

# TeleWell TW-EA501

## ADSL modeemi ja reititin

RFC 2684(1483) , PPPoE, PPPoA -yhteyksille

4 kpl 10/100 Mbps Ethernet -liityntä

Laite toimii automaattisesti sillatuissa  
ADSL-liittymissä (RFC 2364) seuraavilla VPI / VCI -arvoilla  
0/33, 8/35, 8/32, 14/24, 0/100, 0/50

**CE**  
Ohjekirja

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## Myyntipaketin sisältö

- TELEWELL TW-EA501 ADSL modeemi
- CD-levy, jossa ohjekirjan kopio
- RJ-11 puhelinjohto ja suomalainen puhelinpistoke
- Ethernet- (CAT-5 LAN) kaapeli (suora)
- AC-DC virtalähde (12V DC, 1A)
- Ohjekirja
- Jos käytetään tavallisia puhelimia, fakseja tai modeemeja ADSL-liittymän rinnalla, niin jokaisella laitteella kyseisessä liittymässä pitää olla erillinen häiriönpoistin (ADSL-suodatin ei sisälly vakiona myyntipakettiin).
- Käyttäjän pitää itse huolehtia asianmukaisesta virusturvasta sekä "matojen" esto-ohjelmasta omalla tietokoneellaan. Nämä ohjelmat eivät sisälly myyntipakettiin.



### Varoitukset

Laitetta saa käyttää vain normaaleissa asuinhuoneen lämpö- ja kosteusolosuhteissa. Käytä vain laitteen mukana tullutta verkkovirta-muuntajaa.

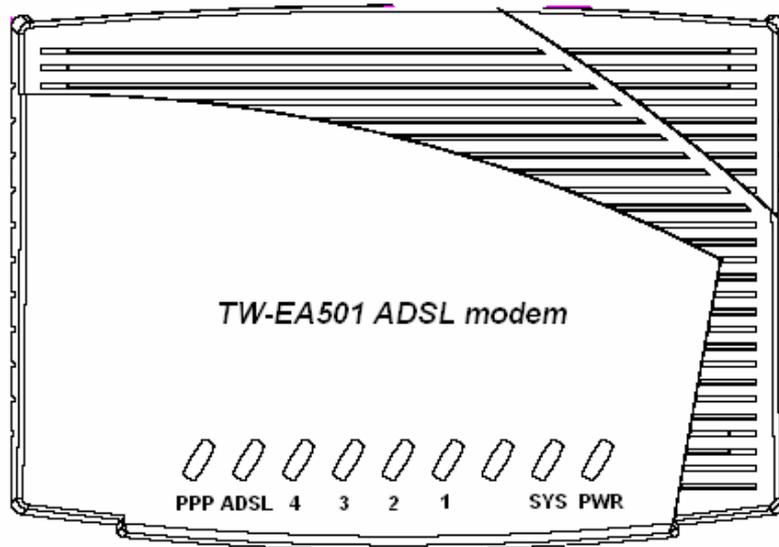
Laitteen avaaminen ei ole sallittua ilman TeleWell Oy:n lupaa. Jos laite on avattu ilman lupaa, niin takuu lakkaa välittömästi.



### Huomautus

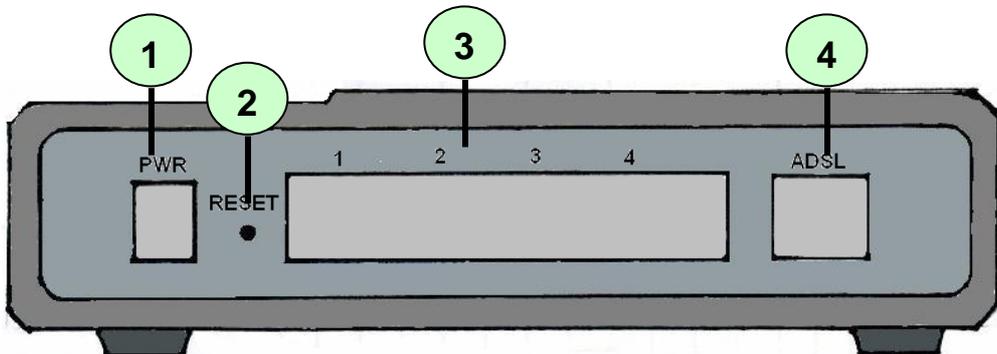
Pidä laitetta mahdollisimman pölyttömässä paikassa. Älä aseta laitetta muiden lämpöä tuottavien laitteiden päälle eikä monitorien tai GSM-puhelinten viereen. **Irroita laite ja puhelin sähköverkosta ukkosten ajaksi tai kun et ole kotona varsinkin kesäaikoina, jolloin ukonilmoja esiintyy.**

## Laitteen merkkivalot



Merkkivalo		Toiminto
1	PPP :	● Palaa kiinteästi, kun PPPoA/PPPoE-yhteys on päällä.
2	ADSL:	● Vilkuttaa, kun laite hakee linjaa. Palaa kiinteästi, kun yhteys operaattorin päähän on muodostunut
3	LAN Port 1-4:	<ul style="list-style-type: none"> <li>● Palaa, kun laite on kytkettynä tietokoneeseen</li> <li>● Vihreä = 100Mbps yhteys; Oranssi = 10Mbps yhteys.</li> <li>● Vilkkuu, kun tietoa lähetetään/vastaanotetaan</li> </ul>
4	SYS :	● Palaa kiinteästi, kun laite on käyttövalmis
5	PWR :	● Palaa, kun laitteessa on virrat päällä.

## Laitteen takapaneeli



Portti		Kytkenät
1	PWR	Tähän kytketään laitteen muuntaja.
2	RESET	Kun laitteessa on virrat päälle, voi sen reset-painikkeesta palauttaa tehdasasetuksille painettuna 0-3 sekunttia: käynnistää laitteen uudelleen painettuna yli 6 sekunttia: palauttaa laitteen tehdasasetuksille
3	LAN 1X – 4X (RJ-45 liitin)	Tähän kytketään Ethernet-kaapeli, joka yhdistää laitteen verkkokortille
4	LINE	Tähän kytketään RJ-11-puhelinjohto, joka menee puhelinpistokkeeseen

## Laitteen käyttöönotto

- Laitetta käytetään yleisessä puhelinverkossa ADSL-keskuksen ja tilaajan välillä

1. Kytetään Ethernet-kaapeli laitteen LAN-liittimen ja tietokoneen välille
2. Kytetään puhelinjohto laitteen Line-liittimen ja puhelinpistorasian välille
3. Kytetään laite sähköverkkoon
4. Odotetaan n. 30 sekunttia, kunnes laite on käynnistynyt oikein
5. Tarkistetaan, että pwr- ja LAN-merkkivalot palavat
6. Tarkistetaan, että SYS-merkkivalo palaa kiinteästi ja ADSL-merkkivalo vilkkuu ensin ja lopuksi jää palamaan kiinteästi eli laite on linjalla

## Tuetut protokollat

- RFC 1483 Bridged (nykyisin RFC 2684)
- RFC 1483 Routed (nykyisin RFC 2684)
- PPPoA
- PPPoE

## Laitteen oletusasetukset

### ● WWW-hallinta:

- ✘ Username: admin
- ✘ Password: admin

### ● LAN IP-tiedot:

- ✘ IP-osoite: 192.168.0.254
- ✘ Aliverkonpeite: 255.255.255.0

### ● ADSL-operaattorin asetukset:

- ✘ RFC 1483 LLC Bridge
- Tukee automaattisesti operaattoriasetuksia VPI = 0, 14 ja VCI = 24, 33, 50, 100  
Ensimmäisellä kerralla, kun laite hakee oikeat operaattoriaisetukset, voi yhteyden muodostuminen kestää n. 2-4 minuuttia
- NAT on päällä

### ● DHCP server:

- ✘ DHCP on päällä
- ✘ IP-alue alkaen: 192.168.0.100
- ✘ IP-osoitteiden oletuksena jaettava määrä: 100
- ✘ Laite hake IP-osoitteen operaattorilta automaattisesti ja jakaa sen omalla DHCP-palvelimella sisäverkon tietokoneille

# Windows-tietokoneen asetukset (TCP/IP)

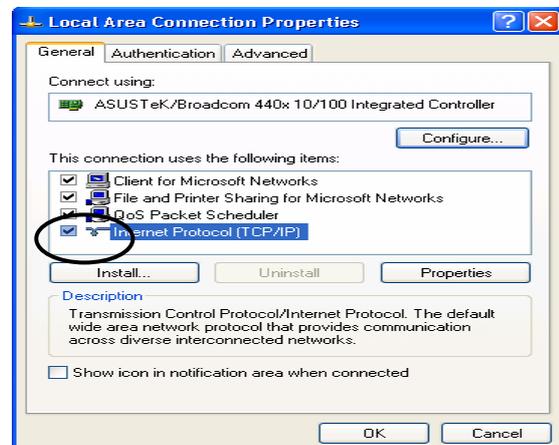
## 1. Windows käyttöjärjestelmässä

Siirry kohtaan ohjainpaneeli/  
verkkoasetukset



## 2. Valitse verkkoyhteydet ja verkkokortin ominaisuudet

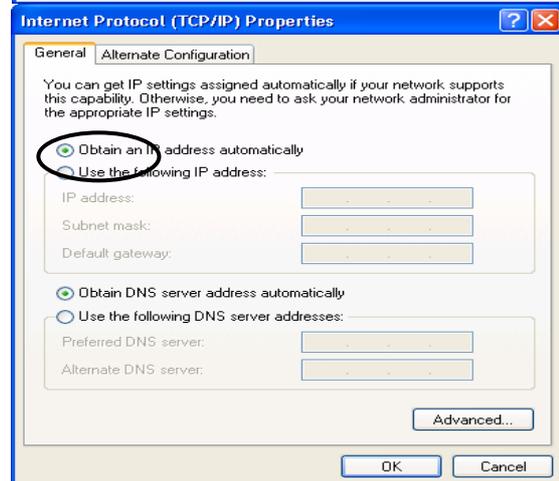
## 3. Valitse TCP/IP ja sen ominaisuudet



