

# User's Manual



**TEI480T+/490T+/4000+**

**Enterprise & Net-bar Level Router**

VER:1.0

[WWW.TENDA.CN](http://WWW.TENDA.CN)

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## Chapter One Introduction

Thanks for purchasing TEI480T+/490T+/4000+ Enterprise/Net-bar level router. TEI480T+/490T+/4000+ is Tenda's latest multifunctional broadband access products specially designed for Net-bar, community, enterprise and school. TEI480T+/490T+/4000+ are adopting the world level high quality, high stability Intel IXP high level network processor, main Frequency is up to 533 MHz, adopting six-layers PCB professional design, fully ensuring the powerful function and super stability of the machine. Full duplex data transferring up to 200Mbps, supports up to 60,000 Link counts, data packing is fast and stable. Powerful Firewall is able to prevent various hacker attacks, ARP attacks and cheating and ARP virus etc. TEI480T+/490T+/4000+ are equipped with all the common function of other broadband routers, besides, TEI480T+/490T+/4000+ also supports Statistic monitoring on clients, Bandwidth control based on IP address, Link Count Controlling on a certain computer, IP and MAC address binding, Port Mirroring, VLAN, UPnP, DDNS, VPN Pass-through and Firewall etc. Please read this user's manual carefully before using.

### 1.1 Function

- Compliant with IEEE802.3, IEEE802.3u, IEEE802.3x
- Supports CSMA/CD, PPPoE, PPP, IP, ARP, DHCP, TCP, UDP, HTTP, FTP, DNS protocol

- Supports 2 10/100Mbps Auto-Negotiation WAN ports, connectable to xDSL/Ethernet/Cable
- Supports 3 10/100Mbps Auto-Negotiation LAN ports, connectable to LAN
- TEI4000+ supports one optic expansion slot, supports optic fiber connecting
- Auto load balance and real-time backup
- Supports port bandwidth control, port VLAN dividing and port mirroring
- Supports Statistic function, enables administrator to analyses the whole network usages status
- Support Web-Management function including IP client filtering, URL Filtering, MAC Address filtering etc.
- Support VPN Pass-through
- Supports QoS configuration based on IP or Port, enables you to control the bandwidth of a certain client
- Supports IP and MAC address binding, prevent from ARP attacks
- Support virtual server, special software, DMZ and static routing
- Supports Link count configuration and limit the Link count of a certain computer
- Built-in firewall, supports IP address Filtering, URL Filtering, MAC Address Filtering
- Prevent from DoS attack, ARP attack, able to separate the computer which is infected by virus

- Support remote Web Management, English configuration Interface, supports simple and easy configuration guide
- Built-in power supply, IU Height case, 19-inch rack-mountable

## 1.2 Unpacking

ITEM	Quantity
TEI480T+/490T+/4000+ Enterprise and Net-bar Level router	1 Unit
Power cord	1
Fast Installation Guide	1 copy
User's Manual	1 copy
Quality Warranty Card	1 copy
Quality Passed Certificate	1 copy
Mounting Brackets	4 piece
Rubber feet used for shock cushioning	4 piece

## Chapter Two Hardware Installation

### 2.1 Front Panel

a. Reset: Button for Resetting the router. Please press the Reset Button for 5 seconds and the SYS LED Indicator would be blinking. After 5 seconds, please un-press the button, the router would restore to factory default setting and restart automatically.

b. LED Indicators:

LED Indicator	Description	Function
POWER	Indicating the Status of the Power	When the power LED lights on, the Switch is receiving power
SYS	Indicating the Status of the System	When the SYS LED is blinking, the system is working normally. When the SYS LED lights ON or OFF, the system is working abnormally.
Link/Act	Indicating the Status of WAN and LAN	When the LED lights ON, the respective port is successfully connected to the Ethernet network. When the LED is blinking, the respective port is transmitting or receiving data.
100Mbps	Indicating the	When the LED for 100M lights ON, the



	Speed of WAN and LAN	<p>respective port is working at the speed of 100M;</p> <p>When the LED for 100M lights OFF, the respective port is working at the speed of 10M</p>
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c. WAN Port: Wide Area Network (RJ-45). Please connect the xDSL Modem or the Ethernet access cable to the WAN port of the router.

d. LAN Port: Local Area Network (RJ-45). Please connect the LAN port to computer, Hub or Switch.

## 2.2 Rear Panel

Power: Please use the power attached in the package.

## 2.3 Physical Environment

Required Physical Environment for Installation:

- Please place the router on a sturdy level surface and install the router in a site free from high heat.
- Please don't place the router in wet or dirty places.
- Please do not wipe the router with wet cloth.
- Recommend operating environment:  
 Temperature: 0°C~40°C (32°F~103°F)  
 Humidity: 5%~90% RH (Non-condensing)

## 2.4 Steps

a. Set up LAN Hardware connection

Please connect the LAN port with the switches or Hubs in the LAN. Or you can also connect the LAN port of your router directly to the LAN adapter of your computer.

b. Set up WAN Hardware connection

Please connect your xDSL or Ethernet to the WAN port of the router with Cat. 5 cable, TEI4000+ supports optic fiber connecting to the SFP module of TEI4000+

c. Connect the power cord

Please connect the power cord correctly and the router would start automatically.

Notice: When installing optic fiber connection, please make sure that the power of the router is turned off. Please make sure that the installing is correct before supplying power to the router, otherwise, this will cause failure of connection in WAN. And we recommend using Tenda TER870S optic module.

