web browse speed test. The result of this test is show by a bar graphic in the test field.

#### Note


Firstly, notify to input the right webpage; webpage speed test tools might not have good performance for some website, such as the website jump page on web server.

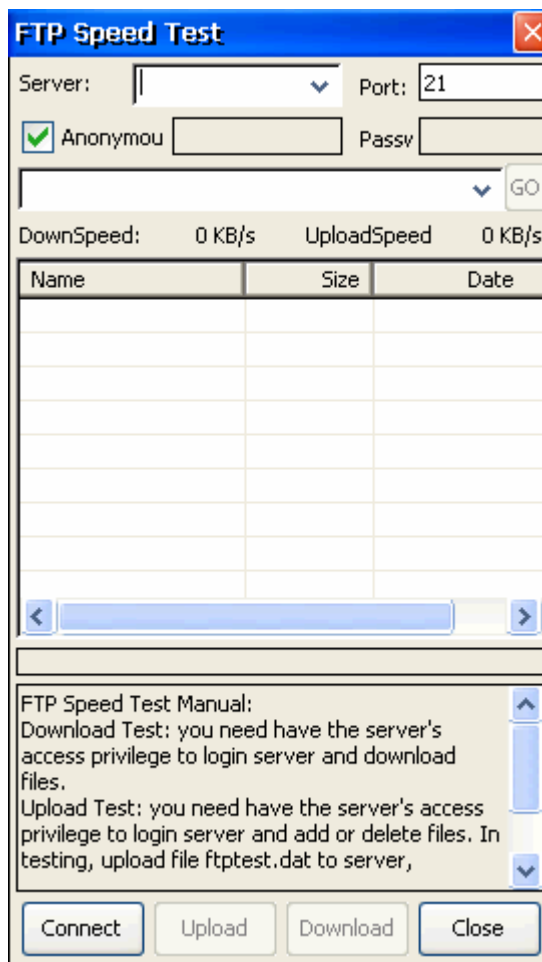
### 7.3.10 FTP Speed Test

#### Functions Introduction:

Provide function test for FTP client end, realize upload/download speed test.

#### How to Use:

Click  FTP speed test icon button, open FTP speed test window as below.



Input the website IP address that need to be tested, user name and password, click “Connect” to start speed test.

## 7.4 LAN Test

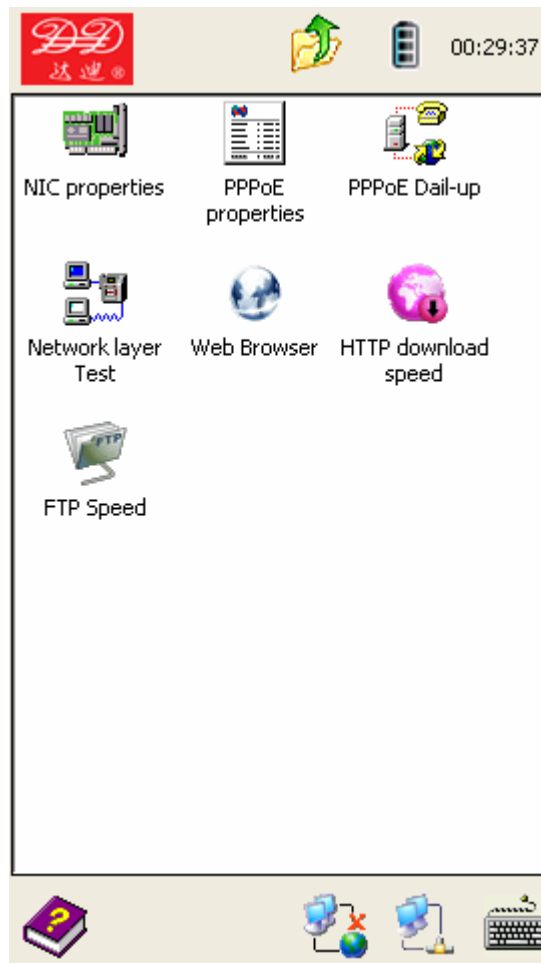
### Functions Introduction:

It mainly test for when connect to the Ethernet and broadband IP user network.

The device can verify the DSL web utility when emulate computer connects to DSL Modem and PPPoE dial for web browsing, on the other hand it also can connect to Ethernet as an IP terminal for the test of DHCP client end, PPPoE dial and web browse, for verifying the Ethernet utility.

### How to Use:

Click  LAN test icon access to LAN test options as below displayed.




Select one icon as you need and click it to enter into the test window.

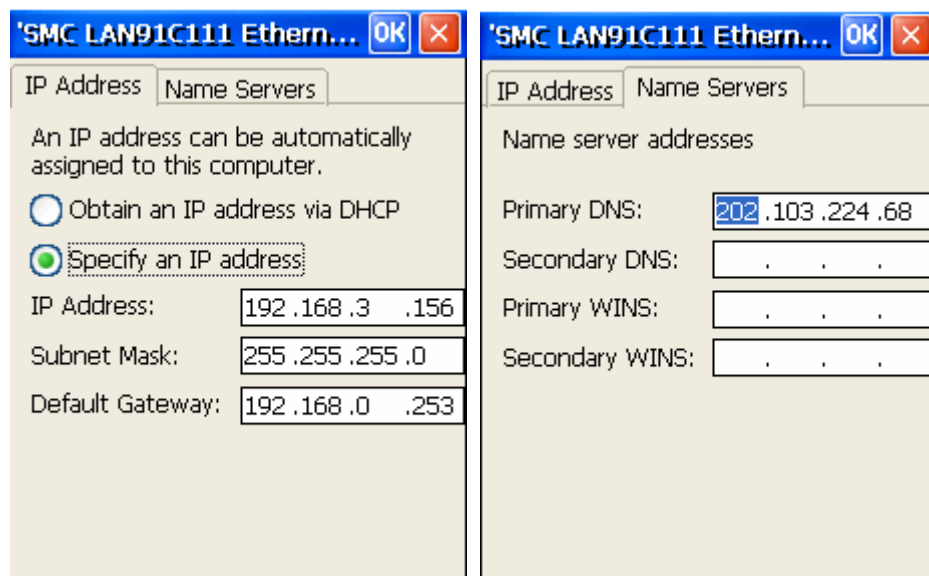
#### 7.4.1 Network Card Properties

##### Functions Introduction:

Modify network card properties, including IP address, gateway, DNS.

