TP-LINK®

User Guide

TD-8840T

ADSL2+ Modem Router



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FCC STATEMENT



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Mark Warning

CE

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.



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DECLARATION OF CONFORMITY

For the following equipment:

Product Description: ADSL2+ Modem Router

Model No.: TD-8840T

Trademark: TP-LINK

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 2004 / 108 / EC, Directives 2006 / 95 / EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents:

EN 55022:2010 EN 55024:2010 EN 61000-3-2:2006+A1:2009+A2:2009 EN 61000-3-3:2008 EN60950-1:2006+A11; 2009+A1:2010+A12:2011

The product carries the CE Mark:



Person is responsible for marking this declaration:

Yang Hongliang Product Manager of International Business

Date of issue: 2012

TP-LINK TECHNOLOGIES CO., LTD

Building 24 (floors 1, 3, 4, 5), and 28 (floors 1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

Pac	kage Contents	1
Cha	apter 1. Product Overview	2
1.1	Overview of the Modem Router	2
1.2	Main Features	3
1.3	Panel Layout	4
	1.3.1 The Front Panel	4
	1.3.2 The Back Panel	4
Cha	apter 2. Connecting the Modem Router	6
2.1	Installation Environment	6
2.2	Connecting the Modem Router	7
Cha	apter 3. Quick Installation Guide	8
3.1	Configuring the PC	8
3.2	Login	11
Cha	apter 4. Configuring the Modem Router	15
4.1	Login	15
4.2	Status	15
4.3	Quick Setup	16
4.4	Network	16
	4.4.1 WAN Settings	17
	4.4.2 Interface Grouping	25
	4.4.3 LAN Settings	
	4.4.4 MAC Clone	27
	4.4.5 ALG Settings	
	4.4.6 DSL Settings	29
4.5	DHCP Server	29
	4.5.1 DHCP Settings	29
	4.5.2 Clients List	31
	4.5.3 Address Reservation	31
	4.5.4 Conditional Pool	32
4.6	Route Settings	
	4.6.1 Default Gateway	
	4.6.2 Static Route	34

	4.6.3 RIP Settings	. 35
4.7	Forwarding	36
	4.7.1 Virtual Servers	. 36
	4.7.2 Port Triggering	. 37
	4.7.3 DMZ	. 39
	4.7.4 UPnP	. 40
4.8	Parent Control	40
4.9	Firewall	42
	4.9.1 Rule	. 42
	4.9.2 LAN Host	. 43
	4.9.3 WAN Host	. 44
	4.9.4 Schedule	. 45
	4.9.5 DDoS	. 46
4.10	Bandwidth Control	48
4.11	IP&MAC Binding	49
	4.11.1 Binding Settings	. 49
	4.11.2 ARP List	. 50
4.12	Dynamic DNS	51
4.13	Diagnostic	51
4.14	System Tools	52
	4.14.1 System Log	. 52
	4.14.2 Time Settings	. 53
	4.14.3 Manage Control	. 54
	4.14.4 CWMP Settings	. 55
	4.14.5 SNMP Settings	. 56
	4.14.6 Backup & Restore	. 57
	4.14.7 Factory Defaults	. 57
	4.14.8 Firmware Upgrade	. 58
	4.14.9 Reboot	. 59
	4.14.10 Statistics	. 59
Арр	endix A: Specifications	61
Арр	endix B: Troubleshooting	62
Арр	endix C: Technical Support	71

Package Contents

The following contents should be found in your package:

- > One TD-8840T ADSL2+ Modem Router
- > One Power Adapter for TD-8840T ADSL2+ Modem Router
- Quick Installation Guide
- > One RJ45 cable
- Two RJ11 cables
- > One ADSL splitter
- > One Resource CD for TD-8840T ADSL2+ Modem Router, including:
 - This User Guide
 - Other Helpful Information

Solution Note:

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact your distributor.

Chapter 1. Product Overview

Thank you for choosing the **TD-8840T ADSL2+ Modem Router**.

1.1 Overview of the Modem Router

The device is designed to provide a simple and cost-effective ADSL Internet connection for a private Ethernet network.

The TD-8840T ADSL2+ Modem Router connects to an Ethernet LAN or computers via standard Ethernet ports. The ADSL connection is made using ordinary telephone line with standard connectors. Multiple workstations can be networked and connected to the Internet using a single Wide Area Network (WAN) interface and single global IP address. The advanced security enhancements, **IP/MAC Filter**, **Application Filter** and **URL Filter** can help to protect your network from potentially devastating intrusions by malicious agents from the outside of your network.

Quick Start of the Web-based Utility is supplied and friendly help messages are provided for the configuration. Network and Router management is done through the Web-based Utility which can be accessed through local Ethernet using any web browser.

ADSL

The TD-8840T ADSL2+ Modem Router supports full-rate ADSL2+ connectivity conforming to the ITU and ANSI specifications. In addition to the basic DMT physical layer functions, the ADSL2+ PHY supports dual latency ADSL2+ framing (fast and interleaved) and the I.432 ATM Physical Layer.

1.2 Main Features

- > 4 10/100M RJ45 LAN ports (Auto MDI/MDIX), 1 RJ11 port.
- Downstream data rates up to 24Mbps, upstream data rates up to 3.5Mbps (With Annex M enabled).
- Supports long transfers, the max line length can reach to 6.5Km.
- Supports remote configuration and management through SNMP and CWMP.
- Supports PPPoE, it allows connecting the internet on demand and disconnecting from the Internet when idle.
- Quick response semi-conductive surge protection circuit, provides reliable ESD and surge-protect function.
- > High speed and asymmetrical data transmit mode, provides safe and exclusive bandwidth.
- Supports All ADSL industrial standards.
- Compatible with all mainstreams DSLAM (CO).
- > Provides integrated access of internet and route function which face to SOHO user.
- > Real-time Configuration and device monitoring.
- Supports Multiple PVC (Permanent Virtual Circuit).
- Built-in DHCP server.
- Built-in firewall, supports IP/MAC filter, Application filter and URL filter.
- Supports Virtual Server, DMZ host and IP Address Mapping.
- Supports Dynamic DNS, UPnP and Static Routing.
- Supports system log and flow Statistics.
- Supports firmware upgrade and Web management.

1.3 Panel Layout

1.3.1 The Front Panel



Figure 1-1

The Router's LEDs are located on the front panel (View from left to right). They indicate the device's working status. For details, please refer to LED Explanation.

LED Explanation:

Name	Status	Indication	
On		Power is on.	
Fower	Off	Power is off.	
On The A		The ADSL port is linked up.	
ADSL	Flash	The ADSL negotiation is in progress.	
Off The A		The ADSL port is linked down.	
	On	A successful PPP connection has been built.	
Internet	Flash	Data is being transferred over the Internet.	
	Off	There is no successful PPP connection or the Router works on Bridge mode.	
	On	There is a successful connection on the corresponding 1~4 (LAN) port but no activity.	
1~4 (LAN)	Off	There is no connection on the corresponding 1~4 (LAN) port or the connection is abnormal.	
	Flash	Data is being transferred over the 1~4 (LAN) port	

1.3.2 The Back Panel

The Router's ports, where the cables are connected, and RESET button are located on the back



Figure 1-2

- > **POWER:** The Power socket is where the power adapter connects to.
- > **ON/OFF:** The switch for the power.
- > **RESET:** There are two ways to reset the Router's factory defaults.

Method one: With the Router powered on, use a pin to press and hold the Reset button for at least 5 seconds. And the Router will reboot to its factory default settings.

Method two: Restore the default setting from "Maintenance-SysRestart" of the Router's Web-based Utility.

- LAN (4~1): Through the port, you can connect the Router to your PC or the other Ethernet network devices.
- > **ADSL:** Through the port, you can connect the Router to the splitter or to the Internet directly.

Chapter 2. Connecting the Modem Router

2.1 Installation Environment

- > The Product should not be located where it will be exposed to moisture or excessive heat.
- Place the Router in a location where it can be connected to the various devices as well as to a power source.
- Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard.
- > The Router can be placed on a shelf or desktop.
- Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.

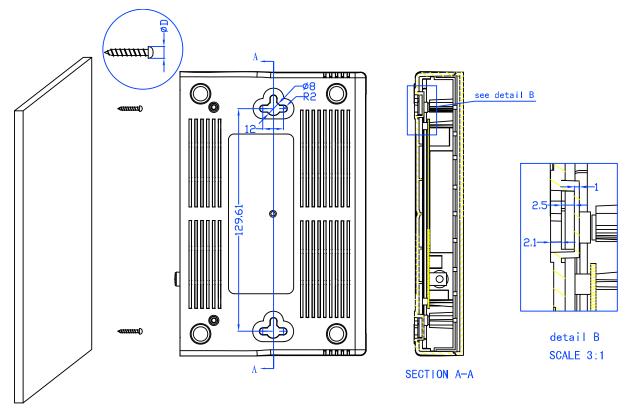


Figure 2-1

Note:

The diameter of the screw, 2.0mm<D<8.0mm, and the distance of two screws is 129.61mm. The screw that project from the wall need around 4mm based, and the length of the screw need to be at least 20mm to withstand the weight of the product.

2.2 Connecting the Modem Router

Before installing the device, please make sure your broadband service provided by your ISP is available. If there is any problem, please contact your ISP. Before cable connection, cut off the power supply and keep your hands dry. You can follow the steps below to install it.

Step 1: Connect the ADSL Line.

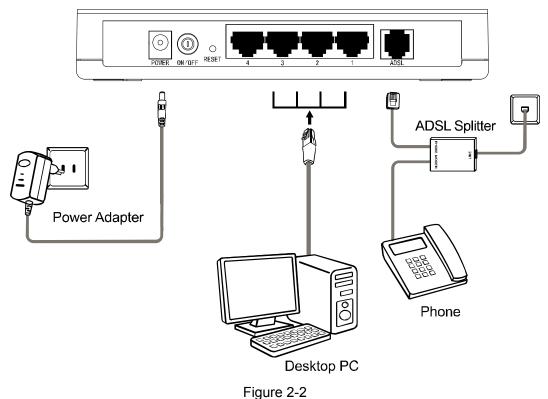
Method one: Plug one end of the twisted-pair ADSL cable into the ADSL port on the rear panel of , and insert the other end into the wall socket.

Method two: You can use a separate splitter. External splitter can divide the data and voice, and then you can access the Internet and make calls at the same time. The external splitter has three ports:

- LINE: Connect to the wall jack
- PHONE: Connect to the phone sets
- MODEM: Connect to the ADSL port of

Plug one end of the twisted-pair ADSL cable into the ADSL port on the rear panel of . Connect the other end to the MODEM port of the external splitter.

- Step 2: Connect the Ethernet cable. Attach one end of a network cable to your computer's Ethernet port or a regular hub/switch port, and the other end to the LAN port on the Modem Router.
- Step 3: Power on the computers and LAN devices.
- **Step 4:** Attach the power adapter. Connect the power adapter to the power connector on the rear of the device and plug in the adapter to a electrical outlet or power extension. The electrical outlet shall be installed near the device and shall be easily accessible.



Chapter 3. Quick Installation Guide

3.1 Configuring the PC

After you directly connect your PC to the Modem Router or connect your adapter to a Hub/Switch which has connected to the Modem Router, you need to configure your PC's IP address. Follow the steps below to configure it.

Step 1: Click the Start menu on your desktop, right click My Network Places, and then select Properties (shown in Figure 3-1).



Figure 3-1

Step 2: Right click Local Area Connection (LAN), and then select Properties.

Network Connections				
File Edit View Favorites Tools Advanced H	elp	2		
🕞 Back - 🕥 - 🏂 🔎 Search 🎼 Fold	ders 🛄 🗸			
Address 🔕 Network Connections	×	🔁 Go		
Network Tasks Image: Create a new connection Image: Create a new connection Disable Image: Create a new con	r connections e Shortcut e me			
Other Places				
Control Panel My Network Places My Documents My Computer				



Step 3: Select General tab, highlight Internet Protocol (TCP/IP), and then click the Properties button.

🕹 Local Area Connection Properties 🛛 🔹 💽
General Authentication Advanced
Connect using:
Realtek RTL8139 Family PCI Fast Etł <u>Configure</u>
This connection uses the following items:
 Client for Microsoft Networks Eile and Printer Sharing for Microsoft Networks QoS Packet Scheduler
I <u>n</u> stall Uninstall Properties
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected Notify <u>m</u> e when this connection has limited or no connectivity
OK Cancel

Figure 3-3

Step 4: Configure the IP address as Figure 3-4 shows. After that, click OK.

Internet Protocol (TCP/IP)Properties 🛛 🛛 💽 🔀							
General							
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.							
O <u>O</u> btain an IP address automatically							
Use the following IP address:							
<u>I</u> P address:	192.168.1.2						
S <u>u</u> bnet mask:	255 . 255 . 255 . 0						
<u>D</u> efault gateway:	192.168.1.1						
O D <u>b</u> tain DNS server address autom	atically						
• Us <u>e</u> the following DNS server add	resses:						
Preferred DNS server:	192.168.1.1						
<u>A</u> lternate DNS server:	· · ·						
Ad <u>v</u> anced							
OK Cancel							

Figure 3-4

Note:

You can configure the PC to get an IP address automatically, select "Obtain an IP address automatically" and "Obtain DNS server address automatically" in the screen above.

Now, you can run the Ping command in the command prompt to verify the network connection. Please click the **Start** menu on your desktop, select **run** tab, type **cmd or command** in the field and press **Enter**. Type **ping 192.168.1.1** on the next screen, and then press **Enter**.

If the result displayed is similar to the screen below, the connection between your PC and the Modem Router has been established.