## 4. Tee asetus mallikuvan mukaiseksi eli IP-osoite haetaan automaattisesti.

Valinta kohta vaihtelee jonkin verran riippuen siitä, mikä Windows-versio on kyseessä

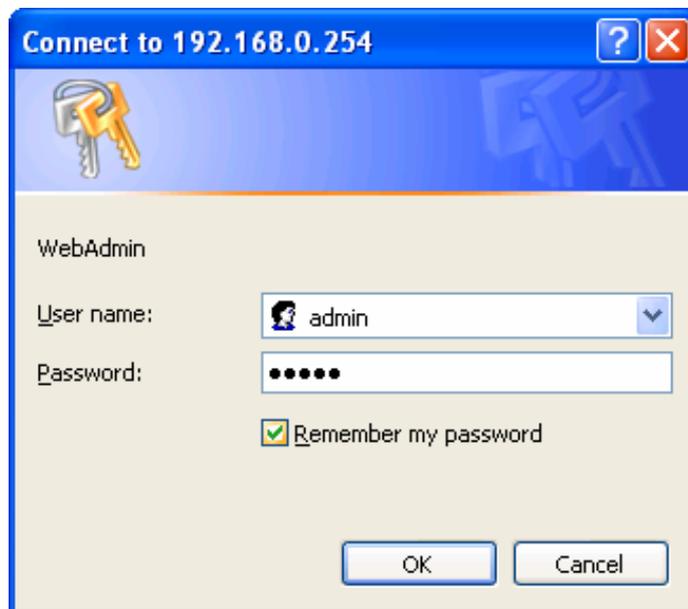
Mac OS-versioissa asetus on kohdassa Omenavalikko / Laajennukset / TCP/IP, jossa valitaan DHCP päälle ja oikea verkkosovitin



## Laitteen konfigurointi

- Laitteen asetusten muutokset tehdään Internet-selaimella (testattu seuraavilla selaimilla: IE5 tai uudempi, Netscape 4.6 tai uudempi, Opera 7 ja Firefox)
- WWW-selaimessa ei saa olla "proxy"- eli välityspalvelinasetus päällä.
- Tietokoneesta tulee olla palomuuriohjelmat pois päältä, ne voivat häiritä laitteen hallintaa.

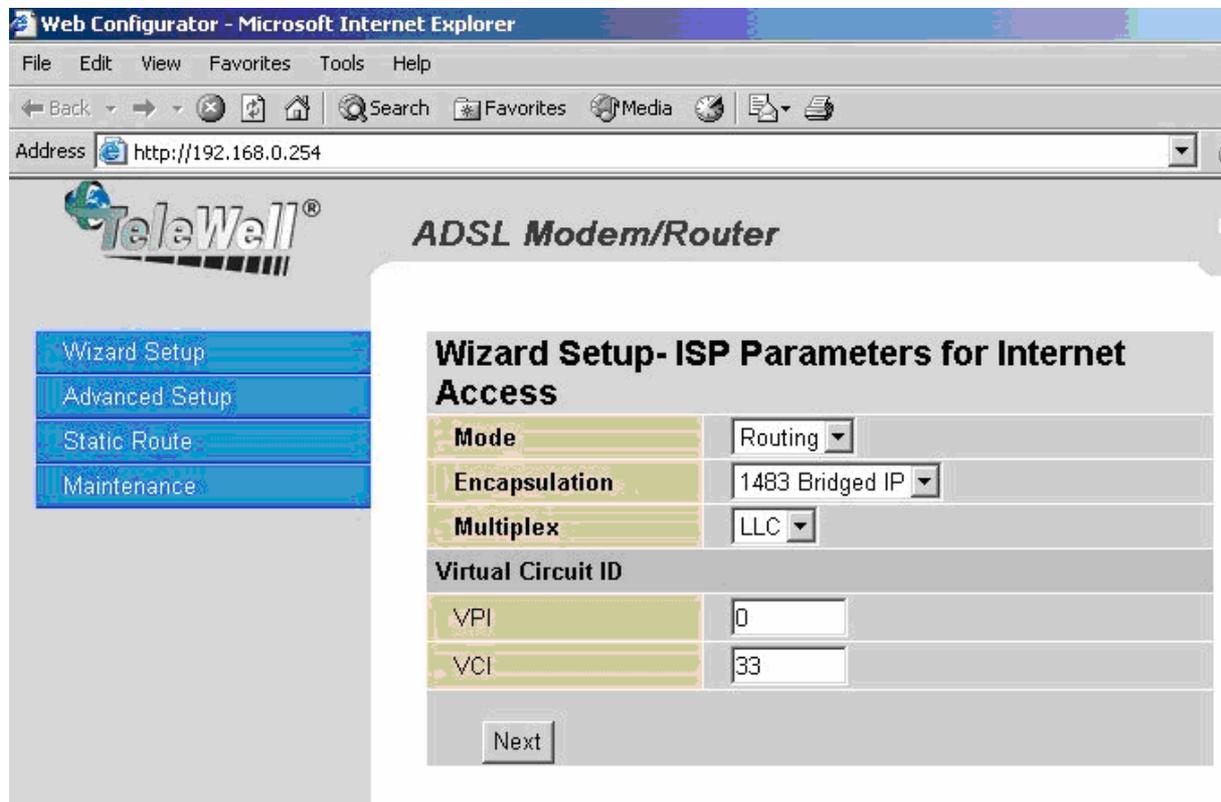
Avaa Internet-selain ja anna osoitteeksi <http://192.168.0.254> ja paina Enter-näppäintä



Oletustunnukset: User Name = admin ja Password = admin. Valitse OK.

Salasanojen palautus, jos niitä muutettu: katso laitteen reset -näppäimen toiminta laitteen takapaneeli -sivulta

Laite toimii oletuksena sillatuissa ADSL-liittymissä automaattisesti seuraavilla operaattoreilla: 0/33, 2/35, 8/32, 14/24, 0/100, 0/50. Mikäli laitteen asetuksia tarvitsee muuttaa, tehdään asetusten muutos hallintaohjelmassa Wizard Setup -kohdassa



- **Mode:** Laitteen tila. Oletuksena routing.
- **Encapsulation:** Valitse operaattorisi käyttämä protokolla. Oletuksena 1483 Bridged IP.
- **Multiplex:** Valitse operaattorisi käyttämä kehysrakenne. Oletuksena LLC
- **Virtual Circuit ID:** Syötä operaattorisi käyttämät VPI- ja VCI-arvot. (oikeat arvot antaa operaattori)

Muuta tarvittavat asetukset ja valitse next. Avautuu uusi ikkuna sen mukaisesti, mikä protokolla on valittu. Esimerkit eri asetuksista löytyvät ohjekirjan englanninkielisestä osiosta.

Seuraavassa on kerrottu, kuinka laite muutetaan sillattuun tilaan.

## Laitteen muuttaminen sillattuun tilaan

Kun laite muutetaan sillattuun tilaan, ei laitteessa ole enää NAT- ja DHCP-ominaisuudet päällä. IP-osoite tulee suoraan operaattorilta tietokoneen verkkokortille.

Laitteen muuttamiseksi sillattuun tilaan pitää tehdä seuraavat asetusten muutokset:

Wizard Setup -kohdassa muutetaan alla olevan kuvan mukaiset asetukset:

Mode: Bridged

Encapsulation: 1483 Bridged IP

Multiplex: LLC

VPI: Kirjoitetaan operaattorin käyttämä VPI-arvo (oikeat arvot antaa operaattori)

VCI: kirjoitetaan operaattorin käyttämä VCI-arvo (oikeat arvot antaa operaattori)

Wizard Setup- ISP Parameters for Internet Access	
Mode	Bridged
Encapsulation	1483 Bridged IP
Multiplex	LLC
Virtual Circuit ID	
VPI	0
VCI	33
<input type="button" value="Next"/>	

Kun oikeat asetukset on laitettu, klikataan next-painiketta

Avautuvassa ikkunassa valitaan IP-osoite asetukseksi "Obtain an IP Address Automatically".

**Wizard Setup- ISP Parameters for Internet Access**

**IP Address**

Obtain an IP Address Automatically

Static IP Address

IP Address	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="0.0.0.0"/>
Gateway	<input type="text" value="0.0.0.0"/>

**Network Address Translation**

Many to One

Klikataan next-painiketta

Avautuvassa ikkunassa tallennetaan asetukset kohdasta "Save Settings"  
Tämän jälkeen otetaan kohdassa "Change LAN Configuration" DHCP server pois päältä

**Wizard Setup- ISP Parameters for Internet Access**

**WAN Information:**

Mode: **Routing**

Encapsulation: **1483 Bridged IP**

Multiplexing: **LLC**

VPI/VCI: **0/33**

IP Address: **Obtain an IP Address Automatically**

Network Address Translation: **Many to One**

**LAN Information:**

IP Address: **192.168.0.254**

IP Mask: **255.255.255.0**

DHCP: **ON**

Client IP Pool Starting Address: **192.168.0.100**

Size of Client IP Pool: **100**

Avautuvassa ikkunassa valitaan DHCP server -kohdassa OFF

### Wizard Setup- ISP Parameters for Internet Access

LAN IP Address	192.168.0.254
LAN Subnet Mask	255.255.255.0
<b>DHCP</b>	
DHCP Server	OFF <input type="button" value="v"/>
Client IP Pool Starting Address	192.168.0.100
Size of Client IP Pool	100
Primary DNS Server	0.0.0.0
Secondary DNS Server	0.0.0.0

Klikataan Back

Katsotaan, että DHCP-kohta on muuttunut OFF-tilaan. Jos se on muuttunut, klikataan kohtaa Save Settings. Odotetaan, että asetukset ovat tallentuneet ja käynnistetään laite uudelleen.