## Chapter Three Connect to the Broadband Router

### 3.1 Set up LAN Connection

Please connect the LAN port with the switches or Hubs in the LAN. Or you can also connect the LAN port of your router directly to the LAN adapter of your computer.

### 3.2 Set up WAN Connection

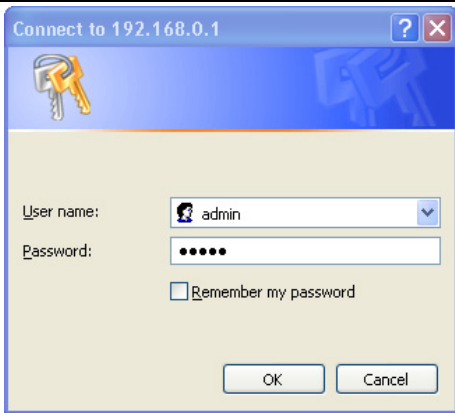
Please connect your xDSL or Ethernet to the WAN port of the router with Cat. 5 cable, or the SFP expansion slot with optic module.

## Chapter Four Configuration on the Router

Before using the router, please have proper network configuration on your computer, this would enables you to have normal communication with the router.

### 4.1 Set up proper Network Configuration

- Please set the IP address of your computer as auto-obtain or Fix IP Address. The router has its factory default IP address which is “192.168.0.1”, please open IE and enter “192.168.0.1” in the address bar. The system would require the user to enter User Name and Password as the figure below. Please enter the User Name and Password in the dialogue box (the default value for User name and Password are “admin”). It is recommended to change the User Name and Password when you enter into the system for the first time.



Enter the configuration Interface and on the left hand side of the page, you could see 10 function menus including: Running Status, Wizard, General Setting, DHCP Server, Advance Setting, Virtual Server, Security Setting, Route Setting, System Tool, Logout. When you select the respective button, more options would appear.

## 4.2 ISP Configuration

- This router supports 3 types of common used access modes to the Internet (the default access mode is dynamic IP access):

PPPoE (ADSL): Using PPPoE dialing up to have Internet connection

Dynamic IP: Broadband network etc use DHCP services to appoint IP addresses

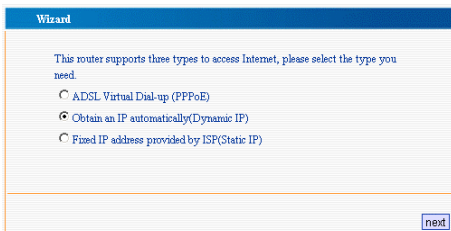
Fixed IP: Ethernet broadband Access, ISP supports fixed IP address

### 4.2.1 Wizard

Please single click the "Next" button in Administrator Mode Interface and

enter in to the Interface for access mode selection.

As the figure below, 3 types of common used access modes to Internet are displayed, please select according to your requirement:

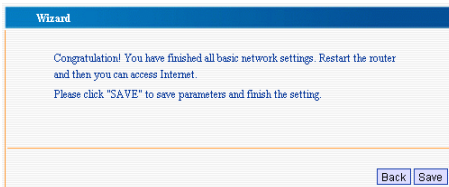


#### 4.2.1.1 PPPoE (ADSL)

If you are connecting to the Internet through "ADSL Virtual Dial-up (PPPoE)", please just enter the User Name and Password which is provided by the ISP into the "Wizard ADSL" dialogue box.

#### 4.2.1.2 Dynamic IP

If you are using "Dynamic IP" to have access to the Internet, you are able to obtain dynamic IP address from the ISP to have access to the Internet and do not need to have other configuration. Please just click "Next" and "save".



#### 4.2.1.3 Static IP

If you are using “Static IP” to have access to the Internet, please input the IP Address, Sub-net mask, Gateway, DNS and secondary DNS, after this, please click “Next” to save.

**Wizard-Static IP**

If your ISP gives you fixed IP address, please fill it into the following table. If you forget or do not know well about these network parameters, please refer to ISP.

IP Address:	<input type="text" value="58.60.110.221"/>
Subnet Mask:	<input type="text" value="255.255.255.252"/>
Gateway:	<input type="text" value="58.60.110.22"/>
DNS:	<input type="text" value="202.96.128.68"/>
Secondary DNS:	<input type="text" value="202.96.134.134"/> (optional)

After configuration, please go to “Running Status”>”WAN Status” to check the configuration that you have set. And by clicking the “disconnect” button, you are able to disconnect the Internet connectivity manually, and when you press the “connect” button, you are able to establish the Internet connectivity again.

WAN Status	
Link Status	Connected
WAN IP	58.60.110.221
Subnet Mask	255.255.255.252
Gateway	58.60.110.22
DNS	202.96.128.68
Secondary DNS	202.96.134.134
Link Type	Static IP

## 4.3 Configuration

### 4.3.1 Start and Log In

- After starting and Logging in successfully, the browser would display

the Interface for administrator's mode.

- In the menu on the left hand side, there are ten buttons including Running Status, Wizard, General Setting, DHCP Server, Advance Setting, Virtual Server, Security Setting, Route Setting, System Tool, and Logout. Single click a certain button and you are able to have the respective function configuration.
- We would give detail introduction to the function of each menu.