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=64
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = Oms, Maximum = Oms, Average = Oms



•

If the result displayed is similar to the screen shown below, it means that your PC has not connected to the Modem Router.

```
Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Figure 3-6

You can check it following the steps below:

1) Is the connection between your PC and the Modem Router correct?

The LEDs of LAN port which you link to the device and the LEDs on your PC's adapter should be lit.

2) Is the TCP/IP configuration for your PC correct?

If the Router's IP address is 192.168.1.1, your PC's IP address must be within the range of $192.168.1.2 \sim 192.168.1.254$.

3.2 Login

Once your host PC is properly configured, please proceed as follows to use the Web-based Utility: Start your web browser and type the private IP address of the Router in the URL field: **192.168.1.1**.

1. To access the configuration utility, open a web-browser and type the default address http://192.168.1.1 in the address field of the browser.

Address http://192.168.1.1

Figure 3-7

After a moment, a login window will appear, similar to the Figure 3-8. Enter **admin** for the User Name and Password, both in lower case letters. Then click the **OK** button or press the **Enter** key.

Connect to 192.1	68.1.1 ? 🔀
	G
TD-8840T	
User name:	🔮 admin 💌
Password:	••••
	Remember my password
	OK Cancel

Figure 3-8

P Note:

- 1) Do not mix up the user name and password with your ADSL account user name and password which are needed for PPP connections.
- If the above screen does not pop up, it means that your Web-browser has been set to a proxy. Go to Tools menu→Internet Options→Connections→LAN Settings, in the screen that appears, cancel the Using Proxy checkbox, and click OK to finish it.
- 2. After your successful login, you will see the Login screen as shown in Figure 3-9. Click **Quick Setup** menu to access **Quick Setup Wizard**.

TD-8840T ADSL2+ Modem Router User Guide

Status	Basic Status								
Quick Setup									
Network	Device Information								
DHCP Server	Firmware version: 0.7.0 0.11 v0007.0 Build 120713 Rel.45664n								
Route Settings	Hardware version: TD-8840T v4 0000000								
Forwarding			Syste	m up tim	e: 0 c	day(s) 01:19:33			
Parent Control									
Firewall	DSL			ino Statu	a. D6	SL Disconnected			
Bandwidth Control		D	ے SL Modula						
IP & MAC Binding		-				inex A/VJ/L/M			
Dynamic DNS									
Diagnostic		Current Rate (K	hna)			0		Downstream 0	
System Tools		Max Rate (Kbp				0		0	
		SNR Margin (d				0	0		
		Line Attenuation				0	0		
		Errors (Pkts)	0			0		
	WAN								
		Name	Connect Type		I/VCI	IP/Mask	Gateway	DNS	Status
		br_1_32_0	Bridge	e .	1/32	N/A	N/A	N/A	DSL Disconnected
		br_0_33_1	Bridge	e (0/33	N/A	N/A	N/A	DSL Disconnected
		br_0_35_2	Bridge	e (0/35	N/A	N/A	N/A	DSL Disconnected
		br_0_100_3	Bridge	e 0	/100	N/A	N/A	N/A	DSL Disconnected
		br_8_35_4	Bridge	e (3/35	N/A	N/A	N/A	DSL Disconnected
		br_8_48_5	Bridge	e	3/48	N/A	N/A	N/A	DSL Disconnected
		br_0_38_6	Bridge	e	0/38	N/A	N/A	N/A	DSL Disconnected
		pppoe_8_35_7	PPPoE		3/35	0.0.0.0 /0	0.0.0.0	0.0.0.0 0.0.0.0	DSL Disconnected
	LAN								
	MAC Address: 00:AA:BB:01:23:45								
	IP Address: 192.168.1.1								
	Subnet Mask: 255.255.0								
	DHCP: Enabled								

Figure 3-9

3. Change the VPI or VCI values which are used to define a unique path for your connection. If you have been given specific settings for this to configuration, type in the correct values assigned by your ISP. Click Next.

Quick Setup - DSL	
Please enter the VPI/VCI provided by your ISP(Internet Service F	Provider).
VPI:	8 (Range: 0-255)
VCI:	35 (Range: 1-65535)
	Previous Next

Figure 3-10

4. Here we select PPPoE WAN Link Type for example, enter the **Username**, **Password** and **Confirm Password** given by your ISP, and then click **Next**.

Quick Setup - PPPoE	
Please enter ADSL Username and Password. If you forget to	hem, please consult your ISP.
Username:	
Password:	
Confirm Password:	
	Previous Next

Figure 3-11

5. On this page, please confirm all parameters. Click **Previous** to modify or click the **Save** button to make the configuration take effect.

Click BACK to modify or click the SAVE button to make the configuration take effect
8/35
PPPoE
tplink

vious Save

Figure 3-12

6. You will see the **Complete** screen below, click **Finish** to complete these settings.

Quick	Setup - Complete
Se	stup Status:
	WAN Connection Configuring Success
	Gateway and DNS Configuring Success
Se	tup has completed.Please click FINISH to exit.
	ote: If the Modem Router still can not connect to the Internet, please click "Network > WAN Settings" menu on the left to confirm the WAN connection type and mode on the AN Settings page.
	Finish

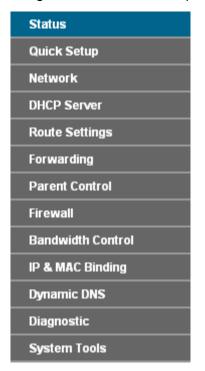
Figure 3-13

Chapter 4. Configuring the Modem Router

This chapter will show each Web page's key function and the configuration way.

4.1 Login

After your successful login, you will see the fifteen main menus on the left of the Web-based utility. On the right, there are the corresponding explanations and instructions.



The detailed explanations for each Web page's key function are listed below.

4.2 Status

Choose "Status", you can see the corresponding information about Device Information, DSL, WAN and LAN.

TD-8840T ADSL2+ Modem Router User Guide

Device Information							
		Firmwar	e version: 0	.7.0 0.11 v0007.0 Bui	ld 120713 Rel.45664	n	
		Hardward	e version: T	D-8840T v4 0000000	D		
		Systen	n up time: 0	day(s) 01:19:33			
DSL							
		Lii	ne Status: [SL Disconnected			
	D		tion Type: N				
		An	nex Type: A	nnex A/VJ/L/M			
			Up	stream		Downstream	
	Current Rate (K	(bps)		0		0	
	Max Rate (Kb)	ps)		0		0	
	SNR Margin (o	-		0		0	
	Line Attenuation			0		0	
	Errors (Pkts	5)		0		0	
WAN		Connecti	on				
	Name	Туре	VPI/VCI	IP/Mask	Gateway	DNS	Status
	br_1_32_0	Bridge	1/32	N/A	N/A	N/A	DSL Disconnected
	br_0_33_1	Bridge	0/33	N/A	N/A	N/A	DSL Disconnected
	br_0_35_2	Bridge	0/35	N/A	N/A	N/A	DSL Disconnected
	br_0_100_3	Bridge	0/100	N/A	N/A	N/A	DSL Disconnected
	br_8_35_4	Bridge	8/35	N/A	N/A	N/A	DSL Disconnected
	br_8_48_5	Bridge	8/48	N/A	N/A	N/A	DSL Disconnected
	br_0_38_6	Bridge	0/38	N/A	N/A	N/A	DSL Disconnected
	pppoe_8_35_7	PPPoE	8/35	0.0.0.0 /0	0.0.0.0	0.0.0.0 0.0.0.0	DSL Disconnected
LAN	br_0_38_6	Bridge PPPoE MAC IP	0/38	N/A 0.0.0.0 /0 0:AA:BB:01:23:45 92.168.1.1	N/A	N/A	Disco Disco Disco

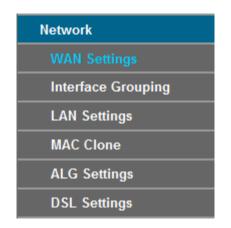
Figure 4-1

4.3 Quick Setup

Please refer to Section <u>3.2 Login</u>.

4.4 Network

Choose "**Network**", there are many submenus under the main menu. Click any one of them, and you will be able to configure the corresponding function.



4.4.1 WAN Settings

Choose "**Network**" \rightarrow "**WAN Settings**", and you will see the WAN Port Information Table in the screen similar to Figure 4-2, which describes the WAN port settings and the relevant manipulation to each interface. There are five different configurations for the connection types, which are Static IP, Dynamic IP, PPPoE, IPoA, and Bridge. You can select the corresponding types according to your needs.

This page is fo	This page is for choosing the type of WAN interface. Choose Add, or Edit to configure a WAN interface.							
Name	Туре	VPI/VCI	IP/MASK	Gateway	DNS	Status	Connect	Edit
br_1_32_0	Bridge	1/32	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_0_33_1	Bridge	0/33	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_0_35_2	Bridge	0/35	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_0_100_3	Bridge	0/100	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_8_35_4	Bridge	8/35	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_8_48_5	Bridge	8/48	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet
br_0_38_6	Bridge	0/38	N/A	N/A	N/A	DSL Disconnected	Connect	View Delet

Figure 4-2

Click **Add** to add a new entry, you can configure the parameters for ATM and WAN Service in the next screen (shown in Figure 4-3).

TD-8840T ADSL2+ Modem Router User Guide

AN Configuration	
WAN port can be set on this page.	
ATM Configuration	8
VPI(0-255): VCI(1-65535):	
Notice: The current PVC has a plurality of connection, the	
House. The current if yo has a planality of confidential, and	Hide
Notice:Do not change the parameters below unless nece	
Encapsulation Mode:	LLC Y
ATM QoS Type:	
PCR:	
SCR:	
MBS:	
WAN Service Setup	
WAN Connection Type	PPPoE 💌
PPP Username:	
PPP Password:	
Confirm Password:	
Choose the right connection type according to your need	eds:
O Connect on demand. The connection will be automa	
Max Idle Time: 15 minutes (0 means remain activ	
Onnect automatically. The connection will be automatically.	
Connect manually, user connects manually	
Max Idle Time: 15 minutes (0 means remain activ	tive at all time)
Authentication Method:	AUTO_AUTH 🔽
Default Gateway:	Current Connection
,	
• main the second	(Hide -
Service Name:	
Server Name:	
MTU(bytes):	
Enable Fullcone NAT Enable SPI Firewall	_
Enable SFI Filewall Enable IGMP Proxy	
Use IP address specified by ISP	_
Echo request interval:	30 (0~120 seconds, 0 means no request)
Set DNS server manually	

Figure 4-3

4.4.1.1 Static IP

Select this option if your ISP provides static IP information to you. You should set static IP address, IP subnet mask, and gateway address in the screen below.

TD-8840T ADSL2+ Modem Router User Guide

WAN port can be set on this page.			
ATM Configuration			
VPI(0-255):	8		
VCI(1-65535):	35		
Notice: The current PVC has a plurality of connection, the	e following para	meters prohibiting to modifying!	
			Hi
Notice:Do not change the parameters below unless nece	essary!		
Encapsulation Mode:	LLC	*	
ATM QoS Type:	UBR	*	
PCR:	0	Frames/s	
SCR:		Frames/s	
MBS:		Frames/s	
WAN Connection Type	Static IP	*	
IP Address: Subnet Mask	0.0.0.0		
Subnet Mask:	0.0.0.0	(Optional)	
Subnet Mask: Gateway:	0.0.0.0	(Optional)	
Subnet Mask: Gateway: DNS Server:	0.0.0.0	(Optional)	
Subnet Mask: Gateway:	0.0.0.0		
Subnet Mask: Gateway: DNS Server:	0.0.0.0	(Optional) (Optional)	
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway:	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne	(Optional) (Optional)	Hi
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway: MTU(bytes):	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne 1500 (1500	(Optional) (Optional)	Hit
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway: MTU(bytes): Enable NAT	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne 1500 (1500 V	(Optional) (Optional)	Hit
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway: MTU(bytes):	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne 1500 (1500	(Optional) (Optional)	Hi
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne 1500 (1500 V 1	(Optional) (Optional)	Hit
Subnet Mask: Gateway: DNS Server: Secondary DNS server: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT Enable SPI Firewall	0.0.0.0 0.0.0.0 0.0.0.0 0.0.0.0 Current Conne 1500 (1500 V 1	(Optional) (Optional)	His

Figure 4-4

ATM Configuration:

- VPI (0~255): Identifies the virtual path between endpoints in an ATM network. The valid range is from 0 to 255. Please input the value provided by your ISP.
- VCI (1~65535): Identifies the virtual channel endpoints in an ATM network. The valid range is from 1 to 65535 (1 to 31 is reserved for well-known protocols). Please input the value provided by your ISP.

Click **Advanced**, advanced selections of ATM Configuration can be shown.

- Encapsulation Mode: Select the encapsulation mode for the Static IP Address. Here you can leave it default.
- > **ATM Qos Type:** Select ATM Qos Type provided by ISP, and the type is UBR by default.

WAN Service Setup:

- > **IP Address:** Enter the IP address in dotted-decimal notation provided by your ISP.
- Subnet Mask: Enter the subnet Mask in dotted-decimal notation provided by your ISP, usually is 255.255.255.0.
- Default Gateway (Optional): Enter the gateway IP address in dotted-decimal notation provided by your ISP.
- DNS Server/ Secondary DNS Server: Here you can set DNS Server (at least one) manually. The Route will use this DNS Server for priority.

- Default Gateway: select a WAN Interface from the drop-down list as the IPv4 default gateway.
- MTU (bytes): Maximum Transmission Unit Size. Check this box then you can change the MTU size. The default MTU value is 1500 Bytes. It is not recommended that you change the default value unless required by your ISP.
- Enable NAT: This technology translates the IP addresses of a local area network to a different IP address for the Internet. If this Modem Router is hosting your network's connection to the Internet, please select the check box. If another Router exists in your network, you don't need to select the option.
- > Enable Fullcone NAT: It is a type of NAT, if not enabled, the default NAT will act.
- Enable SPI Firewall: A SPI firewall enhances network's security. Select the option to use a firewall, or else without a firewall.