### Wizard Setup- ISP Parameters for Internet Access

**WAN Information:**

Mode: **Routing**

Encapsulation: **1483 Bridged IP**

Multiplexing: **LLC**

VPI/VCI: **0/33**

IP Address: **Obtain an IP Address Automatically**  
Network Address Translation: **Many to One**

**LAN Information:**

IP Address: **192.168.0.254**

IP Mask: **255.255.255.0**

DHCP: **OFF**

Client IP Pool Starting Address: **192.168.0.100**

Size of Client IP Pool: **100**

Mikäli DHCP-kohta ei ole muuttunut OFF-tilaan, klikataan uudelleen "Change LAN Configuration" -painiketta ja muutetaan DHCP server OFF-tilaan ja klikataan Finish-painiketta ja sen jälkeen Back-painiketta, mikäli sivu ei Finish-painikkeesta

palautu takaisin "Internet Parameters" -sivulle. Klikataan vielä Save Settings -painiketta. Odotetaan, että asetukset ovat tallentuneet ja käynnistetään laite uudelleen.

Muita esimerkkejä asetusten muutoksista löytyy ohjekirjan englanninkielisestä osiosta (mm. PPPoA ja PPPoE -ohjeistukset).

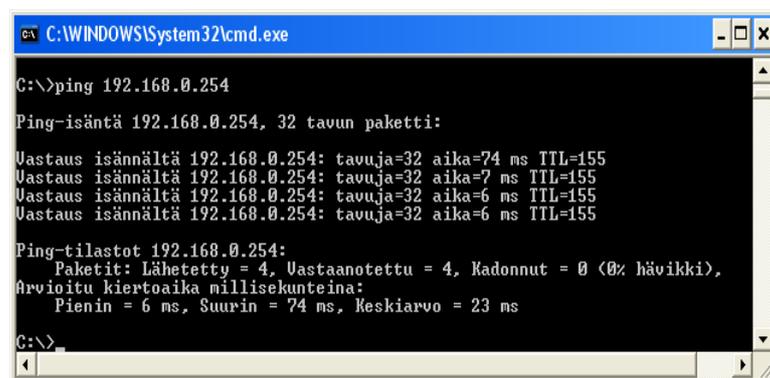
## Oman verkon toimivuuden tarkistus oletusasetuksilla

Suorita-toiminto Käynnistä / Suorita ping 192.168.0.254 ja valitse ok



Modeemin pitää vastata PING-komentoon.

Jos vastausta ei tule, niin tarkista, että verkkokortin IP-osoitteen haku on automaattisella asetuksella ja verkkokaapeli on kytketty oikein tietokoneen ja modeemin välille.



Tietokoneen verkkokortille tulee IP-osoite muotoa 192.168.0.100-XXX. Operaattorin IP-osoitteen näkee laitteen hallintaohjelmasta.

**TeleWell TW-EA501**

**ADSL modem**

**English User's Manual**

**CE**

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### 1.1 Introducing the ADSL Modem/Router

Welcome to the ADSL Modem/Router. Your router is an “all-in-one” unit, combining an ADSL modem, ADSL router and Ethernet network switch, providing everything you need to get the machines on your network connected to the Internet over your ADSL broadband connection.

The product supports PPPoA (RFC 2364 - PPP (Point-to-Point Protocol) over ATM Adaptation Layer 5), RFC 1483 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516), and IPoA (RFC1577) to establish a connection with ISP. The product also supports VC-based and LLC-based multiplexing.

It is the perfect solution to connect a small group of PCs to a high-speed broadband Internet connection. Multi-users can have high-speed Internet access simultaneously.

This product also serves as an Internet firewall, protecting your network from being accessed by outside users. Not only provide the natural firewall function (Network Address Translation, NAT), it also provides rich firewall features to secure user’s network. All incoming data packets are monitored and filtered. Besides, it can also be configured to block internal users from accessing to the Internet.

The product provides two levels of security support. First, it masks LAN users' IP addresses which are invisible to outside users on the Internet, making it much more difficult for a hacker to target a machine on your network. Secondly, it can block and redirect certain ports to limit the services that outside users can access. For example, to ensure that games and other Internet applications will run properly, user can open some specific ports for outside users to access internal services in network.

Integrated DHCP (Dynamic Host Control Protocol) services, client and server, allow multiple users to get their IP addresses automatically on boot up from the product. Simply set local machines as a DHCP client to accept a dynamically assigned IP address from DHCP server and reboot. Each time local machine is powered up; the router will recognize it and assign an IP address to instantly connect it to the LAN.

For advanced users, Virtual Service function allows the product to provide limited visibility to local machines with specific services for outside users. An ISP (Internet Service Providers) provided IP address can be set to the product and then specific services can be rerouted to specific computers on the local network. For instance, a dedicated web server can be connected to the Internet via the product and then incoming requests for HTML that are received by the product can be rerouted to the dedicated local web server, even though the server now has a different IP address. In this example, the product is on the Internet and vulnerable to attacks, but the server is protected.

Virtual Server can also be used to re-task services to multiple servers. For instance, the product can be set to allow separated FTP, Web, and Multiplayer game servers to share the same Internet-visible IP address while still protecting the servers and LAN users from hackers.

## 1.2 Features of the ADSL Modem/Router

### ● **ADSL Multi-Mode Standard**

supports downstream rates of up to 24 Mbps and upstream rates of up to 1 Mbps. It also supports rate management that allows ADSL subscribers to select an Internet access speed suiting their needs and budgets. It is compliant with Multi-Mode standard (ANSI T1.413, Issue 2; G.dmt(G.992.1); G.lite(G992.2)), G.hs (G994.1)). The Annex A is supported in different H/W platforms.

### ● **Fast Ethernet Switch**

A 10/100Mbps fast Ethernet switch is built in with automatic switching between MDI and MDI-X for 10Base-T and 100Base-TX ports. An Ethernet straight or cross-over cable can be used directly for auto detection.

### ● **Multi-Protocol to Establish A Connection**

Supports PPPoA (RFC 2364 - PPP over ATM Adaptation Layer 5), RFC 1483 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516) and IPoA (RFC1577) to establish a connection with the ISP. The product also supports VC-based and LLC-based multiplexing.

### ● **Quick Installation Wizard**

Supports a WEB GUI page to install this device quickly. With this wizard, end users can enter the information easily which they get from their ISP, then surf the Internet immediately.

### ● **Universal Plug and Play (UPnP) and UPnP NAT Traversal**

This protocol is used to enable simple and robust connectivity among stand-alone devices and PCs from many different vendors. It makes network simple and affordable for users. UPnP architecture leverages TCP/IP and the Web to enable seamless proximity networking in addition to control and data transfer among networked devices. With this feature enabled, users can now connect to Net meeting or MSN Messenger seamlessly.

### ● **Network Address Translation (NAT)**

Allows multi-users to access outside resources such as the Internet simultaneously with one IP address/one Internet access account. Many application layer gateway (ALG) are supported such as web browser, ICQ, FTP, Telnet, E-mail, News, Net2phone, Ping, NetMeeting, IP phone and others.

### ● **Firewall**

Supports simple firewall with NAT technology and provides option for blocking access from Internet, like Telnet, FTP, TFTP, WEB, SNMP and ICMP.

- **Domain Name System (DNS) relay**

Provides an easy way to map the domain name (a friendly name for users such as www.yahoo.com) and IP address. When a local machine sets its DNS server with this router's IP address, every DNS conversion request packet from the PC to this router will be forwarded to the real DNS in the outside network.

- **Dynamic Domain Name System (DDNS)**

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname. This dynamic IP address is the WAN IP address. For example, to use the service, you must first apply for an account from a DDNS service like <http://www.dyndns.org/>.

- **PPP over Ethernet (PPPoE):** Provides embedded PPPoE client function to establish a connection. Users can get greater access speed without changing the operation concept, sharing the same ISP account and paying for one access account. No PPPoE client software is required for local computer. The Automatic Reconnect and Disconnect Timeout (Idle Timer) functions are provided, too.

- **Virtual Server:** User can specify some services to be visible from outside users. The router can detect incoming service request and forward it to the specific local computer to handle it. For example, user can assign a PC in LAN acting as WEB server inside and expose it to the outside network. Outside user can browse inside web server directly while it is protected by NAT. A DMZ host setting is also provided to a local computer exposed to the outside network, Internet.

Users can specify some services to be visible from outside users. The router can detect incoming service requests and forward either a single port or a range of ports to the specific local computer to handle it. For example, a user can assign a PC in the LAN acting as a WEB server inside and expose it to the outside network. Outside users can browse inside web servers directly while it is protected by NAT. A DMZ host setting is also provided to a local computer exposed to the outside network, Internet.