##### How to Use:

Click  network card property icon access to the network card property window as below.



User can input the IP address, gateway, DNS value according to their requirement. WINS don't need setup, when finish all modification click setup button and then click "Close" for shut off the window.

**Note**


When modify network property please take care of it for in case of the network logon unavailable.

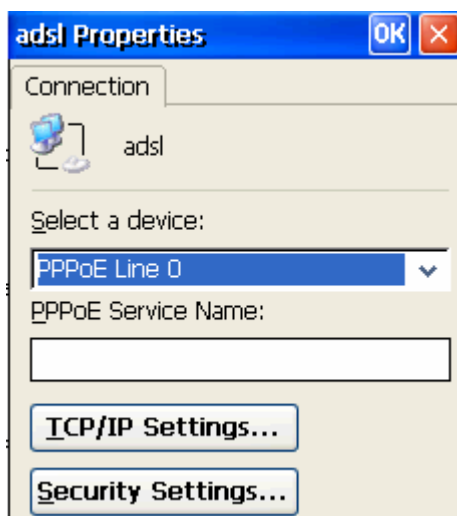
### 7.4.2 PPPoE Property

**Functions Introduction:**

For modifying the property of PPPoE dial, it is mainly modify PPPoE property security setup.

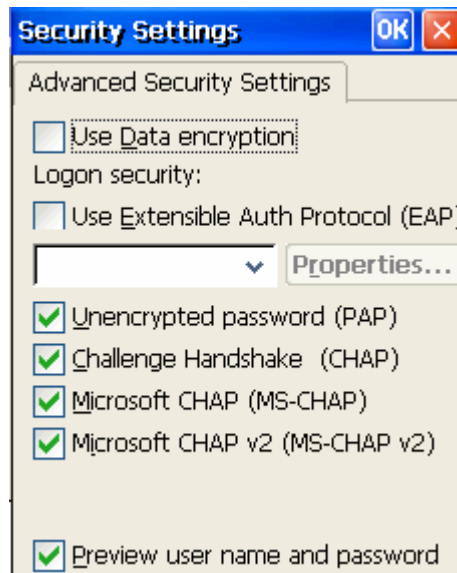
**How to Use:**

Click  PPPoE properties icon for access to PPPoE connect window as below.



And then click Security Settings to enter the window as below:





To modify security settings according to the verification mode, usually select the unencrypted password (PAP). Once it selected, also select challenge handshake (CHAP), Microsoft CHAP (MS-CHAP) and Microsoft CHAP v2 (MS-CHAP v2). At last, select preview user name and password unselect other options as picture above, press OK key all settings are done. At the PPPoE connection window press close key to finish all PPPoE property settings.

**Note:**


1. Incorrect PPPoE configuration lead to connection failed as try the PPPoE dial. Verify the PPPoE property cautiously due to the items from PPPoE security configuration need to compatible with the carrier's AES standard.
2. Do not change or delete any other settings except PPPoE, also don't need to modify for other parameter that was setting done. User can make related setting according to the PPPoE connection. It will possible cause network card unusable or PPPoE dial failed on account of other setting changed.

### 7.4.3 PPPoE Dial-up

**Functions Introduction:**

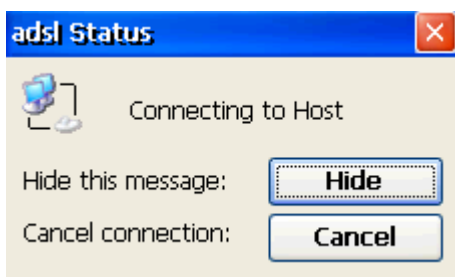
Establish the PPPoE dial connection through external Modem.




**How to Use:**

When external Modem DSL line synchronized, click  PPPoE dial icon, the PPPoE window will pop up the image like this.



At this moment, input the user name and password, notice that Domain should be blank with nothing filled in, click OK to finish the dial connection.



After PPPoE dial connected, the icon  will be changed to . If you need disconnect the PPPoE dial, click  icon pop-up connection window, and then click disconnected.

#### 7.4.4 Network Layer Test

Functions introduction and how to use is the same as 7.3.7 xDSL test module network layer

#### 7.4.5 Web Browse

Functions introduction and how to use is the same as 7.3.8 xDSL test module network layer

#### 7.4.6 Web Speed Test

Functions introduction and how to use is the same as 7.3.9 xDSL test module network layer

## 7.4.7 FTP Speed Test


Functions introduction and how to use is the same as 7.3.10 xDSL test module network layer

## 7.5 Copper Test

### Functions Introduction:

Built-in full function auto range digital power meter is used for testing the telephone line physical characteristic, audio-tracking function can search for the matched wire pair.

### How to Use:

Click  copper test icon that will access to window of copper test as below image




And then select the test item, and click it, it will access to related test window.

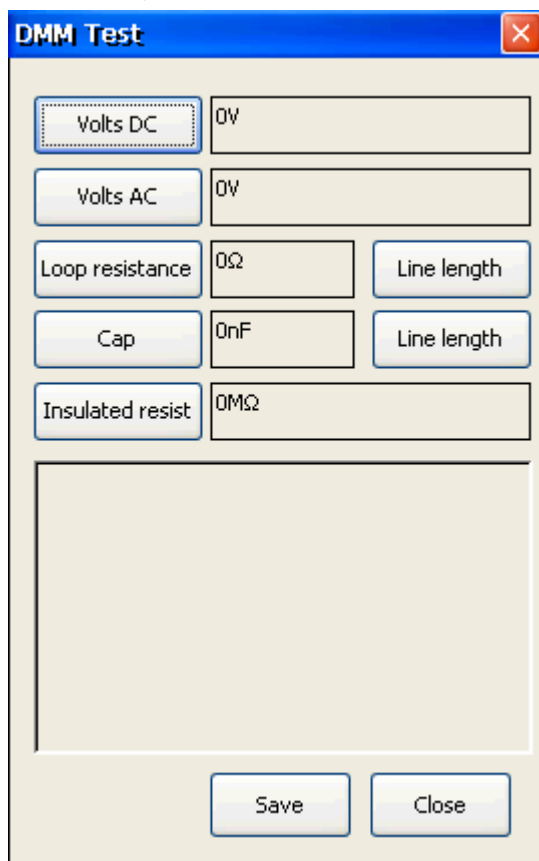
## 7.5.1 DMM Test

### Functions Introduction:

Built-in DMM can test alternating/constant voltage, circle resistance, electric capacity, insulation resistance etc. Maintainer use this testing functions to check if there is 48 V voltage, or any short and open circle trouble, at the same time, calculate roughly line length.