- Enable IGMP Proxy: IGMP (Internet Group Management Protocol) is used to manage multicasting on TCP/IP networks. Some ISPs use IGMP to perform remote configuration for client devices, such as the Modem Router. The default value is disabled, and if you are not sure, please contact your ISP or just leave it.

Click the **Save** button to save the settings.

4.4.1.2 Dynamic IP

Select this option, the Modem Router will be able to obtain IP network information dynamically from a DHCP server provided by your ISP.

AN Configuration			
WAN port can be set on this page.			
ATM Configuration			
VPI(0-255):	8		
VCI(1-65535):	35		
Notice: The current PVC has a plurality of connection, the	e following parar	neters prohibiting to modifying!	
Notice:Do not change the parameters below unless nece	ecaryl		Hide
Encapsulation Mode:		v	
ATM QoS Type:		v	
PCR:		Frames/s	
SCR:		Frames/s	
MBS:		Frames/s	
WAN Service Setup WAN Connection Type	Dynamic IP	~	
IP Address: Subnet Mask: Gateway:	0.0.0.0 0.0.0.0 0.0.0.0		
WAN Connection Type IP Address: Subnet Mask:	0.0.0.0		
WAN Connection Type IP Address: Subnet Mask: Gateway:	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec		Hide
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway:	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌	Hida
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway: MTU(bytes):	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌	Hida
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT Enable SPI Firewall	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌	Hide
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT Enable SPI Firewall Enable IGMP Proxy	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌 as default,do not change unless necessary)	Hide
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT Enable SPI Firewall	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌 as default,do not change unless necessary)	Hide
WAN Connection Type IP Address: Subnet Mask: Gateway: Default Gateway: MTU(bytes): Enable NAT Enable Fullcone NAT Enable SPI Firewall Enable IGMP Proxy	0.0.0.0 0.0.0.0 0.0.0.0 Current Connec	tion 💌 as default,do not change unless necessary)	Hide

Figure 4-5

Click Advanced, advanced selections for WAN Service Setup can be shown.

- MTU (bytes): Maximum Transmission Unit Size. Check this box then you can change the MTU size. The default MTU value is 1500 Bytes. It is not recommended that you change the default value unless required by your ISP.
- Enable NAT: This technology translates the IP addresses of a local area network to a different IP address for the Internet. If this Modem Router is hosting your network's connection to the Internet, please select the check box. If another Router exists in your network, you don't need to select the option.
- > Enable Fullcone NAT: It is a type of NAT, if not enabled, the default NAT will act.
- Enable SPI Firewall: A SPI firewall enhances network's security. Select the option to use a firewall, or else without a firewall.
- Enable IGMP Proxy: IGMP (Internet Group Management Protocol) is used to manage multicasting on TCP/IP networks. Some ISPs use IGMP to perform remote configuration for client devices, such as the Modem Router. The default value is disabled, and if you are not sure, please contact your ISP or just leave it.
- Get IP Unicast: This is disabled by default. The minority of DHCP Server of ISP will not support to enable this. When the Route is connected right but IP cannot get, you can select this box.

Primary DNS Server/ Secondary DNS Server: Choose "Set DNS Server manually", you can set DNS Server (at least one) manually here. The Route will use this DNS Server for priority.

Click the Save button to save the settings.

4.4.1.3 PPPoE

If your ISP provides a **PPPoE** connection and you need to use an ATM Interface, choose **PPPoE** in the drop-down list, and then the screen will be displayed as below.

WAN Configuration	
WAN port can be set on this page.	
ATM Configuration	
VPI(0-255):	
VCI(1-65535):	
Notice: The current PVC has a plurality of connection, the	
Notice:Do not change the parameters below unless neo	Hide A
Encapsulation Mode:	
ATM QoS Type:	
PCR:	
SCR:	
MBS:	Frames/s
WAN Service Setup	
WAN Connection Type	e PPPoE V
PPP Username:	
PPP Password:	
Confirm Password:	
Choose the right connection type according to your nee	
Connect on demand. The connection will be autom	
Max Idle Time: 15 minutes (0 means remain act	
Connect automatically. The connection will be automatically.	tomatically on after startup or disconnection
 Connect manually,user connects manually Max Idle Time: 15 minutes (0 means remain act 	ative at all time)
Maxiule Time. 15 Thinutes (o means remain act	cuve at an time)
Authentication Method:	I: AUTO_AUTH
Default Gateway:	Current Connection 💌
	(Hide 🔺
Service Name:	
Server Name:	(do not change unless necessary)
MTU(bytes):	1480 (1480 as default, do not change unless necessary)
Enable Fullcone NAT	Т
Enable SPI Firewall	_
Enable IGMP Proxy	
Use IP address specified by ISP	
Echo request interval:	
Set DNS server manually	y 🗆
	Course Dools
	Save Back



- PPP Username/Password/Confirm Password: Enter the User Name, Password and Confirm Password provided by your ISP. These fields are case-sensitive.
- Authentication Method: Select the Authentication Method from the drop-down list, the default method is AUTO_AUTH, and you can leave it as a default setting.

Choose the right connection type according to your needs: For PPPoE connection, you can select Connect on demand or Connect automatically or Connect manually. Connect on demand is dependent on the traffic. If there is no traffic (or Idle) for a pre-specified period of time), the connection will tear down automatically. And once there is traffic send or receive, the connection will be automatically on.

Click Advanced, advanced selections for WAN Service Setup can be shown.

Service Name/Server Name: Enter the Service Name and Server Name if it was provided by your ISP. You can leave them blank, if the ISP doesn't provide them.

4.4.1.4 PPPoA

If your ISP provides a **PPPoA** connection and you need to use an ATM Interface, choose **PPPoA** in the drop-down list, and then the screen will be displayed as below.

The configuration is similar to **PPPoE**. Please refer to the section <u>4.4.1.3 PPPoE</u> to configure this part.

WAN Configuration		
WAN port can be set on this page.		
ATM Configuration		
VPI(0-255):	0	
VCI(1-65535):	32	
	52	
Notice: Do not change the perameters below upless per-	accord.	Hide 🔶
Notice:Do not change the parameters below unless nece Encapsulation Mode:	VC-Mux ¥	u l
ATM QoS Type:	UBR V	
PCR:		Frames/s
SCR:		Frames/s
MBS:		Frames/s
WBS.		riames/s
WAN Service Setup		
WAN Connection Type	PPP0A 🗸	v
PPP Username:		
PPP Password:		
Confirm Password:		
Choose the right connection type according to your nee	ds:	
Connect on demand. The connection will be automaticated and the connection		here is Internet access
Max Idle Time: 15 minutes (0 means remain act	-	
Onnect automatically. The connection will be autor		startup or disconnection
Connect manually. User connects manually		
Max Idle Time: 15 minutes (0 means remain act	ive at all time)	
Authentication Method:	AUTO_AUTH	×
Default Gateway:	Current Connectio	tion 👻
	1	
	(1.100	Hide +
MTU(bytes):	1480 (1480 as	as default,do not change unless necessary)
Enable SPI Firewall Enable IGMP Proxy		
Use IP address specified by ISP		
Echo request interval:	30 (0~120 s) seconds, 0 means no request)
Set DNS server manually		
	Save	Back

Figure 4-7

4.4.1.5 IPoA

If your ISP provides an IPoA connection, select **IPoA** option for the **WAN service type** on the screen.

WAN Configuration			
WAN port can be set on this page.			
ATM Configuration			
VPI(0-255):	0		
VCI(1-65535):	32		
			Hide 🔺
Notice:Do not change the parameters below unless nec	essarv		Hide 🔺
Encapsulation Mode:	LLC		
ATM QoS Type:	UBR		
PCR:		ames/s	
SCR:		ames/s	
MBS:	1	ames/s	
	1		
WAN Service Setup			
WAN Connection Type	IPoA 🗸		
IP Address:	0.0.0.0		
Subnet Mask:	0.0.0.0		
GateWay:	0.0.0.0		
DNS Server:	0.0.0.0	(Optional)	
Secondary DNS server:	0.0.0.0	(Optional)	
-			
Default Gateway:	Current Connection	1 ×	
			Hide 🔺
MTU(bytes):	1500 (1500 as	default,do not change unless necessary)	
Enable NAT	\checkmark		
Enable SPI Firewall			
Enable IGMP Proxy			
	Cours.	Dli	
	Save	Back	

Figure 4-8

- IP Address/Subnet Mask: Enter the IP Address and Subnet Mask provided by ISP. If you forget, you can ask your ISP.
- > DNS Server/Secondary DNS Server: Type in your preferred DNS server.
- Default Gateway: select a WAN Interface from the drop-down list as the IPv4 default gateway.

4.4.1.6 Bridge

If you select this type of connection, the modem can be configured to act as a bridging device between your LAN and your ISP. Bridges are devices that enable two or more networks to communicate as if they are two segments of the same physical LAN.

TD-8840T ADSL2+ Modem Router User Guide

WAN Configuration		
WAN port can be set on this page.		
ATM Configuration		
VPI(0-255):	0	
VCI(1-65535):	32	
		Hide •
Notice:Do not change the parameters below unless nece	ssary!	
Encapsulation Mode:	LLC	▼
ATM QoS Type:	UBR	v
PCR:	0	Frames/s
SCR:		Frames/s
MBS:		Frames/s
WAN Service Setup		
WAN Connection Type	Bridge	v
	Save	Back
	Jave	Luck

Figure 4-9

P Note:

After you finish the Internet configuration, please click **Save** to make the settings take effect.

4.4.2 Interface Grouping

Choose "**Network**" \rightarrow "Interface Grouping", you can view all the current groups on this page (shown in Figure 4-10).

This page displays all the cur Note: It is not allowed to disal				IS.
Note. It is not allowed to disal	VLAN: Enable 			
	Grouping	Delete	WAN	LAN
			br_1_32_0	LAN4
			br_0_33_1	LAN3
			br_0_35_2	LAN2
	Default		br_0_100_3	LAN1
			br_8_35_4	
			br_8_48_5	
			br_0_38_6	

Figure 4-10

VLAN: Enable or disable this function. Virtual LAN (VLAN) is a group of devices on one or more LANs that are configured so that they can communicate as if they were attached to the same LAN, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, it is very flexible for user/host management, bandwidth allocation and resource optimization. If you want to active this function, this function must be enabled. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the **Add** button. The **Remove** button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

Click the **Add** button. You can add a new interface group in the next screen. For example, you want LAN1 and LAN3 to be a group called Group 1 over br_0_35_0 WAN interface, you can refer to the following figure.

Add New Group		
Groups can be set on this page.		
	Group Name Group 1	
	Available LAN LAN4 LAN2 Added Interface LAN3 LAN1 br_0_35_2	
	Available WAN <	
	br 0_33_1 br 0_100_3 br 8_35_4 br 8_48_5 br 0_38_6	
	Save Back	

Figure 4-11

Click **Save** to make the entry effective immediately

4.4.3 LAN Settings

Choose "**Network**"→"**LAN Settings**" menu, and you will see the LAN screen (shown in Figure 4-12). Please configure the parameters for LAN ports according to the descriptions below.

The parameters of LAN can be configured on this page.		
Note: If the LAN IP address or subnet mask is changed, please is same subnet with the new LAN IP.	makes sure the DHC	P Address Pool and the static IP assigned by DHCP Server are in the
Group:	Default	
IP Address:	192.168.1.1	
Subnet Mask:	255.255.255.0	
Enanble IGMP Snooping		
Enable Second IP		
DHCP Server:	🔿 Disable 💿 Ena	able ODHCP Relay
Start IP Address:	192.168.1.100	
End IP Address:	192.168.1.199	
Leased Time:	1440 minutes (1~	2880 minutes, the default value is 1440)
Gateway:	192.168.1.1	(Optional)
Default Domain:		(Optional)
Primary DNS server:	0.0.0.0	(Optional)
Secondary DNS server:	0.0.0.0	(Optional)

Figure 4-12

- IP Address: You can configure the Modem Router's IP Address and Subnet Mask for LAN Interface.
 - **IP Address:** Enter the Modem Router's local IP Address, then you can access to the Web-based Utility via the IP Address, the default value is 192.168.1.1.
 - Subnet Mask: Enter the Modem Router's Subnet Mask, the default value is 255.255.255.0.
- Enable IGMP Snooping: If you select the option, please choose the IGMP Mode: Standard Mode or Blocking Mode.
- Enable Second IP: You can configure the Modem Router's second IP Address and Subnet Mask for LAN Interface through which you can also access to the Web-based Utility as the default IP Address and Subnet Mask.
- DHCP Server: These settings allow you to configure the Modem Router's Dynamic Host Configuration Protocol (DHCP) server function. The DHCP server is enabled by default for the Modem Router's Ethernet LAN interface. DHCP service will supply IP settings to computers which are configured to automatically obtain IP settings that are connected to the Modem Router though the Ethernet port. When the Modem Router is set for DHCP, it becomes the default gateway for DHCP client connected to it. Keep in mind that if you change the IP address of the Modem Router, you must change the range of IP addresses in the pool used for DHCP on the LAN.