- **Dynamic Host Configuration Protocol (DHCP) client and server**

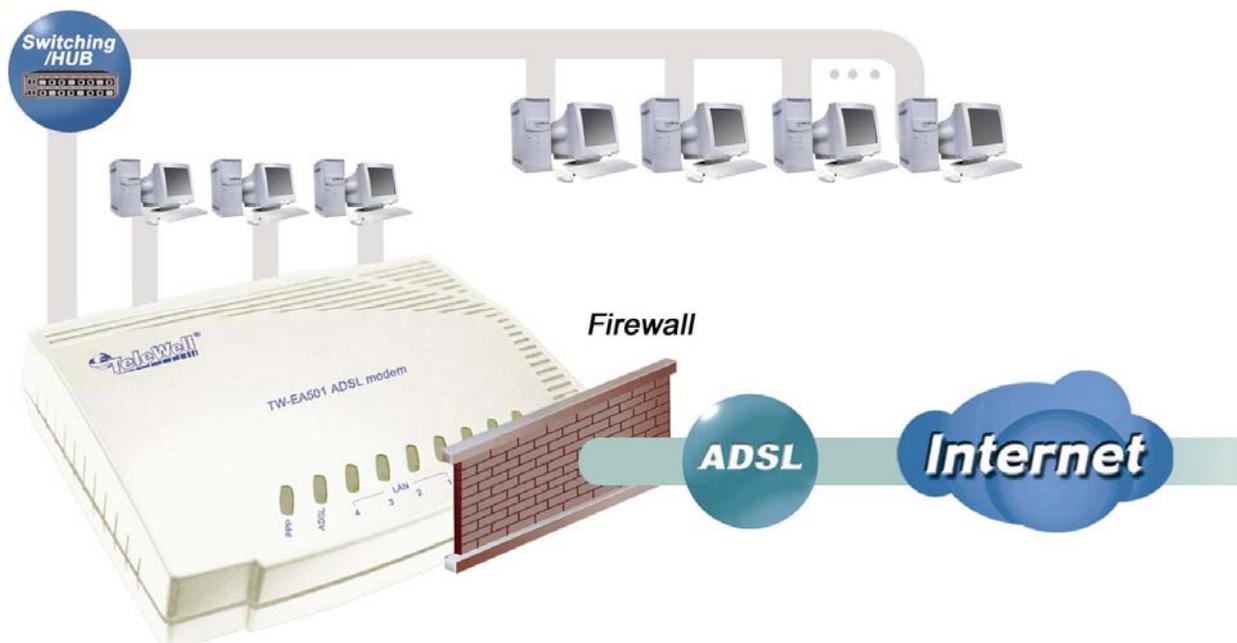
In the WAN site, the DHCP client can get an IP address from the Internet Service Provider (ISP) automatically. In the LAN site, the DHCP server can allocate a range of client IP addresses and distribute them including IP address, subnet mask as well as DNS IP address to local computers. It provides an easy way to manage the local IP network.

- **RIP1/2 Routing**

Supports RIP1/2 routing protocol for routing capability.

- **Simple Network Management Protocol (SNMP)**  
It is an easy way to remotely manage the router via SNMP.
- **Web based GUI**  
Supports web based GUI for configuration and management. It is user-friendly and comes with on-line help. It also supports remote management capability for remote users to configure and manage this product.
- **Firmware Upgradeable**  
Device can be upgraded to the latest firmware through the WEB based GUI.
- **Rich management interfaces**  
Supports flexible management interfaces with local console port, LAN port, and WAN port. Users can use terminal applications through the console port to configure and manage the device, or Telnet, WEB GUI, and SNMP through LAN or WAN ports to configure and manage the device.

### 1.3 Applications for the ADSL Modem/Router



### 2.1 Important note for using the ADSL Modem/Router



#### **Warning**

- ✓ Do not use the ADSL Modem/Router in high humidity or high temperatures.
- ✓ Do not use the same power source for the ADSL Modem/Router as other equipment.
- ✓ Do not open or repair the case yourself. If the ADSL Modem/Router is too hot, turn off the power immediately and have it repaired at a qualified service center.
- ✓ Avoid using this product and all accessories outdoors.



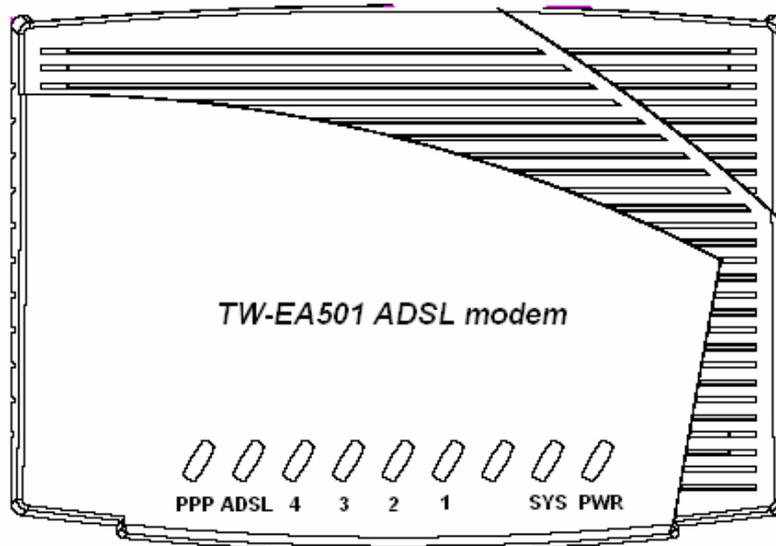
#### **Attention**

- ✓ Place the ADSL Modem/Router on a stable surface.
- ✓ Only use the power adapter that comes with the package. Using a different voltage rating power adaptor may damage the router.

### 2.2 Package Contents

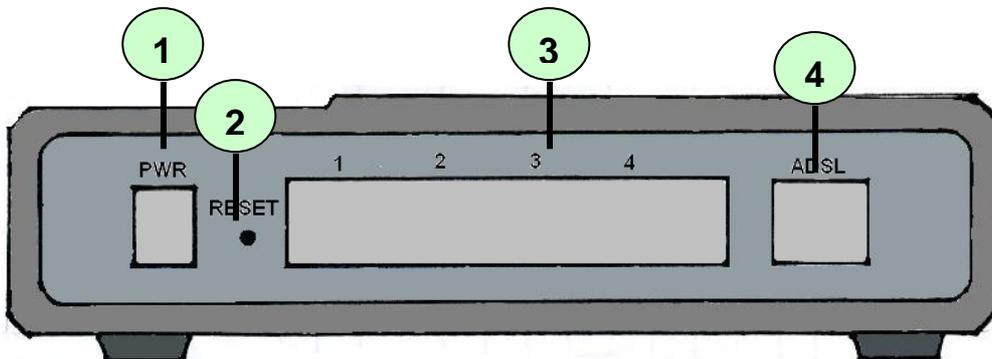
- ADSL Modem/Router
- CD-ROM containing the online manual
- RJ-11 ADSL/telephone Cable
- Ethernet (CAT-5 LAN) Cable
- AC-DC power adapter (12V DC, 1A)

## 2.3 The Front LEDs



LED		Meaning
1	PPP :	● Lit steady when there is a PPPoA / PPPoE connection.
2	ADSL:	● Lit when successfully connected to an ADSL DSLAM ("linesync").
3	LAN Port 1-4:	<ul style="list-style-type: none"> <li>● Lit when connected to an Ethernet device.</li> <li>● Green for 100Mbps; Orange for 10Mbps.</li> <li>● Blinking when data is Transmitted / Received.</li> </ul>
4	SYS :	● Lit when the system is ready.
5	PWR :	● Lit when power is ON.

## 2.4 The Rear Ports



Port		Meaning
1	PWR	Connect the supplied power adapter to this jack.
2	RESET	After the device is powered on, press it to reset the device or restore to factory default settings. <b>0-3 seconds:</b> reset the device <b>6 seconds above:</b> restore to factory default settings (this is used when you can not login to the router, e.g. forgot the password)
3	LAN 1X — 4X (RJ-45 connector)	Connect a UTP Ethernet cable (Cat-5 or Cat-5e) to one of the four LAN ports when connecting to a PC or an office/home network of 10Mbps or 100Mbps.
4	LINE	Connect the supplied RJ-11 (“telephone”) cable to this port when connecting to the ADSL/telephone network.

## 2.5 Cabling

One of the most common causes of problems is bad cabling or ADSL line(s). Make sure that all connected devices are turned on. On the front of the product is a bank of LEDs. Verify that the LAN Link and ADSL line LEDs are lit. If they are not, verify that you are using the proper cables.

Ensure that all other devices connected to the same telephone line as your TW-EA501 router (e.g. telephones, fax machines, analogue modems) have a line filter connected between them and the wall socket (unless you are using a Central Splitter or Central Filter installed by a qualified and licensed electrician), and ensure that all line filters are correctly installed and the right way around. Missing line filters or line filters installed the wrong way around can cause problems with your ADSL connection, including causing frequent disconnections

# Chapter 3

## Basic Installation

The router can be configured with your web browser. A web browser is included as a standard application in the following operating systems: Linux, Mac OS, Windows 98/NT/2000/XP/Me, etc. The product provides a very easy and user-friendly interface for configuration.

### 3.1 Before Configuration

PCs must have an Ethernet interface installed properly and be connected to the router either directly or through an external repeater hub, and have TCP/IP installed and configured to obtain an IP address through a DHCP server or a fixed IP address that must be in the same subnet as the router. The default IP address of the router is **192.168.0.254** and the subnet mask is **255.255.255.0** (i.e. any attached PC must be in the same subnet, and have an IP address in the range of 192.168.0.1 to 192.168.0.253). The best and easiest way is to configure the PC to get an IP address automatically from the router using DHCP. If you encounter any problems accessing the router's web interface it may also be advisable to **uninstall** any kind of software firewall on your PCs, as they can cause problems accessing the 192.168.0.254 IP address of the router. Users should make their own decisions on how to best protect their network.

Please follow the steps below for your PC's network environment installation. First of all, please check your PC's network components. The TCP/IP protocol stack and Ethernet network adapter must be installed. If not, please refer to your Windows-related or other operating system manuals.



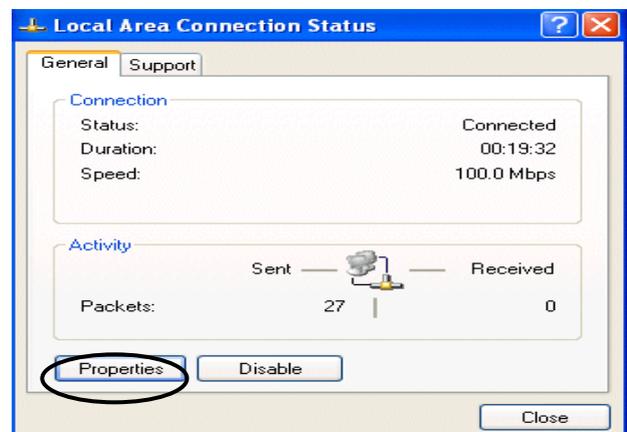
Any TCP/IP capable workstation can be used to communicate with or through the TW-EA501. To configure other types of workstations, please consult the manufacturer's documentation.