### How to Use:

Click  DMM test icon may access to DMM test window.



Volts DC	0V	
Volts AC	0V	
Loop resistance	0Ω	Line length
Cap	0nF	Line length
Insulated resist	0MΩ	

Save Close

Then connect test line, click the test items to start the testing. All test items introduced as below.

### DC Voltage Test

The signal in the line can be test by voltage. The xDSL line that bundled to ordinary telephone service, if the voltage in the line lower or equal to 0V it identify that this line need check maintaining due to the critical problem caused by line service not open or bad insulation, short cut, broken circuit or other line breakdown.

This test is only works on the DC voltage, the test range is -110V~+110V, when it beyond the value the device will prompt "Test overload"

### AC Voltage Test

By the AC Voltage test, high AC voltage can be tested for fear that line maintainer is in danger, when it has high AC voltage take down the alligator clip carefully so as to electric shock.

This test only used for AC voltage, the test range is 0-110V, when it beyond the value the device will prompt “Test overload”

### Loop Resistance Test

The length of line can be test by circle resistance. Otherwise, if the cable length is given, the cable connection will be test by circle resistance.

The formula for cable length test by circle resistance value is

$$L=R_L/R_O \text{ (Km)}$$

In above formula,  $R_L$  is circle resistance test value (unit:  $\Omega$ ),  $R_O$  is circle resistance per kilometer (unit:  $\Omega$ )

In general condition 0.32mm copper line  $R_O=435.2\Omega$ , 0.4mm copper line  $R_O=278.5\Omega$ , 0.5mm copper line  $R_O=178.3\Omega$ .

If the device prompts “Test Overload” it means that test clap is disconnected or line haven’t circle connected or circle resistance is overload, when that happed, check test clap or circle connect the line and test once again.

During the test when line voltage is over 5V, device will prompt “Line-voltage”, at this moment the circle resistance test is unavailable, the test only performed when there is no electricity in the line.

### Capacitance Test

The line length can be measured by electric capacity test. When there is no bridged tap and cable is not dip in water, the length can be measured by test electric capacity, the formula is

$$L=C_{ab}/C_O(\text{Km})。$$

In above formula,  $C_{ab}$  is electric capacity test value(unit: nF),  $C_O$  is electric capacity value per kilometer (unit: nF)

The electric capacity of cable in common used for local calls is  $C_O=51\text{nF}$

When the device prompts “Test Overload” that means the electric capacity is overload or cable default, retest it after check the cable.

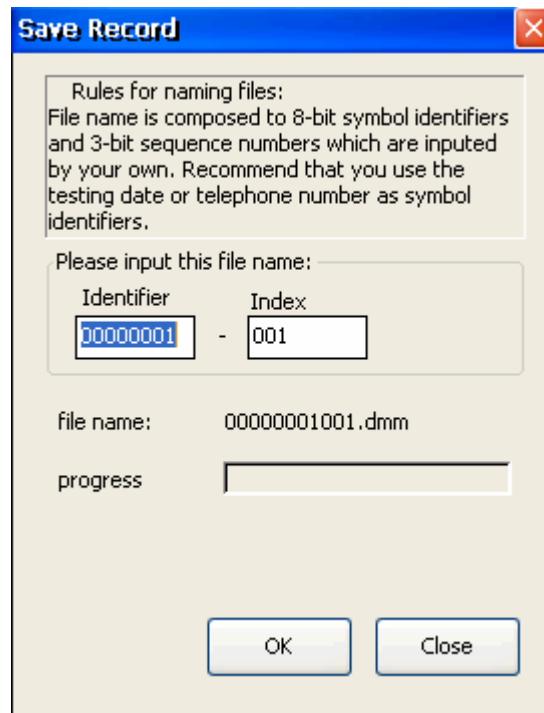
During the test when line voltage is over 5V, device will prompt “Line-voltage”, at this moment the capacity test is unavailable, the test only can be performed when there is no electricity in the line.

### Insulation Resistance Test

The insulation test function can be used for the line insulation test, if the line with small value of insulation resistance that means it has serious insulation problem that may cause the ADSL line suffer the bad transmission, in general, the value of ADSL line insulation resistance supposed to be larger than  $10\text{M}\Omega$ .

During the test when line voltage is over 5V, device will prompt “Line-voltage”, at this moment the insulation test is unavailable, the test can only performed when there is no electricity in the line. If the insulation resistance is overload, the device will display “Insulation Resistance >  $50\text{M}\Omega$ ”that means the line insulation is in good condition.

When DMM test is done, click Close button it can close the DMM test window, by this, user will be alerted if need to save the test result, click OK button to save otherwise click Close button.



Save record default file name is xxxxxxxx-xxx.dmm; the x is the number, user can change to the telephone number instead as symbol identifiers that are strongly suggested for case of record distinction. User also are able to change the sequence number which is saved and plus 1 automatically for every changing.

**Note:**


1. DMM test result the file name of line number is preferable coincidence with physical layer test result so as to save the file.
2. User can modify the file name by their favorite. But, keep the rules unified for future management.

