SmartAX MT800u-T ADSL Router

User Manual

HUAWEI

SmartAX MT800u-T ADSL Router

User Manual

V100R002

Huawei Technologies Proprietary

Welcome to use SmartAX MT800u-T ADSL Router User Manual

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About This Manual

Release Notes

The product version corresponds to the manual is SmartAX MT800u-T ADSL CPE V100R002C10B020.

Organization

- Chapter 1 provides a brief description of MT800u-T and a list of features.
- Chapter 2 introduces the hardware installation of MT800u-T.
- Chapter 3 introduces the preparation procedures before configuring the MT800u-T.
- Chapter 4 describes how to use the embedded Web-based management software to configure the MT800u-T.
- Chapter 5 describes the detailed configuration procedures for 6 applications.
- Chapter 6 lists several FAQs and trouble-locating methods.
- Chapter 7 gives the technical specifications of the MT800u-T.
- Appendix gives the abbreviation list and default factory settings for MT800u-T.

Intended Audience

The manual is intended for the following readers:

- Marketing staff
- Installation engineers & technicians
- Operation & maintenance personnel

Conventions

The manual uses the following conventions:

I. General conventions

Convention	Description
Arial	Normal paragraphs are in Arial.
Arial Narrow	Warnings, Cautions, Notes and Tips are in Arial Narrow.
Boldface	Headings are in **Boldface**.

II. Symbols

Eye-catching symbols are also used in this manual to highlight the points worthy of special attention during the operation. They are defined as follows:

Caution: Means reader be extremely careful during the operation.

Note: Means a complementary description.

Environmental Protection

This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

Table of Contents

1 MT800u-T Overview 1
1.1 Parts of MT800u-T 1
1.1.1 Front Panel 1
1.1.2 Rear Panel 2
1.1.3 External Splitter 3
1.2 MT800u-T Features 4

2 Hardware Installation 5
2.1 Preparations 5
2.1.1 Checking Computer Configuration 5
2.1.2 Collecting ISP Information 5
2.2 Connecting MT800u-T 6
2.2.1 Connecting ADSL Line 6
2.2.2 Connecting the computer to MT800u-T 6
2.2.3 Connecting the Ethernet LAN to the MT800u-T 7
2.3 Powering On the MT800u-T 8

3 Before Configuring MT800u-T 9
3.1 When to Configure the MT800u-T 9
3.2 Configuring IP Settings on Your Computer 10
3.3 Accessing the Web-based Configuration Manager 10
3.3.1 Checking for Proxy Service 11
3.3.2 Applying the LAN IP Address of MT800u-T 11
3.3.3 Inputting the User Name and Password 11

4 Web-based Management 13
4.1 Manager Interface Layout 13
4.2 System Status (Home Page) 14
4.3 ATM Setting 15
4.3.1 Bridge Configuration 15
4.3.2 Routing Configuration 17
4.4 LAN Configuration 23
4.5 DHCP Mode Configuration 25
4.6 NAT 29
4.7 IP Route Table 33
4.8 RIP 35
4.9 Security 37
4.10 Time Zone 38
4.11 Remote Management 40
4.12 Upnp 41
4.13 User Management 42
4.14 DHCP Table 44
4.15 Diagnostics 44
4.16 Statistics 48
4.17 Restart 50
4.18 Firmware Upgrade 51
4.19 Logout 52

5 Service Configuration 54
5.1 Preparation for Service Configuration 54
5.2 PPPoE Configuration 55
5.3 PPPoA Configuration 56
5.4 RFC 2684 Bridged Configuration 58
5.5 RFC 2684 Route (IPoA) Configuration 59

6 Troubleshooting 61
6.1 Quick Troubleshooting 61
6.2 FAQs 62
7 Technical Specifications 67
8 Appendix 70
8.1 Factory Default Settings 70
8.2 Abbreviations 71

1 MT800u-T Overview

This chapter introduces the appearance and features of the MT800u-T.

The MT800u-T provides the small and private network with simple, secure, and cost-efficient ADSL Internet connection. It enables many interactive multi-media applications. And it can be placed on a table, stood and mounted on the wall.

1.1 Parts of MT800u-T

The following mainly describes its front and back panels.

1.1.1 Front Panel

Place the MT800u-T in a location where the LED indicators can be easily viewed.

Figure 1-1 shows LEDS on the front panel of the MT800u-T

Figure 1-1 front panel

The meaning of LEDs are listed as follows:

LED Indicator	Status	Description
Power	Steady green light	The unit is powered on.
ADSL LINK	Steady green light	A valid ADSL connection.
ADSL ACT	Blinking green light	There is traffic over ADSL line.
LAN LINK	Steady light	A valid LAN connection.
	Green light	The speed of data transfer is 10Mbps.
	Orange light	The speed of data transfer is 100Mbps.
LAN ACT	Blinking green light	There is traffic over Ethernet.

1.1.2 Rear Panel

You shall connect cables through ports in the rear panel. Figure 1-2 shows the rear panel.

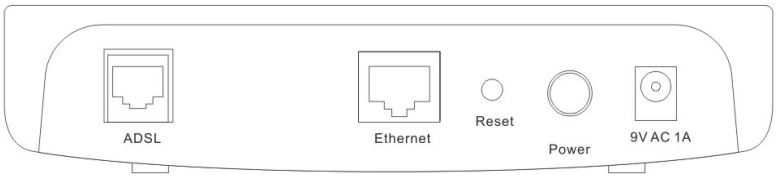


Figure 1-2 Rear panel

LED indicator	Description
ADSL	ADSL port, connecting to the splitter.
Ethernet	Ethernet port, connecting to the PC or the hub.
Reset	Press this button for 3 seconds to restore the default setting. This operation will let you lose your custom setting. Please be careful when using Reset button.
Power	Power switch.
9V AC 1A	Power input plug.

🕮 **Note:**

There may be different power adapter used in different regions. Please make sure that your power adapter is in conformity with the sign in the rear panel (9V AC 1A or 9V DC 1A).

1.1.3 External Splitter

Using splitter can reduce disturbance signals in the telephone line. The MT800u-T contains an external Splitter that has three ports: LINE, PHONE and MODEM ports.

- **LINE:** Connecting to the telephone jack.
- **PHONE:** Connecting to the telephone.
- **MODEM:** Connecting to ADSL modem with RJ-11 telephone line.

1.2 MT800u-T Features

Features of the MT800u-T are listed below:

- Data rates: downstream rate of 8 Mbps and upstream 896 kbps for ADSL / downstream rate of 24 Mbps and upstream rate of 1.2 Mbps for ADSL 2+.
- Friendly Web-based graphical user interface for configuration and management.
- Supporting up to eight simultaneous virtual connections.
- Various LED indicators facilitating the troubleshooting and maintenance of the device.
- Widest range of DSLAM interoperability.
- Built-in firewall and filter rule for users' information security protection.
- Upgradeable firmware through TFTP.
- Easy to install and use.

2 Hardware Installation

This chapter introduces how to connect cables of the MT800u-T.

1) Preparations
2) Connecting MT800u-T
3) Power on MT800u-T

2.1 Preparations

2.1.1 Checking Computer Configuration

Item	Requirement
OS	Web browser, such as IE, is installed.
Web browser type	Microsoft Internet Explorer®5.0 or Netscape Navigator®4.7 or above
Web browser settings	Enable JavaScript
Ethernet port	NIC adapter Enable TCP/IP

2.1.2 Collecting ISP Information

You shall collect the following information:

- VPI, VCI

- Encapsulation type
- Protocol type
- Modulation type
- User name, password

2.2 Connecting MT800u-T

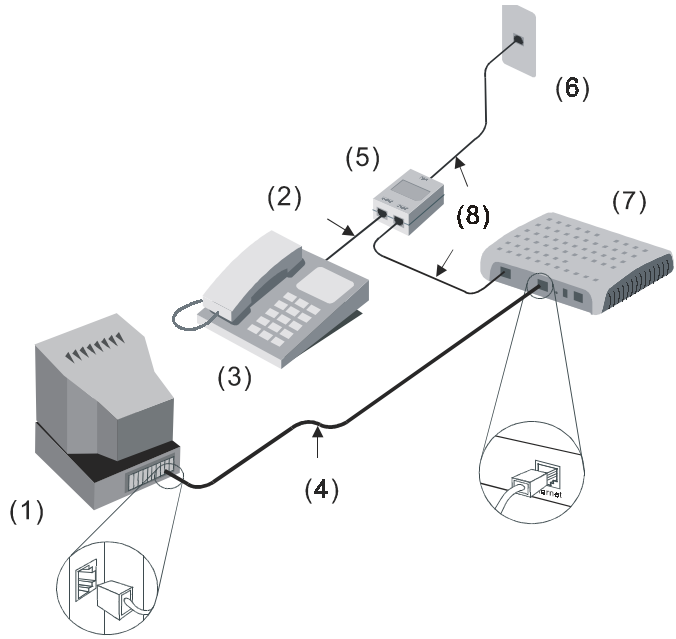
2.2.1 Connecting ADSL Line

Simply plug one end of the twisted-pair telephone line into the Modem port of the splitter and insert the other end into the ADSL port on the rear panel of MT800u-T.

