XL-DM327G

User manual

Brief Introduction

This user manual includes function introduction, installation, wiring, operation and solutions. In order to confirm your proper operation, please read this manual before using; keep the manual in a safe and convenient place for quick response when problems appear.

Note:

- Due to the continuous improvement and refinement of the tester, please kindly forgive us not inform you of any modified manual.
- We will try to make the manual accurate. If you find any mistakes, please inform us.

Contents

Chapter I Summary and System Structure

1. Summary

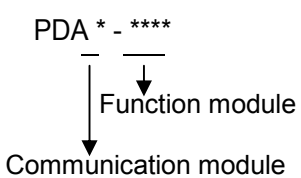
PDA is designed for meeting entire network requirement, whose functions including xDSL test, LAN test, optical power test, visual fault locator, cable tracing, check line sequence, DMM test, IPTV test, and landline telephone test.

PDA can test many kinds of connect mode, including XDSL, LAN, Optical fiber. It is not only can emulate the user's PC, but also test broadband IP line or through user's Modem to realize PPPoE dial; moreover, it can test the connectivity of broadband IP network and the problem of user's Modem or eliminate problems caused by user's PC malfunctions that leads to failing logon web pages.

2. Checking the Package

Essential Components:

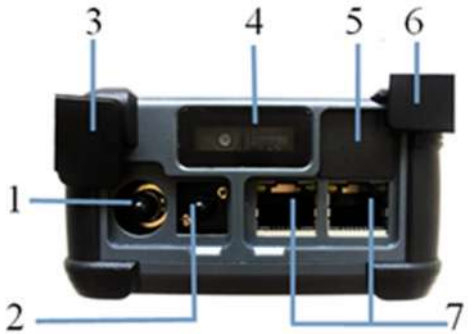
According to the following table, please check the model name and suffix code of the nameplate on the back of the telecom test PDA.

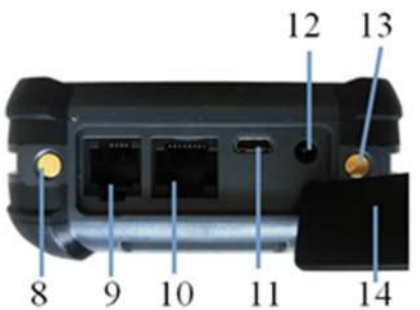


Communication module	Module code	Module classification	
Unicom/ Telecom	Blank	With FDD/TDD/WCDMA/EVDO/CDMA/GSM	
Mobile	T	With TDD/TD-SCDMA/GSM	
Telecom	E	With FDD/TDD/EVDO/CDMA/GSM	
Unicom	W	With FDD/TDD/WCDMA/GSM	
Function module	**Module code**	**Module classification**	**Remarks**
xDSL	A	ADSL2+ module	optional
	V	VDSL2 module	optional
Bar code scan	B	1D Bar code	optional
Optical power	G	Optical power module	optional
Visual fault locator	H	Visual fault module	optional
Cable Tracing	X	Cable Tracing module	optional
IPTV	I	IPTV module	optional
DMM	D	DMM module	optional
ONU	O	ONU module	optional
Landline telephone	T	Landline module	optional
Check line sequence	W	Check line sequence module	optional
NFC	N	NFC module	optional

For example, PDA -AG: Unicom/Telecom module PDA with ADSL and optical power module.

3. Components and Functions



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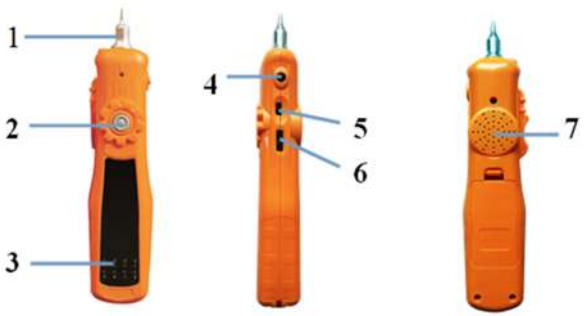
NO	Name	Function
1	VFL port	Connect with the fiber interface, red light test fiber optic connection
2	Optical power port	Connect with the fiber interface, test optical power
3	Dust-proof cap of optical port	Protect the optical port from dust and water
4	Scanning head	Window of bar code scanning engine, which is used to scan the bar codes.
5	ONU port	ONU fiber port
6	Dust-proof cap of electric port	Protect the electric port from dust and water
7	Ethernet port	The port to connect with Ethernet, can be used for network test
8	Seat-type charger cathode	Seat-type charger cathode
9	RJ11 port	Connect with telephone line to test xDSL, and cable tracing single output port
10	RJ45 port	Check line sequence input port
11	USB port	USB port, connect PC or charge
12	Charge port	Charge

13	Seat-type charger anode	Seat-type charger anode
14	Bottom dust-proof cap	Protect RJ11, RJ45, USB and charge port, protect from dust and water
15	Receiver	Receiver
16	Front camera	Make a photo or video
17	Indicator	Indicate the conditions of the equipment
18	Display	Screen display
19	MIC	Landline telephone function MIC
20	Keyboard	Function key, detailed function as below
21	MIC	Mobile phone MIC
22	Rear camera	Make a photo or video
23	Loudspeaker	Equipment loudspeaker
24	LED light	LED light also can be used as flashlight
25	Fixed groove of the hand belt	Used to fix the hand belt
26	Battery cover screw	Fix or loose the battery cover
27	Battery cover	Fix the battery
28	Hand belt	Used for holding the equipment

29	SCAN side key	Scan shortcut key
30	RFID side key	RFID shortcut key
31	Earphone hole	Connect earphone
32	Volume key	Adjust volume of phone call or the loud speaker