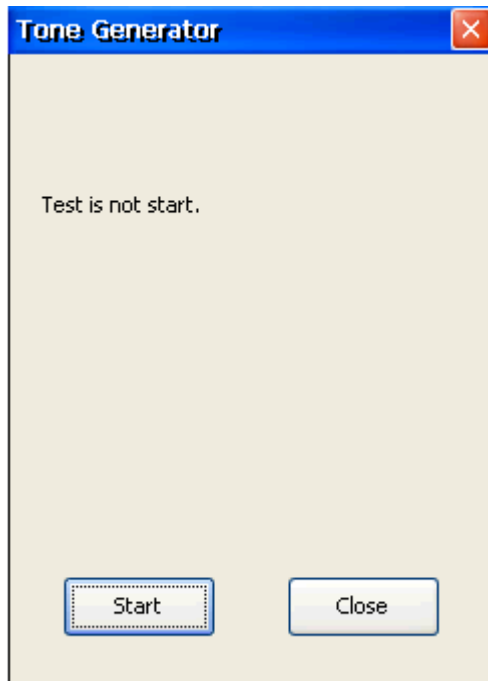
## 7.5.2 Tone Generator

### Functions Introduction:

Support audio signal tracking function with built-in Tone generator.

### How to Use:

Click  Tone Generator icon, see the below Tone Generator window as below image.



The device can send the audio signal at the end of twisted-pair, use Tone Tracer to find the compatible line pair at the other end.

**Note:**


This function is only can be used to idle line, do not connect with other network equipment to the other end of line.

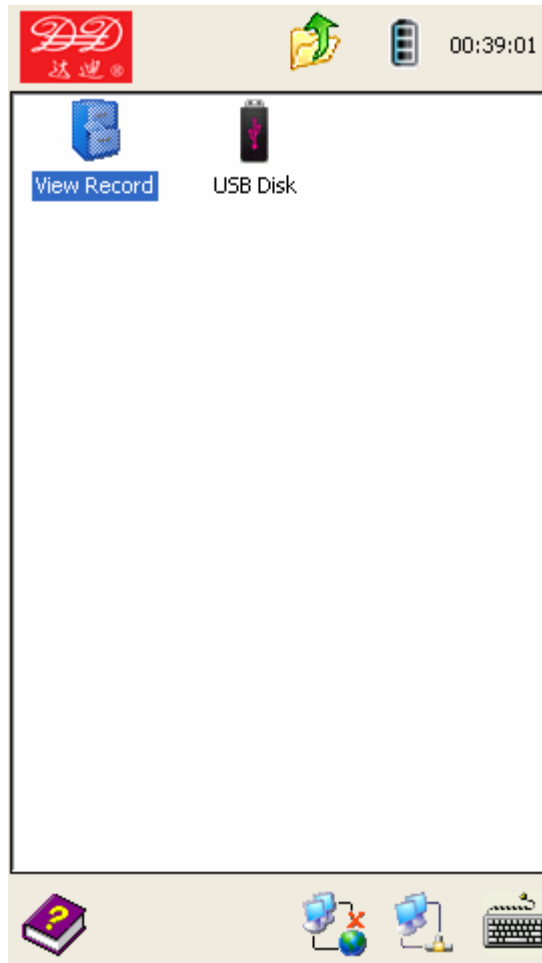
## 7.6 Explorer

### Functions Introduction:

It is mainly applied to the document management and viewing, includes view record and U disk storage etc.

### How to Use:

Click  Explorer icon, see below file management window.




Click the file icon and access to the file management window.

### 7.6.1 View Record

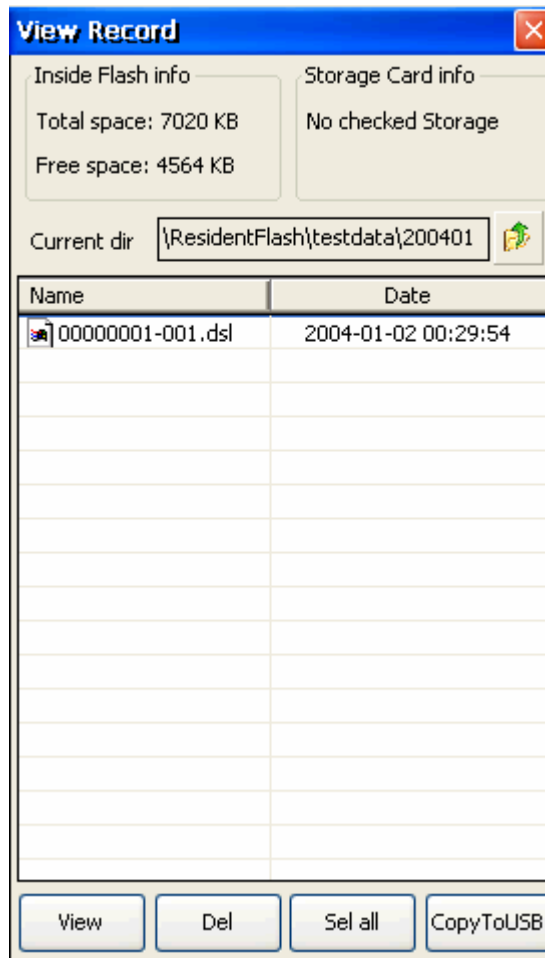
#### Functions Introduction:

View the history test results, such as DMM test, physical layer parameter etc.

#### How to Use:

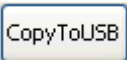
Click  record view icon, see the image of record view as below:




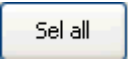



The file suffix are dsl, dmm, by the way the dsl suffix indicate the file for the xDSL physical layer test result whereas dmm suffix indicate the file for the DMM test result.

The storage area display the available capacity, if it is less than 1000KB suggest to clear up the history record for convenience to save new records. Memory card display expansion SD card capacity and its available capacity accordingly.