## Configuring PC in Windows XP

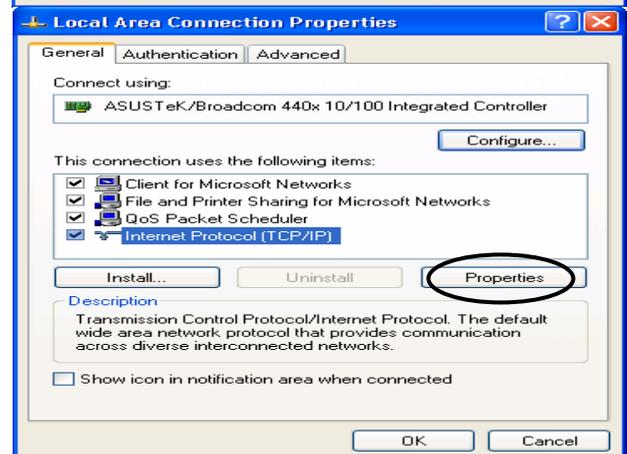
5. Go to Start / Control Panel (in Classic View). In the Control Panel, double-click on Network Connections
6. Double-click Local Area Connection.



7. In the Local Area Connection Status window, click Properties.

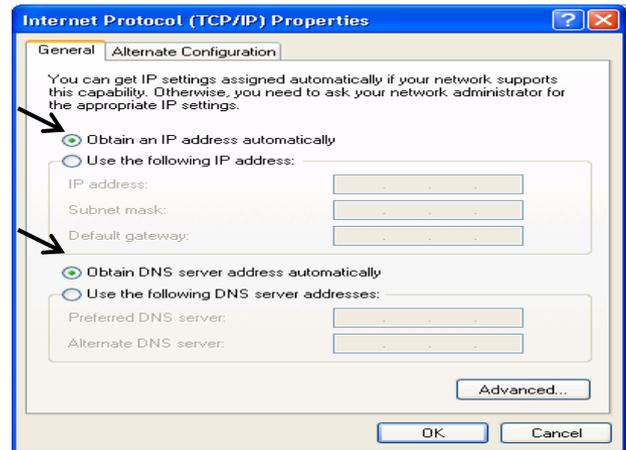


8. Select Internet Protocol (TCP/IP) and click Properties.



9. Select the Obtain an IP address automatically and the Obtain DNS server address automatically radio buttons.

10. Click OK to finish the configuration.

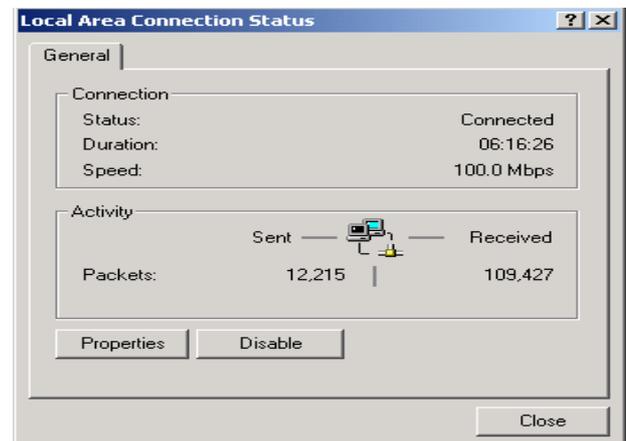
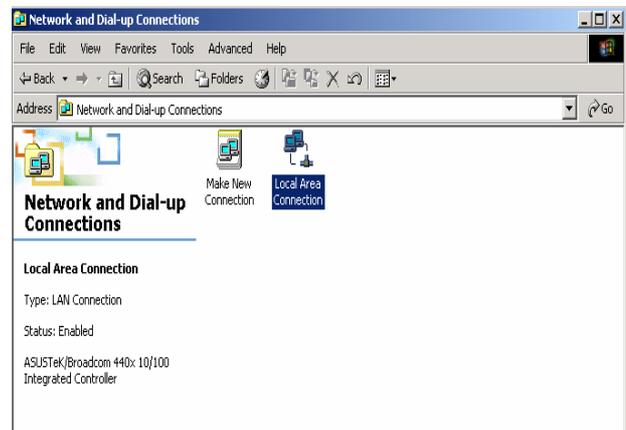


## Configuring PC in Windows 2000

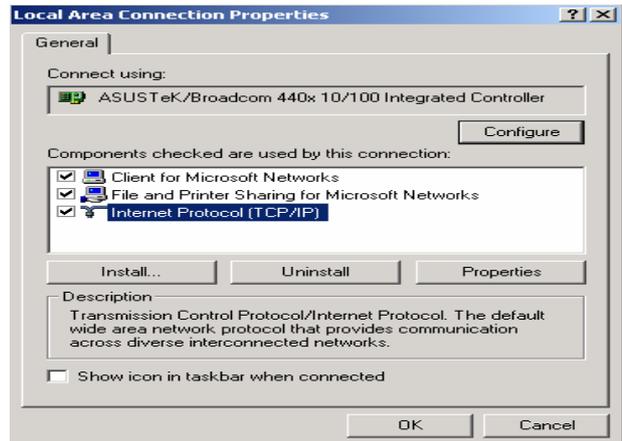
1. Go to Start / Settings / Control Panel. In the Control Panel, double-click on Network and Dial-up Connections.

2. Double-click Local Area Connection.

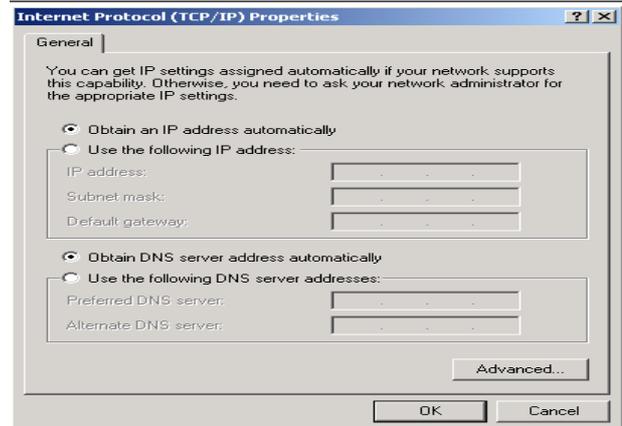
3. In the Local Area Connection Status window click Properties.



4. Select Internet Protocol (TCP/IP) and click Properties.



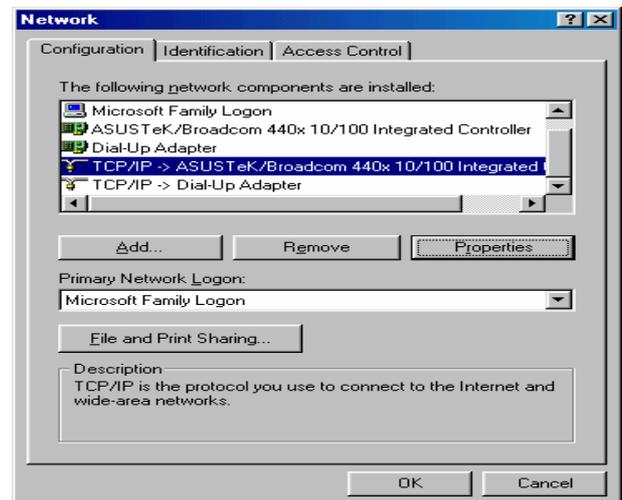
5. Select the Obtain an IP address automatically and the Obtain DNS server address automatically radio buttons.



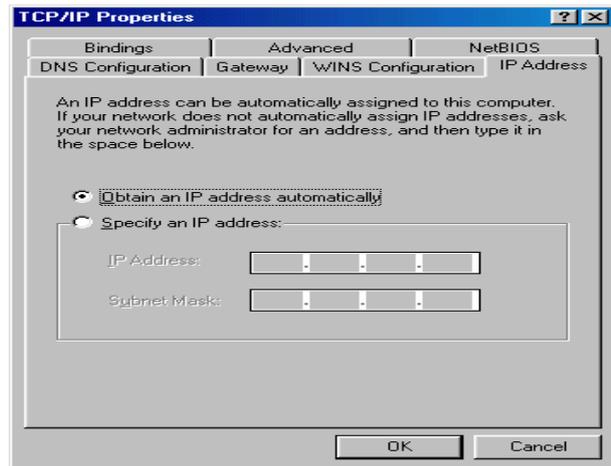
6. Click OK to finish the configuration.

## Configuring PC in Windows 98/Me

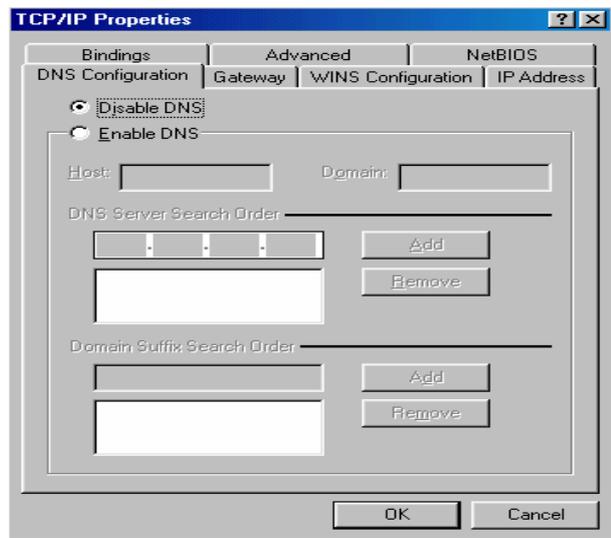
1. Go to Start / Settings / Control Panel. In the Control Panel, double-click on Network and choose the Configuration tab.
2. Select TCP/IP ->NE2000 Compatible, or the name of your Network Interface Card (NIC) in your PC.