Cable Tracing Receiver



NO.	Name	Function
1	Receiver probe	Antenna probe
2	Test button	Press it to test the signal
3	Indicator	Indicator of check line sequence
4	Earphone hole	Connect earphone
5	Indicator button	Light ON/OFF of Indicator

6	Volume adjustment key	Turn it down to open the receiver and increase the volume, turn it up to decrease the volume till to take off.
7	Loudspeaker	Audio signal generator loudspeaker

4. Install SIM and TF Card

Open the battery cover, take out the battery, will show SIM and TF card slot, insert SIM, TF card as the icon show. Note: SIM card means micro SIM card. Insert direction as below:

5. Main Features

- ➢ It adopts 720*1280 IPS true color touch screen
- ➢ It adopts the built-in Android 4.4 operation system
- ➢ Support Telecom TDD-LTE Broad band B41
- ➢ Support Telecom FDD-LTE Broad band B1/B3/B7; CDMA 800MHz; GSM Broad band B2/B3/B8
- ➢ Support Unicom TDD-LTE Broad band B40/B41
- ➢ Support Unicom FDD-LTE Broad band B1/B3/B7;

WCDMA Broad band B1/B2/B5; GSM Broad band B2/ B3/B8

- ➢ Rechargeable 3.8V 8200mAh polymer battery
- ➢ Can make a phone call in earphone and listen to music. (needs earphone)
- ➢ Support 1D bar code scan
- ➢ Support HF RFID 13.65MHz (optional)
- ➢ Postposition camera with 8 million pixels and support auto focus and flash function
- ➢ Preposition camera with 2 million pixels and support auto focus
- ➢ Support flash light function
- ➢ Dimension: 181mm*87mm*45mm
- ➢ Weight: 550g

Chapter II Specifications and Basic Functions

1. Technical Specifications

1.1 xDSL Index (Optional)

ADSL2+ Module

1) It can meet the following standards: ITU G.994.1 (G.hs), ITU G.992.5, ITU G.992.5 Annex L. The max distance which can be connected is 6.5km. Be compatible with ADSL, ADSL2 and READSL
2) It can test the transmission parameters in the DSL line:

◆Attenuation: 0~63.5dB
◆Noise Margin: 0~32dB
◆Upstream Channel Rate (interweaved /fast mode): 0~1.2Mbps
◆Downstream Channel Rate (interweaved / fast mode): 0~24Mbps

◆The maximum rate and capacity ratio of upstream Channel and downstream channel
◆The modulating bits in the DMT sub-channel: 0~15 and each sub-channels' frequency points
◆The number of error codes (CRC, HEC, FEC, NCD, OCD)
◆The output power of DSL
◆It can display every condition of the DSL line: lost signal and shutdown of link

VDSL2 Module
1) It can meet the ITU-T G993.2 (VDSL2), compatible with ADSL2/ ADSL standard
2) It can test the transmission parameters in the DSL line:
◆ Attenuation
◆ Noise margin
◆ Upstream channel rate(interweaved/fast mode): 0~100M
◆ Downstream channel rate(interweaved/fast mode): 0~100M
◆ The maximum rate and capacity ratio of upstream channel and downstream channel: 0~100M
◆ The modulating bits in the DMT sub-channel: 0~15 and each sub-channels' frequency points
◆ The number of error codes (CRC, HEC, FEC, NCD, OCD)
◆ The output power of DSL
◆ It can display every condition of the DSL line: lost signal and shutdown of link
◆ DSLAM information
◆ Error seconds
◆ INP pulse protection
◆ SNR channel figure
◆ Channel noise margin figure
3) Support VDSL2 (profile 8a, 8b, 8c, 8d, 12a, 12b, 17a)

1.2 Optical Power Index (Optional)

- Wavelength range(nm): 800~1700
- Photo-sensing material: InGaAs

- Power test range(dBm): -70~+3 (-50~+26)
- Error range: ±5%
- Display distinguishability
  Linear display: 0.1%
  Logarithmic display: 0.01 dBm
- It has different adapters: FC, ST, SC

1.3 Visual Fault Locator (Optional)

- Laser: FP-LD
- Wavelength: 650nm±20nm
- Output power: 1mw/3mw/5mw/10mw (You can choose the different power value)
- Connector: universal adapter(SC, FC, ST)
- Working mode: CW or 2Hz modulation
- Applicable fiber: SM/MM

2. General Functions

2.1 OTG USB Function

Through USB OTG data line can connect phone to USB, transfer files and data backup. The phone support USB storage device including U dish, reader and phones which support USB large capacity storage function. After connecting USB equipment and upload successful can read the data in the USB storage equipment.

2.2 Charge Function

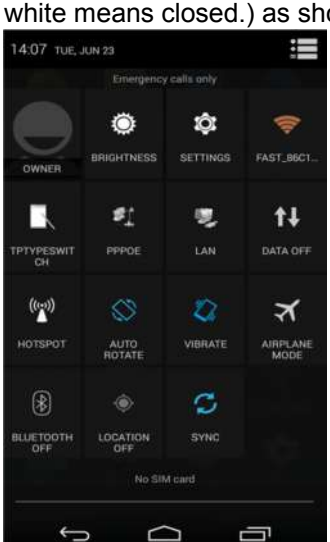
With direct charger, current can be 1.5A. And support micro USB charge, current can be 500mA.

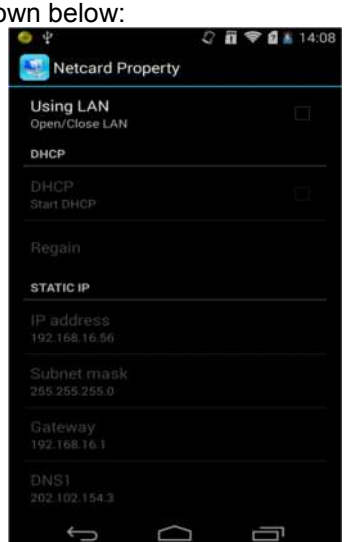
2.3 Electromagnetic Touch Screen (Optional)

Electromagnetic touch screen can realize original write function. Choose  in the menu, then open the electromagnetic screen, at this time, can touch the equipment with electromagnetic pen and hands.