Use another telephone line to connect the splitter and the Phone Jack in the wall.

2.2.2 Connecting the computer to MT800u-T

Use a straight-through cable to connect your PC and MT800u-T. You can connect the MT800u-T directly to a 10/100Base-TX Ethernet adapter card on your PC with the provided Ethernet cable as shown in this diagram.



(1) Computer	(2) RJ-11 Tel Cable	(3) Phone	(4) RJ-45 Ethernet Cable
(5) Splitter	(6) Phone Jack	(7) MT800u-T	(8) RJ-11 Tel Cable

Figure 2-1 Computer to MT800u-T connection

2.2.3 Connecting the Ethernet LAN to the MT800u-T

The MT800u-T may be connected to any 10/100Base-TX Ethernet port. When connecting the MT800u-T to any Ethernet device that is capable of operating at speeds higher than 10Mbps, ensure that the device has auto-negotiation mode enabled for the connecting port.

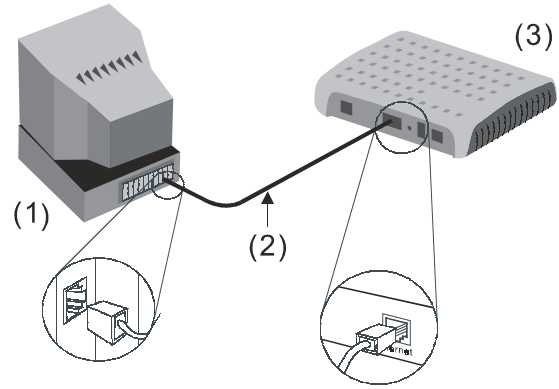
Uses cross-over cable to connect the MT800u-T and the uplink port of a switch or hub. Be sure that the cable connecting the LAN to the MT800u-T is less than 100 meters.

2.3 Powering On the MT800u-T

1) Use the power adapter and plug it into a suitable power source nearby.
2) You should see the Power LED indicator light up, which indicates the device is powered on.
3) After a few seconds, look at the LAN LINK indicator and make sure it with steady light, which indicates a valid connection between the router and your computer.

3 Before Configuring MT800u-T

To configure MT800u-T, you have to connect MT800u-T to a computer as shown below. Use the provided straight-through cable.



(1)Computer (2)RJ-45 Ethernet cable (3)MT800u-T

Figure 3-1 Computer to MT800u-T connection

3.1 When to Configure the MT800u-T

The default settings enable the MT800u-T to operate in most conditions of the network and meet basic requirements of the users with simple network topology.

If the conditions of network have been changed by the modification of security, scale, line of communication, protocol and topology, for example, a demand of particular VPI and VCI, you shall

adjust accordingly the default settings to be able to adapt to the changes.

3.2 Configuring IP Settings on Your Computer

The steps of configuring the IP settings are as below.

1) Understand the default IP settings for MT800u-T: IP address (192.168.1.1), Subnet mask (255.255.255.0).
2) Make sure your computer has the TCP/IP protocol installed and enabled.

- If you have an Ethernet port on your computer, it probably already has TCP/IP protocol installed.
- If you are using Windows XP, the TCP/IP is enabled by default for standard installations.

3) Configure the IP address and Subnet mask of your computer to make the computer set in the same subnet with the MT800u-T, for example, IP address:192.168.1.100, Subnet mask: 255.255.255.0.

For computers running non-Windows operating systems, follow the instructions for your OS to configure the IP setting to occupy the same subnet as MT800u-T.

3.3 Accessing the Web-based Configuration Manager

Once the IP settings of your computer allow it to access the Web-based configuration manager, you can change the factory default settings to enable the MT800u-T to connect to the Internet.

3.3.1 Checking for Proxy Service

If the browser software on the computer is configured to use a proxy server for Internet access, it is necessary to first disable the proxy connection.

In Windows Internet Explorer, you can check whether a proxy server is enabled using the following procedures:

1) In the “Microsoft Internet Explorer” window, select [Tools/Internet Options] to display the “Internet Options” dialog box.
2) In the “Internet Options” dialog box, click the “Connections” tab, and then click <LAN Settings> button.
3) Check whether the “Use proxy server” option is not selected. If it is selected, clear it , and then click <OK>.

3.3.2 Applying the LAN IP Address of MT800u-T

To access the Web-based configuration manager, launch your Web browser and enter the LAN IP address of the MT800u-T. For the first access, the default LAN IP address of the MT800u-T is used. Type in “**http://192.168.1.1**” in the address bar of the browser.

3.3.3 Inputting the User Name and Password

A new window appears prompting you to input a user name and password needed to access the Web-based configuration manager.

Figure 3-2 Enter user name and password

Use the default user name, **Huawei** and password **Bridge** for first time login. You can change the password once you have opened the Web-based configuration manager. The user name and password allows any computer on the same subnet as the MT800u-T to access the Web-based configuration manger. And this password can also be used to Telnet to the device through the Ethernet or Internet interfaces. To change this password, see 4 Web-based Management.

🕮 **Note:**

Do not confuse the user name and password used to access the Web-based manager with the ADSL account and password needed for PPP connections to access your ISP's network.

---

4 Web-based Management

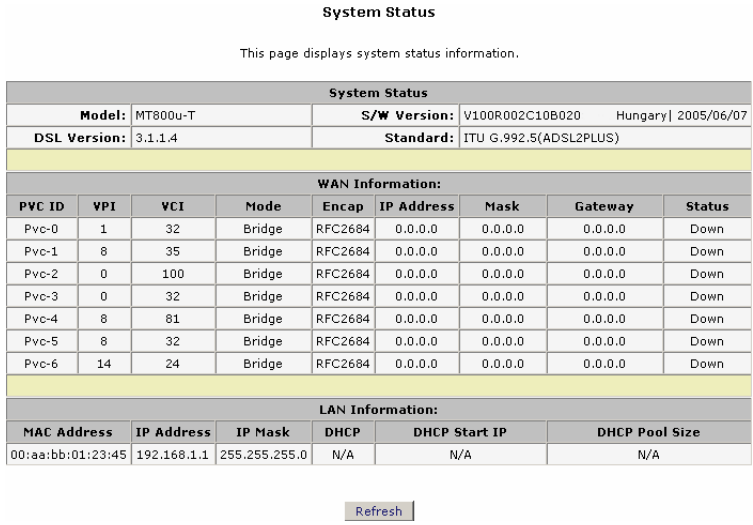
This chapter describes how to use the web-based management software to configure the MT800u-T, which introduces the signification of parameters and method of setting in the configuration interface. The order of sectors is listed according to the functional configuration interfaces.

4.1 Manager Interface Layout

The MT800u-T initially presents the **System Status** page shown below when you first log in.

- The left part of the page is wizard column, and you can enter the web page of configuration or management through the hyperlink in wizard column.
- The right part of the page is the practical domain of configuration and management.

4.2 System Status (Home Page)



System Status

This page displays system status information.

System Status			
Model:	MT800u-T	S/W Version:	V100R002C10B020 Hungary| 2005/06/07
DSL Version:	3.1.1.4	Standard:	ITU G.992.5(ADSL2PLUS)

WAN Information:								
PVC ID	VPI	VCI	Mode	Encap	IP Address	Mask	Gateway	Status
Pvc-0	1	32	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-1	8	35	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-2	0	100	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-3	0	32	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-4	8	81	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-5	8	32	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down
Pvc-6	14	24	Bridge	RFC2684	0.0.0.0	0.0.0.0	0.0.0.0	Down

LAN Information:					
MAC Address	IP Address	IP Mask	DHCP	DHCP Start IP	DHCP Pool Size
00:aa:bb:01:23:45	192.168.1.1	255.255.255.0	N/A	N/A	N/A

Refresh

Figure 4-1 Home Page – system view display

The System View read-only table on the Home Page displays a summary of various system settings and functions as described in the table below.

- **System Status**: Displaying the basic information about the device, include hardware model, software version, DSL version and standard.
- **WAN Information**: Displaying the names and settings for the device WAN interfaces. Multiple software-defined interfaces may be configured to use the DSL connection. In the WAN interface will display the PVC ID, VPI/VCI, Mode, Encapsulation, IP address, Mask, Gateway, and status.

- **LAN Information**: Displaying the names and various settings of LAN interface, which include MAC address, IP address, IP Mask, DHCP, DHCP Start IP, and DHCP Pool Size.

4.3 ATM Setting

Click the hyperlink **ATM Setting** in wizard column to open the ATM setting page.

There are two basic configuring modes for selection in this web page: Routing and Bridge.

4.3.1 Bridge Configuration

Select Bridge mode from the drop-down menu of Mode, the setting page displayed as below.