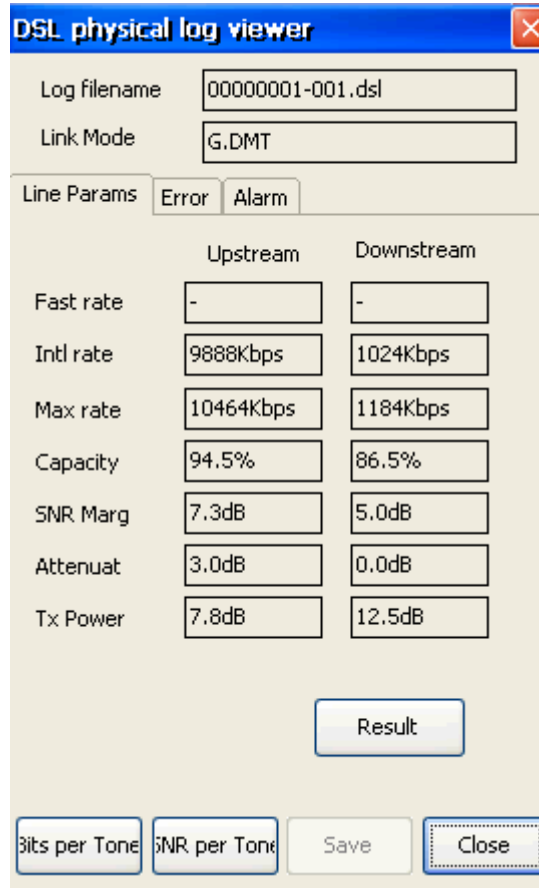
Select a file and click  button, copy the recorded file to U disk in order to view or print via PC.

Select a file and click  button it will pop up a dialog box for delete confirmation.

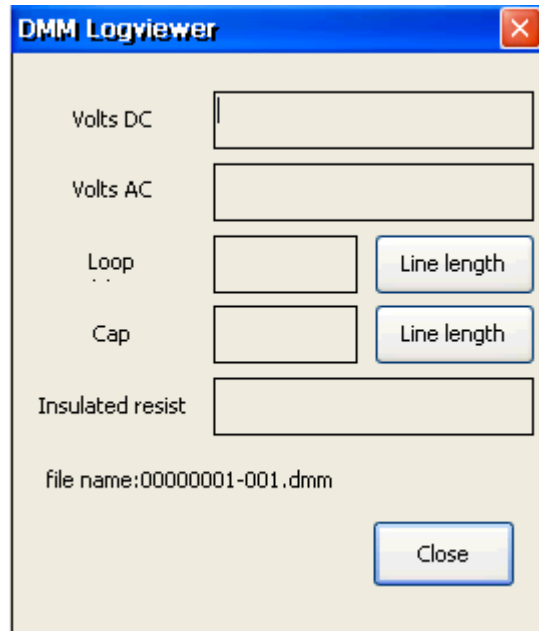
Click  button to select all files or cancel selection of all files.

Select a file and click  button or double click a record file to open up a record view window.

See xDSL physical layer parameter record view window as below image.



DMM test record view window as below.



## 7.6.2 U Discs Storage

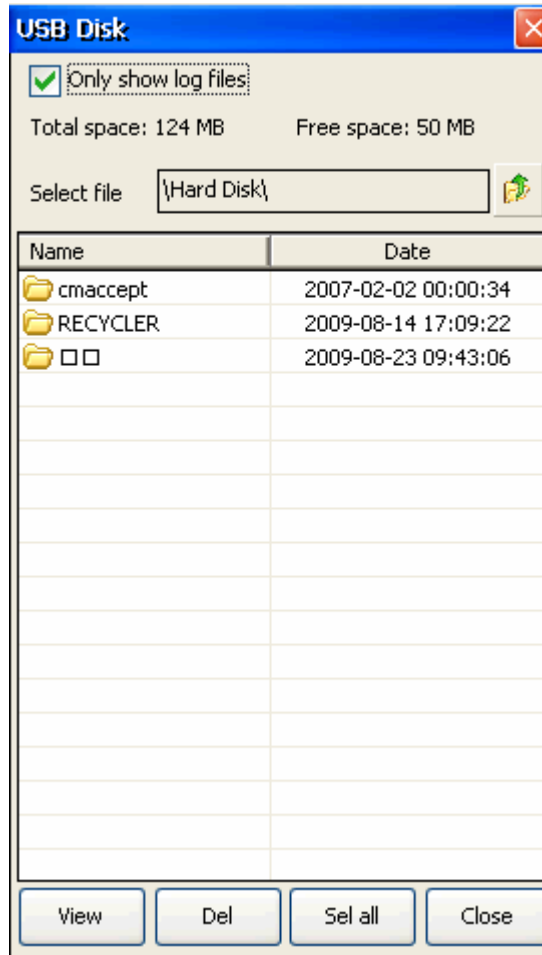
### Functions Introduction:

It will be used to check and view U disk test record. Be confirming that U disk has been

connected properly and it is under the condition of write-protect.

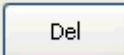
### How to Use:

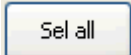
Click  U disk storage icon and open U disk storage window as below image.

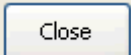


In the file list column which display the U disk recording files.

Select a record file and then click  button or double click a record file to open it.

Select a record file click  button it will pop up a dialogue box for confirming the delete.

Select  button the files are all selected or cancel the selection all.


Click  button to close the U disk storage window.

## 7.7 Help

### Functions Introduction:

Provide the functions mainly for system upgrading, usage introduction and product informations.

**How to Use:**

Click  help icon access to help window as below image.




Click an icon and achieve its functions.

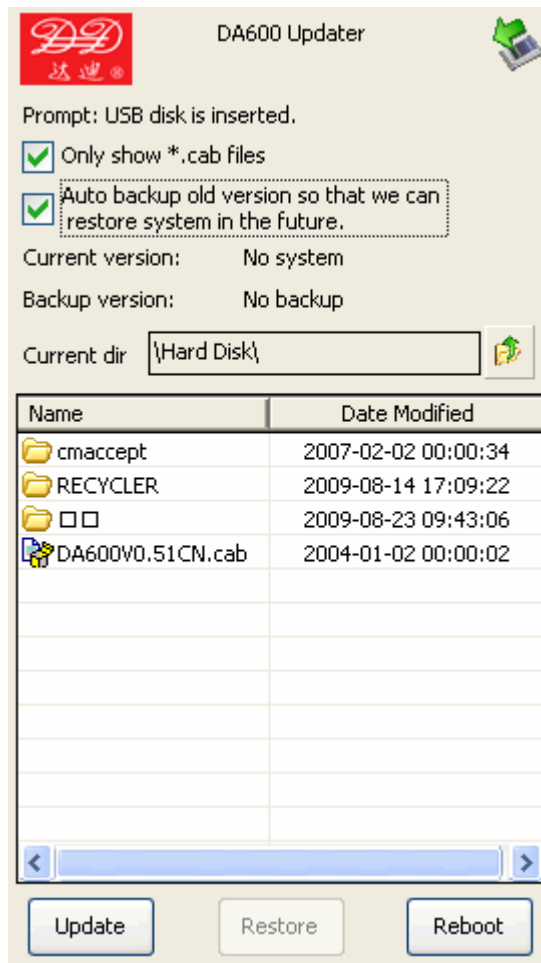
**7.7.1 System Upgrade**


**Functions Introduction:**

When equipment needs improvement for existing features or upgrading the software, it can be upgraded via U disk or download the software from our website ([www.lzdd.com](http://www.lzdd.com)), we will make the software on website is the newest.