### 4.3.2 Running Status

The screenshot displays the Tenda router's web interface. On the left is a navigation menu with options: Running Status, Wizard, General Setting, DHCP Server, Advance Setting, Virtual Server, Security Setting, Basic Setting, System Tool, and Logout. The main content area is titled 'Running Status' and is divided into two sections: 'WAN Status' and 'LAN Status'. The 'WAN Status' section shows the following details: Link Status: Connected; WAN IP: 99.46.4.100; Subnet Mask: 255.255.255.255; Gateway: 219.133.207.1; DNS: 202.96.130.86; Secondary DNS: 202.96.134.133; Link Type: PPPoE; Link Time: 00:01:53. There are 'Connect' and 'Disconnect' buttons. The 'LAN Status' section shows: IP Address: 192.168.0.1; Subnet Mask: 255.255.255.0; DHCP Server: Enable; NAT: Enable; Firewall: Disable.

#### a. WAN Status

The connectivity status of WAN Port 1, WAN Port 2, WAN IP, Subnet Mask, Gateway, DNS, Secondary DNS, Link Type of the router and quantity of data packets sent and received by the WAN ports are displayed here.

#### b. LAN Status

The basic information of IP address, Subnet mask, DHCP Server, NAT,

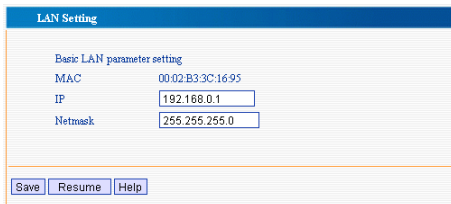
Firewall are displayed here.

- c. The Running Status, Client Count, Firmware Version etc are displayed here.

### 4.3.3 General Setting

Under “General Setting”, you could find 5 sub-items including LAN Setting, WAN Setting, MAC Clone, DNS Server, and Access Limit. Please single click a certain sub-item and you would be able to have respective function configuration. We would give brief introduction as follows:

#### 4.3.3.1 LAN Setting



LAN Setting	
Basic LAN parameter setting	
MAC	00:02:B3:3C:16:95
IP	<input type="text" value="192.168.0.1"/>
Netmask	<input type="text" value="255.255.255.0"/>
<input type="button" value="Save"/> <input type="button" value="Resume"/> <input type="button" value="Help"/>	

- IP Address: This refers to the IP address of the router on the LAN. Default IP address is 192.168.0.1, you can change this according to your requirement.
- Netmask: This refers to the SubNet Mask of the router on the LAN, you can input it manually.

**⚠ Notice:** If you change this IP address, you are required to use the new IP address to log in to the WEB Management Interface, and in order to have successful access to the Internet, default Gateway of all the computers under this router are required to set as this IP address.



### 4.3.3.2 WAN Setting

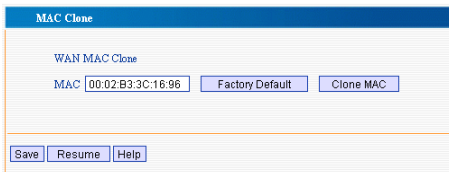
First, please select the WAN access type, which means your way of connecting to the Internet. The default mode of connecting to the Internet is “Dynamic IP”

- a. **Dynamic IP:** If you are having access to the Internet through dynamic IP, you are able to obtain IP address from the ISP automatically.
- b. **Static IP:** IF you are having access to the Internet through static IP, you should have the fixed IP address which is provided by your ISP.
- c. **ADSL:** If you are having access to the Internet through ADSL virtual dialing up. In this page, you are able to change and configure the following items:
  - **User Name:** This refers to your account number, please input the account number which is provided by your ISP.
  - **Password:** Please input the Password which is provided by your ISP, if you are not clear of these information, please contact your ISP and require them to offer to you.
  - **Service:** Input the Service which is provided by your ISP. (Optional)
  - **MTU:** the default value is 1492, you can change it according to your requirement.
  - **Connecting automatically:** This enables you to connect automatically after starting the router or being disconnected.
  - **Connecting manually:** This enables the user to connect manually.
  - **Connecting if needed:** To set up connection automatically when data

visiting exists.

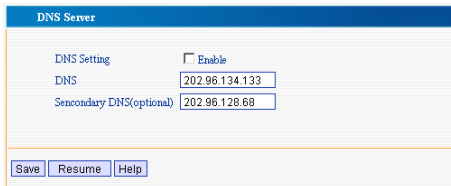
- **Connecting automatically in period of time:** To set up connection at fixed time period

#### 4.3.3.3 MAC Clone




Selecting this enables you to clone the MAC address of the computer being used by the administrator to the MAC address in WAN Port. 1 (You could also change the MAC address manually.)

#### 4.3.3.4 DNS Server



- **DNS server address:** Please input the DNS server address provided by ISP. Please contact your ISP for this information if you are not clear.
- **Secondary DNS:** Optional item, if your ISP provides you with two DNS servers, then you could input the IP address of another DNS server here.

 **Notice:** The main function of DNS is to translate the URL that we enter into IP address.

#### 4.3.3.5 Access Limit

In order to enhance the security of the router, you are able to set an IP address of the computer which is entitled to have access to the management interface of the router or change the port through which the host can have access to the web management interface.

**Access Limit**

If you want to appoint only one host to access to the web management and set the router, you may enable this function.

Notice: When you set IP and port of the host which can access to the web management, you should restart the router, and then the setting could take effect.