I. Configuration page

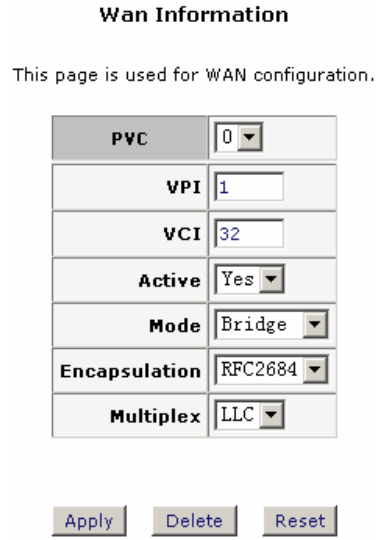


Figure 4-2 bridge connection

II. Parameters explanation

- **PVC:** System provides 8 PVCs. Generally you can leave this set at the default value 0. This option is also used to create and configure new PVCs.
- **VPI/VCI:** If you need any modification, please enter the VPI/VPI value provided by ISP. See the 8.1 Factory Default Settings for all the VPI/VCI default values of PVC.
- **Active:** Select **Yes** to enable the settings below, Otherwise, select **No**.
- **Mode:** Display the current selected mode of system.

- **Encapsulation:** For Bridge mode, only the RFC2684 encapsulation is available.
- **Multiplex:** You can select the mode LLC or VC MUX.

III. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Delete** button to remove the current specified PVC, and click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.3.2 Routing Configuration

When Routing mode is selected, there will be 4 options- RFC2684(IPoA), RFC2684B, PPPoA, and PPPoE for Encapsulation.

- **PVC:** System provides 8 PVCs. Generally you can leave this set at the default value 0. This option is also used to create and configure new PVCs.
- **VPI/VPI:** If you need any modification, please enter the VPI/VCI values provided by ISP. See the attached table for all the VPI/VCI default values of PVC.
- **Active:** Select **Yes** to enable the selected mode below, Otherwise, select **No**.
- **Mode:** Display the current selected mode of system.
- **Encapsulation:** The mode of encapsulation includes RFC2684 (IPoA), RFC2684B, PPPoE and PPPoA.
- **Multiplex:** You can select the mode LLC or VC MUX.

I. RFC2684 (IPoA)

Select RFC2684 (IPoA) option from the drop-down menu of Encapsulation, the setting page displayed as below will appear.

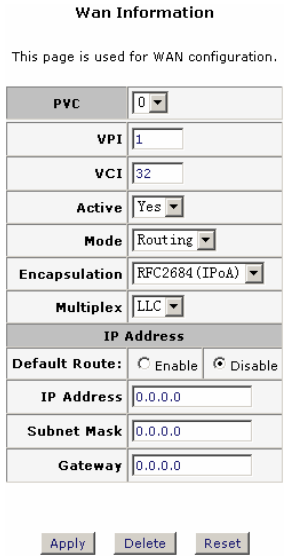


Figure 4-3 Routing configuration-RFC2684 (IPoA)

- **Default Route:** This option enable or disable the setting of IP address below to be specified as the default route of LAN. The data will be sent through WAN interface whenever a client LAN computer accesses the Internet.
- **IP Address** and **Subnet Mask:** Enter the IP address and subnet mask provided by ISP for the WAN interface of your MT800u-T.
- **Gateway:** Enter the Gateway address provided by ISP.

II. RFC2684B

Select RFC2684B option from the drop-down menu of Encapsulation, the setting page displayed as below will appear.

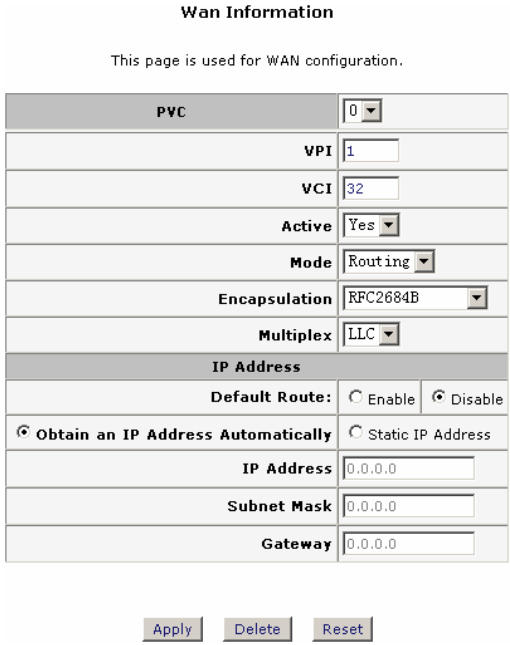


Figure 4-4 RFC2684B route configuration-

- **Default Route:** This setting specified the IP address below is using for default route of LAN. The data will be sent through WAN interface whenever a client LAN computer accesses the Internet.
- **Obtain an IP address automatically:** Select this option to obtain IP address automatically from DHCP server. If you

choose the option **Static IP address**, you should enter the **IP Address**, **Subnet Mask** and **Gateway Address** provided by ISP for the WAN interface of your MT800u-T.

III. PPPoA

Select PPPoA option from the drop-down menu of Encapsulation, the setting page displayed as below will appear.

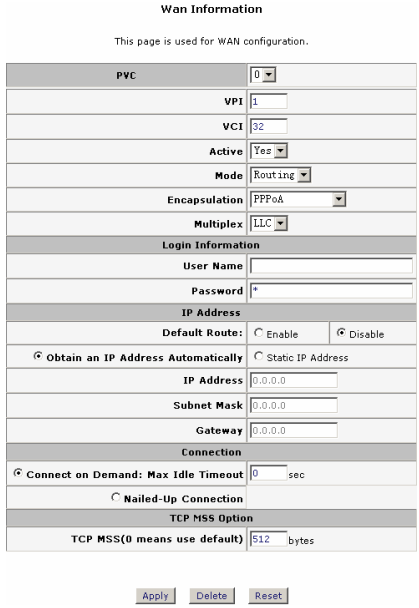


Figure 4-5 PPP configuration-PPPoA

- **Login information:** Enter the username and password provided by ISP.
- **IP address:** Configure the parameters of IP address:

- **Default Route:** This setting specified the IP address below is using for default route of LAN. The data will be sent through WAN interface whenever a client LAN computer accesses the Internet.
- **Obtain an IP address automatically:** Select this option to obtain IP address automatically from DHCP server. If you choose the option **Static IP address**, you should enter the **IP Address**, **Subnet Mask** and **Gateway Address** provided by ISP for the WAN interface of your MT800u-T.

- **Connection:** If you select the option **Connect on Demand**, you should enter the value of Max Idle Timeout manually. Otherwise, select the option **Nailed-up Connection** for uninterrupted connection.
- **TCP MSS Option**: Enter the maximum bytes of the packet being transmitted during connection.

IV. PPPoE

Select PPPoE option from the drop-down menu of Encapsulation, the setting page displayed as below will appear.

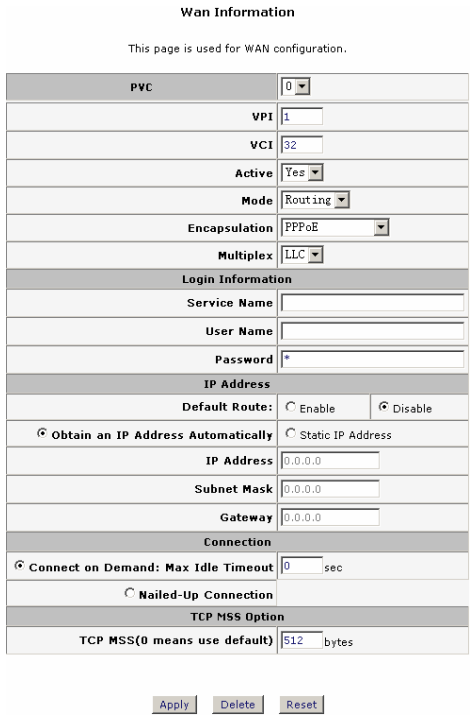


Figure 4-6 PPP configuration-PPPoE

- **Login information:** Enter the service name, username and password provided by ISP.
- **IP address:** Configure the parameters of IP address:
  - **Default Route:** This setting specified the IP address below is using for default route of LAN. The data will be sent through WAN interface whenever a client LAN computer accesses the Internet.
  - **Obtain an IP address automatically:** Select this option to obtain IP address automatically from DHCP

server. If you choose the option **Static IP address**, you should enter the IP address, subnet mask and gateway address provided by ISP for the WAN interface of your MT800u-T.

- **Connection:** If you select the option **Connect on Demand**, you should enter the value of Max Idle Timeout manually. Otherwise, select the option **Nailed-up Connection** for uninterrupted connection.
- **TCP MSS Option**: Enter the maximum bytes of the packet being transmitted during connection.

V. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Delete** button to remove the current specified PVC, and click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.4 LAN Configuration

Click the **LAN Configuration** of **Other Setting** in the Wizard Column to set the LAN interface. The LAN IP address must be in the same subnet as the computers on your LAN.

You can change the default LAN IP address and Net Mask to suit for your LAN.