**How to Use:**

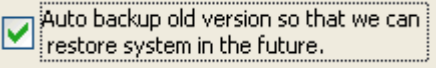
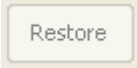
Click  system upgrade icon, and see the below system upgrade window.



- Be sure that website download upgrade software is saved to U disk root directory, and select the upgrade software (extension. cab), and then click  button to finish the system upgrading.

Upgraded file name format like this: product model +version no. + language. En stands for English, CN stands for Chinese.

Such as DA600V0.20CN.cab, it means the model is DA600, version no. is V0.20, Chinese language


- When system upgrading, if select , after upgrading then click  button it will retrieve and back up the last version of the program.

## 7.7.2 User Notes

### Functions Introduction:

The help may provide system all use methods and functional introduction.

### How to Use:


Click  use introduction icon enter into the help window as below image.  
Get in the contents when select one subject.

### 7.7.3 About Version

#### Function Introduction

For introduce the device software version and company information.

#### How to Use:

Click  about icon it will obtain the about window as below.




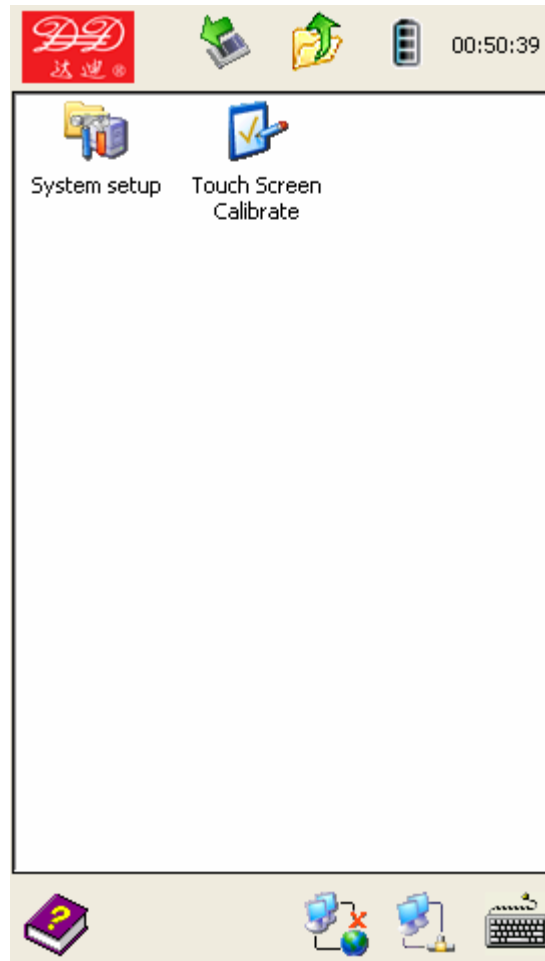
### 7.8 Settings

#### Functions Introduction:

It used for LCD backlight brightness adjustment, volume control, key sound setup, touch screen click sound setup, auto power off, backlight time and touch screen calibration.

#### How to Use:

Click  setup icon will get to the function setup window as below.




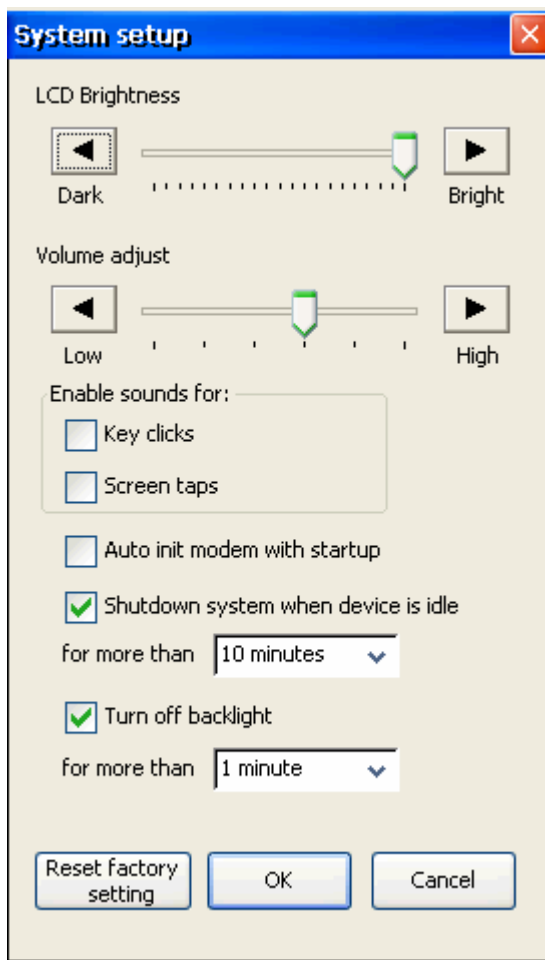
### 7.8.1 System Setup

#### Functions Introduction:

LCD backlight brightness adjustment, volume control, key sound setup, touch screen click sound setup, auto power off, backlight time.

#### How to Use:

Click  system setup icon, access to the system setup window as below.