2.4 Open / Close Network Card

To open the device's card, pull down the prompt bar and click the LAN icon  (blue icon means the net card turned on, white means closed.) as shown below:





Select Using LAN to open the net card, you can choose DHCP or STATIC IP. Click again to get IP address from DHCP server at DHCP mode. At STATIC mode, firstly you need to set DNS1 and DNS2, then you can modify IP address, subnet mask, gateway, and DNS.

2.5 PPPoE Dial

To make PPPoE dial, you need to pull down prompt bar and click PPPoE icon  (blue icon means PPPoE dial is connected, while white means PPPoE disconnected), PPPoE Properties pictures are as below:

Input user name and password, click connect to establish PPPoE link.

Chapter III Usage of Main Functions

On the standby screen, click icon  , showing main menu, as below

Keep pressing the icon, you can move where you want. Then release, in this way, you can put the function what you like desktop. (during moving, keep pressing the icon and do not release)

1. Test Function

The test function is professional test software, which includes xDSL test, Modem emulation, optical power test, visual fault locator, network layer test, E Netcom, download meter, FTP client, etc. The customer can choose the corresponding functions. Test interface picture is as following:

Please see the details:

1.1 xDSL Test (Optional)

Through inner xDSL Modem, you can test xDSL line. It includes Physical layer test, Modem setting, web and Network layer test.

xDSL login interface

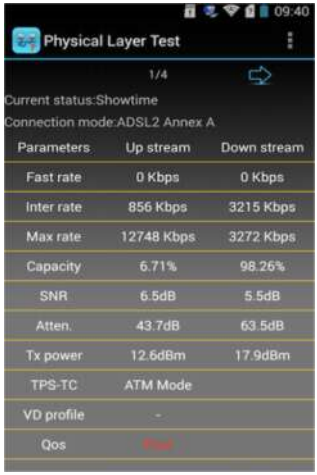
Physical layer test can test physical layer parameter, which includes xDSL connection status, connection mode, upstream/downstream, noise margin, attenuation, the output power, error codes of CRC, HEC, FEC, NCD, OCD and channel bits picture.

Using this function, user can check whether there is a problem in the user line or not, and check the user line parameter, resolving the problems due to users' Modem and computer.

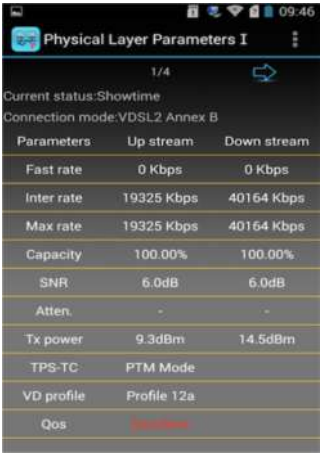
Test interface will show each value parameter to reflect the current state.

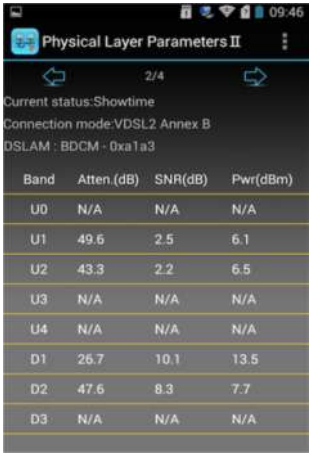
Via xDSL current state, you can see the connection between xDSL and local side equipment. Current connection mode is displayed as connection mode.

Please see the following pictures:



ADSL2+ Physical layer parameter ADSL2+ Error codes statistics





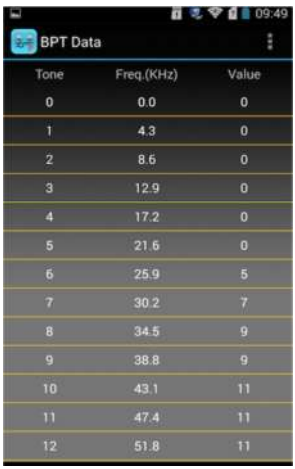
VDSL2 Physical layer parameter 1 VDSL2 Physical layer parameter 2

VDSL2 Error codes statistics

The current status means:
Handshake: Shake hands
Discovery: Discover the local side DSLAM;
Training: It is training;
Showtime: Distal end DSLAM is connected.

Connection mode means:
G.DMT: ADSL G.DMT protocol mode, in accordance with ITU-T G992.1 standard;
G.LITE: ADSL G.LITE protocol mode, in accordance with ITU-T G992.2 standard;
T1.413: ADSL T1.413 protocol mode, in accordance with ANSI T1.413 issue1 & Issue 2 standard.
ADSL2/ADSL2+: ADSL2+ G.DMT.BISPLUS protocol mode, in accordance with ITU-T G992.5.
ADSL2: ADSL2 G.DMT.BIS protocol mode，in accordance with ITU-T G992.3 standard;
VDSL2：ITU-T G.993.2（VDSL2）

ADSL2+ Bit Graph

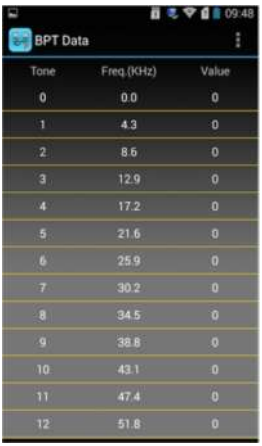


Tone	Freq.(KHz)	Value
0	0.0	0
1	4.3	0
2	8.6	0
3	12.9	0
4	17.2	0
5	21.6	0
6	25.9	5
7	30.2	7
8	34.5	9
9	38.8	9
10	43.1	11
11	47.4	11
12	51.8	11