 - Start IP Address: Enter a value for the DHCP server to start with when issuing IP addresses. Because the default IP address for the Modem Router is 192.168.1.1, the default Start IP Address is **192.168.1.100**, and the Start IP Address must be 192.168.1.100 or greater, but smaller than 192.168.1.254.
 - End IP Address: Enter a value for the DHCP server to end with when issuing IP addresses. The End IP Address must be smaller than 192.168.1.254. The default End IP Address is **192.168.1.254**.
 - Leased Time: The Leased Time is the amount of time in which a network user will be allowed connection to the Modem Router with their current dynamic IP address. Enter the amount of time, in hours, then the user will be "leased" this dynamic IP address. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is **1440** minutes.

The detailed configuration about DHCP server, please refer to section 4.5 DHCP Server.

4.4.4 MAC Clone

Choose menu "Advanced Setup" \rightarrow "MAC Clone", you can configure the MAC address of the WAN Interface as shown below.

You can select corresponding WAN Interface from the drop-down list and click **Clone** button to clone your current PC MAC, and then click **Save**.

MAC Address	Operation	
:61:86:E5:B2:DC	MAC Clone To	

Figure 4-13

P Note:

Only the WAN Ports can use MAC Address Clone function. All the clone MAC addresses must not be the same with each other.

4.4.5 ALG Settings

Choose menu "Advanced Setup" \rightarrow "ALG Settings", and then you can configure the basic security in the screen as shown in Figure 4-14.

Application Layer Gateway Settings	
This page allows you to enable or disable gateway	of application layer.
Virtual Private Network(VPN)	
PPTP Pass-through:	Enable O Disable
L2TP Pass-through:	💿 Enable 🔿 Disable
IPSec Pass-through:	● Enable ○ Disable
Application Layer Gateway(ALG)	
FTP ALG:	Enable O Disable
TFTP ALG:	Inable O Disable
	Save

Figure 4-14

- Virtual Private Network (VPN) VPN Passthrough must be enabled if you want to allow VPN tunnels using VPN protocols to pass through the Modem Router.
 - **PPTP Pass-through** Point-to-Point Tunneling Protocol (PPTP) allows the Point-to-Point Protocol (PPP) to be tunneled through an IP network. To allow PPTP tunnels to pass through the Modem Router, click **Enable**.
 - **L2TP Pass-through** Layer Two Tunneling Protocol (L2TP) is the method used to enable Point-to-Point sessions via the Internet on the Layer Two level. To allow L2TP tunnels to pass through the Modem Router, click **Enable**.
 - **IPSec Pass-through** Internet Protocol security (IPSec) is a suite of protocols for ensuring private, secure communications over Internet Protocol (IP) networks, through the use of cryptographic security services. To allow IPSec tunnels to pass through the Modem Router, click **Enable**.
- Application Layer Gateway (ALG) It is recommended to enable Application Layer Gateway (ALG) because ALG allows customized Network Address Translation (NAT) traversal filters to be plugged into the gateway to support address and port translation for certain application

layer "control/data" protocols such as FTP, TFTP etc.

- **FTP ALG** To allow FTP clients and servers to transfer data across NAT, click **Enable**.
- **TFTP ALG** To allow TFTP clients and servers to transfer data across NAT, click **Enable**.

Click the **Save** button to save your settings.

4.4.6 DSL Settings

Choose "Advanced Setup" \rightarrow "DSL Settings", you can select the DSL Modulation Type and Annex Type in the next screen. The DSL feature can be selected when you meet the physical connection problem. Please check the proper settings with your Internet service provider.

DSL Configuration	
DSL parameters can be set on this page.	
DSL Modulation Type	Auto Sync-up
Annex Type	Annex A/I/J/L/M
	✓ Enable Bit Swap ✓ Enable SRA
	Save

Figure 4-15

- DSL Modulation Type: Select the DSL operation Modulation Type which your DSL connection uses.
- > Annex Type: Select the DSL operation Annex Type which your DSL connection uses.

Click the **Save** button to save your settings.

4.5 DHCP Server

Choose "DHCP Server", you can see the next submenus:



Click any of them, and you will be able to configure the corresponding function.

4.5.1 DHCP Settings

Choose menu "**DHCP Server**" \rightarrow "**DHCP Settings**", you can configure the DHCP Server on the page as shown in Figure 4-16. The Modem Router is set up by default as a DHCP (Dynamic Host Configuration Protocol) server, which provides the TCP/IP configuration for all the PC(s) that are connected to the Modem Router on the LAN.

TD-8840T ADSL2+ Modem Router User Guide

10	D 6		.	_
76	ΡS	set	ιn	us

This page allows you to set DHCP server which provide	s TCP/IP configura	tion for all the PCs connected to the Modern Router in the LAN.		
Gro	ups: Default			
IP Add	ress: 192.168.	1.1		
Subnet M	lask: 255.255.	255.0		
DHPC Set	rver: 🔘 Disable	e 💿 Enable 🔘 DHCP Relay		
Start IP Address:	192.168.1.100			
End IP Address:	192.168.1.199			
Address Lease Time:	1440 minutes (1	~2880 minutes, the default value is 120)		
Default Gateway:	192.168.1.1	(optional)		
Default Domain:		(optional)		
Primary DNS:	0.0.0	(optional)		
Secondary DNS:	0.0.0.0	(optional)		
Save				



- Start IP Address: Enter a value for the DHCP server to start with when issuing IP addresses. Because the default IP address for the Modem Router is 192.168.1.1, the default Start IP Address is 192.168.1.100, and the Start IP Address must be 192.168.1.100 or greater, but smaller than 192.168.1.254.
- End IP Address: Enter a value for the DHCP server to end with when issuing IP addresses. The End IP Address must be smaller than 192.168.1.254. The default End IP Address is 192.168.1.254.
- Address Lease Time: The Leased Time is the amount of time in which a network user will be allowed connection to the Modem Router with their current dynamic IP address. Enter the amount of time, in hours, then the user will be "leased" this dynamic IP address. After the dynamic IP address has expired, the user will be automatically assigned a new dynamic IP address. The default is 24 hours.
- Default Gateway (Optional.) It is suggested to input the IP address of the LAN port of the Modem Router. The default value is 192.168.1.1.
- > **Default Domain -** (Optional.) Input the domain name of your network.
- Primary DNS (Optional.) Input the DNS IP address provided by your ISP or consult your ISP.
- Secondary DNS (Optional.) Input the IP address of another DNS server if your ISP provides two DNS servers.
- DHCP Relay: Select Relay, then you will see the next screen, and the Modem Router will work as a DHCP Relay. A DHCP relay is a computer that forwards DHCP data between computers that request IP addresses and the DHCP server that assigns the addresses. Each of the device's interfaces can be configured as a DHCP relay. If it is enabled, the DHCP requests from local PCs will forward to the DHCP server runs on WAN side. To have this function working properly, please run on router mode only, disable the DHCP server on the LAN port, and make sure the routing table has the correct routing entry.

	Groups:	Default
	IP Address:	192.168.1.1
	Subnet Mask:	255.255.255.0
	DHPC Server:	🔘 Disable 🔘 Enable 💿 DHCP Relay
Remote Server	's IP Address: 0.0.	0.0
NUMBER AND A DESCRIPTION OF A DESCRIPTIO	Miconnections, Or the I	DHCP Relay may not take effect!

P Note:

- 1) To use the DHCP server function of the Modem Router, you must configure all computers on the LAN as "Obtain an IP Address automatically".
- 2) You have to disable NAT of the WAN connections, or the DHCP Relay may not take effect.
- 3) If you select **Disabled**, the DHCP function will not take effect.

Click the **Save** button to save your settings.

4.5.2 Clients List

Choose menu "**DHCP Server**" \rightarrow "Clients List", you can view the information about the clients attached to the Modem Router in the screen as shown in Figure 4-17.

HCP Clients List					
This p	age displ	ays the information of DHC	CP clients.		
	ID	Client Name	MAC Address	IP Address	Valid Time
	1	tplink13488	40:61:86:E5:B2:DC	192.168.1.100	23:42:05

Figure 4-17

- > Client Name: The name of the DHCP client
- > MAC Address: The MAC address of the DHCP client
- > IP Address: The IP address that the Modem Router has allocated to the DHCP client
- Valid Time: The time of the DHCP client leased. After the dynamic IP address has expired, a new dynamic IP address will be automatically assigned to the user.

You cannot change any of the values on this page. To update this page and to show the current attached devices, click the **Refresh** button.

4.5.3 Address Reservation

Choose menu "**DHCP Server**"→"Address Reservation", you can view and add a reserved address for clients via the next screen (shown in Figure 4-18). When you specify a reserved IP address for a PC on the LAN, that PC will always receive the same IP address each time when it accesses the DHCP server. Reserved IP addresses should be assigned to the servers that require permanent IP settings.

DHCP Add	ress Reser\	vation				
This pag	je displays the	e static IP assigned by DHCP Server and a	allows you to configure it by clicki	ing corresponding buttons.		
		MAC Address	IP Address	Groups	Status	Edit
		40:61:86:FC:6F:22	192.168.1.100	Default	Disabled	<u>Edit</u>
	Add New Enable Selected Disable Selected Delete Selected					
			Refresh			

Figure 4-18

- > MAC Address: The MAC address of the PC for which you want to reserve an IP address.
- > **IP Address:** The IP address reserved for the PC by the Modem Router.
- > Status: The status of this entry either Enabled or Disabled.

To Reserve an IP address:

- 1. Click the **Add New** button. Then Figure 4-19 will pop up.
- 2. Enter the MAC address (in XX:XX:XX:XX:XX format.) and IP address (in dotted-decimal notation) of the computer for which you want to reserve an IP address.
- 3. Click the Save button.

DHCP Address Reservation	
The static IP of DHCP Server can be set on this page.	
MAC Address:	
IP Address:	
Groups:	Default 💌
Status:	Disabled 💌
	Save Back
	Save Back

Figure 4-19

To modify or delete an existing entry:

- 1. Click the **Edit** in the entry you want to modify. If you want to delete the entry, click the **Delete**.
- 2. Modify the information.
- 3. Click the **Save** button.

Click the Enable/Disable Selected button to make selected entries enabled/disabled.

Click the **Delete Selected** button to selected entries.

4.5.4 Conditional Pool

Choose menu "**DHCP Server**" \rightarrow "**Conditional Pool**", you can see the next screen (shown in Figure 4-20). This page displays vendor class settings and allows you to set parameters for vendor class by clicking corresponding buttons.

DHCP	Conditional Pool					
Th	nis page displays vendor class s	ettings and allows you to set p	parameters for vendor class by c	licking corresponding buttons.		
	Vendor ID	Start IP Address/ End IP Address	Facility	Groups	Status	Edit
	Add New Ena	ble Selected Disable	Selected Delete Selec	sted		
			Refresh			

Figure 4-20

To add a vendor class:

- 1. Click the **Add New** button. Then Figure 4-21 will pop up.
- 2. Enter parameters for the vendor class.

Click the Save button.

ne vendor class IP range can be set on this page.	
Facility:	
Vendor ID:	
Start IP Address:	
End IP Address:	
Default Gateway:	
Device Type:	PC 💌
Add Option:	Option 241
Option Value:	
Groups:	Default 💙
Status:	Disabled 🗸

Figure 4-21

To modify or delete an existing entry:

- 4. Click the **Edit** in the entry you want to modify. If you want to delete the entry, click the **Delete**.
- 5. Modify the information.
- 6. Click the **Save** button.

Click the Enable/Disable Selected button to make selected entries enabled/disabled.

Click the **Delete Selected** button to selected entries.

4.6 Route Settings

Choose "Route Settings", it includes three menus: Default Gateway, Static Route and RIP Settings. The detailed descriptions are provided below.

Route Settings	
noute settings	
Default Gateway	
Static Route	
RIP Settings	

4.6.1 Default Gateway

Choose "**Route Settings**" \rightarrow "**Default Gateway**", you can see the Default Gateway screen. You can select a WAN Interface from the drop-down list as the system default gateway.

Default Gateway Setting	
Select a preferred WAN interface as the system de	efault gateway.
Select WAN Interface:	No available interface. Add Interface
	Save

Figure 4-22

Click the Add Interface button, you can add WAN Interfaces.

Click the **Save** button to save your settings.

4.6.2 Static Route

Choose "**Route Settings**" \rightarrow "**Static Route**". You can see the Static Route screen, this screen allows you to configure the static routes (shown in Figure 4-23). A static route is a pre-determined path that network information must travel to reach a specific host or network.

Static I	Route				