I. Configuration page

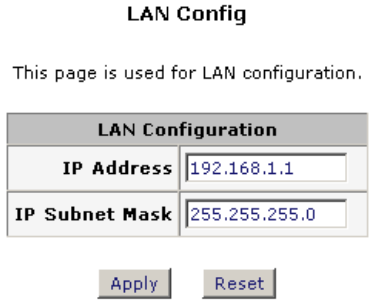


Figure 4-7 LAN configuration

II. Parameter explanation

To change the LAN IP address, click the **Apply** button and type in the new settings as described below.

- **IP Address:** Type in the IP address for the Ethernet LAN interface. The default IP address is 192.168.1.1
- **IP Subnet Mask:** Type in the Subnet Mask for the Ethernet LAN IP interface. The default Mask is 255.255.255.0

🕮 **Note:**

The public IP address that ISP assigned is not LAN IP address. The public IP address identifies the WAN interface that the ADSL router connects to Internet.

III. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

🕮 **Note:**

If you change the IP address, you need login in again.

4.5 DHCP Mode Configuration

Click the **DHCP Mode** of **Other Setting** in the Wizard Column to set the DHCP mode. DHCP services that provided by MT800u-T include: directly provide DHCP service, receive and relay DHCP service.

I. DHCP Configuration Mode-None

The default setting is None, which disable DHCP services. In this case, ADSL terminal device shall be assigned IP settings manually or through the DHCP server of LAN or ISP. The gray items are unavailable to be configured.

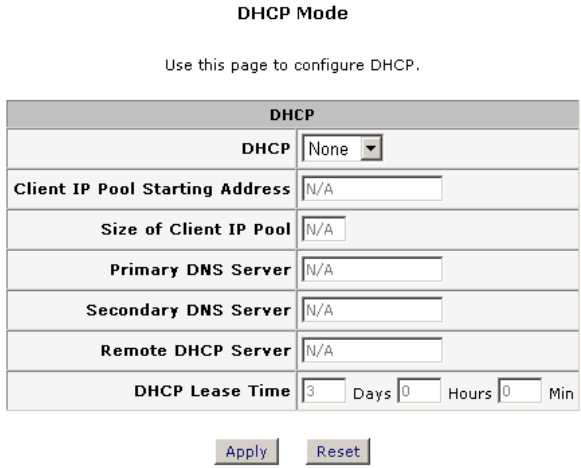


Figure 4-8 DHCP mode configuration-None

II. DHCP Configuration Mode -Server

MT800u-T can be configured as DHCP server of LAN. Then the ADSL Modem shall provide IP settings for your PC. The gray item is unavailable to be configured.

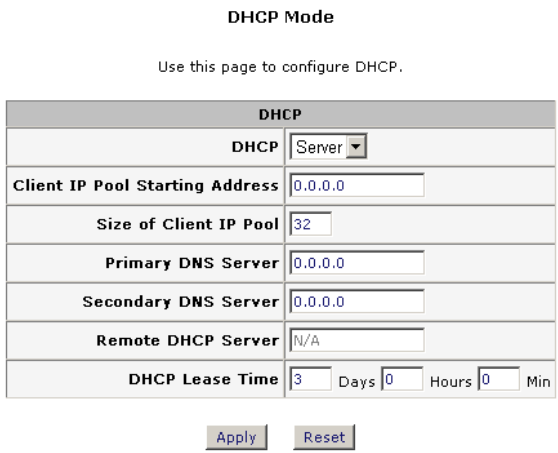


Figure 4-9 DHCP mode configuration-DHCP Server

- **Client IP Pool Starting Address:** The starting IP address of IP addresses range that released by DHCP server.
- **Size of Client IP Pool:** The number of clients that would be received the DHCP service.
- **Primary DNS Server:** Enter the assigned IP address of DNS server in the field. ISPs typically provide primary and secondary DNS addresses.
- **Secondary DNS Server:** Enter another DNS address for backup DNS server.
- **DHCP Lease Time:** Specify the lease time of DHCP server.

III. DHCP Configuration Mode-Relay

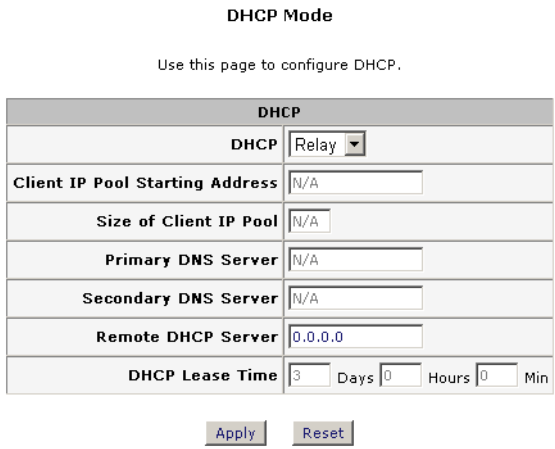


Figure 4-10 DHCP mode configuration-DHCP Relay

MT800u-T can also to be configured to relay DHCP packets. Enter the IP address of **Remote DHCP Server** and the PC shall be assigned IP address automatically.

IV. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.6 NAT

Network Address Translation (NAT) is a method for disguising the private IP addresses on your LAN as the public IP address on the Internet. You define NAT rules that specify exactly how and when to translate between public and private IP addresses.

Click the **NAT** of **Other Setting** in the Wizard Column to set the NAT. NAT services that provided by MT800u-T include: SUA Only and Full Feature.

I. DHCP Configuration Mode-None

Select the option **None** to disable NAT services.

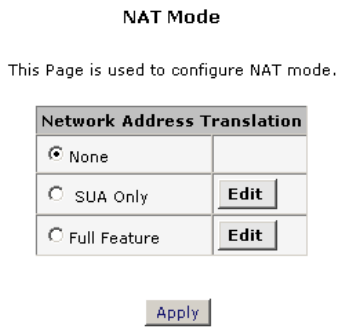


Figure 4-11 NAT configuration-None

II. SUA Only

SUA (Single User Account) is a feature that allows multiple devices to access Internet concurrently for the cost of a single user account.

Select the option **SUA Only** and click **Edit** button to enter the editing page of SUA, shown as below:

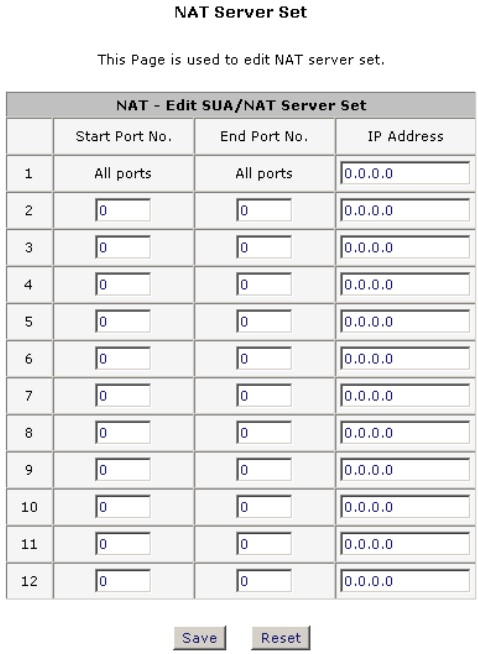
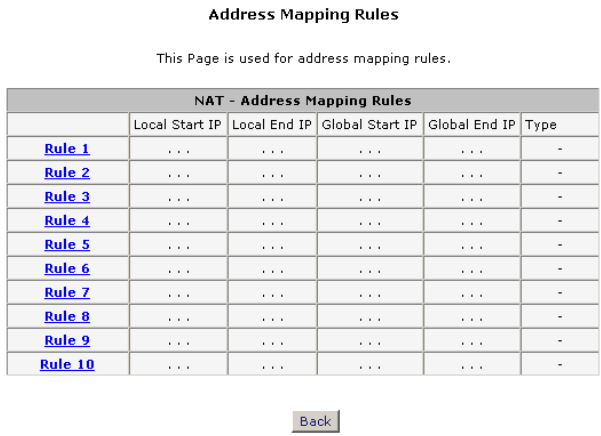


Figure 4-12 SUA Only-edit

- **Start/End Port No.:** Enter the range of port number in order to access internet through SUA.
- **IP address:** Enter IP address of device that needs to access Internet through SUA.

III. Full Feature



Address Mapping Rules

This Page is used for address mapping rules.

NAT - Address Mapping Rules					
	Local Start IP	Local End IP	Global Start IP	Global End IP	Type
Rule 1	. . .	. . .	. . .	. . .	-
Rule 2	. . .	. . .	. . .	. . .	-
Rule 3	. . .	. . .	. . .	. . .	-
Rule 4	. . .	. . .	. . .	. . .	-
Rule 5	. . .	. . .	. . .	. . .	-
Rule 6	. . .	. . .	. . .	. . .	-
Rule 7	. . .	. . .	. . .	. . .	-
Rule 8	. . .	. . .	. . .	. . .	-
Rule 9	. . .	. . .	. . .	. . .	-
Rule 10	. . .	. . .	. . .	. . .	-

Back

Figure 4-13 Full feature-edit

- **Rule ID:** The Rule ID determines the order in which rules are invoked (the lowest numbered rule is invoked first, and so on). In some cases, two or more rules may be defined to act on the same set of IP addresses. Be sure to assign the Rule ID so that the higher priority rules are invoked before lower-priority rules. It is recommended that you select rule IDs as multiples of 5 or 10 so that, in the future, you can insert a rule between two existing rules. You can click the Rule ID, such as Rule1 to configure its parameters.
- **Local Start IP:** Display the starting IP of the range of private address you want to be translated. You can specify that data from all LAN addresses should be translated by typing 0 (zero) in each From field and 255 in each To field.