3. Select the Obtain an IP address automatically radio button.

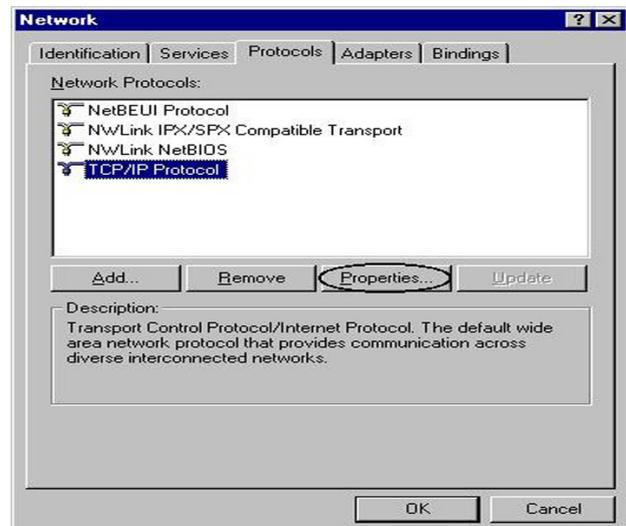


4. Then select the DNS Configuration tab.
5. Select the Disable DNS radio button and click OK to finish the configuration.

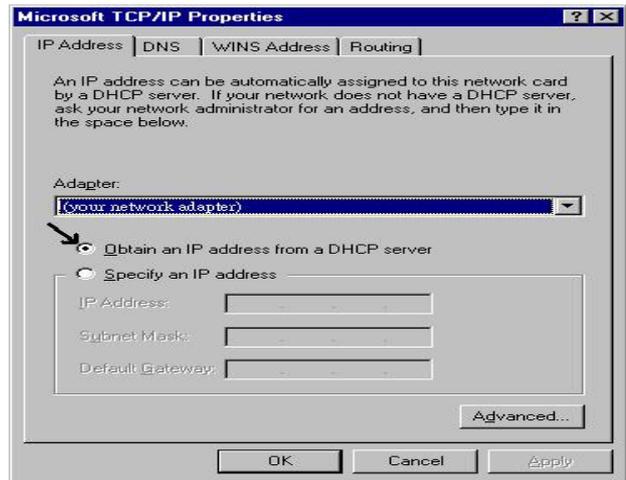


## Configuring PC in Windows NT4.0

1. Go to Start / Settings / Control Panel. In the Control Panel, double-click on Network and choose the Protocols tab.
2. Select TCP/IP Protocol and click Properties.



3. Select the Obtain an IP address from a DHCP server radio button and click OK.



## 3.2 Factory Default Settings

Before configuring your, you need to know the following default settings.

### ● Web Interface:

- ✘ Username: admin
- ✘ Password: admin

### ● LAN Device IP Settings:

- ✘ IP Address: 192.168.0.254
- ✘ Subnet Mask: 255.255.255.0

### ● ISP setting in WAN site:

- ✘ RFC 1483 LLC Bridge
- ✘ Auto support for VPI=0,14 and VCI=33,50,100 if auto-scan fails!  
During the 1<sup>st</sup> connection IP - traffic may take 2-4 minutes after boot.  
Device will auto-scan correct parameters for ISP line on this period.
- ✘ NAT enabled

### ● DHCP server:

- ✘ DHCP server is enabled.
- ✘ Start IP Address: 192.168.0.100
- ✘ IP pool counts: 100

### 3.2.1 Username and Password

The default username and password are “admin” and “admin” respectively.



If you ever forget the password to log in, you may press the RESET button up to 6 seconds to restore the factory default settings.

#### **Attention**

### 3.3 LAN and WAN Port Addresses

The parameters of LAN and WAN ports are pre-set in the factory. The default values are shown below.

LAN Port		WAN Port
IP address	192.168.0.254	Bridge is automatic setting in WAN port.
Subnet Mask	255.255.255.0	
DHCP server function	Enabled	
IP addresses for distribution to PCs	100 IP addresses continuing from 192.168.0.100 through 192.168.0.199	

### 3.4 Information from your ISP

Before configuring this device, you have to check with your ISP (Internet Service Provider) what kind of service is provided such as PPPoE, PPPoA, RFC1483, or IPoA.

Gather the information as illustrated in the following table and keep it for reference.

PPPoE	VPI/VCI, VC-based/LLC-based multiplexing, Username, Password, Service Name, and Domain Name System (DNS) IP address (it can be automatically assigned by your ISP when you connect or be set manually).
PPPoA	VPI/VCI, VC-based/LLC-based multiplexing, Username, Password, and Domain Name System (DNS) IP address (it can be automatically assigned by your ISP when you connect or be set manually).
RFC1483 Bridged	VPI/VCI, VC-based/LLC-based multiplexing to use Bridged Mode.
RFC1483 Routed	VPI/VCI, VC-based/LLC-based multiplexing, IP address, Subnet mask, Gateway address, and Domain Name System (DNS) IP address (it is fixed IP address).

### 3.5 Configuring with your Web Browser

Open your web browser, enter the IP address of your router, which by default is 192.168.0.254, and click "Go", a user name and password window prompt will appear. The default username and password are "admin" and "admin".



Congratulation! You are now successfully logon to the ADSL Modem/Router

# Chapter 4

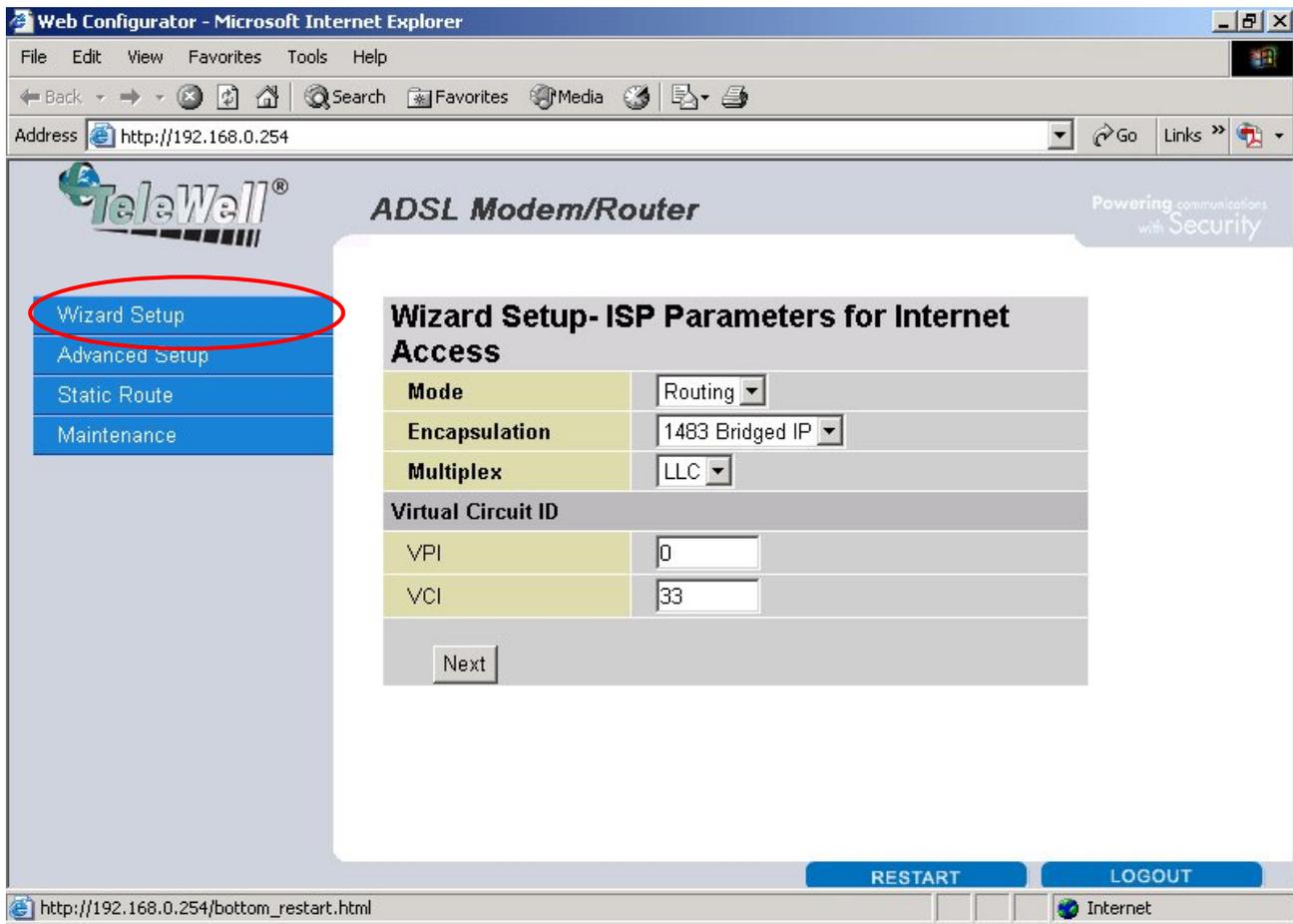
## Configuration

At the configuration homepage, the left navigation pane where bookmarks are provided links you directly to the desired setup page, including:

- **Wizard Setup** (wizard setup)
- **Advanced Setup** (Password, LAN, WAN, NAT, Security, Dynamic DNS, Time Zone, Remote Management Control, UPnP)
- **Static Route** ( Current Route )
- **Maintenance** (System Status, DHCP Table, Diagnostic, Firmware)
- **Logout**.

Please see the relevant sections of this manual for detailed instructions on how to configure your TW-EA501 router.

## 4.1 Wizard Setup



### 4.1.1 Wizard Setup

Use the Wizard Setup screens to configure your system for Internet access settings and fill in the fields with the information in the Internet Account Information table of the Compact Guide or Read Me First. Your ISP may have already configured some of the fields in the wizard screens for you.