Th	nis page displays static route table. Click r	elevant button to configure it.			
	Destination IP Address	Subnet Mask	Gateway	Status	Edit
	202.96.134.210	255.255.255.0	172.30.74.1	Enabled	Edit
	Add New Enable Selec	ted Disable Selected	Delete Selected		
		Refresh			

Figure 4-23

To add static routing entries:

1. Click the **Add New** button in Figure 4-23, and you will see the screen as shown in Figure 4-24.

Static Route	
Static Route information can be set on this page.	
Destination IP Address:	202.96.134.210
Subnet Mask:	255.255.255.0
Gateway:	172.30.74.1
Interface:	LAN
Status:	Enabled 😽
[Save Back

Figure 4-24

- 2. Enter the following data:
- Destination IP Address: The Destination IP Address is the address of the network or host that you want to assign to a static route.
- Subnet Mask: The Subnet Mask determines which portion of an IP Address is the network portion, and which portion is the host portion.
- Gateway: Here you should type the Gateway address correctly, and the option for Interface will adopt the default Gateway address for the Static Route.
- Interface: Select the Interface name in the text box, or else, the default Use Interface will be adopted for the Static Route.
- > Status: Select Enabled or disabled from the drop-down list.
- 3. Click **Save** to save your settings as shown in Figure 4-24.

To modify or delete an existing entry:

- 1. Find the desired entry in the table.
- 2. Click Edit as desired on the Edit column.

Click the Enable/ Disabled Selected button to make selected entries enabled/ disabled.

Click the **Delete Selected** button to delete selected entries.

4.6.3 RIP Settings

Choose "**Route Settings**"→"**RIP Settings**", you can see the RIP (Routing Information Protocol) screen which allows you to configure the RIP.

RIP Setti	ngs				
WAN	Interface, uncheck th		ersion and operation and place a check in the re/Apply' button to start/stop RIP and save the nas NAT enabled.		
	Interface Version Operation Enabled				
			Save		

Figure 4-25

P Note:

RIP cannot be configured on the WAN Interface which has NAT enabled (such as PPPoE).

4.7 Forwarding

Forwarding
Virtual Servers
Port Triggering
DMZ
UPnP

There are four submenus under the Forwarding menu: **Virtual Servers**, **Port Triggering**, **DMZ** and **UPnP**. Click any of them, and you will be able to configure the corresponding function.

4.7.1 Virtual Servers

Choose menu "Forwarding" \rightarrow "Virtual Servers", and then you can view and add virtual servers in the next screen (shown in Figure 4-26). Virtual servers can be used for setting up public services on your LAN. A virtual server is defined as a service port, and all requests from Internet to this service port will be redirected to the computer specified by the server IP. Any PC that was used for a virtual server must have a static or reserved IP address because its IP address may change when using the DHCP function.

irtual Se	rver						
		cified by the server IF		I LAN SERVEL AII I EU	juests from the interi	net to this service port will be	reairectea to
	Service Port		IP Address	Protocol	Status	WAN	Edit
		21	192.168.1.100	TCP or UDP	Enabled	pppoe_8_35_2	Edit
	Add	lew Enal	ble Selected Disa	able Selected	Delete Selected		
				Refresh			
				Kellesn			

Figure 4-26

- Service Port: The numbers of External Service Ports. You can enter a service port or a range of service ports (the format is XXX – YYY; XXX is the Start port and YYY is the End port).
- > **IP Address**: The IP address of the PC running the service application.
- Protocol: The protocol used for this application, either TCP, UDP, or All (all protocols supported by the Modem Router).
- **Status**: The status of this entry, "Enabled" means the virtual server entry is enabled.
- > Edit: To modify or delete an existing entry.

To setup a virtual server entry:

- 1. Click the Add New button. (pop-up Figure 4-27)
- Select the service you want to use from the Common Service Port list. If the Common Service Port menu does not list the service that you want to use, enter the number of the service port or service port range in the Service Port field.
- 3. Select the service you want to use from the **Use Interface** list.
- 4. Enter the IP address of the computer running the service application in the IP Address field.

- 5. Select the protocol used for this application in the **Protocol** drop-down list, either **TCP**, **UDP**, or **All**.
- 6. Select the **Enabled** option in the **Status** drop-down list.

Click the **Save** button.

Virtual Server	
Virtual server defines the mapping from WAN service port to L computer specified by the server IP. Note: Virtual Server setup is supported only when there is avai	AN server. All requests from the Internet to this service port will be redirected to the
Use Interface:	pppoe_8_35_2 V
Service Port:	(XX-XX or XX)
IP Address:	
Protocol:	ALL 🗸
Status:	Enabled
Common Service Port:	Please Select 💌
	Save Back

Figure 4-27

Note:

It is possible that you have a computer or server that has more than one type of available service. If so, select another service, and type the same IP address for that computer or server.

To modify or delete an existing entry:

- 1. Find the desired entry in the table.
- 2. Click Edit as desired on the Edit column.

Click the Enable/ Disabled Selected button to make selected entries enabled/ disabled.

Click the **Delete Selected** button to delete selected entries.

Note:

If you set the service port of the virtual server as 80, you must set the Web management port on **System Tools -> Remote Management** page to be any other value except 80 such as 8080. Otherwise there will be a conflict to disable the virtual server.

4.7.2 Port Triggering

Choose menu "Forwarding"→ "Port Triggering", you can view and add port triggering in the next screen (shown in Figure 4-28). Some applications require multiple connections, like Internet games, video conferencing, Internet telephoning and so on. Port Triggering is used for some of these applications that cannot work with a pure NAT Modem Router.

		as Internet games, video conferences, Internet t Triggering can help some of these application			
Trigger Port	Trigger Protocol	Open Port	Open Protocol	Status	Edi
6112	TCP or UDP	6112	TCP or UDP	Enable	Edit

Figure 4-28

To add a new rule, follow the steps below.

- 1. Click the Add New button, the next screen will pop-up as shown in Figure 4-29.
- Select a common application from the Common Service Port drop-down list, then the Trigger Port field and the Open Ports field will be automatically filled. If the Common Service Port do not have the application you need, enter the Trigger Port and the Open Ports manually.
- 3. Select the protocol used for Trigger Port from the **Trigger Protocol** drop-down list, either **TCP**, **UDP**, or **All**.
- 4. Select the protocol used for Incoming Ports from the **Incoming Protocol** drop-down list, either **TCP** or **UDP**, or **All**.
- 5. Select **Enable** in **Status** field.
- 6. Click the **Save** button to save the new rule.

Port Trigger	
	net games, video conferences, Internet callings and so on. Due to firewall,these ing can help some of these applications deal with this problem.
Note: Port Triggering is supported only when there is available	e interface.
Use Interface:	pppoe_8_35_2
Trigger Port:	
Trigger Protocol:	ALL
Open Port:	
Open Protocol:	ALL
Status:	Enabled 💌
Common Service Port:	Please Select 💌
	Cause Death
	Save Back

Figure 4-29

- Trigger Port: The port for outgoing traffic. An outgoing connection using this port will trigger this rule.
- Trigger Protocol: The protocol used for Trigger Ports, either TCP, UDP, or All (all protocols supported by the Modem Router).
- Open Port: The port or port range used by the remote system when it responds to the outgoing request. A response using one of these ports will be forwarded to the PC which triggered this rule. You can input at most 5 groups of ports (or port sections). Every group of ports must be separated with ",", for example, 2000-2038, 2046, 2050-2051, 2085, 3010-3030.

- Open Protocol: The protocol used for Incoming Port, either TCP, UDP, or ALL (all protocols supported by the Modem Router).
- Status: The status of this entry, Enabled means the Port Triggering entry is enabled.
- > **Modify**: To modify or delete an existing entry.
- Common Service Port: Some popular applications already listed in the drop-down list of Open Protocol.

To modify or delete an existing entry:

- 1. Find the desired entry in the table.
- 2. Click Edit as desired on the Edit column.

Click the Enable/ Disabled Selected button to make selected entries enabled/ disabled.

Click the **Delete Selected** button to delete selected entries.

Once the Modem Router is configured, the operation is as follows:

- 1. A local host makes an outgoing connection to an external host using a destination port number defined in the **Trigger Port** field.
- 2. The Modem Router records this connection, opens the incoming port or ports associated with this entry in the **Port Triggering** table, and associates them with the local host.
- 3. When necessary, the external host will be able to connect to the local host using one of the ports defined in the **Incoming Ports** field.

Note:

- 1. When the trigger connection is released, the corresponding opened ports will be closed.
- 2. Each rule can only be used by one host on the LAN at a time. The trigger connection of other hosts on the LAN will be refused.
- 3. **Open Ports** ranges cannot overlap each other.

4.7.3 DMZ

Choose menu "**Forwarding→DMZ**", and then you can view and configure DMZ host in the screen (shown in Figure 4-30). The DMZ host feature allows one local host to be exposed to the Internet for a special-purpose service such as Internet gaming or videoconferencing. The Modem Router forwards packets of all services to the DMZ host. Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP Address assigned to it because its IP Address may be changed when using the DHCP function.

DMZ	
The DMZ host feature allows one local host to be exposed to the	e Internet for bidirectional communication.
DMZ Status:	🔿 Enable 💿 Disable
DMZ Host IP Address:	0.0.0.0
	Save

Figure 4-30

To assign a computer or server to be a DMZ server:

- 1. Click the **Enable** button.
- 2. Enter the IP address of a local PC that is set to be DMZ host in the **DMZ Host IP Address** field.
- 3. Click the **Save** button.

4.7.4 UPnP

Choose menu "Forwarding \rightarrow UPnP", and then you can view the information about UPnP in the screen (shown in Figure 4-31). The Universal Plug and Play (UPnP) feature allows the devices, such as Internet computers, to access the local host resources or devices as needed. UPnP devices can be automatically discovered by the UPnP service application on the LAN.

nP config								
This page dsiplays UPnP status and settings.								
Current UPnP Status: Disabled Enable								
		Current	UPnP Settings Li	st				
) (100	Description	External Port	Protocol	Internal Port	IP Address	Status		
ID App Description External Port Protocol Internal Port IP Address Status								

Figure 4-31

- Current UPnP Status: UPnP can be enabled or disabled by clicking the Enable or Disable button. This feature is enabled by default.
- > Current UPnP Settings List: This table displays the current UPnP information.
 - **App Description**: The description about the application which initiates the UPnP request.
 - **External Port**: The port which the Modem Router opened for the application.
 - **Protocol**: The type of protocol which is opened.
 - Internal Port: The port which the Modem Router opened for local host.
 - IP Address: The IP address of the local host which initiates the UPnP request.
 - **Status**: Either Enabled or Disabled. "Enabled" means that the port is still active; otherwise, the port is inactive.

Click the **Enable** button to enable UPnP.

Click the **Disable** button to disable UPnP.

Click the **Refresh** button to update the Current UPnP Settings List.

4.8 Parent Control

Choose menu "**Parent Control**", and you can configure the parent control in the screen as shown in Figure 4-32. The Parent Control function can be used to control the internet activities of the child, limit the child to access certain websites and restrict the time of surfing.

Parent Control			
Parental Control function can t	be used to control the Internet activities of	of the child, limit the child to access specified websites in specified time.	
Enable Parental Control			
	MAC Address Of Parental PC:		
	MAC Address of Current PC:	50:E5:49:C8:E2:7A Copy to Above	
Save			
	MAC Address - 1:		
	MAC Address - 2: MAC Address - 3:		
	MAC Address - 4:		
	MAC Address in current LAN: 50:e5	5:49:c8:e2:7a 💙 Fill InPlease 🗸	
Apply To:	Start Time:	End Time:	
Each Day	00:00	24:00 × Add	
	Time 0:00 1:00 2:00 3:00	00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00	
	Sun.		
	Mon. Tues.		
	Wed.		
	Thur.		
	Sat.		
	<		
Clear Schedule			
	Add URL:	Add	