Or, type the same address in both fields if the rule only applies to one LAN computer.

- **Local End IP:** Type the ending IP of the range of private address you want to be translated.
- **Global Start IP:** Type the public IP address assigned to you by your ISP.
- **Global End IP:** If you have multiple WAN interfaces, in both the Global Start/End IP Address fields, type the IP address of the interface to which this rule applies. This rule will not be enforced for data that arrives on other PPP interfaces. If you have multiple WAN interfaces and want the rule to be enforced on a range of them, type the starting and ending IP addresses of the range. You can specify a single value by entering that value in both the From and To fields.
- **Type:** This specifies which type of Internet communication will be subject to this translation rule, which include **One-to-One**, **Many-to-One**, **Many-to-Many Overload**, **Many-to-Many No Overload** and **Server**.

IV. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.7 IP Route Table

Click the **IP Route** of **Other Setting** in the Wizard Column to set the IP Route Table. IP Routes are used to define gateways and hops used to route data traffic.

You may need to define routes if your LAN includes two or more networks or subnets, if you connect to two or more ISP services, or if you connect to a remote corporate LAN. Use the IP Route Table to add new IP routes.

I. Configuration page

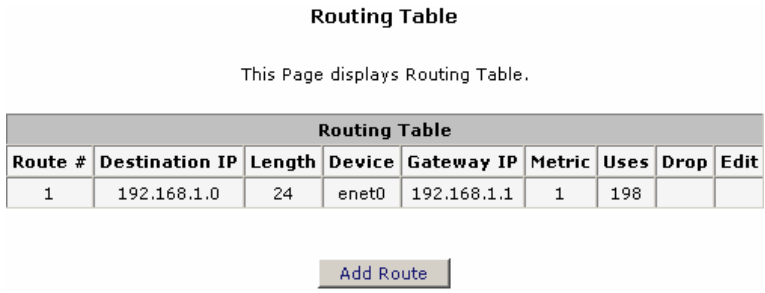


Figure 4-14 IP Route Table

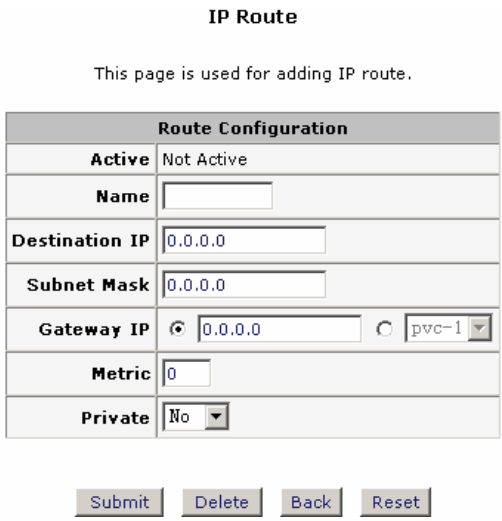


Figure 4-15 IP Route-Add

II. Parameter explanation

- **Destination IP:** Specifying the IP address of the destination computer. The destination can specify the IP address of a specific computer or an entire network. It can also be specified as all zeros to indicate that this route should be used for all destinations for which no other routes are defined (this is the route that creates the default gateway).
- **Subnet Mask:** Enter the Subnet Mask provided by your ISP.
- **Gateway IP:** Displaying the IP address of gateway through which to data is forwarded to.

- **Metric:** Displaying the Metric value for the interface. IP route uses a "hop count" as a way to determine the best path to a given destination in the network. The hop count is the sum of the metric values assigned to each port through which data is passed before reaching the destination. Among several alternative routes, the one with the lowest hop count is considered the fastest path.
- **Private:** Select between Yes and No.

III. Save

- Click the **Submit** button to save the settings in the RAM.
- Click **Delete** button to remove the current specified PVC.
- Click **Reset** button to erase the modification.
- Click **Back** button to go back to the previous page.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.8 RIP

RIP is an Internet protocol. You can set up to share routing table information with other routing devices on your LAN, at your ISP's location, or on remote networks connected to your network via the ADSL line.

Click the **RIP** of **Advanced Function** in the Wizard Column to set the RIP.

I. Configuration page

Figure 4-16 RIP configuration

II. Parameter explanation

- **RIP Direction:** Select the direction of RIP from drop-down list.
- **RIP Version:** Select RIP version from drop-down list.

Note:

- RIP version 1 is the original RIP protocol. Select RIP1 if you have devices that communicate with this interface that understand RIP version 1 only.
- RIP version 2 is the preferred selection because it supports "classless" IP addresses (which are used to create subnets) and other features. Select RIP2 if all other routing devices on your LAN support this version of the protocol.

III. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.9 Security

Click the **Security** of **Advanced Function** in the Wizard Column to set the RIP.

I. Configuration page

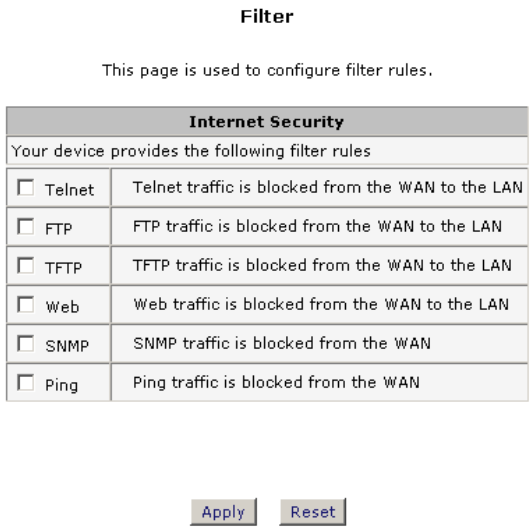


Figure 4-17 Firewall configuration

The Security enables you to protect the system against attacks and other types of malicious accesses to your LAN. Check the options you want to enable and then click **Apply** button to take the selected functions effect.

II. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.10 Time Zone

Click the **Time Zone** of **Advanced Function** in the Wizard Column to set the system time. The "Time Zone" is used by the unit to synchronize scheduling services and system logging activities. You will need to set the time zone corresponding to your location. The time can be set manually or the device can connect to a NTP (Network Time Protocol) server to retrieve the time.

I. Configuration page

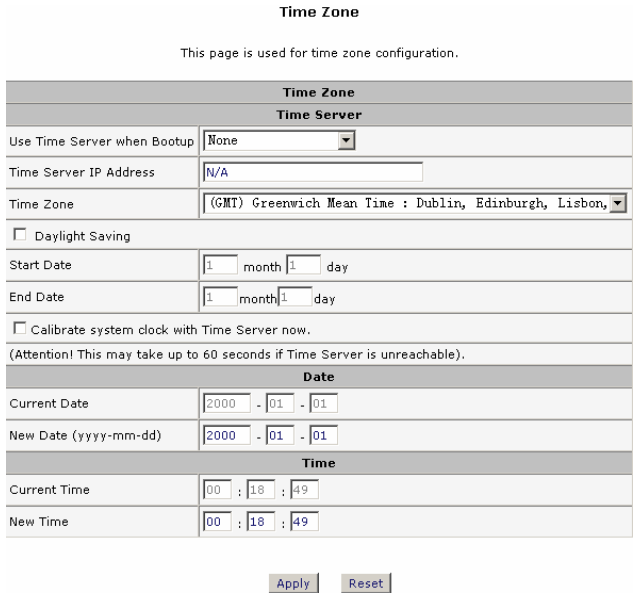


Figure 4-18 Time Zone

II. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.11 Remote Management

Use the Remote Management function to manage MT800u-T from servers or computers that are located outside of the LAN or subnet of the MT800u-T.

Click the **Remote Management** of **Advanced Function** in the Wizard Column to set the remote access management.

I. Configuration page

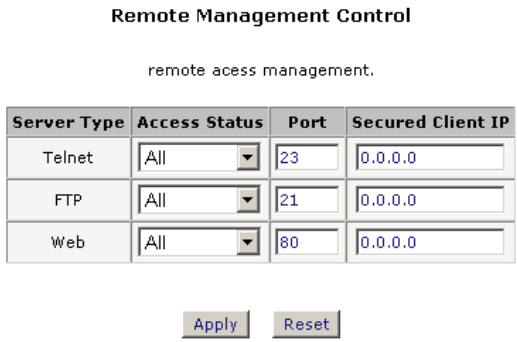


Figure 4-19 Remote Management

II. Parameter explanation

- **Server Type:** Displaying the protocol that MT800u-T applied to allow the remote access.
- **Access Status:** Choose the appropriate access status from drop-down list.
- **Port:** Enter the port number that you expect to see on incoming access destined for the LAN computer.