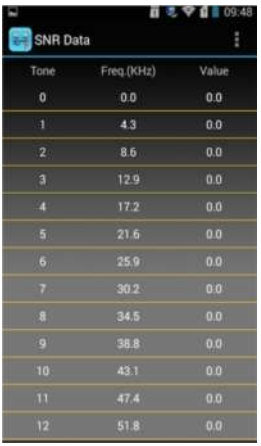
ADSL2+ Bit Data

VDSL2 Bit Graph

VDSL2 SNR Graph



VDSL2 Bit Data



VDSL2 SNR Data

Physical layer parameter:

Activating times: Display the active times from the beginning of test to current time, the activation time will increase one with each active.

Test Duration: Display the time from starting physical layer test after initialization of the Modem.

User can check the current channel bit value in the channel bit interface, and the value will be displayed in graph. User can see the test result in text through pressing text button.

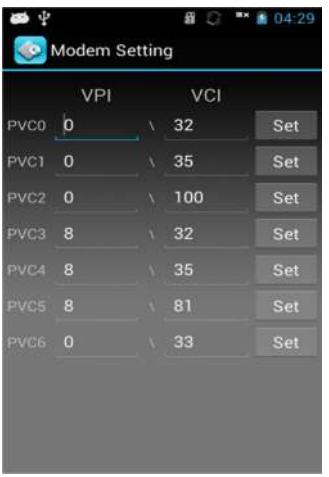
Modem parameter setting

It includes Modem mode setting and VPI/VCI setting.

In Modem setting, you can set up Modem working mode and seven groups VPI/VCI value.

The setting interface will show 7groups of VPI/VCI parameters which were set already. If it needs to be modified, type new VPI/VCI value from VPI and VCI bar. Click "Set", and the Modem VPI/VCI will be set (can be saved even if power off)

Note:
If the MODEM mode is modified as another kind, please exit the xDSL Test and re-enter it again. Otherwise, the MODE modifying will not be effective.
Modem parameter setting interface is as following:



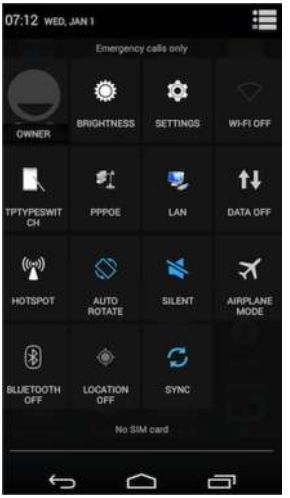
ADSL 2+Modem parameter setting interface

VDSL2 Modem parameter setting interface 1

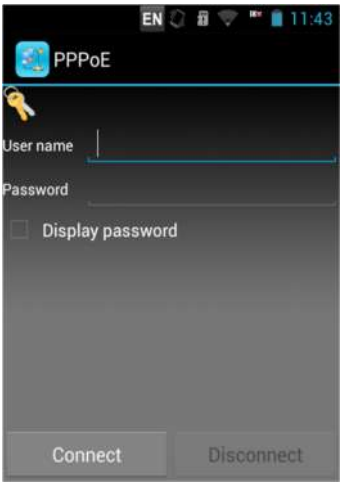
VDSL2 Modem parameter setting interface 2

PPPoE Dial

PPPoE is in the status bar, pull-down, as shown following:



Click  icon, the dialing window will pop up, input user name and password, click connect to do the PPPoE dial, the equipment will memorize user name and password automatically. User can test the web browsing after dial succeed. As following picture:



Internet

After PPPoE dialing successful, click web icon to open the browser and input the address, and then click the triangle arrow or click OK on the keyboard to enter into the website. User can test the connectivity of the xDSL line.

After entering Back, you need to choose Close modem power supply or keep modem power supply. If xDSL is needed for external use, choose Keep modem power supply, otherwise, choose Close modem power supply.

You can also press menu button to back to main menu, and then enter menu to the PPPOE dial.

xDSL test process is:

xDSL physical layer test—>PPPoE dial —>Web log test.

If other program uses xDSL for Internet access, you need to select keep modem power supply when exiting xDSL Modem test.

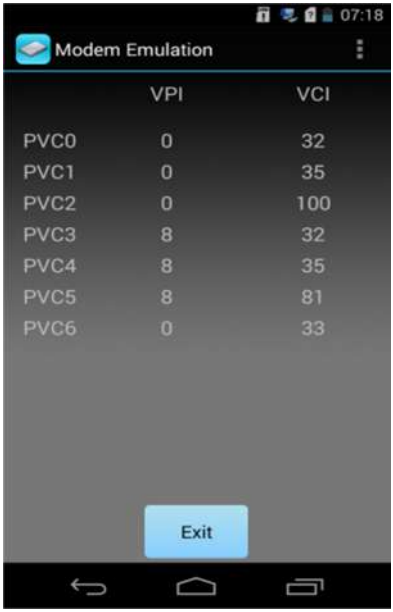
Insert telephone line into RJ11 port when testing, as follows:

xDSL test wiring diagram

Entering into xDSL test, then click physical layer test interface, it can show data of activation situation, etc. When activation indicator up for long time, the line activated, it can show the up/down stream rate, noise margin, attenuation, the output power, the number of error codes (CRC, HEC, FEC, NCD, OCD) and parameter as channel bits picture, etc. User can check all test data by sliding screen under the test parameter interface. Then press PPPoE dial, input the user name and password, and then do the landing page test after success dialing.