Enable

IP

Port

**⚠ Notice:** After setting the IP address, computers with other IP addresses are not able to log in the WEB Management Interface of the router. After changing the port through which the host is entitled to have access to management interface of the router, you are required to restart the router.

### 4.3.4 DHCP Server


In DHCP server, you can see “LAN DHCP Server” and “DHCP Client List”. We would have detail descriptions on these two functions as follows:

#### 4.3.4.1 LAN DHCP Server

LAN DHCP Server	
DHCP Server	<input checked="" type="checkbox"/> Enable
Start IP	192.168.0. <input type="text" value="10"/>
End IP	192.168.0. <input type="text" value="100"/>
Lease Time	<input type="text" value="One Day"/> ▾

In order to use the DHCP server function, you should have the following configuration:

- Enable DHCP server
- Start IP Address of IP Pool: The starting IP address which is appointed by the DHCP server automatically.
- End IP Address of IP Pool: The ending IP address which is appointed by the DHCP server automatically
- Remaining Time: The entitled time for each client to use the IP addresses which it obtains.

 **Notice:** In order to use the DHCP server function of this router, the TCP/IP protocol of the computers under the LAN should be set as "Auto-Obtain IP Address"

#### 4.3.4.2 DHCP Client List

- The name of the host, IP address, MAC Address, Remaining Time and Static are displayed in DHCP Client List.
- The name of the host: the name of the host
- IP Address: the IP address which is successfully applied by the client
- MAC Address: the MAC Address of the computer which applies the IP address successfully

- Remaining Time: The time for the host to use the IP address which is permitted by the DHCP server.
- Static: Bind the IP address to client through MAC address Binding function.
- When the router uses up the IP address in the IP Pool, it will distribute expired IP addresses to clients which newly applies for IP addresses.
- Input in the “Static Client”, the MAC address will be bind to IP address, this enables the computer to obtain current IP address in next time.

⚠ **Notice:** When the computers on the LAN are set as auto obtain, you are able to distribute IP addresses to computers on the LAN through this function.

### 4.3.5 Advance Settings

- In the “Advance Setting” menu, there are six sub-items, including Statistic, Port Monitor, VLAN, Bandwidth Control, LAN IP Control, ARP Control and [Load Balance](#). By clicking a certain sub-item, you are able to have respective function checking and have configuration.

#### 4.3.5.1 Statistic


Statistic										
This page shows the traffic and data rate of each host IP( ↑ stands for transmitting, ↓ stands for receiving).										
Sort by IP ▾										
IP	MAC	Traffic				Rate		Link Count	Operation	Binding
		↑ Packet	↓ Byte	↓ Packet	↓ Byte	↑ Rate	↓ Rate			
192.168.0.1	00:02:B3:3C:16:95	0	0	0	0	0	0	0	<a href="#">Restrict</a>	<a href="#">Introduce</a>
192.168.0.4	00:E0:4C:FF:24:2B	138	15340	0	0	0	0	0	<a href="#">Restrict</a>	<a href="#">Introduce</a>

[Refresh](#) [Help](#)

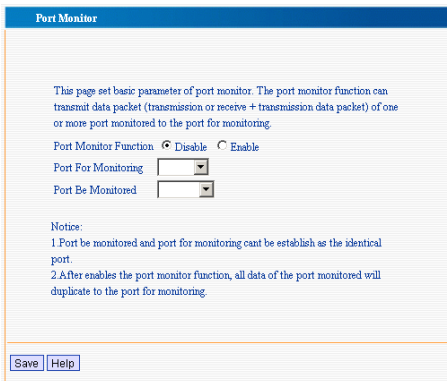
This page displays the traffic and data rate of each host IP. (↑stands for

transmitting, ↓stands for receiving) Link Count

- IP data Traffic and Rate: To display the data of visiting the router and visiting the external network.
- Link Count: To display the Link Counts established by the IP
- Operation: You can restrict or [release](#) this IP
- Binding: To bind this IP with the MAC loaded. But the ARP Binding function in IP-MAC binding should be enabled

 **Notice:** If you have not enabled the “Defense Network Attack” function in “Security Setting”, the data above would be caused to be not accurate.

#### 4.3.5.2 Port Monitor



**Port Monitor**

This page set basic parameter of port monitor. The port monitor function can transmit data packet (transmission or receive + transmission data packet) of one or more port monitored to the port for monitoring.

Port Monitor Function  Disable  Enable

Port For Monitoring

Port Be Monitored

Notice:


1. Port be monitored and port for monitoring cant be establish as the identical port.
2. After enables the port monitor function, all data of the port monitored will duplicate to the port for monitoring.

- This page sets basic parameters of Port Monitor. The port monitor function can transmit data packet (transmission or receive + transmission data packet) of one or more ports monitored to the monitoring port.

- Port monitor function: Enable or Disable Port Monitor Function
- Port for Monitoring: To collect the data packet of the ports being monitored
- Port Be Monitored: All the data packets transmitted or received by this port are copied and send to the Port for Monitoring

#### 4.3.5.3 VLAN

- In this section, you are able to configure the basic parameters of VLAN function, this router supports VLAN (Port based VLAN). Only the ports set in the same VLAN group are able to communicate with each other.
- VLAN Mode Selecting: To choose the every required mode according to the Notice.