Wizard Setup- ISP Parameters for Internet Access	
Mode	Routing
Encapsulation	1483 Bridged IP
Multiplex	LLC
Virtual Circuit ID	
VPI	0
VCI	33
Next	

● **Mode:** Select Routing (default) if your ISP allows multiple computers to share an Internet account. Otherwise select Bridge.

● **Encapsulation:** Select the encapsulation type your ISP uses from the Encapsulation drop-down list box. Choices vary depending on what you select in the Mode field. If you select Bridge in the Mode field, select 1483 Bridged IP.

If you select Routing in the Mode field, select PPPoA, 1483 Bridged IP, 1483 Router IP or PPPoE.

● **Multiplex:** Select the multiplexing method used by your ISP from the Multiplex drop-down list box either VC-based or LLC-based.

● **Virtual Circuit ID:** VPI (Virtual Path Identifier) and VCI (Virtual Channel Identifier) define a virtual circuit.

● **VPI:** Enter the VPI assigned to you. This field may already be configured.

● **VCI:** Enter the VCI assigned to you. This field may already be configured.

#### 4.1.2 PPPoE

PPPoE ( PPP over Ethernet ) provides access control and billing functionality in a manner similar to dial-up services using PPP. Select PPPoE from the Encapsulation in the first wizard screen to display the screen as shown.

Wizard Setup- ISP Parameters for Internet Access	
Mode	Routing
Encapsulation	PPPoE
Multiplex	LLC
Virtual Circuit ID	
VPI	0
VCI	33
Next	

## Wizard Setup- ISP Parameters for Internet Access

Service Name	<input type="text"/>
User Name	<input type="text" value="username"/>
Password	<input type="password" value="*****"/>
<b>IP Address</b>	
	<input checked="" type="radio"/> Obtain an IP Address Automatically
	<input type="radio"/> Static IP Address
	<input type="text" value="0.0.0.0"/>
<b>Connection</b>	
	<input type="radio"/> Connect on Demand: Max Idle Timeout <input type="text" value="0"/> sec
	<input checked="" type="radio"/> Nailed-Up Connection
<b>Network Address Translation</b>	
	Many to One <input type="button" value="v"/>
<input type="button" value="Back"/> <input type="button" value="Next"/>	

- **Service Name:** Type the name of your PPPoE service here
- **User Name:** Enter the user name exactly as your ISP assigned.
- **Password:** Enter the password associated with the user name above.
- **IP Address:** Type your ISP assigned IP address in the IP Address text box below.
- **Connection:** Select **Connect on Demand** when you don't want the connection up all the time and specify an idle time-out (in seconds) in the **Max. Idle Timeout** field
- **Network Address Translation:** Select **None**, **Many to One** or **Many to Many** from the drop-down list box. Refer to the NAT chapter for more details.

### 4.1.3 1483 Routed IP

Select 1483 Router IP from the Encapsulation drop-down list box in the first wizard screen to display the screen as shown.

<b>Wizard Setup- ISP Parameters for Internet Access</b>	
Mode	Routing <input type="button" value="v"/>
Encapsulation	1483 Routed IP <input type="button" value="v"/>
Multiplex	LLC <input type="button" value="v"/>
<b>Virtual Circuit ID</b>	
VPI	<input type="text" value="0"/>
VCI	<input type="text" value="33"/>
<input type="button" value="Next"/>	

## Wizard Setup- ISP Parameters for Internet Access

IP Address	<input type="text" value="0.0.0.0"/>
Network Address Translation	Many to One ▾
<input type="button" value="Back"/> <input type="button" value="Next"/>	

- IP Address: Type your ISP assigned IP address in the IP Address text box below.
- Network Address Translation: Select None, Many to One or Many to Many from the drop-down list box. Refer to the NAT chapter for more details.

### 4.1.4 1483 Bridged IP

Select 1483 Bridged IP from the Encapsulation in the wizard screen to display the screen as shown.

## Wizard Setup- ISP Parameters for Internet Access

Mode	Routing ▾
Encapsulation	1483 Bridged IP ▾
Multiplex	LLC ▾
Virtual Circuit ID	
VPI	<input type="text" value="0"/>
VCI	<input type="text" value="33"/>
<input type="button" value="Next"/>	

## Wizard Setup- ISP Parameters for Internet Access

<b>IP Address</b>	
<input checked="" type="radio"/> Obtain an IP Address Automatically	
<input type="radio"/> Static IP Address	
IP Address	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="0.0.0.0"/>
Gateway	<input type="text" value="0.0.0.0"/>
<b>Network Address Translation</b>	
Many to One ▾	
<input type="button" value="Back"/> <input type="button" value="Next"/>	

- IP Address: Type your ISP assigned IP address in the IP Address text box below.
- Subnet Mask: Enter a subnet mask in dotted decimal notation.
- Gateway: You must specify a gateway IP address (supplied by your ISP) when you use 1483 Bridged IP in the Encapsulation field in the previous screen.
- Network Address Translation: Select None, Many to One or Many to Many from the drop-down list box. Refer to the NAT chapter for more details.

## 4.1.5 PPPoA

PPPoA stands for Point to Point Protocol over ATM Adaptation Layer 5 (AAL5). It provides access control and billing functionality in a manner similar to dial-up services using PPP. Select PPPoA from the Encapsulation in the first wizard screen to display the screen as shown.

Wizard Setup- ISP Parameters for Internet Access	
Mode	Routing
Encapsulation	PPPoA
Multiplex	LLC
Virtual Circuit ID	
VPI	0
VCI	33
<input type="button" value="Next"/>	

Wizard Setup- ISP Parameters for Internet Access	
User Name	username
Password	*****
IP Address	
	<input checked="" type="radio"/> Obtain an IP Address Automatically
	<input type="radio"/> Static IP Address
	0.0.0.0
Connection	
	<input type="radio"/> Connect on Demand: Max Idle Timeout <input type="text" value="0"/> sec
	<input checked="" type="radio"/> Nailed-Up Connection
Network Address Translation	
	Many to One
<input type="button" value="Back"/> <input type="button" value="Next"/>	

- **User Name:** Enter the user name exactly as your ISP assigned.
- **Password:** Enter the password associated with the user name above.
- **IP Address:** Type your ISP assigned IP address in the IP Address text box below.
- **Connection:** Select **Connect on Demand** when you don't want the connection up all the time and specify an idle time-out (in seconds) in the **Max. Idle Timeout** field
- **Network Address Translation:** Select **None**, **Many to One** or **Many to Many** from the drop-down list box. Refer to the NAT chapter for more details.

## 4.1.6 Wizard Setup Configuration

Verify the settings in the screen shown next. To change the LAN information on the ADSL Modem/Router, click Change LAN Configurations.

<b>Wizard Setup- ISP Parameters for Internet Access</b>	
<b>WAN Information:</b>	
Mode:	<b>Routing</b>
Encapsulation:	<b>1483 Bridged IP</b>
Multiplexing:	<b>LLC</b>
VPI/VCI:	<b>0/33</b>
IP Address:	<b>Obtain an IP Address Automatically</b>
Network Address Translation:	<b>Many to One</b>
<b>LAN Information:</b>	
IP Address:	<b>192.168.0.254</b>
IP Mask:	<b>255.255.255.0</b>
DHCP:	<b>ON</b>
Client IP Pool Starting Address:	<b>192.168.0.100</b>
Size of Client IP Pool:	<b>100</b>
<input type="button" value="Change LAN Configuration"/>	
<input type="button" value="Save Settings"/>	

If you want to change your ADSL Modem/Router LAN settings, click Change LAN Configuration to display the screen as shown next.

<b>Wizard Setup- ISP Parameters for Internet Access</b>	
LAN IP Address	192.168.0.254
LAN Subnet Mask	255.255.255.0
<b>DHCP</b>	
DHCP Server	ON <input type="button" value="v"/>
Client IP Pool Starting Address	192.168.0.100
Size of Client IP Pool	100
Primary DNS Server	0.0.0.0
Secondary DNS Server	0.0.0.0
<input type="button" value="Back"/> <input type="button" value="Finish"/>	

● **LAN IP Address:** Enter the IP address of TW-EA501 in dotted decimal notation, for example, 192.168.0.254 (factory default).

● **LAN Subnet Mask:** Enter a subnet mask in dotted decimal notation.

● **DHCP Server:** From the **DHCP Server** drop-down list box, select **On** to allow ADSL Router to assign IP addresses, an IP default gateway and DNS servers to computer systems that support the DHCP client. Select **Off** to disable DHCP server. When DHCP server is used, set the following items:

● **Client IP Pool Starting Address:** This field specifies the first of the contiguous addresses in the IP address pool.

● **Size of Client IP Pool:** This field specifies the size or count of the IP address pool.

● **Primary DNS Server:** Enter the IP addresses of the DNS servers. The DNS servers are passed to the DHCP clients along with the IP address and the subnet mask.

● **Secondary DNS Server:** Enter the IP addresses of the DNS servers. The DNS servers are passed to the DHCP clients along with the IP address and the subnet mask.

#### 4.1.7 Wizard Setup Configuration

The ADSL Modem/Router automatically tests the connection to the computer(s) connected to the LAN ports. To test the connection from the ADSL Router to the ISP, click **Start Diagnose**. Otherwise click **Return to Main Menu** to go back to the Site Map screen.

## Wizard Setup- ISP Parameters for Internet Access

Your DSL Gateway is now configured. Your device is capable of testing your DSL service. The individual tests are listed below. Click "Start Diagnose" button if you want to test; otherwise, click "Return to Main Menu" button.