- **Secured Client IP:** Enter the IP address of clients that to be specified to management MT800u-T from outside of the LAN or subnet of the MT800u-T.

III. Save

- Click the **Apply** button to save the settings in the RAM.
- Click **Reset** button to erase the modification.
- To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.12 Upnp

Upnp supports zero-configuration networking and automatic discovery for many types of networked devices. When enabled, it allows other devices that support Upnp to dynamically join a network, obtain an IP address, convey its capabilities, and learn about the presence and capabilities of other devices. DHCP and DNS service can also be used if available on the network. Upnp also allows supported devices to leave a network automatically without adverse effects to the device or other devices on the network.

Click the **Upnp** of **Advance Function** in the Wizard column to open the Upnp page.

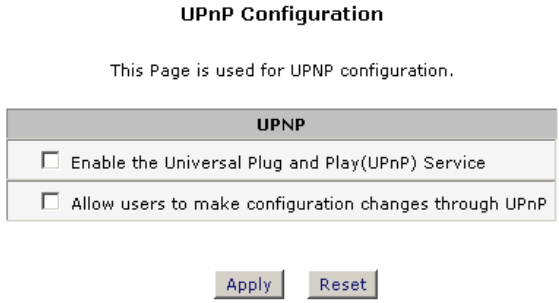


Figure 4-20 Upnp Configuration

To enable Upnp for any available connection, click to check the **Enable the Universal Plug and Play (Upnp) Service** selection box. Check the **Allow users to make configuration change through Upnp** selection box to enable MT800u-T obtained configuration from other devices which available on the network automatically and dynamically. .

Click the **Apply** button to save the settings in the RAM. Click **Reset** button to erase the modification. To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

4.13 User Management

Click the **User Management** of **Maintenance** in the Wizard column to open the User Configuration page.

The first time you log into the Web Configuration Manager, use the default user ID and password (admin and admin).

For the default user ID, admin, only the password can be changed. The method to change the password of admin or users is described as below:

Figure 4-21 User Management

Perform the following steps to change the password:

1) Enter the old password in the blank.
2) Enter the new password
3) Confirm the password and click Apply.

Click the **Apply** button to save the settings in the RAM. Click **Reset** button to erase the modification. To save these configuration changes permanently, enter the **Restart** page, select **Current Settings** and click **Restart** button to save new settings.

🕮 **Note:**

It is recommended to keep a record of the new password after modified.

4.14 DHCP Table

Click the **DHCP Table** of **Maintenance** in the Wizard column to open the DHCP table page.

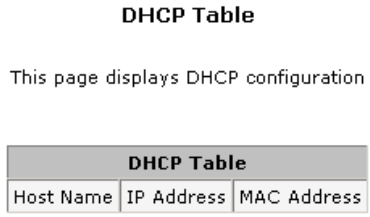


Figure 4-22 DHCP Table

This window displays the status of all current DHCP clients.

4.15 Diagnostics

The diagnostics feature executes a series of test of your system software and hardware connections. Use this feature when working with your ISP to troubleshoot problems. Click the **Diagnostics** of **Maintenance** in the Wizard column to perform the basic diagnostics for system.

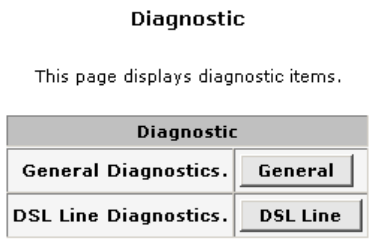


Figure 4-23 Diagnostics

Select the General Diagnostics or DSL Line Diagnostics and click its relative button.

I. General Diagnostics

Click the **General** button, a window of general diagnostics will appear as below.

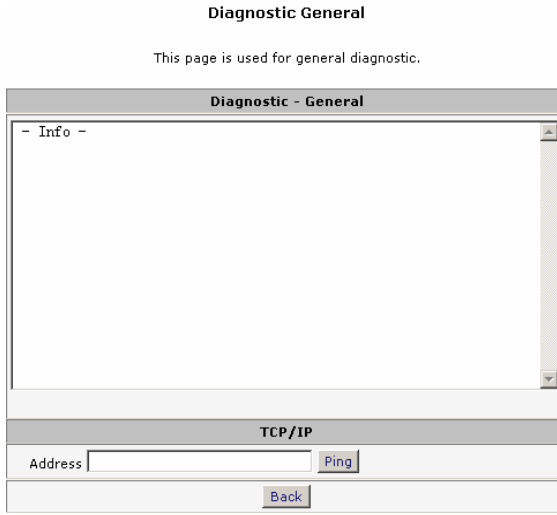


Figure 4-24 Diagnostics-General

The Ping utility is essentially a tool that is used to see if a computer is operating and also to see if network connections are intact. You can enter the host name or IP address of the device you want to check, and then click the **Ping** button. The result will be shown in the window above.

Click **Back** button to return the main page of Diagnostics.

II. DSL Line Diagnostics

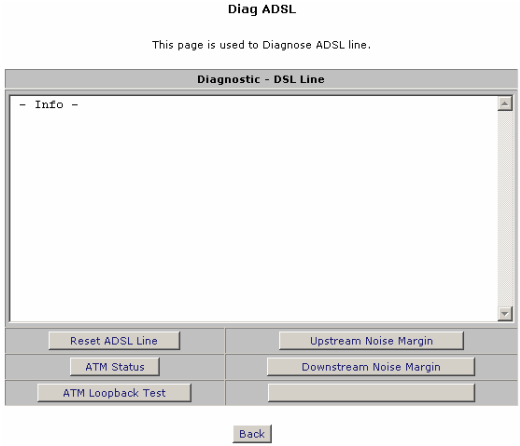


Figure 4-25 Diagnostics-DSL Line

- **Reset ADSL Line:** The Firmware of MT800u-T will be reloaded and then the ADSL Line will be reset.
- **ATM Status:** It's able to read the amount of Receive and Transmit packets that pass through the device on both the WAN (Wide Area Network) port and the LAN (Local Area Network) ports from the ATM status.
- **ATM Loopback Test:** Click the button to run the diagnostic procedure in which a signal is transmitted and returned to the sending device after passing through all or a portion of a network or circuit. The returned signal is compared with the transmitted signal in order to evaluate the integrity of the equipment or transmission path.

- **Upstream/Downstream Noise Margin:** Noise is the unwanted interfering signal sources with Upstream and downstream. Click this button to test the strength of Noise.

The diagnostics utility will run a series of test to check whether the device's connections are up and working. The program reports whether the test passed or failed. A test may be skipped if the program determines that no suitable interface is configured on which to run the test.

4.16 Statistics

Click the **Statistics** of **Maintenance** in the Wizard Column to view the log of device.

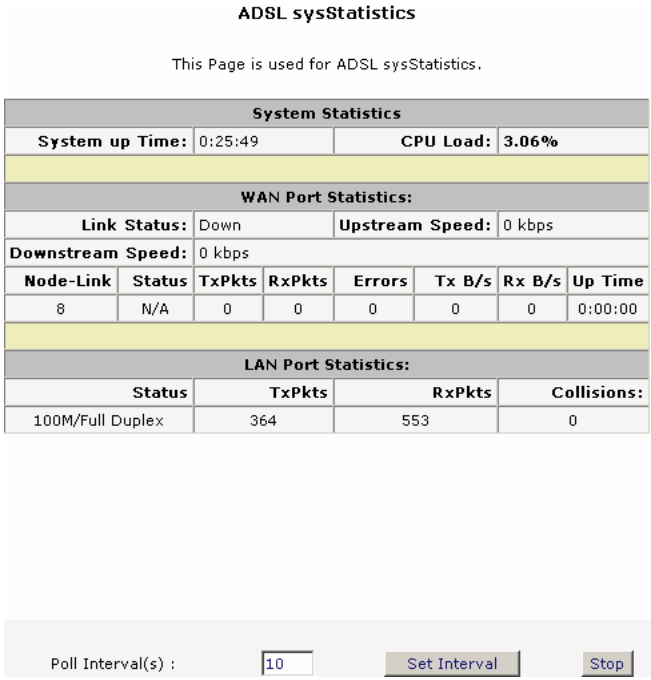


Figure 4-26 Traffic Statistics

The device keeps statistic of the data traffic that it handles. You are able to read the amount of Receive and Transmit packets that pass through the device on both the WAN (Wide Area Network) port and the LAN (Local Area Network) ports.

The time of polling interval can be modified. Enter an appropriate value and then click **Set Interval** button to change the Poll Interval. Click the **Stop** button to halt the action of statistics.

4.17 Restart

Click the **Restart** in Wizard column to specify the method of restart.