 **Notice:** This function can be used in safe management of company data.

#### 4.3.5.4 Bandwidth Control

In this page, we will set the bandwidth of every LAN. We can distribute bandwidth reasonably based on the structure of LAN, for utilizing the networks resources sufficiently.

**Bandwidth Control**

In this page we will set the bandwidth of every LAN. We can distribute bandwidth reasonably based on the structure of LAN, for utilizing the networks resource sufficiently.

Port1	No Limit
Port2	No Limit
Port3	No Limit
Port4	No Limit

[Save](#) | [Help](#)

- You are able to configure reasonable bandwidth for respective LAN port to control the download rate of each port, and able to utilizing the networks resources sufficiently If you don't want to limit the bandwidth of a certain LAN port, then please configure it as "No Limit".

#### 4.3.5.5 LAN IP Control

In this page you are able to set actual transmission bandwidth of every IP address of IP segment in LAN, to control effectively bandwidth and Link counts of every PC, to prevent the evilly intentionally seizing of the network resources through download tools like BT etc. and to equally distribute current flow of total network.

- Range of Upload Speed and Download speed: 8K, 16K, 32K, 64K, 128K, 256K, 512K, 1024K, 2048K, no limit
- Connect Limit range: 0-999. "0" stands for No Limit

LAN IP Control					
<p>In this page you can set actual transmission bandwidth of every IP or IP address segment in LAN, to control effectively bandwidth of every PC combined with flux statistics, to prevent the evil intention seizes the network resources by BT and so on download tool, to equally distribute current flux of total network.</p>					
<input type="checkbox"/> Use rulers appear in following table, needs to select this sign to enable.					
Start IP	End IP	Download Speed KB/s	Upload Speed KB/s	Connect Limit	Operation
<input type="text"/>	<input type="text"/>	No Limit	No Limit	<input type="text"/>	<<Add
<input type="button" value="Save"/> <input type="button" value="Help"/>					

#### 4.3.5.6 ARP Bind

In this page, you are able to set matching rule of single PC's MAC and IP,



and prevent other illegal IP and illegal MAC from having access to the network, and to prevent ARP cheating.

- Load All: To Load the IP and MAC addresses displayed in Advance Setting→Statistic. If you want to add IP and MAC addresses in the network, please add manually.
- Other Configuration: Add Item, Enable Item, Delete Item, Search Item and Save

**ARP Bind**

This page set matchrule of single PC's MAC and IP.

Note: For automata bind turn to **Advanced Setting->Statistic** or directly

Note: Only IP in following table can visit internet when rules are enable.

ARP Bind  Disable  Enable

ID	LAN IP	MAC	Bind	Config
----	--------	-----	------	--------

**⚠ Notice:** If you enable this function, there is no IP or MAC addresses in the table, then all the computers in the network are not able to connect to the network, only the IP and MAC addresses displaying in the table are entitled to have access to the network.

#### 4.3.5.7 Load Balance Control

TEI480T+/TEI490T+/TEI4000+ supports three types of load balance modes:

- Intelligent Load Balance Mode (Fully Automatic): To calculate the load balance rate of WAN port according to the ISP circuitry real bandwidth input by the user, to ensure the stability of the network. Please refer to the figure below:

ISP circuitry real bandwidth

WAN1:  
Up bandwidth 1024 Kbit/s      Down bandwidth 1024 Kbit/s

WAN2:  
Up bandwidth 1024 Kbit/s      Down bandwidth 1024 Kbit/s

- Intelligent Circuitry Backup Mode: To select the main WAN port, the other WAN port is set as circuitry for backup.
- IP Group (The standard is the rule set by the administrator, for the data packets outside the rule defined, they are deal with by WAN 1.). Please refer to the figure below:

User-defined load setup

Name of ruler:

Source IP address:     to

Destination IP:     -

appointed WAN: WAN1

Activate:

### 4.3.6 Virtual Server

Under the Virtual Server Menu, there are three sub-items including [Virtual Server](#), [UPnP Setting](#) and [DMZ](#). Single click a certain sub-item, you are able to have respective checking and IP configuration.

#### 4.3.6.1 Virtual Server

- Virtual Server is defined as a service port. All external access to this port of WAN is re-oriented to the computers on the LAN

Virtual Server

Virtual Server define the mapping relationship between service port of WAN and network server of LAN. All access to service port of WAN will be reorientation to network server of LAN appointed by IP address.

ID	Port	IP	Protocol	Enable	Delete
1.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="text"/>	<input type="text"/>	ALL ▾	<input type="checkbox"/>	<input type="checkbox"/>

Normal service port:   ID

- WAN Port: To select the WAN port for services
- Service Port: LAN service port, this refers to the internal service port which should be connected to the WAN service port.
- Network IP: Please input the IP of the internal host which requires to open virtual service.
- Protocol: Please choose protocol of TCP/UDP/ALL for data transferring.

➤ Enable: Please select “Enable” to activate the setting.

⚠ **Notice:** If you configure the virtual server with service port of 80, then you are required to set the value in “Remote Control” under “Security Setting” with a value different from 80, for example, 8080. Otherwise, conflict would happen and cause the virtual server to fail to work. If this happens, in order to activate this function again, you should restart the router.