		Details	
Delete Selected (It w	vill not take effect until you save it.)		
		Save	

Figure 4-32

- Enable Parental Control: Check the box if you want this function to take effect. This function is disabled by default.
- MAC Address of Parental PC: In this field, enter the MAC address of the controlling PC, or you can make use of the Copy To Above button below.
- MAC Address of Current PC: This field displays the MAC address of the PC that is managing this Modem Router. If the MAC Address of your adapter is registered, you can click the Copy To Above button to fill this address to the MAC Address of Parental PC field above.
- > Add URL: Here you can input the net addresses which the child is allowed to access.

Click the **Save** button to save your settings.

4.9 Firewall

Firewall
LAN Host
WAN Host
Schedule
DDo S

There are five submenus under the Firewall menu: **Rule**, **LAN Host**, **WAN Host**, **Schedule** and **DDoS**. Click any of them, and you will be able to configure the corresponding function.

4.9.1 Rule

Choose menu "Firewall" \rightarrow "Rule", and then you can view and set the rules in the screen as shown in Figure 4-33.

Firewall Rules									
The router can restrict the internet behavior o can set flexible combination rules by selecting rules.									
Enable Firewall	Enable Firewall								
Default Filtering Rules:	Default Filtering Rules:								
Allow the packets not specified by any filt	ering rules to pass thro	ugh the device							
Deny the packets not specified by any filt	ering rules to pass thro	ugh the device							
Note: The modem router will first try to match t packet is not specified by any filtering rules in				ply the first i	matching rule.	lf the			
					Save	ŧ			
			I						
Description	Lan Host	Target	Schedul	Pass	Status	Edit			
Add New Enable Selecte	d Disable Sele	cted Delete Se	lected						

Figure 4-33

- Enable Firewall: Select the check box to enable the Firewall function, so the Default Filtering Rules can take effect.
- > **Description:** Here displays the description of the rule and this name is unique.
- > LAN Host: Here displays the host selected in the corresponding rule.
- > **Target:** Here displays the target selected in the corresponding rule.
- > Schedule: Here displays the schedule selected in the corresponding rule.
- **Status:** Here displays the status of the rule, enabled or not.
- **Edit:** Here you can edit or delete an existing rule.
- > Add New: Click the Add New button to add a new rule entry.
- > Enable Selected: Click the Enable Selected button to enable the selected rules in the list.
- > Disable Selected: Click the Disable Selected button to disable the selected rules in the list.

> Delete Selected: Click the Delete Selected button to delete the selected entries in the table.

The methods to add a new rule:

- 1. Click the **Add New** button and the next screen will pop up as shown in Figure 4-34.
- 2. Give a name (e.g. Rule_1) for the rule in the **Description** field.
- 3. Select a host from the LAN Host drop-down list or choose "Add LAN Host".
- 4. Select a target from the WAN Host drop-sown list or choose "Add WAN Host".
- 5. Select a schedule from the Schedule drop-down list or choose "Add Schedule".
- 6. In the Action field, select Deny or Allow to deny or allow your entry.
- 7. In the **Status** field, select **Enabled** or **Disabled** to enable or disable your entry.
- 8. In the **Direction** field, select **IN** or **OUT** from the drop-down list for the direction.
- 9. In the **Protocol** field, here are four options, All, TCP, UDP, and ICMP. Select one of them from the drop-down list for the target.
- 10. Click the Save button.

Firewall Rules	
An internet control rule can be set on this page.	
Description:	
	·
LAN Host:	Any Host Add LAN Host
WAN Host:	Any Host Add WAN Host
Schedule:	Any Time Add Schedule
Action:	Deny
Status:	Enabled 💌
Direction:	IN 💌
Protocol:	ALL
S	ive Back
	Dack

Figure 4-34

4.9.2 LAN Host

Choose menu "Firewall" \rightarrow "LAN Host", and then you can view and set a Host list in the screen as shown in Figure 4-35.

LAN HOS	LAN HOST							
		Description	Address Info	Edit				
		Host_1	192.168.1.88	Edit				
	Add	New Delete Selected						

Figure 4-35

- > **Description:** Here displays the description of the host and this description is unique.
- > Address Info: Here displays the information about the host. It can be IP or MAC.
- **Edit:** To modify an existing entry.

To add a new entry, please follow the steps below.

- 1. Click the **Add New** button.
- 2. In the Mode field, select IP Address or MAC Address.
 - If you select IP Address, please follow the steps below:
 - 1) In **Description** field, create a unique description for the host (e.g. Host_1).
 - 2) In IP Address field, enter the IP address.
 - If you select MAC Address, please follow the steps below:
 - 1) In **Description** field, create a unique description for the host (e.g. Host_1).
 - 2) In **MAC Address** field, enter the MAC address.
- 3. Click the **Save** button to complete the settings.

Click the **Delete Selected** button to delete the selected entries in the table.

4.9.3 WAN Host

Choose menu "Firewall" \rightarrow "WAN Host", and then you can view and set a Host list in the screen as shown in Figure 4-36.

WAN HOS	ST			
		Description	Details	Edit
		Host_1	202.114.71.2	Edit
	Add	New Delete Selected		

Figure 4-36

- > **Description:** Here displays the description about the WAN and this description is unique.
- > **Details:** The details can be IP address, port, or domain name.
- **Edit:** To modify an existing entry.

To add a new entry, please follow the steps below.

- 1. Click the **Add New** button.
- 2. In Mode field, select IP Address, MAC Address or URL Address.

If you select **IP Address**, the screen shown is Figure 4-37.

WAN HOST	
Mode:	IP Address
Description: IP Address:	
Port:	- Save Back

Figure 4-37

- 1) In **Description** field, create a unique description for the host (e.g. Host_1).
- 2) In IP Address field, enter the IP address.

If you select MAC Address, the screen shown is Figure 4-38.

WAN HOST	
Mode:	MAC Address 💌
Description: MAC Address:	
	Save Back

Figure 4-38

1) In **Description** field, create a unique description for the host (e.g. Host_1).

2) In MAC Address field, enter the MAC address.

If you select **URL Address**, the screen shown is Figure 4-39.

WAN Host	
Mode:	URL Address 🔽
Description:	
Add URL Address:	Add
	Detail
	Delete (It won't take effect until you save it)
	Save Back

Figure 4-39

- 1) In **Description** field, create a unique description for the host (e.g. Host_1).
- Enter the URL address in the Add URL Address field, and then click the Add button. The URL address will be shown in the Detail table. If you click the Delete button, the existing URL address in the Detail table can be deleted.
- 3. Click the **Save** button to complete the settings.

4.9.4 Schedule

Choose menu "Firewall" \rightarrow "Schedule", and then you can view and set a Schedule list in the next screen as shown in Figure 4-40.

Task Schedule			
		Description	Edit
		Schedule_1	Edit
Add New	Delete Selecter		<u>Edit</u>

Figure 4-40

- > **Description**: Here displays the description of the schedule and this description is unique.
- > Edit: Here you can modify an existing schedule.

To add a new schedule, follow the steps below:

- 1. Click Add New button and the next screen will pop-up as shown in Figure 4-41.
- 2. In **Description** field, create a unique description for the schedule (e.g. Schedule_1).
- 3. In Apply To field, select the day or days you need.
- 4. In time field, you can select all day-24 hours or you may enter the **Start Time** and **Stop Time** in the corresponding field.
- 5. Click **Save** to complete the settings.

Click the **Clear Schedule** button to clear your settings in the table.

edule																
Schedule can be set on this	page.															
		Des	cript	ion:												
Арріу То:	Start	Time	e:				En	d Tin	ne:							
Each Day 💙	00:00		~	•			24:	00		*					Ad	d
	Time	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00)12:00	1:00	2:00
	Sun.															
	Mon.															
	Tues.															
	Wed.															
	Thur.															
	Fri. Sat.															
	oat.	<														>
Clear Schedule																
						Sav	e			Ba	ck					



Click the **Delete Selected** button to delete the slected entries in the table.

4.9.5 DDoS

Choose menu "Firewall" \rightarrow "DDoS", and then you can protect the Modem Router from being attacked by TCP-SYN Flood, UDP Flood and ICMP-Flood in the screen as shown in Figure 4-42.

DDoS	
DDoS Parameters can be set on this page.	
DoS Protection: 🔘 Enable 💿 Disa	ble
(Note: DoS Protection will not take e	ffect only when the Traffic Statistics is enabled.)
Enable ICMP-Flood Attack Filtering	
ICMP-Flood Packets Threshold (5~3600):	50 packets/second
Enable UDP-Flood Attack Filtering	
UDP-Flood Packets Threshold (5~3600) :	500 packets/second
Enable TCP-SYN-Flood Attack Filtering	
TCP-SYN-Flood Packets Threshold (5~3600) :	50 packets/second
Forbid ping packets from LAN port	
	Save Blocked DOS Host List

Figure 4-42

DoS protection - Denial of Service protection. Check the Enable or Disable button to enable or disable the DoS protection function. Only when it is enabled, will the flood filters be enabled.

P Note:

Dos Protection will take effect only when the **Traffic Statistics** in "System Tool \rightarrow Traffic Statistics" is enabled.

- > Enable ICMP-Flood Attack Filtering Enable or Disable the ICMP-Flood Attack Filtering.
- ICMP-Flood Packets Threshold (5~3600) The default value is 50. Enter a value between 5 ~ 3600. When the current ICMP-Flood Packets number is beyond the set value, the Router will startup the blocking function immediately.
- > Enable UDP-Flood Filtering Enable or Disable the UDP-Flood Filtering.
- UDP-Flood Packets Threshold (5~3600) The default value is 500. Enter a value between 5
 ~ 3600. When the current UPD-Flood Packets number is beyond the set value, the Router will startup the blocking function immediately.
- Enable TCP-SYN-Flood Attack Filtering Enable or Disable the TCP-SYN-Flood Attack Filtering.
- TCP-SYN-Flood Packets Threshold (5~3600) The default value is 50. Enter a value between 5 ~ 3600. When the current TCP-SYN-Flood Packets numbers is beyond the set value, the Router will startup the blocking function immediately.
- Forbid ping packet from LAN port Enable or Disable Forbid ping packet from LAN port. The default setting is disabled. If enabled, the ping packet from LAN cannot access the Router. This function can be used to defend against some viruses.

Click the Save button to save the settings.

Click the **Blocked DoS Host List** button to display the DoS host table by blocking.

4.10 Bandwidth Control

Choose menu "**Bandwidth Control**", and then you can configure the Upstream Bandwidth and Downstream Bandwidth in the next screen. The values you configure should be less than 100000Kbps. For optimal control of the bandwidth, please select the right Line Type and ask your ISP for the total bandwidth of the egress and ingress.

Bandwidth Control							
Bandwidth control enables you to co rules. Only when the Bandwidth Cor				you to enable or	disable Bandwidth	Control, and se	t control
Note: For optimal control of the ban your ISP for help.	dwidth, please configu	ure the rig	ght Line Type and bandw	idth. If you are no	sure about these	information, plea	ase ask
Enable bandwidth control							
	Line T	ype: 🤇	ADSL O Other				
Tot	al Upstream Bandwi	idth:	Kbps				
Total I	Downstream Bandwi	idth:		Kbps			
Save							
Bandwidth Control Rules							
Description	Description Priority		am Bandwidth (Kbps)	s) Downstream Bandwidth (Kbps)		Status	Edit
			Ain Max	Min	Max		
Add New Enab	le Selected)isable Se	elected Delete	Selected			

Figure 4-43

- Enable Bandwidth Control: Check this box so that the Bandwidth Control settings can take effect.
- Line Type: Select the right type for you network connection. If you don't know how to choose, please ask your ISP for the information.
- > Total Upstream Bandwidth The upload speed through the WAN port.
- > Total Downstream Bandwidth The download speed through the WAN port.

Bandwidth Control Rules:

- > **Description:** This is the information about the rules such as address range.
- Upstream bandwidth: This field displays the max and mix upload bandwidth through the WAN port, the default is 0.
- Downstream bandwidth: This field displays the max and mix download bandwidth through the WAN port, the default is 0.
- > Edit: Click Edit to modify the rule.

To add/modify a Bandwidth Control rule, follow the steps below.

- 1. Click **Add New** shown in Figure 4-43, you will see a new screen shown in Figure 4-44.
- 2. Enter the information like the screen shown below.

Bandwidth Control Configuration	
Enable	
IP Range:	
Port Range:	
Protocol:	ALL
Priority:	5
	Min Rate(Kbps) Max Rate(Kbps)
Upstream:	
Downstream:	
Si	ave Back

Figure 4-44