- Brightness adjustment: click dark and bright button or drag the slider to adjust the LCD screen brightness.
- Volume control: Click low and high button or drag the slider to control the volume
- Key sound: Enable or shut down the key sound prompt.
- Screen taps sound: Enable or shut down the screen taps sound.
- Audio initiate Modem with startup: When check this option, startup the device will power supply to Modem in order to enable the xDSL test immediately. If there is no response of xDSL test within two minutes, it will auto cut off Modem power to prolong the battery use time.
- Shutdown system when device is idle: When check this option; if the device is idle within fixed time, it will auto shutdown system in order to prolong the battery use time. Three time options are 10 minutes, 20 minutes, 30 minutes.
- Auto turn off backlight: when check this option, the device will auto turn off within a fixed time, it will prolong the battery use time.


## 7.8.2 Touch Screen Calibration

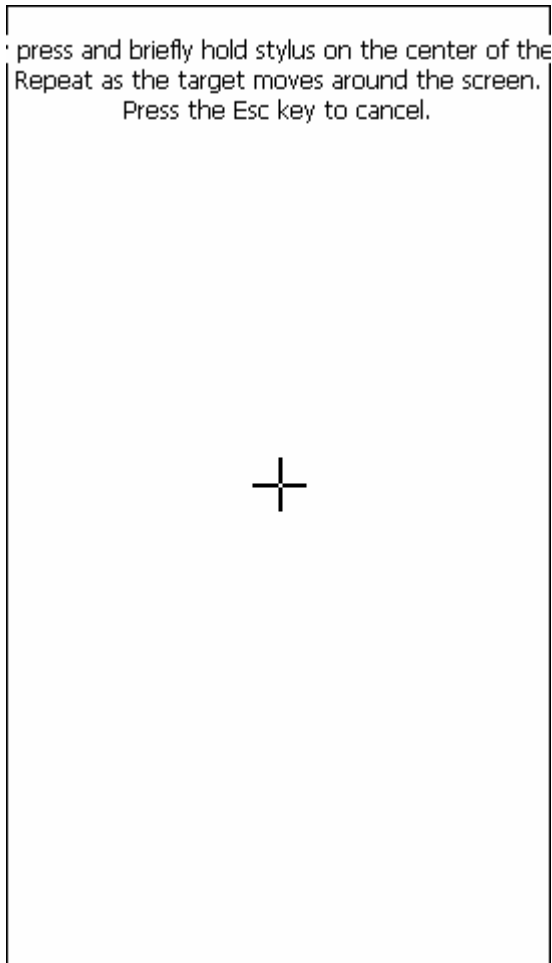
### Functions Introduction:


It used to calibrate the screen taps precise response.

### How to Use:



Click  touch screen calibration icon, access to screen calibration window as below.



Click  at the center of screen; repeat clicking as the target moves around the screen.  
It will show the below image when finished the calibration with the stylus.

New calibration settings have been measured.  
Press the Enter key to accept the new settings.  
Press the Esc key to keep the old settings.

Click Enter key to accept the new settings that will finish the new calibration with stylus.

## 7.9 Charge the Instrument

This device build-in 7.4V 4000mAh Li battery when battery sign is indicate low battery, the device prompt no battery and shut down automatically. Please charge it immediately.

Li battery can be charged anytime due to it has no memory effect. Advise you to charge the battery when it is low for not effect its normal use.

How to charge: firstly, shut down the device and then connect the charger to the AC 22V socket, the charger indicator light is green and then put the plug to the device socket at this time the indicator light turns red the device is under charging now. When indicator light turns green that means the battery is full, the charger can removed now.

## 7.10 Replace Battery

The device is applicable to the 7.4V 4000mAh li battery, the size is (W×L×H) ≤ 67mm×100mm×11mm,When the battery need replaced please contact DADI Telecom, because the battery is customized, you may not find from the market.

How to replace: place the device upward and lift the holder. Unscrew the rear cover the blue battery will be seen, take out the battery and unplug the socket between the bottom of

circuit board and battery, and then connect new battery.

Don't dispose the battery, put it to battery recycle box or someone who in charge of recycling battery.

## 8. Malfunction Analysis and Solution

Problems	Reasons Analysis	Solutions	Note
Device power on disabled	Low battery	Charge firstly and then try again	
When device is in the xDSL the build-in Modem activation in the ADSL line disabled.	1.The line disconnected. 2.No line signal, test if the line has 48V voltage by DMM voltage test.	1. Confirm if the line is connected. 2. If no voltage indicated, the line has no open service	
After a short time of xDSL test, indicate low battery.	Because the built-in Modem has large power consumption, the power can not supply enough power for xDSL test	Ensure enough power before xDSL test	
Disable to identify U disk when it properly connected.	The device can not read all U discs.	Unplug and try again, if it does not work try another U disk.	
PPPoE dia can not work but activation is no problem	Please confirm the correctness of user name and password, VPI/VCI also the PPPoE properties setup.	Modify the PPPoE properties according to the line require, and input the correct password for PPPoE dial.	
Web browsing disabled	Be sure PPPoE dial is done.	Be sure the PPPoE dial is all right, or try another website for viewing in order to it is not the problem of some website server defaults.	
Ethernet indicator light disabled when Ethernet cable connect to device	Network cable divided into crossover cable and Ethernet cable	Connect to other Ethernet port if one Ethernet port can not be totally identified.	

## Appendix xDSL Basic Problems and Solutions

### 1. xDSL sometimes disconnects line, there may be some reasons. Such as:

#### Line Quality is Poor

- The indoor lines are over wound.
- The line is so long and it is also the parallel.
- There are so many plugs on the line.
- The telephone extension directly connects to the line rather than the separator.
- The line is too close to the home electronic appliance, such as high power sound, rectifier, high power motor etc.
- The climate reason, such as rainy day, the connector is oxidation because of humidity, light and thunder which lead to the magnetic field variation that generate the induced current.
- The line from central office to the user is too long, but the quality of line is not good as well.

#### Equipment problem

- 1) xDSL MODEM default such as, heating, quality degrading, poor compatibility.
- 2) PC network card affected, such as model aging, low reacting, older drive program etc.

#### Improper configuration for the central office

- 1) Central office equipment xDSL port is in the improper configuration for in-depth interleaving and noise margin.
- 2) Central office equipment and Modem debug mode can not configured effectively, it will also cause the drop line often.

### 2. The common default happened on the user terminal inactivated, or it need frequently activated, or activated but the internet is unavailable.