### 4.3.6.2 UPnP Setting

UPnP Setting

Enable UPnP

UPnP Mapping Table

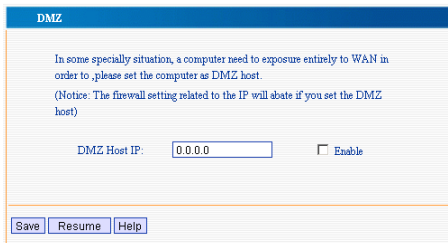
ID	Ext.Host	Ext.Port	Int.Host	Int.Port	Protocol	Description
----	----------	----------	----------	----------	----------	-------------

Refresh

Save Resume Help

TEI480T+/TEI490T+/TEI4000+ supports the latest Universal Plug and Play (UPnP). It would be effective under OS Windows ME/ Windows XP or above (Remarks: The OS should be integrated, and installed with Directx 9.0 or above revision.), or under the applications which supports UPnP. For example, a computer under OS of Windows ME/Windows XP with MSN Messenger is able to use UPnP protocol when using the video and audio communication.

### 4.3.6.3 DMZ



DMZ

In some specially situation, a computer need to exposure entirely to WAN in order to ,please set the computer as DMZ host.  
(Notice: The firewall setting related to the IP will abate if you set the DMZ host)

DMZ Host IP:   Enable

Some programs require many connections while running, for example, Internet Games, Video Meeting, Internet Phone etc. Because the firewall of the router exists, these programs are not able to work under pure virtual services. In this case, you could set the computer as DMZ host.

As in the figure above, please input the “DMZ Host IP” of the IP address of the computer which is required to set as DMZ on the LAN. Then please click “Enable” to make the DMZ take effect.

### 4.3.7 Security Setting

- Under the menu of “Security setting”, there are 6 sub-menus including: [Client Filter](#), [URL Filter](#), [MAC Filter](#), [Defense Network attack](#), [Remote Management](#) and [Special Application Filter](#). We would give detail introduction to them as follows:

#### 4.3.7.1 Client Filter

Client Filter

The data packet **appear** in the following table is forbidden to pass, others will be allowed to pass

ID	Start IP	End IP	Port	Type	Time	Enable	Delete
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="text"/>	<input type="text"/>	<input type="text"/>	All	0:00	<input type="checkbox"/>	<input type="checkbox"/>

Save Resume Help

- In order to enable you to have further management on the computers on the LAN, you can use the function of Client Filter to control the Internet access of the computers on the LAN.

Steps for Client filter configuration are as follows:

- 1) Please Click “Security setting” and choose submenu “Client Filter”
- 2) Put IP address of the computer which are going to be controlled on the LAN into the “Start IP” and “End IP” section.
- 3) Fill in “Port” with the port name you expect to control.
- 4) In “Type”, please choose the protocol used by the controlled data packets. (“All” indicates TCP/ UDP)
- 5) In “Time” section, please choose the effective date and expiry date.
- 6) Choose “Enable” to activate this filter rule.
- 7) Single Click “Save” to complete setting.

### 4.3.7.2 URL Filter

Index	Start IP	End IP	URL String	Enable	Delete
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

Enable URL Filter

- URL Filter: Control the web pages that the hosts in LAN access to.
- The steps to set URL Filter:
  - 1) Click “Security setting”, and choose submenu “URL Filter”.
  - 2) Choose “Enable URL Filter” to activate URL Filter Function.
  - 3) Fill in the IP table with the IP segment you want to control.
  - 4) In “URL string”, please input the filtered domain name, or input part of the filtered domain name. If you input a certain character string, the computer with selected IP would not be able to access to all domain names containing this character string.
  - 5) Choose “Enable” to activate this filter rule. This rule is only effective for the WebPages to which the browser’s accessing port is 80.
  - 6) Click “Save” to complete setting.

### 4.3.7.3 MAC Filter

MAC Filter

MAC Filter  Enable

Filter/Permit the following MAC address connect to Internet  Filter  Permit

Configure MAC

MAC	Note	Operate
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/>	<<Add <input type="text" value="Manually"/>

- In order to manage the hosts in LAN better, you could control the computers' access to Internet by MAC filter.

Steps for setting MAC filter are as follows:

- 1) Click "Security setting", and choose submenu "MAC Filter".
- 2) Choose "Enable" to activate MAC Filter.
- 3) Choose "Filter" to forbid the MAC address to connect with Internet; Choose "Permit" to enable the MAC address to connect with Internet.
- 4) Input the MAC address of hosts which you want to control in to the "Configure MAC" section, and fill in "Note" with proper description. And you can also select the MAC address of the host which you know in the table of "Operate", please click "Add" and then click "Save" to complete configuration.



#### 4.3.7.4 Defense Network Attack

Defense Network Attack	
You can prevent hacker and the viral attack from the LAN and WAN through this page setup. Notice: Only after enable the function guard against the DOS attack can other projects be used.	
Defend DoS Attack	<input checked="" type="checkbox"/>
Neglect Ping from WAN	<input checked="" type="checkbox"/>
Filter Ping from LAN(Defense shockwave virus's attack)	<input type="checkbox"/>
Enable ICMP-FLOOD attack filter	<input checked="" type="checkbox"/>
Valve value of ICMP-FLOOD packet: (5-3600)	<input type="text" value="100"/> packet/fee
Enable UDP-FLOOD filter	<input checked="" type="checkbox"/>
Valve value of UDP-FLOOD packet: (5-3600)	<input type="text" value="1500"/> packet/fee
Enable TCP-SYN-FLOOD attack filter	<input checked="" type="checkbox"/>
Valve value of TCP-SYN-FLOOD packet: (5-3600)	<input type="text" value="1000"/> packet/fee
<input type="button" value="Save"/> <input type="button" value="List"/> <input type="button" value="Help"/>	