I. Configuration page

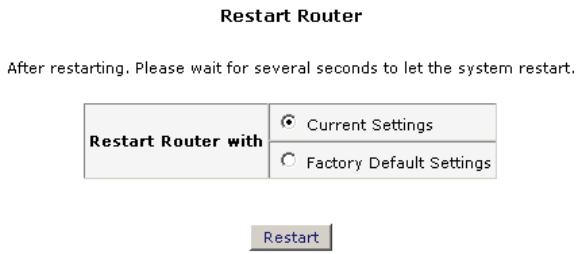


Figure 4-27 Restart

II. Parameter explanation

- **Current Setting:** This will save the current setting into the permanent storage and put into effect any configuration changes that have been successfully saved to flash memory.
- **Factory Default Setting:** This reboots the device to default settings provided by your ISP or the manufacturer. Choosing this option erases any custom settings.

You should select the proper method to restart the system.

Caution:

Do not reboot the device using the Reset button on the back panel of the MT800u-T to activate new changes. If you press the Reset button and hold for a few second, all device settings will be lost and the device will restore the manufacturer's default values.

4.18 Firmware Upgrade

Click the **Firmware Upgrade** in the Wizard column to open the Firmware Upgrade page and update the system software.

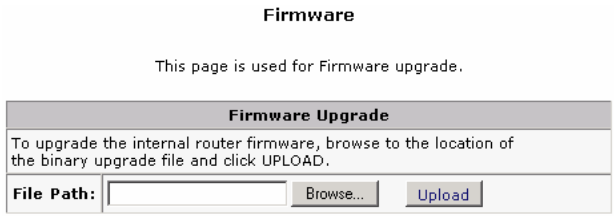


Figure 4-28 Firmware upgrade

File Path: Type in the full path and file name of the firmware file to be uploaded. Alternatively you may click the **Browse** button to search for the file on your system.

When the file names have been entered, click the **Upload** button to start loading the firmware file. If the upload is successful, a message informs you that it was successfully loaded. If the firmware

does not load, an error message informs you to try the upload again. Check the file names and attempt to upload again. If the file still is not loaded, reboot the device and try again.

⚠ **Caution:**

- Do not power off the MT800u-T during the firmware upgrade. Otherwise, the configuration in the flash could be damaged.
- The device must be restored to factory default setting after the upgrade has been completed. Please enter the Restart page and check the option “Factory default setting”, and then click **Restart** button.

4.19 Logout

Click the **Logout** in the Wizard column, the system will display a page which shown as blew and then logout the Web-based management.

Figure 4-29 Logout

5 Service Configuration

This section describes the configuration for five modes of MT800u-T ADSL router device for ADSL online service. The contents include:

- Preparation for service configuration
- PPPoE
- PPPoA
- RFC2684 bridge
- RFC2684 Route (IPoA)
- RFC2684B

5.1 Preparation for Service Configuration

Collect the following data firstly to perform the configuration:

Protocol types	**Virtual dialup mode**		**DSL mode**		
	PPPoE	PPPoA	RFC 2648 Bridge	RFC 2684B	RFC 2684 Route (IPoA)
Preparing information	Connection Type	Connection Type	Connecti on Type	Connecti on Type	Connection Type
	PPPoE user name	PPPoA user name	VPI/VCI	VPI/VCI	VPI/VCI
	PPPoE password	PPPoA password	None	WAN IP	WAN IP
	VPI/VCI	VPI/VCI	None	Subnet mask	Subnet mask

Protocol types	Virtual dialup mode		DSL mode		
	PPPoE	PPPoA	RFC 2648 Bridge	RFC 2684B	RFC 2684 Route (IPoA)
	Security Protocol	Security Protocol	None	Default gateway	Default gateway
	None	None	None	none	none

5.2 PPPoE Configuration

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
ATM Setting	PVC	Select any one from the eight PVCs.
	VPI/VCI	The value shall be provided by your ISP.
	Operation Mode	Select “Enable”.
	Encapsulation	The value shall be provided by your ISP. Usually you can keep the default value: LLC.
	Connection Type	Select “PPP”.
	PPPoA/PPPoE	Select “PPPoE”.
	User name and Password	The values shall be provided by your ISP.
	Default Route	Select “Enable”.

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
	DNS	Select “Enable”.
NAT	It is recommended to enable the function of NAT.	
DNS	It is recommended to have DNS Relay function enabled.	
DHCP Mode	It is recommended to have DHCP Server function enabled.	
Traffic Index	It is recommended to set 0.	
Configurations on the user’s PC		
IP Address and Network Mask	It is recommended to set the mode as obtaining an IP address automatically.	
DNS	It is recommended to set the mode as obtaining a DNS server’s IP address automatically.	

5.3 PPPoA Configuration

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
ATM Setting	PVC	Select any one from the eight PVCs.
	VPI/VCI	The value shall be provided by your ISP.
	Operation Mode	Select “Enable”.

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
	Encapsulation	The value shall be provided by your ISP. Usually you can keep the default value: LLC.
	Connection Type	Select “PPP”.
	PPPoA/PPPoE	Select “PPPoA”.
	User name and Password	The values shall be provided by your ISP.
	Default Route	Select “Enable”.
	DNS	Select “Enable”.
NAT	It is recommended to enable the function of NAT.	
DNS	It is recommended to have DNS Relay function enabled.	
DHCP Mode	It is recommended to have DHCP Server function enabled.	
Traffic Index	It is recommended to set 0.	
Configurations on the user’s PC		
IP Address and Network Mask	It is recommended to set the mode as obtaining an IP address automatically.	
DNS	It is recommended to set the mode as obtaining a DNS server’s IP address automatically.	

5.4 RFC 2684 Bridged Configuration

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
ATM Setting	PVC	Select any one from the eight PVCs.
	VPI/VCI	The value shall be provided by your ISP.
	Operation Mode	Select “Enable”.
	Encapsulation	The value shall be provided by your ISP. Usually you can keep the default value: LLC.
	Connection Type	Select “RFC2684 Bridged”.
	Address Type	Select “Pure Bridge”.
Traffic Index	It is recommended to set 0.	
Configurations on the user’s PC		
PPPoE Dial–up Application	Before connecting to the Internet, the user shall have PPPoE dial–up application installed on the PC.	

5.5 RFC 2684 Route (IPoA) Configuration

Configurations on MT800u-T		
Location	**Parameters**	**Comments**
ATM Setting	PVC	Select any one from the eight PVCs.
	VPI/VCI	The value shall be provided by your ISP.
	Operation Mode	Select “Enable”.
	Encapsulation	The value shall be provided by your ISP. Usually you can keep the default value: LLC.
	Connection Type	Select “RFC2684 Routed (IPoA)”.
	IP Address and Subnet Mast	The values shall be provided by your ISP.
	Default Route	Select “Enable”.
	Gateway IP Address	The value shall be provided by your ISP.
NAT	It is recommended to enable the function of NAT.	
DNS	It is recommended to have DNS Relay function enabled. And set DNS IP address provided by your ISP.	
DHCP Mode	It is recommended to have DHCP Server function enabled.	
Traffic Index	It is recommended to set 0.	

Configurations on the user's PC	
IP Address and network mask	It is recommended to set the mode as obtaining an IP address automatically.
DNS	It is recommended to set the mode as obtaining a DNS server's IP address automatically.

Note:

For other advanced configurations, please refer to 4 Web-based Management.

6 Troubleshooting

6.1 Quick Troubleshooting

Failures	Instructions
Power light is out.	1. Ensure power adapter is well connected; 2. Ensure the right power adapter is used.
ADSL LINK light is out.	1. Ensure the ADSL line is well connected; 2. Ensure the telephone line before entering the house is valid, try to test with a telephone; 3. Check that there is no junction box before connecting MT800u-T, which has such components like capacitors or diodes that could hinder back high frequency signals; 4. Ensure the MT800u-T and telephones are connected in the right way.
LAN LINK light is out.	1. Ensure you use the right cables from the MT800u-T to your PC; 2. Ensure the connection is secured; 3. Check if the NIC LED lights up; 4. Ensure your Network Adapter works normally by examining whether the item of “Networking Adapters” is labeled with “**?**” or “**!**”. If it is, you may delete it and then click “Refresh” to reinstall. Otherwise, you may try the NIC in another slot. As a last resort, you have to replace the NIC.

Failures	Instructions
Can't access the Internet.	Take the most common access mode as an example, in which a dial-up application is installed on the user's computer: 1. Ensure that any of the problems above is not the reason; 2. Ensure that the dial-up application is correctly installed and set on your PC; 3. Ensure that you have entered the right user name and password; 4. Ensure "Use Proxy Server" is set properly for IE, if the problem still remains even after you have log into successfully; 5. Try more than one Web sites, in case of some Web server's being in failure.

6.2 FAQs

Q: Why can't my computer access the Internet, even when the physical links are well connected?

Check first whether the LEDs are in normal status. If they do, you have to find help to adjust the settings on the MT800u-T.

Q: I forget the username and password when I am to log into the Web-based Configuration Manager. Or I just can't access the Web-based Configuration Manager.

1) Please press reset button at the rear panel for 3 seconds to restore the factory default settings of MT800u-T.

2) Indicate your NIC IP address to 192.168.1.3
3) Disable Proxy service.
4) Launch your Web browser and type in http://192.168.1.1
5) Use the default user name: admin and password: admin

Q: My configuration is gone after rebooting MT800u-T.