3. Click the **Save** button.

4.11 IP&MAC Binding



There are two submenus under the IP &MAC Binding menu: **Binding Settings** and **ARP List**. Click any of them, and you will be able to scan or configure the corresponding function. The detailed explanations for each submenu are provided below.

4.11.1 Binding Settings

This page displays the **IP & MAC Binding Setting** table; you can operate it in accord with your desire (shown in Figure 4-45).

plays the AR	P List. Please click corresp	onding button to configure IP-MAC E	inding entries.	
		ARP Binding 🔿 Enable 💿 D	isable Sav	e
	MAC Address	IP Address	Status	Edit
	40:61:86:FC:74:29	192.168.1.100	Bound	Edit
ew	Enable Selected	Disable Selected Delete	Selected	
		Refresh		
		MAC Address 40:61:86:FC:74:29	ARP Binding O Enable O D MAC Address IP Address 40:61:86:FC:74:29 192.168.1.100 ew Enable Selected Disable Selected Delete	MAC Address IP Address Status 40:61:86:FC:74:29 192.168.1.100 Bound ew Enable Selected Disable Selected Delete Selected



- > MAC Address: The MAC address of the controlled computer in the LAN.
- > **IP Address:** The assigned IP address of the controlled computer in the LAN.
- **Bound:** Check this option to enable ARP binding for a specific device.
- **Edit:** To modify or delete an existing entry.

When you want to add or modify an IP & MAC Binding entry, you can click the **Add New** button or **Edit** button, and then you will go to the next page. This page is used for adding or modifying an IP & MAC Binding entry (shown in Figure 4-46).

Binding Settings		
This page allows you to set IP-MAC Binding entries.		
MAC Address:		
IP Address:		
Bind		
	Save	Back

Figure 4-46

To add IP & MAC Binding entries, follow the steps below.

- 1. Click the Add New button as shown in Figure 4-45.
- 2. Enter the MAC Address and IP Address.
- 3. Select the Bind checkbox.
- 4. Click the **Save** button to save it.

To modify or delete an existing entry, follow the steps below.

- 1. Find the desired entry in the table.
- 2. Click Edit as desired on the Edit column.

Click the Enable/ Disable Selected button to make selected entries enabled or disabled.

Click the **Delete Selected** button to delete selected entries.

4.11.2 ARP List

To manage the computer, you could observe the computers in the LAN by checking the relationship of MAC address and IP address on the ARP list, and you could also configure the items on the ARP list. This page displays the ARP List; it shows all the existing IP & MAC Binding entries (shown in Figure 4-47).

ARP List				
		MAC Address	IP Address	Status
		40:61:86:E5:B2:DC	192.168.1.100	Loaded
Load Selec	:ted	Delete Selected		
			Refresh	

Figure 4-47

- > **MAC Address:** The MAC address of the controlled computer in the LAN.
- > **IP Address:** The assigned IP address of the controlled computer in the LAN.
- Status: Indicates whether or not the MAC and IP addresses are bound.

> Load: Load the item to the IP & MAC Binding list.

Click the Load Selected button to load selected items to the IP & MAC Binding list.

Click the **Refresh** button to refresh all items.

4.12 Dynamic DNS

Choose menu "Dynamic DNS", and you can configure the Dynamic DNS function.

The Modem Router offers the **DDNS** (Dynamic Domain Name System) feature, which allows the hosting of a website, FTP server, or e-mail server with a fixed domain name (named by yourself) and a dynamic IP address, and then your friends can connect to your server by entering your domain name no matter what your IP address is. Before using this feature, you need to sign up for DDNS service providers such as <u>www.dyndns.org</u>. The Dynamic DNS client service provider will give you a password or key.

DDNS Settings	
Parameters of dynDns can be set on this page.	
Service Provider:	www.dyndns.org 🖌 Go to register
Domain Name:	
User Name:	
Password:	
Enable DDNS	
Connection Status:	Disconnected
Logout	
	Save

Figure 4-48

- Service Provider: This field displays the service provider of DDNS.
- > **Domain Name:** Enter the Domain name you received from dynamic DNS service provider.
- > Username & Password: Type the "User Name" and "Password" for your DDNS account.
- **Enable DDNS:** Activate the DDNS function or not.
- Login/ Logout: Login to or logout of the DDNS service.

4.13 Diagnostic

Choose "**Diagnostic**", you can view the test results for the connectivity of the physical layer and protocol layer for both LAN and WAN sides in the screen. Select the desired type and click the start button.

Diagnostics Tools			
The router's internet connection status can be tested on this page. Please select the desired type and click the start button.			
Diagnostics Type	Test internet surfing Start		
	Test WAN interface connection		

Figure 4-49

4.14 System Tools

System Tools
System Log
Time Settings
Manage Control
CWMP Settings
SNMP Settings
Backup & Restore
Factory Defaults
Firmware Upgrade
Reboot
Statistics

Choose menu "System Tools", and you can see the submenus under the main menu: System Log, Time Settings, Manage Control, CWMP Settings, SNMP Settings, Backup & Restore, Factory Defaults, Firmware Upgrade, Reboot and Statistics. Click any of them, and you will be able to configure the corresponding function. The detailed explanations for each submenu are provided below.

4.14.1 System Log

Choose menu "System Tools" \rightarrow "System Log", and then you can view the logs of the Modem Router.

System L	.og			
	Log Type:	ALL	*	Log Level: Debug
Index	Time	Туре	Level	Content
	Refresh Clear Log Save Log Log Settings			

Figure 4-50

- **Log Type:** By selecting the log type, only logs of this type will be shown.
- **Log Level:** By selecting the log level, only logs of this level will be shown.
- > **Refresh:** Refresh the page to show the latest log list.
- Clear Log: All the logs will be deleted from the Modem Router permanently, not just from the page.
- Save Log: Click to save all the logs in a txt file.
- > Log Settings: Click to set the logs in the screen (shown in Figure 4-51).

Syslog Settings	
▼ Save Locally	Minimum Level Information
Save Remotely	
	Save Back

Figure 4-51

- > Save Locally: If Save Locally is selected, events will be recorded in the local memory.
- Minimum Level: Select the Minimum level in the drop-down list, for the Minimum Level, all logged events above or equal to the selected level will be displayed.
- Save Remotely: If Save Remotely is selected, events will be sent to the specified IP address and UDP port of the remote system log server.

Click the **Save** button to save your settings.

4.14.2 Time Settings

Choose menu "System Tools" \rightarrow "Time Settings", and then you can configure the time on the following screen.

Settings	
he system time of Modem F	Router can be set on this page. You can set the time manually or get standard GMT from the Internet
Time Zone:	(GMT) Greenwich Mean Time;Dublin, Edinburgh, London, Lisbon
Date:	1970 Year 1 Month 1 Day
Time:	23 Hour 1 Minute 22 Second
NTP Server Prio	r 1:
NTP Server Prior	r 2:
Get GMT	(Only when the Internet connection is on.)
	Save

Figure 4-52

- > Time Zone: Select your local time zone from this pull down list.
- > **Date:** Enter your local date in MM/DD/YY into the right blanks.
- > **Time:** Enter your local time in HH/MM/SS into the right blanks.
- NTP Server 1 / NTP Server 2: Enter the address or domain of the NTP Server 1 or NTP Server 2, and then the Modem Router will get the time from the NTP Server preferentially. In addition, the Modem Router built-in some common NTP Servers, so it can get time automatically once it connects the Internet.

To set time manually:

- 1. Select your local time zone.
- 2. Enter the **Date** in Year/Month/Day format.
- 3. Enter the **Time** in Hour/Minute/Second format.
- 4. Click Save.

To set time automatically:

- 1. Select your local time zone.
- 2. Enter the address or domain of the NTP Server 1 or NTP Server 2.
- 3. Click the **Get GMT** button to get system time from Internet if you have connected to the Internet.

4.14.3 Manage Control

Choose "System Tools" \rightarrow "Manage Control", you can see the screen (shown in Figure 4-51)

lanage Control			
Current User Status			
User Type	Admin		
User Name	admin		
Host IP Address	192.168.1.121		
Host MAC Address	40:61:86:E5:B2:DC		
Account Management			
Old Password			
New User Name			
New Password			
Confirm Password			
Service Configuration			
	HTTP Service	Host(IP/MAC)	
Local Management	Port 80		
Remote Management	Enable 🔲 Port 🕫		
	Save		

Figure 4-53

- Current User Status: This box displays the information about User Type, User Name, Host IP Address and Host MAC Address.
- Account Management: Here you can set the account user information about Old Password, New User Name, New Password and Confirm Password.
- Service Configuration: Here you can modify the port of the Modem Router's web management interface and limit the hosts which can login this Modem Router's web management interface.

4.14.4 CWMP Settings

Choose "System Tools" \rightarrow "CWMP Settings", you can configure the CWMP function in the screen.

The Modem Router offers CWMP feature. The function supports TR-069 protocol which collects information, diagnoses the devices and configures the devices automatically via ACS (Auto-Configuration Server).

CWMP Settings	
	-Configuration Server (ACS) to perform auto-configuration, provision, collection, and ues and click "Save/Apply" to configure the TR-069 client options.
CWMP:	🔿 Enable 💿 Disable
Inform:	○ Enable
Inform Interval:	300
ACS URL:	
ACS User Name:	admin
ACS Password:	****
Interface used by TR-069 client:	Any_WAN
Display SOAP messages on serial console:	○ Enable
Connection Request Authentication	
Connection Request User Name:	admin
Connection Request Password:	****
Connection Request Path:	/tr069
Connection Request Port:	7547
Connection Request URL:	
1	SaveGetRPCMethods

Figure 4-54

- **CWMP:** Select enable the CWMP function.
- Inform: Enable or disable the function. If enabled, the information will be informed to ACS server periodically.
- > Inform Interval: Enter the interval time here.
- > ACS URL: Enter the website of ACS which is provided by your ISP.
- > ACS User Name/Password: Enter the User Name and password to login the ACS server.
- > Interface used by TR-069 client: Select the interface used by TR-069 client.
- > Display SOAP messages on serial console: Enable or disable this function.
- Connection Request User Name/Password: Enter the User Name and Password that provided the ACS server to login the Modem Router.
- Connection Request Path: Enter the path that connects to the ACS server.
- Connection Request Port: Enter the port that connects to the ACS server.
- **Connection Request URL:** Enter the URL that connects to the ACS server.

4.14.5 SNMP Settings

Choose "**Management**" → "**SNMP Agent**", you can see the SNMP-Configuration screen as shown below.

SNMP (Simple Network Management Protocol) has been widely applied in the computer networks currently, which is used for ensuring the transmission of the management information between any two nodes. In this way, network administrators can easily search and modify the information on any node on the network. Meanwhile, they can locate faults promptly and implement the fault diagnosis, capacity planning and report generating.

SNMP Settings	
Simple Network Management Protocol (SNMP) allows a manager Select the desired values and click "Apply" to configure the SNM	ment application to retrieve statistics and status from the SNMP agent in this device. IP options.
SNMP Agent:	Disable Enable
	Save

Figure 4-55

An **SNMP Agent** is an application running on the Modem Router that performs the operational role of receiving and processing SNMP messages, sending responses to the SNMP manager, and sending traps when an event occurs. So a router contains SNMP "agent" software can be monitored and/or controlled by SNMP Manager using SNMP messages.

4.14.6 Backup & Restore

Choose menu "System Tools" \rightarrow "Backup & Restore", and then you can save the current configuration of the Modem Router as a backup file and restore the configuration via a backup file as shown in Figure 4-56.

Backup and R	estore
modifying se	ickup button to save all configuration settings to your local computer as a file.We suggest you back up your configuration files first before ettings or upgrading firmware. ckup store your settings by loading configuration files.
Configurat	tion File: Browse Restore
Notice:	1.The current configuration will be covered with the uploading configuration file. Wrong process will lead the device unmanaged. 2.The restoring process lasts for 20 seconds and the Router will restart automatically then. Keep the power of the Router on during the process, in case of any damage.

Figure 4-56

- Click the **Backup** button to save all configuration settings as a backup file in your local computer.
- > To upgrade the Modem Router 's configuration, follow these instructions.