#### The user terminal is not in activation

It is the problem for line and terminal default. The major default is concerned to be presented in which of specific wiring when user constructing. The commonly defaults are line connector (Sub box, user junction box, voice separator, xDSL terminal etc) in poor connect, the line insulation performance degradation, (such as user line sobbed in water or aging) and user line contact to the power line default. These defaults could be solved by the line testing system with auxiliary position, line exchange and its connection property improvement. Terminal default include power supply damaged, poor contact or terminal damage, it can be solved by exchanging the power supply or terminal.

#### The user terminal need often activated

This problem is due to the line defaults. The commonly defaults are line connector (Sub box, user junction box, voice separator, xDSL terminal etc) in poor connect or noise margin much lower. Of which the line connection can be improved by the way of location the signal attenuation from the normal line and default line, the improvement for the line connection is a best solution for it, on the other hand noise margin lower could be addressed by reducing the

lines operating standards.

#### The user terminal can be activated but the network access is unavailable

This problem is mainly as the protocol classification defaults. In general, the problem from the subscriber' computer equipment should be amended by computer configuration.

### 3. xDSL stream stop problem

May problems happen when people use internet access on xDSL, such as webpage can not open, download interrupted or online visual and audio interrupted, that is so called xDSL stream stop, the reasons are:

#### Poor card quality

Check the network card, it is much better to change to PCI from ISA, 10M or 10/100M adaptive network card is OK. The good quality network card is best choice; usually the cheaper network card may cause the critical problem. In addition, the common problem is the dual NIC conflict. Please try to unplug LAN connection or other PC network card, and connect ADSL network card for internet test. If retrieve the normal, it proved that there should be the dual NIC conflicts.

#### Operation system in defection

Sometimes the operation system may have the problem of compatibility for the xDSL related components. Take Windows 98 as an example, its network components has major deficiency of unexpected stream stop as connecting to the network. In this circumstances the best solution is system patching, you can logon the Microsoft official website to download the patch. Once it done, you can setup the visual dial-up software for the patching problem.

#### Line connection error

Be sure that line connection is correct, different voice separator has its own connection method, you should follow the user guide to connect it correctly. At the same time, you should make sure that line quality is good has no interference at all and it didn't connect to other equipment that may interference to the other lines. For example: extension line, fax etc. Next, inspect if the wiring box and crystal terminals are in good connection, if it is serial wound with other wires. It is better to use standard telephone line, it is utmost desired to compliance to ITU International Telecommunication Union standard's three, five or UTP twisted pair.

#### Setup Error

The most common setup error is wrong IP address in xDSL Modem or incorrect DSN server setup. But for the xDSL visual dial-up subscriber, the IP address setup is unnecessary, it is auto assigned. If you must set for it, when it is Windows 9x OS, at the DOS window, enter Winipcfg to obtain DNS address, when it is Windows 2000/XP OS, enter ipconfig/renew or get back to the operator for the help. Otherwise, TCP/IP setup usually cause the browse inconvenience, you can try to add TCP/IP protocol after delete the old TCP/IP protocol.

#### Dial-up software mutual interference

xDSL access Internet has visual dial-up and dedicated access two methods, by now most subscriber's xDSL use the visual dial-up. After different operation system test, if the operation

system is Windows XP, the own PPPoE dial-up software recommended, it is much more stable than others and stream stop phenomenon is lesser. If the operation system is Windows ME or 9x, the following visual dial-up software can be used: EnterNet, WinPoET, RasPPPoE. Among of it, EnterNet which is one commonly used, EnterNet 300 compatible for Windows 9x, EnterNet 500 compliance for the Windows 2000/XP. When the problem PPPoE dial-up software arised, you can unload it and try other PPPoE dial-up software. Please be sure that the multi-PPPoE software is not allowed in order to avoid the conflict.

Although there is only small chance that your PC and network is under hiker or virus attack, if virus ruined the ADSL related components, the stream stop phenomenon will be happen then. We suggest to install “ SkyNet-FireWall” or “Jinshan Network dart” network firewall, they all real time monitor the PC and network, and alarm unexpected network access method, that can effective reduce the attack risks.

#### Grounding-line quality problem

PC grounding-line performance must be good otherwise the electrostatic will effect xDSL transfer rate even offline. Normally, PC grounding resistance should be lower than 10Ω. Otherwise, the un-regulated power wire routing, if or no grounding line, or grounding line not qualified, they are effect the normal use of network equipment even the problem of off-line, it need the rectification immediately.

#### Line has strong source of interference

The radio transmission tower, electric welder, trolley car or High-voltage power transformers strong source of interference made the users receive offline clutter that caused strong interference on subscriber line (copper clad steel wire week shield but behave strong signal receive). The interfered signal usually access to the sunshield assembly line because that truck line has the shield layer has light interference. If in the strong interference area use the shield assembly line, it will reduce the rate instability or drop line interferences. In addition, the power line should not pairing with the ADSL line, for the case of ADSL defaults caused by crosstalk.

#### Subscriber line is distance

Irregular line dropping caused by the line quality or distance, find a better line for replacement by xDSL tester test signal attenuation and interference strong or week signal. In general, subscriber’s trunk line shouldn’t be longer than 5km; the telephone line from sub-line box to the subscriber’s room should not exceed 100m.

#### Internet Access OK, but Talk drop line

Due to the transfer between the terminal board cable cut off and broken head close to the terminal board, so the data sensor is be through but speech cannot, if user is close to the infrastructure, whereas the indoor mixed lines are also result in the above trouble.

#### Internet and Talk are unusable

It is mainly due to the external line defective insulation or connector poor contact. The user end external line defective insulation, as soon as the internet online once grab the telephone

the alarm light is flash, WAN is turn off, the problem will be solved immediately as the external line fixed.

#### Talk OK, but Internet offline

The user probably connect the wrong line, made for the Modem line for the phone line, that may raise the problem of telephone talk ok but internet offline, at this moment xDSL Modem LINE indicate light is turn off, first of all check the device line if this is connected well, not suggest to change the line frequently for in case of the wire wrong connected.

#### Improper tandem telephone extension

The crosstalk was caused by the improper tandem telephone extension also made the data incorrect. If you have to tandem a telephone extension, the separator should be used on the line.