Modem emulation

Being used to emulate user's Modem, and eliminate faults of user's Modem. Click Modem Emulation icon can open the power of Modem, then the PDA will be under the Modem emulation status and show the Modem's VPI/VCI, please see the following picture:



At the moment the PDA is a xDSL Modem with Ethernet port. It can emulate user's Modem (If the VPI/VCI value needs to be modified, please modify it from Modem Parameter setting in the xDSL test), PDA can used as Modem to realize PPPoE dial through PC. It can eliminate the internet connect failure caused by user's Modem faults. If needs to exit Modem Emulation status, please Click Exit.

Modem emulation connection is as follow：

Modem emulation wiring diagram

1.2 DMM Test (Optional)

Specification

1. DC Voltage: -400 to 400 V; Resolution: 0.1V
2. AC Voltage: 0 to 290 V
3. Capacitance: 0 to 1000nF

Accuracy: 0-10nF: ±2nF, 10nF-1000nF: ±2 %±2nF

4. Loop Resistance: 0 to 20KΩ

Accuracy: 0-100: ±3%±4Ω, 100-500: ±3%, 500-20 KΩ: ±2%

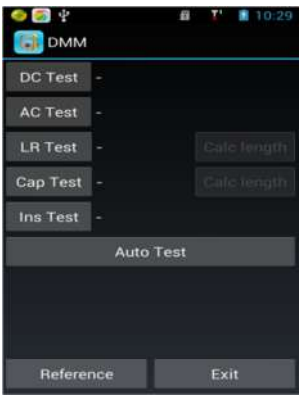
5. Insulation Resistance: 0 to 50MΩ

Accuracy: 0-1.0M: ±0.1 MΩ, 1.0-30M: ±10%±0.5 MΩ

Introduction

Built-in digital multi meter can test the DC and AC voltage, resistance, capacitance, insulation resistance parameters.

Maintenance personnel can use these functions to test if there is danger voltage on test line or the existence of 48 V voltage on the telephone line, estimate cable length and inspect characteristic on the telephone line. As the Picture:



DC voltage test

The voltage test can test if there is a signal in the line. For ordinary telephone services bundled in the xDSL lines, if the line voltage is low or 0 V, means the line is not in use or under bad insulation, short circuit or open circuit, need to check the line.

The test is limited to the DC voltage test in range of -400 V ~ +400 V. When beyond the range of testing, the equipment will be prompted to “out of range”

AC voltage test

AC voltage test can test the high-voltage alternating current in the line in order to protect the lineman. If encounter high-voltage alternating current please remove the test nips carefully to avoid electric shock. The test is limited to the AC voltage test in range of 0 ~ 290 V. The equipment will be prompted to “out of range” beyond this range.

Loop resistance test

Use resistance test function can determine the length of cable. Conversely, if you know the length of the cable, the resistance test result will show whether the cable connection is good or not.

Calculation formula: $L=R_L/R_O$ （Km）----------①

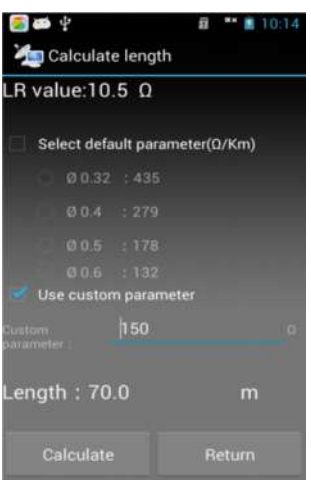
①: RL is resistance measurements result (Ω), RO is the resistance (Ω) per kilometer.

General specifications for the 0.32 mm copper RO = 435.2 Ω

specifications for the 0.4 mm copper RO = 278.5 Ω

specifications for the 0.5 mm copper RO = 178.3 Ω

If the course of testing equipment tips “out of range” which shows test nips not connected or cable not looped or out of resistance range, please check the test nips or retest after loop the cable again. In the test, if there is in voltage (voltage more than 2V) in the line, then there will be a prompt “voltage”. It means this line have electricity and cannot test the resistance. Please check the lines and test after cutting the electricity. Please see picture for loop resistance calculation interface:



Capacitance test

Use of capacitance test function can judge the length of lines. If there is no bridge tap or waterish logged, we can get the length from the test result of the capacitance.

Calculation formula: $L=C_{ab}/C_O(Km)$----------②

②: C_{ab} for capacitance test result (nF), C_O capacitance result (nF) per kilometer.

Commonly used telephone cable capacitance per kilometer: C_O = 51nF.

If the tester prompts “out of range”, that means capacitance out of range or the cable have faults, please re-test after checking the lines.

Conducting this test, if the lines have voltage (voltage more than 2V), the tester will prompt “voltage!”, and then return to the test menu. This means the line has electricity and cannot test the capacitance, please check the line and retest after cutting the electricity.

The interface as following:

Insulation test

Insulation test can test the insulation status of the line. If the insulation resistance value is small, means the insulation is bad, this will affect the ADSL line transmission quality and need to repair. Generally for ADSL line, insulation resistance value should be more than 10 M Ω.
In this test, if the line has voltage (voltage more than 2 V), the tester will prompt “voltage”. This means the line have electricity and cannot test the insulation, please check the line and retest after cutting the electricity. If the line resistance out of value range, the tester will show “more than 50MΩ”, that means the insulation is good.