- Enable each function to prevent hacker and the various attacks, and protect the network security.
- Defend Dos Attack: Only after enabling the Defend Dos Attack function can other function be used.
- Neglect PING from WAN: Neglect PING from WAN
- Filter PING from LAN: Enabling this function to prevent from shockwave virus's attack
- Enable ICMP-FLOOD attack filter: Enabling this function to prevent from shockwave virus' attack
- Enable UDP-FLOOD filter: Enabling this function to prevent from UDP-FLOOD Attack
- Enable TCP-SYN-FLOOD attack filter: Enabling this function to

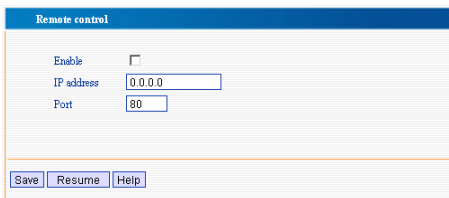
prevent from SYN-FLOOD attack.

**⚠ Notice:**

- 1、 The computer is limited and not able to connect to the network when the network attack is found, and you can find the IP address of the host that launched the attack in the table.
- 2、 When the attack or virus of the computer has been cleared, you could delete the table and enable the computer forbidden to have access to the network again.

#### 4.3.7.5 Remote Control

Generally Speaking, Only the clients in the LAN would manage the router. If you have special demand, you could remotely manage the router through this function.



Remote control	
Enable	<input type="checkbox"/>
IP address	<input type="text" value="0.0.0.0"/>
Port	<input type="text" value="80"/>

**⚠ Notice:**

The default IP for remote management is 0.0.0.0. When enabling this function, every host in the WAN could log in and remotely manage the router. If you change the default IP (e.g.: changed into 58.60.111.221), only the host with specified IP (58.60.111.221) could execute this WEB management function.

### 4.3.7.6 Special Application Filter

- Enable this function to forbid MSN and QQ.

Special Application Filter

Disable MSN

Disable QQ

Save Resume Help

**⚠ Notice:** There are many different modes for QQ to log in. And different QQ version may change server and login mode. If you are not able to forbid QQ under this function, please consult with our technical support.

### 4.3.8 Route Setting

- Under “Route Setting”, there are 2 sub-items: “System Routing Table” and “Static Routing Table”. We will give detail introduction to the function of each sub-item as follows:

#### 4.3.8.1 System Routing Table

System Routing Table

Destination IP	Subnet Mask	Gateway	metric	Interface
0.0.0.0	0.0.0.0	58.60.110.22	0	ixg1
192.168.0.0	255.255.255.0	192.168.0.1	0	ixg0
58.60.110.220	255.255.255.252	58.60.110.221	0	ixg1

Refresh

- This section displays the core contents of the system routing table of the router.

### 4.3.8.2 Static Routing Table

Static Routing Table			
Destination IP	Subnet Mask	Gateway	Operation
<input type="text"/>	<input type="text"/>	<input type="text"/>	<<add
<input type="button" value="Help"/>			

- You could set the static routing function, and specify static routing rule.
- Destination IP: IP for host(s) or network to access
- Subnet Mask: Usually subnet Mask of destination address Normally is 255.255.255.0
- Gateway: The IP address for the router or host to transmit packet to.



#### Notice:

- 1、The IP for gateway should be set on the same IP segment as WAN or LAN.
- 2、The subnet mask should be set as 255.255.255.255 if the destination IP is the IP address of a certain host.
- 3、The subnet mask should match the destination IP if it is a IP segment. For example, if the destination IP is 10.0.0.0, Subnet mask should be 255.0.0.0; If the destination IP is 10.1.2.0, Subnet mask should be 255.255.255.0

### 4.3.9 System Tool

- Under "System Tool", there are 8 sub-items. They are Time Setting, Dynamic DNS (DDNS), Backup/ Resume settings, Upgrade, Restore factory settings, Restart, Password and System Log. Click the sub-item, you are able to have respective configuration. Below is the

detailed introduction.

### 4.3.9.1 Time Setting

The screenshot shows the 'Time setting' configuration page. It includes a title bar, a main content area with instructions and a notice, a checkbox for 'Enable periodic Calibration' with a 'Calibration period' dropdown set to 'half an hour', and a 'Time zone' dropdown menu currently set to '(GMT+08:00)Beijing,China, Hong Kong,Singapore,Taipei'. At the bottom, there are 'Save', 'Resume', and 'Help' buttons.

- You would choose the time zone according to your location. When connected to Internet, you would obtain GMT time.

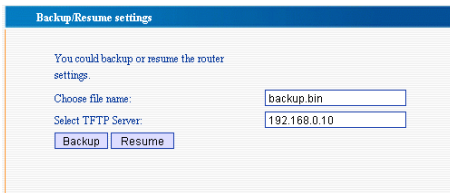
### 4.3.9.2 DDNS

The screenshot shows the 'DDNS' configuration page. It features a title bar, a section for 'DDNS Clnet support' with radio buttons for 'Enable' and 'Disable', and a 'Server ISP' dropdown menu set to 'oray.net' with a 'Register' link. Below are input fields for 'User Name', 'Password', and 'Domain name' (with '(Optional)' text). At the bottom, there are 'Save', 'Resume', and 'Help' buttons.