 - Click the **Browse** button to find the configuration file which you want to restore.
 - Click the **Restore** button to update the configuration with the file whose path is the one you have input or selected in the blank.

Note:

The current configuration will be covered with the uploading configuration file. Wrong process will lead the device unmanaged. The restoring process lasts for 20 seconds and the Modem Router will restart automatically then. Keep the power of the Modem Router on during the process, in case of any damage.

4.14.7 Factory Defaults

Choose menu "System Tools \rightarrow Factory Defaults", and then and you can restore the configurations of the Modem Router to factory defaults on the following screen

Factory Defaults
Click this button below to restore factory defaults.
Restore

Figure 4-57

Click the **Restore** button to reset all configuration settings to their default values.

- The default User Name: admin
- The default **Password**: admin
- The default Subnet Mask: 255.255.255.0

Note:

All changed settings will be lost when defaults are restored.

4.14.8 Firmware Upgrade

Choose menu "System Tools \rightarrow Firmware Upgrade", and then you can update the latest version of firmware for the Modem Router on the following screen.

Software Upgrade				
You'll get new functions after upgrading the firmware of the	he router.			
Firmware File Path	Browse			
Firmware version	0.7.0 0.11 v0007.0 Build 120713 Rel.45664n			
Hardware version	TD-8840T v4 00000000			
Note: Please select the right firmware version that corresponds to the current hardware. It is important to keep power supplied during the entire process. Loss of power during the upgrade could damage the device. The upgrade process takes about 50 seconds, after that, the router will reboot automatically.				
	Upgrade			

Figure 4-58

- Firmware Version: Displays the current firmware version.
- Hardware Version: Displays the current hardware version. The hardware version of the upgrade file must accord with the Modem Router's current hardware version.

To upgrade the Modem Router's firmware, follow these instructions below:

- 1) Download a most recent firmware upgrade file from our website (www.tp-link.com).
- 2) Enter or select the path name where you save the downloaded file on the computer into the **File Name** blank.
- 3) Click the **Upgrade** button.
- 4) The Modem Router will reboot while the upgrading has been finished.

Note:

1) New firmware versions are posted at http://www.tp-link.com and can be downloaded for free.

There is no need to upgrade the firmware unless the new firmware has a new feature you want to use. However, when experiencing problems caused by the Modem Router rather than the configuration, you can try to upgrade the firmware.

- 2) When you upgrade the Modem Router's firmware, you may lose its current configurations, so before upgrading the firmware please write down some of your customized settings to avoid losing important settings.
- 3) Do not turn off the Modem Router or press the Reset button while the firmware is being upgraded. Loss of power during the upgrade could damage the Modem Router.
- 4) The firmware version must correspond to the hardware.
- 5) The upgrade process takes a few moments and the Modem Router restarts automatically when the upgrade is complete.

4.14.9 Reboot

Choose menu "System Tools" \rightarrow "Reboot", and then you can click the Reboot button to reboot the Modem Router via the next screen.

System Reboot	
Click this button below to reboot the router.	
Reboot	

Figure 4-59

Some settings of the Modem Router will take effect only after rebooting, which include

- Change the LAN IP Address (system will reboot automatically).
- Change the DHCP Settings.
- Change the Wireless configurations.
- Change the Web Management Port.
- Upgrade the firmware of the Modem Router (system will reboot automatically).
- Restore the Modem Router's settings to factory defaults (system will reboot automatically).
- Update the configuration with the file (system will reboot automatically.

4.14.10 Statistics

Choose menu "System Tools" \rightarrow "Statistics", and then you can view the statistics of the Modem Router, including total traffic and current traffic of the last Packets Statistic Interval.

Traffic Statisti	icsLAN							
Statistics List:		Statistics:	◯ Enable Si		e Interval:	Save 10 💙 Se	2	
	То	tal		Current				
IP Address MAC Address	Packets	Bytes	Packets	Bytes	ІСМР Тх	UDP Tx	SYN TX	Operation
					Curre	nt list is bla	nk	·

Figure 4-60

- Statistics Status: Enable or Disable. The default value is disabled. To enable it, click the Enable. If it is disabled, the function of DoS protection in Security settings will be disabled.
- Statistics Interval (5-60): The default value is 10. Select a value between 5 and 60 seconds in the drop-down list. The Packets Statistic interval indicates the time section of the packets statistic.

Click **Reset All** to reset the values of all the entries to zero.

Click **Delete All** to delete all entries in the table.

Click the **Refresh** button to refresh immediately.

Statistics Table:	

IP/MAC Address		The IP and MAC address are displayed with related statistics.	
Total	Packets	The total number of packets received and transmitted by the Modem Router.	
	Bytes	The total number of bytes received and transmitted by the Modem Router.	
	Packets	The total number of packets received and transmitted in the last Packets Statistic interval seconds.	
Current	Bytes	The total number of bytes received and transmitted in the last Pack Statistic interval seconds.	
	ІСМР Тх	The number of the ICMP packets transmitted to WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".	
	UDP Tx	The number of UDP packets transmitted to the WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".	
	SYN Tx	The number of TCP SYN packets transmitted to the WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".	
Operation	Reset	Reset the value of he entry to zero.	
operation	Delete	Delete the existing entry in the table.	

Appendix A: Specifications

	General
	ANSI T1.413, ITU G.992.1, ITU G.992.2, ITU G.992.3, ITU G.992.5,
Standards and Protocols	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.3, IEEE 802.3u, TCP/IP, PPPoA, PPPoE, SNTP, HTTP, DHCP, ICMP, NAT
Safety & Emission	FCC, CE
Ports	Four 10/100M Auto-Negotiation RJ45 ports (Auto MDI/MDIX)
	One RJ11 port
LEDs	Ů Power, ♀ ADSL, Ø Internet, 묘 1,2,3,4(LAN),
Network Medium	10Base-T: UTP category 3, 4, 5 cable
	100Base-TX: UTP category-5
	Max line length: 6.5Km
Data Rates	Downstream: Up to 24Mbps
	Upstream: Up to 3.5Mbps (With Annex M enabled)
System Requirement	Internet Explorer 5.0 or later, Netscape Navigator 6.0 or later
	Win 9x/ ME/ 2000/ XP/ Vista/ 7
	Physical and Environment
Working Temperature	0°C ~ 40°C
Working Humidity	10% ~ 90% RH (non-condensing)
Storage Temperature	-40°C ~ 70°C
Storage Humidity	5% ~ 90% RH (non-condensing)

Appendix B: Troubleshooting

T1. How do I restore my Modem Router's configuration to its factory default settings?

With the Modem Router powered on, press and hold the **RESET** button on the rear panel for 8 to 10 seconds before releasing it.

P Note:

Once the Modem Router is reset, the current configuration settings will be lost and you will need to re-configure the router.

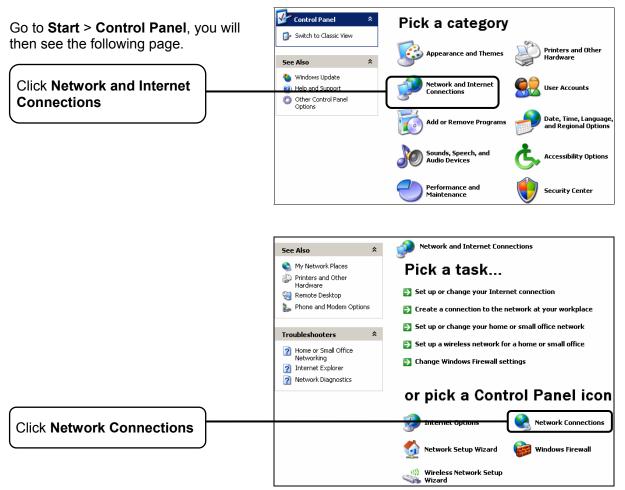
T2. What can I do if I don't know or forget my password?

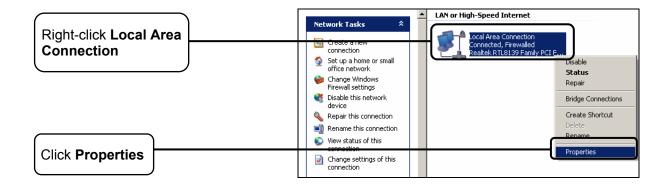
- 1) Restore the Modem Router's configuration to its factory default settings. If you don't know how to do that, please refer to **T1**.
- 2) Use the default user name and password: admin, admin.
- 3) Try to configure your Modem Router once again by following the instructions in <u>4.1 Login</u>.

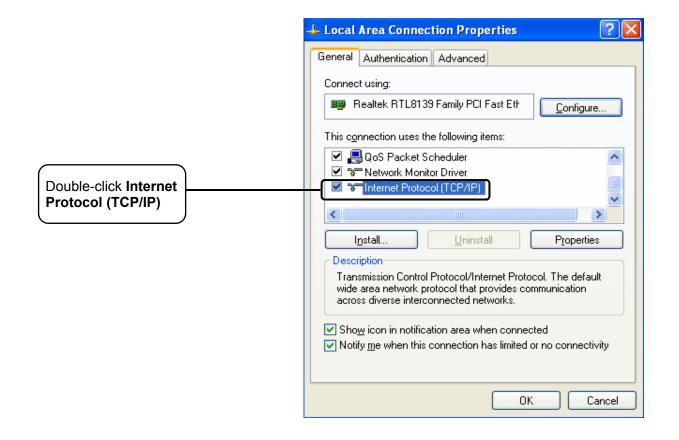
T3. What can I do if I cannot access the web-based configuration page?

1) Configure your computer's IP Address.

For Windows XP OS





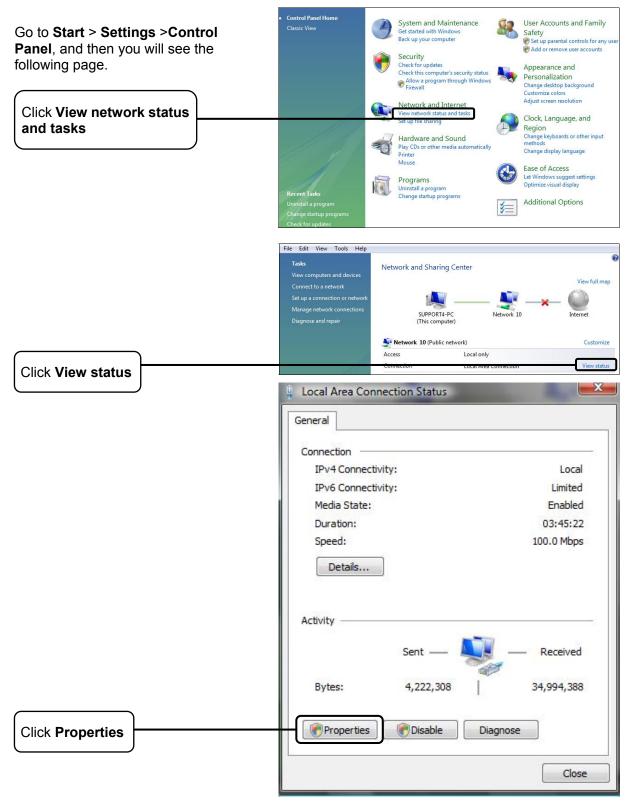


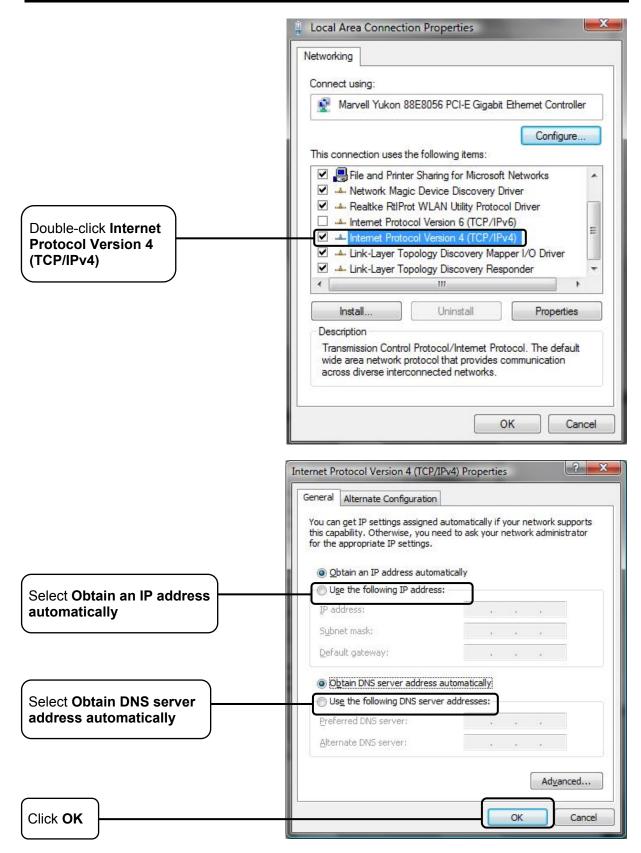
	Internet Protocol (TCP/IP) Properties
Select Obtain an IP address automatically	General You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. Image: Otherwise of the setting of the
Select Obtain DNS server address automatically	Default gateway: Obtain DNS server address automatically O Use the following DNS server addresses: Preferred DNS server: Alternate DNS server:
Click OK	Advanced

Connect using: Realtek RTL8139 Family PCI Fast Etł Configure This connection uses the following items: QoS Packet Scheduler Network Monitor Driver Network Monitor Driver Notify me when this connection has limited or no connectivity	Local Area Connection Properties
Internet Protocol (TCP/IP) Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. Show icon in notification area when connected	Realtek RTL8139 Family PCI Fast Etł
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. ✓ Show icon in notification area when connected	Retwork Monitor Driver Internet Protocol (TCP/IP)
	Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication

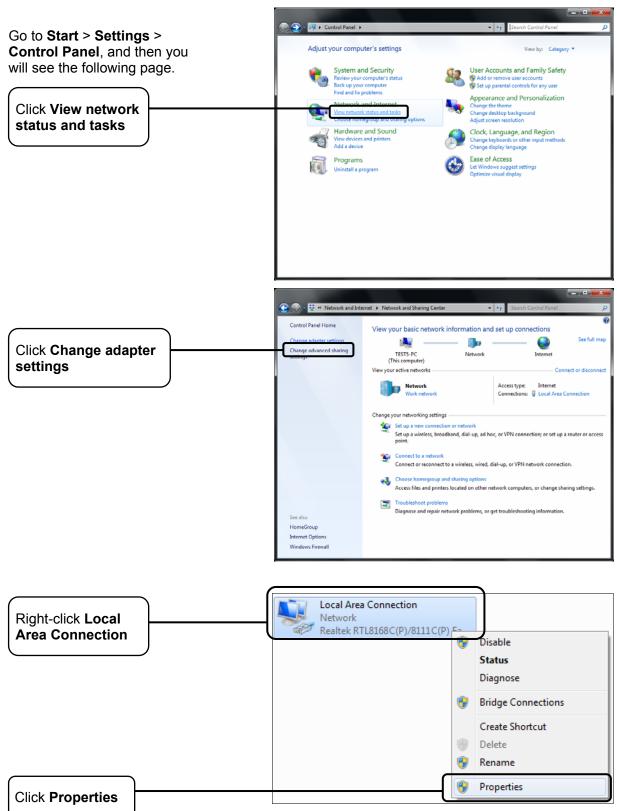
Click **OK**

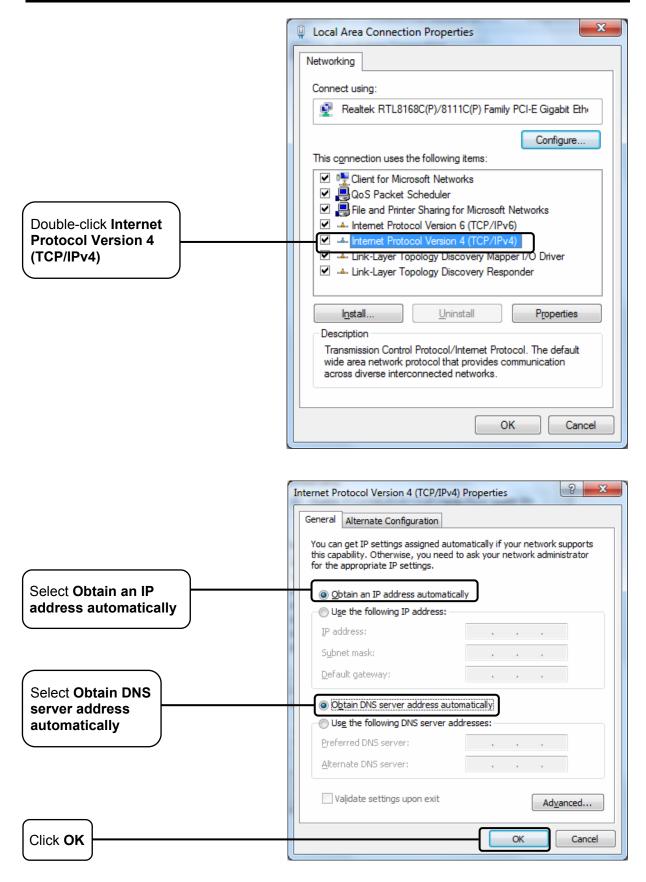
For Windows Vista OS



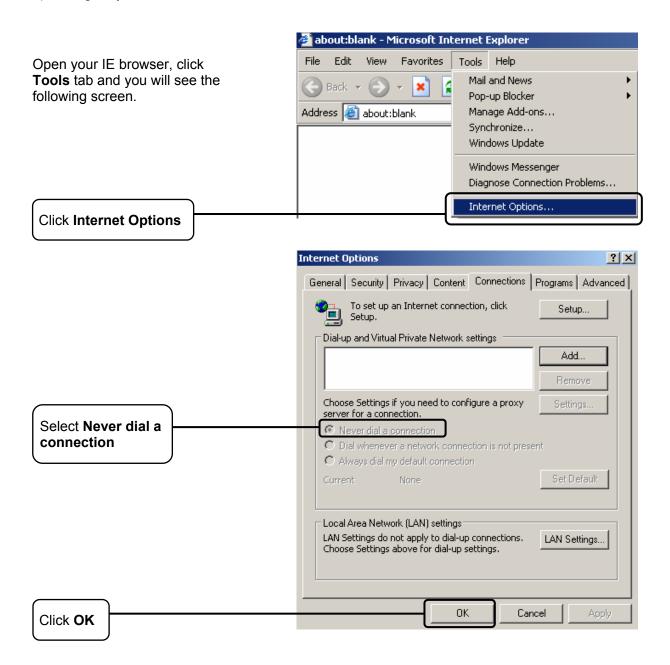


For Windows 7 OS





2) Configure your IE browser



Now, try to log on to the Web-based configuration page again after the above settings have been configured. If you still cannot access the configuration page, please restore your Modem Router's factory default settings and reconfigure your Modem Router following the instructions in <u>4.1 Login</u>. Please feel free to contact our Technical Support if the problem still exists.

T4. What can I do if I cannot access the Internet?

- 1) Check to see if all the connectors are connected well, including the telephone line, Ethernet cables and power adapter.
- 2) Check to see if you can log on to the web management page of the Modem Router. If you can, try the following steps. If you cannot, please set your computer referring to T3 then try to see if you can access the Internet. If the problem persists, please go to the next step.

- 3) Consult your ISP and make sure all the VPI/VCI, Connection Type, account username and password are correct. If there are any mistakes, please correct the settings and try again.
- 4) If you still cannot access the Internet, please restore your Modem Router to its factory default settings and reconfigure your Modem Router by following the instructions in <u>4.1 Login</u>.
- 5) Please feel free to contact our Technical Support if the problem still exists.
- Pote:

For more details about Troubleshooting and Technical Support contact information, please log on to our Technical Support Website: http://www.tp-link.com/en/support

Appendix C: Technical Support

Technical Support

- For more troubleshooting help, go to: www.tp-link.com/support/faq.asp
- To download the latest Firmware, Driver, Utility and User Guide, go to:
 - www.tp-link.com/support/download.asp
- For all other technical support, please contact us by using the following details:

<u>Global</u>

Tel: +86 755 26504400 E-mail: support@tp-link.com Service time: 24hrs, 7 days a week **UK**

Tel: +44 (0) 845 147 0017 E-mail: support.uk@tp-link.com Service time: 24hrs, 7 days a week

<u>Turkey</u>

Tel: 444 19 25 (Turkish Service) E-mail: support.tr@tp-link.com Service time: 9:00 AM to 9:00 PM 7 days a week

<u>Ukraine</u>

Tel: 0-800-505-508 E-mail: support.ua@tp-link.com Service time: Monday to Friday 14:00 PM to 22:00 PM

<u>Brazil</u>

Toll Free: 0800-770-4337 (Portuguese Service) E-mail: suporte.br@tp-link.com Service time: Monday to Saturday 08:00 AM to 08:00 PM

<u>France</u>

Tel: +33 (0) 820 800 860 (French service) Email: support.fr@tp-link.com Fee: 0.118 EUR/min from France Service time: Monday to Friday 9:00 AM to 6:00 PM (Except French Bank holidays)

Russian Federation

Tel: 8 (499) 754-55-60 8 (800) 250-55-60 (toll-free call from any RF region) E-mail: support.ru@tp-link.com Service time: From 10:00 to 18:00 (Moscow time) *Except weekends and holidays in Russian Federation

Switzerland

Tel: +41 (0) 848 800998 (German Service) E-mail: support.ch@tp-link.com Fee: 4-8 Rp/min, depending on rate of different time Service time: Monday to Friday 9:00 AM to 6:00 PM. GMT+ 1 or GMT+ 2 (Daylight Saving Time)

Singapore

Tel: +65 62840493 E-mail: support.sg@tp-link.com Service time: 24hrs, 7 days a week

USA/Canada

Toll Free: +1 866 225 8139 E-mail: support.usa@tp-link.com Service time: 24hrs, 7 days a week Australia / New Zealand

AUSTIALIA / NEW ZEALA

Tel: AU 1300 87 5465 NZ 0800 87 5465 E-mail: support@tp-link.com.au Service time: 24hrs, 7 days a week

Italy

Tel: +39 0230519020 E-mail: support.it@tp-link.com Service time: Monday to Friday 9:00 AM to1:00 PM, 2:00 PM to 6:00 PM

Indonesia

Tel: (+62) 021 6259 135 E-mail : support.id@tp-link.com Service time : Monday to Friday 9:00 -12:00; 13:00 -18:00 *Except public holidays

<u>Malaysia</u>

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