1.3 Optical Power Test (Optional)

Optical power test can test the power of optic fiber, insert the pigtail of optical signal to be tested into the optical interface can test optical power, please see the picture:

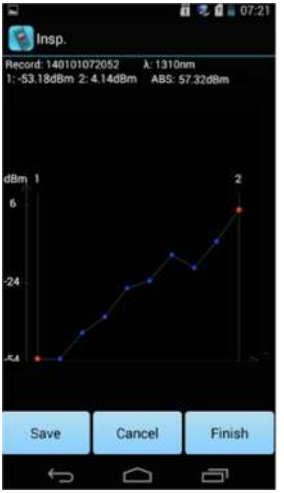
There are six wavelengths as calibration wavelength, choose corresponding wavelength can test current optical power

value. It is shown as dBm and nW when having a test. User can stop testing by pressing "Stop Test", and the data displayed is the latest testing result. You can also choose save current test result, in help of checking afterwards. As following:

User can modify the file name themselves.
Click the Insp button can build inspection mission for line inspection operation, as following:

Input the name of the line to separate different lines. Inspection significance: test different positions optical power value on one fiber, then draw the power curve (test curve is similar to the OTDR), you can view any attenuation values between 2 points.

After establishing inspection mission, click on the inspection button, current optical power value will be added to the inspection record end and will be displayed by the curve graph. The two vertical lines are two movable cursors; drag the cursor to view the power value and difference of any two points.



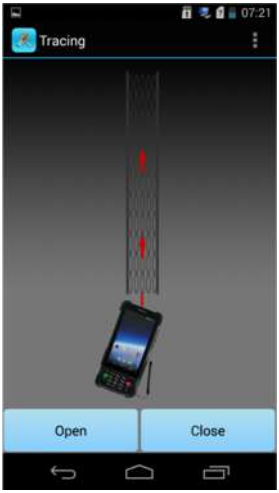
1.4 Visual Fault Locator (Optional)

Click "Red Light", the tester can be used as the visual fault locator, can output the CW and 2Hz modulation. As follows:

Click "Open" to turn on the VFL, and click "Close" to turn off the VFL. CW/2Hz is the switch button of the continuous and modulated light, the tester can memorize the VFL mode automatically.
The output power is 1mw/3mw/5mw/10mw (optional).

1.5 Cable Tracing (Optional)

Tester can do cable tracing, twisted pair and line distinguish.
Tester can produce special video signal and inject it into cable, and the video signal will be leaked during the transmission, and user can receive the signal by receiver, and do the route test to find different cable.
Click the Tracing icon to enter into the route test interface. As follows:

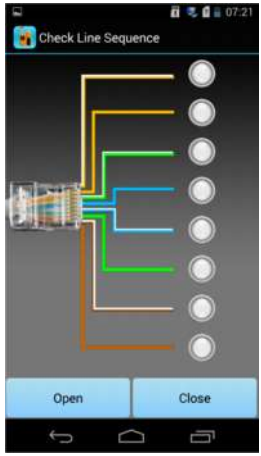


Cable tracing interface

Click “Open” to start cable tracing, tester start sending video signal, and then click "Close" to stop the video signal sending, and user can exit cable tracing by pressing return.
Turn on the receiver, connect the RJ11 test line to the cable needed to be test, and the click "Open" icon button, the receiver will start inspection. Keeping the video signal, and then you can find the route of the wiring.

1.6 Check Line Sequence (Optional)

The device supports generate network line signal, can do line sequence checking work with the receiver.
The device send a specific signal sequence, and injected into the cable through straight-through cable, with a receiver can receive the corresponding signal. Then you can view the network check line sequence.
Click the “Check Line Sequence” icon to enter the check line sequence function interface, as below:



Check line sequence interface

Click “Open”, the machine starts sending the pulse signal, click “Close”, the device stops sending the pulse signal, press the return key to exit check line sequence testing.
Open the icon, connect the testing cable to the RJ45 port on the lower end of the device, the receiver should be connected to the other end of the cable, and then click the “Open” button, you can see the signal sent by the device is in order from 1-8, by receiving side lights to determine the line sequence.

1.7 IPTV (Optional)

Main function & technical specification

Transmit quality
Curt rate(kbps): Transfer rate of the IPTV service packages
IP num(is): statistics of IP package gathered in the sampling period

Losted num: data statistics of RTP package loss number gathered in the sampling period
IP Jitter: reflect levels of IP packet transmission quality

Net configuration
Support any net encapsulation format, include TS, TCP, UDP, RTP, RTSP, PPPoE etc.
MDI DF: Delay in MDI test regulated by RFC4445
MDI MLR：Media package loss number in MDI test regulated by RFC4445 Source MAC: IPTV sender MAC
Dst Mac: STB MAC
Tos: IP protocol information
TTL: IP protocol information
Source ip: IPTV sender IP
Dst Port: STB IP
Source port: IPTV sender port
Dest port: STB port
Rtp type: RTP protocol information

Statistics
MLR-15: Statistical value of MLR in 15 minutes
Losted total: RTP packet loss total number in test cycle
Rate: Current test cycle rate, including maximum, minimum and average statistics

Operation
Function：
IPTV test when connected with LAN
Instructions：
Click “ 

” icon in Android program panel, open IPTV test function interface:

Prepare to test

Function：

Prepare for IPTV Test

Instructions：

Put the network cable which used to connect with the IPTV set-top box to telecom test PDA Port 1, then use another cable connect the telecom test PDA Port 2 with IPTV set-top box. Play the TV show which you want to test.

Test

Function：

Start IPTV Test

Instructions：

Click “ start ” button to start the IPTV test:

Stop test

Function：

Stop IPTV Test

Instructions：

Click “ Stop ” button to stop the IPTV test, the interface still show the last test result:

Exit IPTV test

Function：

Exit IPTV Test interface

Instructions：

Click “ Exit ” button to exit the IPTV test interface:

IPTV test mode

Mode： Listener way

IPTV business: Monitoring login authentication, monitoring the received video stream

1.8 Landline Telephone Function (Optional)

Main functions of landline telephone:
Dial and receive telephone
Operate Instruction:
Functions Instruction:
Landline telephone test
Use Instruction:
In Android interface, click “Test” to enter, and then click “Landline Telephone” to open the Landline Telephone interface, on the hook off state, as below:

Prepare to test
Function Instruction:
Prepare to test landline telephone.
Use Instruction:
Put the telephone line to the xDSL port of telecom test PDA

Start testing
Function Instruction:
Begin to test landline telephone

Use Instruction:
Dial
Click the green button on the left bottom of the interface to enter Off-hook state, then the green button changed to red, the entered phone number will be dialed automatic. Click the red button to finish talk, see below:

Redial

On Off-hook state, there will be 10 numbers appear, click will ok, long time entrance will delete the one you want. Or click the right bottom red button to redial the last time number.