- Register your Domain name in Oray.net. Input your registered User Name and password, and saved. Then, you could access your local server by the Domain name through the DDNS of this router: (For example, register a user name qp612 in Oray.net. And set up a WEB server on the local host of 192.168.0.111 The domain name is qp612.vicp.net. When Mapped the port in Virtual server, you are able

to input “http:// qp612.vicp.net”into the address bar of the explorer and able to have access to your Web page.

#### 4.3.9.3 Backup / Resume settings



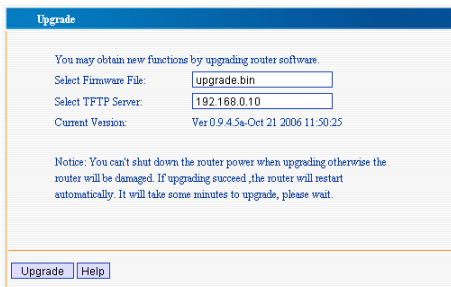
The screenshot shows a web interface titled "Backup/Resume settings". The main text reads: "You could backup or resume the router settings." Below this, there are two input fields: "Choose file name:" with the value "backup.bin" and "Select TFTP Server:" with the value "192.168.0.10". At the bottom, there are two buttons: "Backup" and "Resume".

- You could backup current setting or restore to previous settings for router.

Steps for Backup and Restore

- 1、Download a TFTP Server program in our homepage [www.tenda.cn](http://www.tenda.cn). Save it in a fixed directory, and run it.
- 2、Click “Backup” to generate a system backup file in the directory of TFTP program.
- 3、In the same way, we could place the configuration files which requires to be uploaded in the directory of TFTP, and click “Resume”, and restart the router and we are able to restore to the previous system configuration.

#### 4.3.9.4 Software Upgrade



The screenshot shows a web interface titled "Upgrade" with a blue header. The main content area is white with a thin border. It contains the following text and form elements:

- Text: "You may obtain new functions by upgrading router software."
- Form: "Select Firmware File:" followed by a text input field containing "upgrade.bin".
- Form: "Select TFTP Server:" followed by a text input field containing "192.168.0.10".
- Text: "Current Version: Ver 0.9.4.5a-Oct 21 2006 11:50:25".
- Text: "Notice: You can't shut down the router power when upgrading otherwise the router will be damaged. If upgrading succeed, the router will restart automatically. It will take some minutes to upgrade, please wait."
- Buttons: "Upgrade" and "Help" at the bottom left.

By upgrading router firmware, you would obtain more stable router version and value-added function.

#### Steps for Upgrading

1、Download the latest version of firmware from our homepage [www.tenda.cn](http://www.tenda.cn).

2、Open a TFTP Server in a certain PC which is on the LAN. Please unpack the file downloaded and use WinRAR to unpack and place it under the directory of the TFTP server.

3Please click "Upgrade" to have software upgrading.

3、 After upgrading, the router would restart automatically.

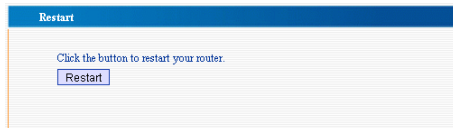
**⚠ Notice: Please don't turn off the power of the router during up-grading, otherwise this would destroy the router. After upgrading successfully, the router would restart automatically. The process for upgrading would take several minutes, please be patient and wait. In order to enable the router to have better performance, please restore to factory default setting after upgrading.**

### 4.3.9.5 Restore to Factory Settings



- By clicking the “Restore” button, all the function on the router would go back to factory default settings. They are as follows:
  - Default User Name: admin
  - Default Password: admin
  - Default IP: 192.168.0.1
  - Default Subnet Mask: 255.255.255.0
  - You should restart the router to take effect after restoring to factory default setting

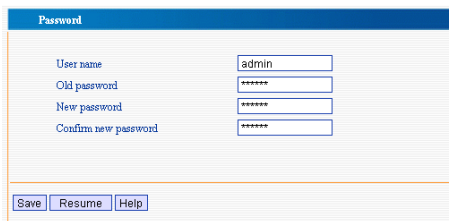
### 4.3.9.6 Restart



- By click “Restart” the router, some function which requires restarting to become active would take effect. Before the router restarts, the network connectivity would be disconnected automatically.




### 4.3.9.7 Change Password



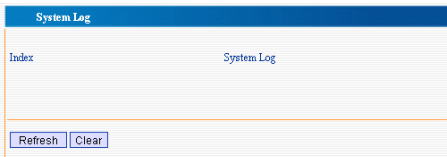
Password	
User name	<input type="text" value="admin"/>
Old password	<input type="password" value="*****"/>
New password	<input type="password" value="*****"/>
Confirm new password	<input type="password" value="*****"/>

- In this section, you can change the User Name and Password.
- Please input your new User name, old password, and new password. Then click “Save”, The User name and Password would be changed successfully if the information that you input are correct.

 **Notice:** Considering the security, we strongly recommend you to change the default User Name and Password.

### 4.3.9.8 System Log

- In System Log, you would check the system record, and see if there is network attack.
- Clear: To clear system Log



System Log	
<a href="#">Index</a>	<a href="#">System Log</a>

### 4.3.10 Logout

- After completing settings, please click ‘Logout’ to exit.