If you want to keep your settings after reboot MT800u-T. Please go to “Web-based Configuration Manager”, click the “Restart” tab, and then click <Current Settings>button to save your configurations.

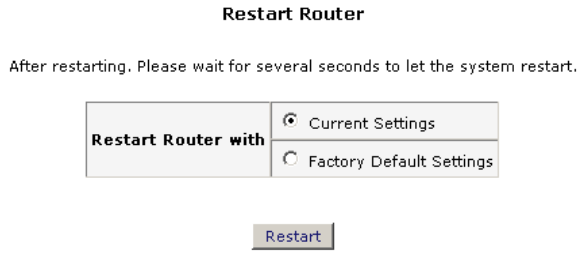


Figure 6-1 Save the changed setting

Q: I can’t upgrade with the new firmware.

Please make sure the file that you have downloaded is valid.

Q: Why can’t I access the Internet by using virtual dialing through Microsoft’s Internet Gateway?

Internet Gateway supports PPPoE itself. No other PPPoE terminal software shall be installed again.

Q: Why does my PC fall off line sometimes even with all LEDs are in normal status?

There are several scenarios might cause this problem.

1) Be disconnected by the ISP.
2) Some ISPs will have idle timeout setting to avoid wasting IP. When the end user connects to the Internet too long without any packet, the ISP will drop the connection. Please contact with your ISP about this problem.
3) Some ISPs don't provide a good quality ADSL signal line. Therefore, when the ADSL line is unstable, your connection will be dropped. Try with a telephone and find the status of your ADSL signal line.
4) If you have contacted the ISP and they promised the quality of ADSL line, it may be the hardware issue and please contact your vendor.

Q: When can I use the "Restore Factory Default Setting" button?

If you changed some setting unconsciously in the Web Management Interface and you forgot the detailed values that you modified, please use the "Restore Factory Default Setting" button to recover the factory default settings.

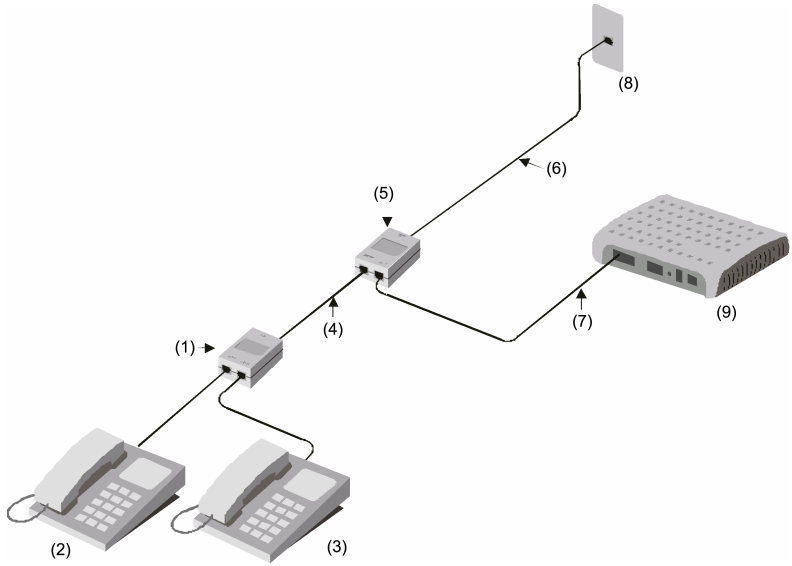
Q: How many methods can be used to restore the factory default setting?

Totally two methods:

1) By the restore button on the rear panel of the device. Push it for 3 seconds to take the factory default setting into effect;
2) Select the option Factory Setting Reboot in the page of Save & Reboot and then click Submit button.

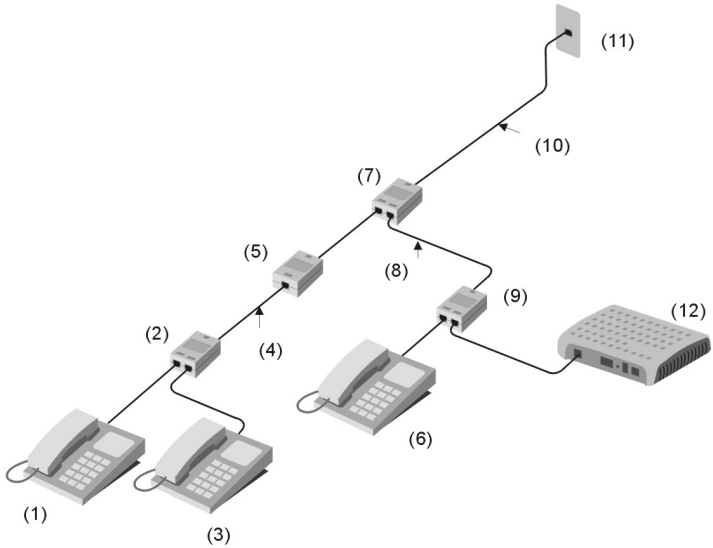
Q: How to connect multiple phones?

Follow the figures below to complete the installation. Note that the MT800u-T needs the splitter for proper working.



(1) Phone Socket	(2) Phone	(3) Phone	(4) RJ-11 Tel Cable
(5) Splitter	(6) RJ-11 Tel Cable	(7) RJ-11 Tel Cable	(8) Phone Jack
(9) MT800u-T			

Figure 6-2 Connect multiple phones-1



(1) Phone	(2) Phone Socket	(3) Phone	(4) RJ-11 Tel Cable
(5) Micro-filter	(6) Phone	(7) Phone Socket	(8) RJ-11 Tel Cable
(9) Splitter	(10) RJ-11 Tel Cable	(11) Phone Jack	(12) MT800u-T

Figure 6-3 Connect multiple phones-2

7 Technical Specifications

General Specifications	
Standards	**ADSL Standards:** ANSI T1.413 Issue 2 ITU G.992.1 (G.dmt) **Annex B** ITU G.992.2 (G.lite) **Annex B** ITU G.994.1 (G.hs)
	ITU G.992.7 Physical layer management for DSL transceivers
	ADSL2 Standards: ITU G.992.3 (G.dmt.bis) Annex B ITU G.992.4 (G.lite.bis) Annex B
	ADSL2+ Standards: ITU G.992.5 Annex B **(Pass the test against Centillium-based Annex B DSLAM)**

General Specifications	
Data Transfer Rate	G.dmt full rate: Downstream up to 8 Mbps / Upstream up to 896 kbps G.lite: Downstream up to 1.5 Mbps / Upstream up to 512 kbps T1.413: Downstream up to 8 Mbps / Upstream up to 896 kbps G.992.5 (ADSL2+): downstream rate of 24 Mbps / upstream rate of 1.2 Mbps
External Interface	One RJ-11 ports for ADSL line connection One RJ-45 port for 10/100 Base-T Ethernet connection

Physical and Environmental Specifications	
Power Adapter	9 V AC 1A
Power Consumption	Max. 9W
Operating Temperature	0° C to 40° C (32°F to 104° F)
Humidity	5% to 95% (non-condensing)
Dimensions	135mm x 110mm x 28mm
Weight	180g

🕮 **Note:**

- There might be different power adapter used in different regions. Please make sure that your power adapter is in conformity with the sign in the rear panel (9V AC 1A or 9V DC 1A).
- Waterproof should be used during the storage, transportation and running of the equipment.

8 Appendix

8.1 Factory Default Settings

User name		Huawei	
Password		Bridge	
IP address		192.168.1.1	
Subnet mask		255.255.255.0	
DSL Mode		Multimode	
RFC 2684 Bridged Mode	PVC0	VPI =1	VCI=32
	PVC1	VPI =8	VCI=35
	PVC2	VPI= 0	VCI= 100
	PVC3	VPI =0	VCI=32
	PVC4	VPI =8	VCI=81
	PVC5	VPI= 8	VCI=32
	PVC6	VPI= 14	VCI=24
DHCP Mode		Disable	
NAT		Enable	

8.2 Abbreviations

Abbreviation	Description
ADSL	Asymmetric Digital Subscriber Line
ATM	Asynchronous Transfer Mode
CPE	Customer Premises Equipment
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name Server
DSLAM	Digital Subscriber Line Access Multiplex
HTML	Hypertext Markup Language
IP	Internet Protocols
ICMP	Internet Control Message Protocol
IPoA	Internet Protocols Over ATM
ISP	Internet Service Provider
LAN	Local Area Network
MAC	Media Access Control
MIB	Management Information Base
NIC	Network Interface Card
NMS	Network Management Station
PPP	Point to Point Protocol
PPPoA	PPP over ATM
PPPoE	PPP over Ethernet
PVC	Permanent Virtual Connection
QoS	Quality of Service

Abbreviation	Description
RAM	Random Access Memory
RIP	Routing Information Protocol
SNMP	Simple Network Management Protocol
TCP	Transfer Control Protocol
TFTP	Trivial File Transfer Protocol
UDP	User Datagram Protocol
VCI	Virtual Channel Identifier
VPI	Virtual Path Identifier
WAN	Wide Area Network

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