Receive

The left bottom green button will swing back and forth when there is a call, click the button to receive the call, click after finishing the talk. See below:

Exit test

Function Instruction:

Exit the landline telephone test

Use Instruction:

Click the “Back” button twice continuously to exit the Landline Telephone test

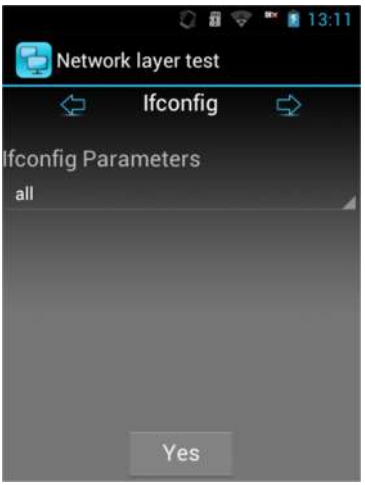
1.9 Network Layer Test

Network layer test which including Ping test, Ifconfig test, Route test and Traceroute test. Sliding screen can switch test items.

Ping test

Type IP address or domain name; choose the data package size and Ping times. At last click "Yes".

Ifconfig test

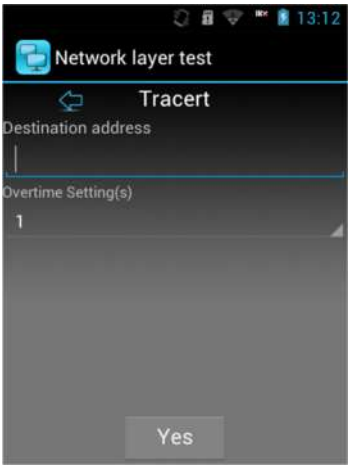


Click "Yes" to see current network information.

Route test

Click "Yes" to check the current web information.

Traceroute test



Typed the destination address, choose overtime, click "Yes".

1.10 E Netcom Test

Click "Search Device" to look for the network equipment in the local network. The tester support both LAN and WIFI, and the network type can be chosen from the interface. The IP, MAC address and host name of the equipment will display on the interface.

1.11 Download Meter

Download speed test can test the web download speed, reflect the web state directly.
Can browse the download attachment by entering the website, and user can also download the well-settled attachment in menu. (the homepage and the address of attachment download is settled in setting)
Click "Start", the following interface will be shown:

Tester will statistic the max and average download speed and download progress, the screen will display as follows after finishing download:

1.12 FTP Client

FTP Client can log on FTP server, upload and download programs like the following picture:

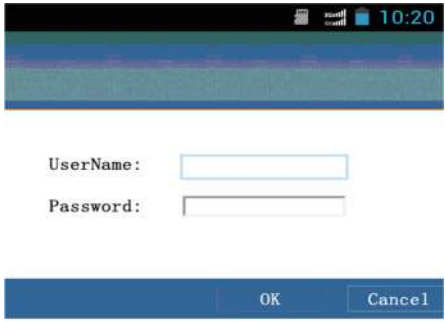
Typed FTP server address, user name, password and port number, and then clicking "Connect" can log on FTP server. The system will memorize the logged on FTP server address, user name, password and port number.

Note: If you want to log on FTP server, you must make sure the network is available either LAN network or WIFI.

2. ONU Log In

Tester can connect with Modem through Ethernet, login the configuration page of WEB, and modify SN code. (Should know IP address, and set up network card IP address and Modem IP address in same range). This tester can set up four ONU equipment address, see the following picture:

ONU equipment address is IP address of ONU equipment. Before login, please confirm the device and tester has connected through network line, and then click ONU equipment address, it will appear ONU equipment address window, user choose and write device address, click "Yes" can login WEB page. (Usually, it will appear user name and password before login). Login picture:



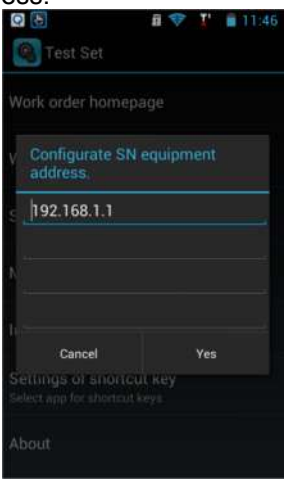
Enter the user name and password, and login the configuration page of WEB, double-click the browser to enlarge the content, slide the screen to view the different area of the web page.

3. Test Set

Test setting used in device test software setting, including ONU equipment address, Modem power off time setting, About, like the following picture:

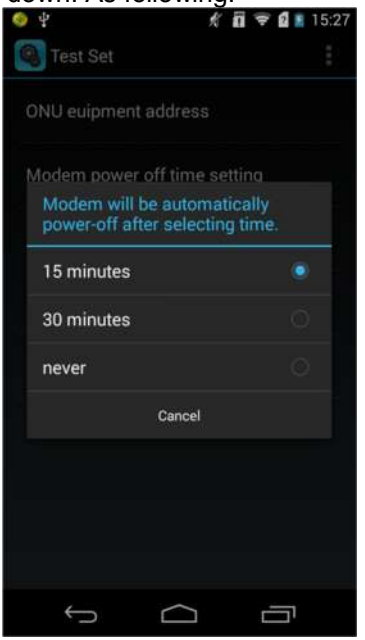
ONU equipment address

This option is setting for SN equipment default IP address; can setup four IP address.



Modem power off time setting

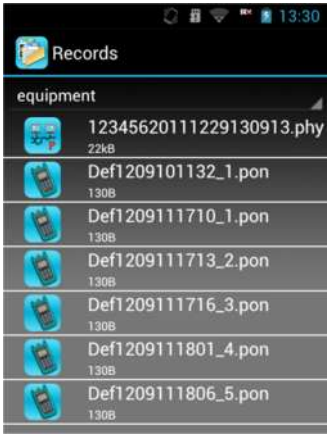
It is used to setup Modem working time; over the setting time, Modem will shut down. As following:



About
Device software version and company contact information:

4. Records

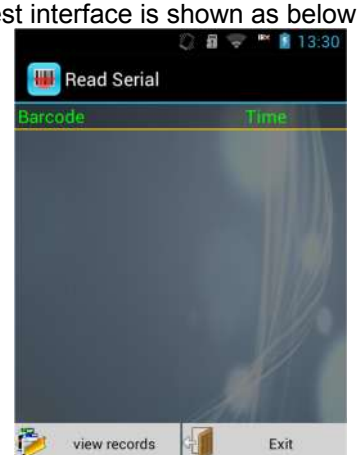
Browse the saved test records. See the picture:



Note:
When the device name showed, if the name is too long, it will intercept appropriate name automatically.
Click corresponding test records can open and check records.

5. Barcode Scan Test

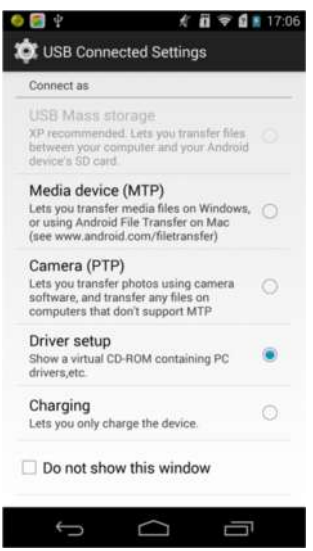
Barcode scan test interface is shown as below:



In the "Read Serial" interface, after pressing "SCAN" key on the left side, it can work. Just aim at bar code with the red light the test result will show on screen. Tester can scan continuously and show the scan result in table, and record the scan time. A prompt box about whether store will be pop up when exit.

6. How to Install the USB Driver

Connect the USB data cable to the tester, pull down the prompt bar and click the “USB Connected settings”, as the following:



Choose Driver setup, the following window will pop up on PC:

Close the installation window; computer will display a more drive as CD Driver (M:) eSurfingClient (drive code will change with the number of computer drives). Open the Disk, the content will be as following:

Name	Date Modified	Type	Size
Setup	2012/7/13 15:45	Documents	
autorun	2010/12/18 17:12	Application program	288 KB
autorun	2008/10/19 10:49	Icon	8 KB
autorun	2011/1/12 22:19	Installation information	1 KB
autorun	2010/12/17 16:45	Configuration setting	1 KB
Install the cell phone driver	2010/12/17 18:03	Windows batching	1 KB
Tianyi Pc Modem install instruction	2011/3/23 0:22	MHTML File	444 KB
Uninstall the cell phone driver	2010/12/17 18:04	Windows batching	1 KB

Click install the cell phone driver only, the following window will pop up:

Then click install again, wait for a while, the driver installation will be finish, the program will display as following:

Click OK, and restart PC to enforce the program.

Chapter IV Faults and Solutions

If you meet the following problems during the using process, please try to use the "Faults and Solutions" first to do the relative operation. If the problems still exist, please contact the professional maintenance person.

Problem	Reason	Solution
Unable to switch on the tester	The time of pressing the power key is not enough.	Press the power key for over 2 seconds and more.
	Low battery	Charge the tester
	Poor contact of the battery	Reinstall battery or clean the battery contact point.

Some programs can't be used normally.	The storage space is not enough.	Clean the messages of built-in multimedia promptly and other application programs as well as the download application records.
The standby time is not enough.	The battery performance declines.	Change the battery.
	Play games and music for a long time.	Limit the time of playing games and music.
Charging fault	Poor contact	Check the contacts or change plug.
	Low battery voltage.	There will be no charging display. Charging for about half an hour and then unplug it to recharge.
	Battery fault	Change battery.
	Wrong charger type	Change proper charger.
	Charger fault	Change or mend the charger.
Can't connect with the net.	Weak signal	Move to a wide place and then try again.
	Not in service area.	Confirm the network coverage.
Can't make a	Equipment card	Check or change

call.	fault	equipment card.
	Dialing error	Redial
	Reach to the cost limit.	Contact with the operator.
Invalid button operation	Get accident interference.	Remove the battery and then install 1 minute later.
Some calls can't realize	The telephone number digits exceed the limit.	Check the telephone number.
	Setting fault	Check whether set "calling barring".
Can't find the Contacts.	The equipment card is changed.	Use the original equipment card.
There is no number in the Contacts.	Wrong setting or the battery is long time in low voltage or long time no use.	The saved data have lost due to the long time low voltage.
There is no call warning tone.	The volume is set to mute.	Reset the proper volume.
PIN code error	Input the wrong password for three times.	Contact with the operator.

Error of automatically locking password	Input the wrong password. (forget the password)	Please contact with the appointed after-sale service center.
The equipment is automatically closed	Battery low	Please charge.
	Setting reason	Check whether setting the auto power-off or not.
	Get accident interference.	Restart
Big test error	Sensor interface is dirty	Clean the sensor interface