### LAN connections

Test your Ethernet Connection	<b>PASS</b>
-------------------------------	-------------

### WAN connections

Test ADSL synchronization	<b>N/A</b>
Test ADSL(ATM OAM) loopback test	<b>N/A</b>
Test PPP/PPPoE server connection	<b>N/A</b>
Ping default gateway	<b>N/A</b>

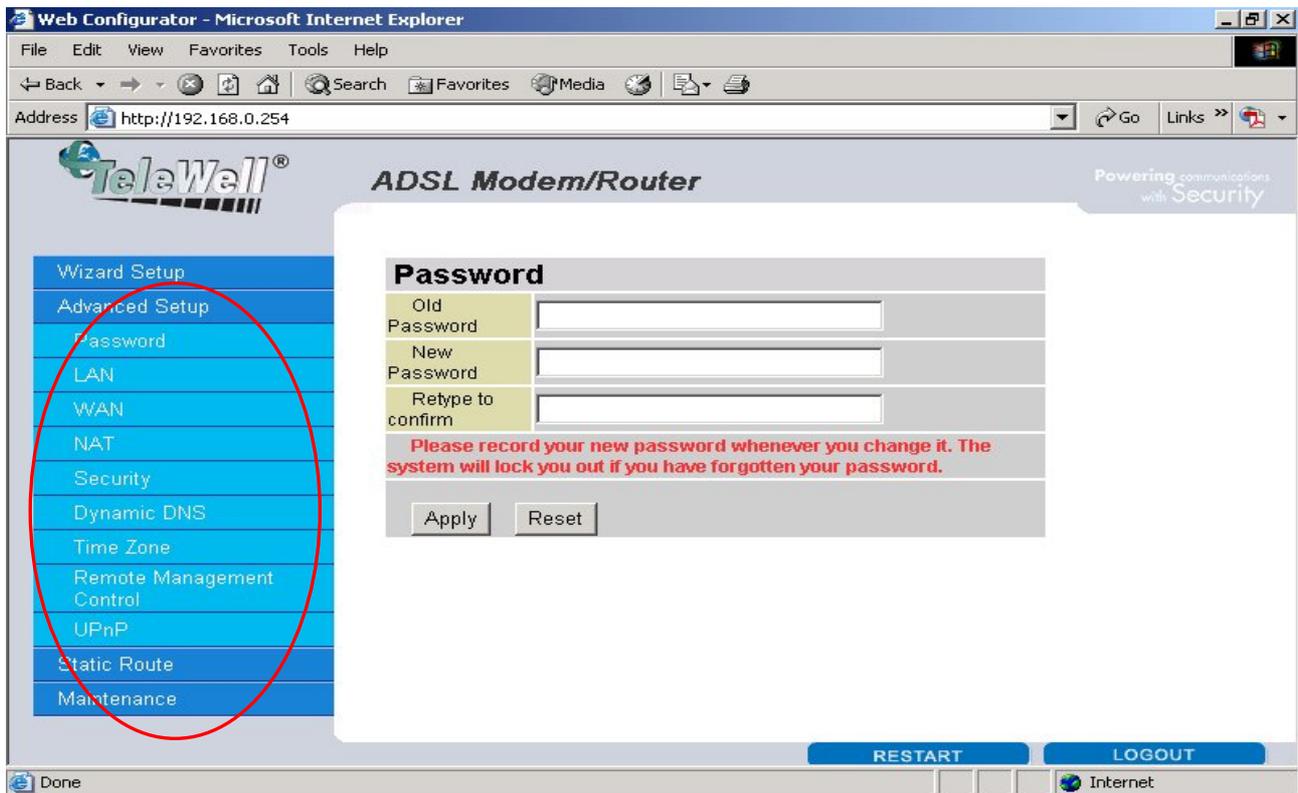
Start Diagnose

Return to Main Menu



If you cannot access the Internet, open the web configurator again to confirm that the Internet settings you configured in the Wizard Setup are correct.

## 4.2 Advanced setup



### 4.2.1 Password

In factory setting, the default password is **admin**, and that for user is also password. You can change the default password to ensure that someone cannot adjust your settings without your permission. Every time you change your password, please record the password and keep it at a safe place.

Password	
Old Password	<input type="text"/>
New Password	<input type="text"/>
Retype to confirm	<input type="text"/>
<b>Please record your new password whenever you change it. The system will lock you out if you have forgotten your password.</b>	
<input type="button" value="Apply"/>	<input type="button" value="Reset"/>

- **Old Password:** Type the default password or the existing password you use to access the system in this field.
- **New Password:** Type the new password in this field
- **Retype to confirm:** Type the new password again in this field.

## 4.2.2 LAN

Click LAN to open the following screen.

LAN - Setup		
<b>DHCP</b>		
DHCP	Server	
Client IP Pool Starting Address	192.168.0.100	
Size of Client IP Pool	100	
Primary DNS Server	0.0.0.0	
Secondary DNS Server	0.0.0.0	
Remote DHCP Server	N/A	
<b>TCP/IP</b>		
IP Address	192.168.0.254	
IP Subnet Mask	255.255.255.0	
RIP Direction	None	
RIP Version	N/A	
Multicast	None	
<input type="button" value="Apply"/> <input type="button" value="Reset"/>		

### ● DHCP:

If set to **Server**, your ADSL Modem/Router can assign IP addresses, an IP default gateway and DNS servers to Windows 95, Windows NT and other systems that support the DHCP client.

If set to **None**, the DHCP server will be disabled.

If set to **Relay**, the ADSL Modem/Router acts as a surrogate DHCP server and relays DHCP requests and responses between the remote server and the clients. Enter the IP address of the actual, remote DHCP server in the Remote DHCP Server field in this case.

When DHCP is used, the following items need to be set

**Client IP Pool Starting Address:** This field specifies the first of the contiguous addresses in the IP address pool.

**Size of Client IP Pool:** This field specifies the size or count of the IP address pool.

**Primary DNS Server:** Enter the IP addresses of the DNS servers. The DNS servers are passed to the DHCP clients along with the IP address and the subnet mask.

**Secondary DNS Server:** Enter the IP addresses of the DNS servers. The DNS servers are passed to the DHCP clients along with the IP address and the subnet mask.

**Remote DHCP Server:** If **Relay** is selected in the **DHCP** field above then enter the IP address of the actual remote DHCP server here.

## TCP/IP

**IP Address:** Enter the IP address of ADSL Router in dotted decimal notation, for example, 192.168.0.254 (factory default).

**IP Subnet Mask:** The default is 255.0.0.0. User can change it to other such as 255.255.255.0. Type the subnet mask assigned to you by your ISP (if given).

**RIP Direction:** Select the RIP direction from None, Both, In Only and Out Only.

**RIP Version:** Select the RIP version from RIP-1, RIP-2B and RIP-2M.

**Multicast:** IGMP (Internet Group Multicast Protocol) is a network-layer protocol used to establish membership in a Multicast group - it is not used to carry user data. The ADSL Modem/Router supports both IGMP version 1 (IGMP-v1) and IGMP-v2. Select None to disable it

### 4.2.3 WAN Setup

A WAN (Wide Area Network) is an outside connection to another network or the Internet. And allows the user to set the configuration for the WAN/ADSL ports.

To change ADSL Modem/Router's WAN remote node settings, click WAN.

WAN - WAN List							
<input checked="" type="checkbox"/> Route							
<input type="checkbox"/> Bridge							
<input type="checkbox"/> Half Bridge							
	Name	Active	Mode	VPI	VCI	Encap	IP Address
<b>Profile 1</b>	isp	Yes	Route	0	33	1483 Bridged IP	Dynamic
<b>Profile 2</b>	-	-	-	-	-	-	-
<b>Profile 3</b>	-	-	-	-	-	-	-
<b>Profile 4</b>	-	-	-	-	-	-	-
<b>Profile 5</b>	-	-	-	-	-	-	-
<b>Profile 6</b>	-	-	-	-	-	-	-
<b>Profile 7</b>	-	-	-	-	-	-	-
<b>Profile 8</b>	-	-	-	-	-	-	-
<input type="button" value="Apply"/>							

### 4.2.3.1 Half Bridge

Name	isp
Active	Yes
Mode	Routing
Encapsulation	PPPoE
Multiplex	LLC
<b>Virtual Circuit ID</b>	
VPI	0
VCI	32
ATM QoS Type	UBR
<b>Cell Rate</b>	
Peak Cell Rate	0 cell/sec
Sustain Cell Rate	0 cell/sec
Maximum Burst Size	0
<b>Login Information</b>	
Service Name	
User Name	username
Password	*****
<b>IP Address</b>	
<input checked="" type="radio"/> Obtain an IP Address Automatically	
<input type="radio"/> Static IP Address	
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Gateway	0.0.0.0
<b>Connection</b>	
<input type="radio"/> Connect on Demand: Max Idle Timeout 0 sec	
<input checked="" type="radio"/> Nailed-Up Connection	
<b>TCP MSS Option</b>	
TCP MSS(0 means use default)	0 bytes
<input type="button" value="Back"/> <input type="button" value="Apply"/> <input type="button" value="Reset"/>	

- **Name:** Enter the name of your Internet Service Provider
- **Mode:** Select Routing (default) or Bridge
- **Encapsulation:** select Bridge in the Mode field, select either PPPoA or RFC 1483. select Routing in the Mode field, select PPPoA, RFC 1483, ENET ENCAP or PPPoE.
- **Multiplex:** Select the method of multiplexing used by your ISP. Choices are VC or LLC.
- **Virtual Circuit ID:** VPI and VCI define a virtual circuit.  
VPI: The valid range for the VPI is 0 to 255  
VCI: The valid range for the VCI is 32 to 65535
- **ATM QoS Type:** Select CBR to specify fixed (always-on) bandwidth for voice or data traffic. Select UBR for applications that are non-time sensitive, such as e-mail. Select VBR for burst traffic and bandwidth sharing with other applications.

● **Cell Rate:** Cell rate configuration often helps eliminate traffic congestion that slows transmission of real time data such as audio and video connections.

Peak Cell Rate: Divide the DSL line rate (bps) by 424 (the size of an ATM cell) to find the Peak Cell Rate (PCR).

Sustain Cell Rate: The Sustain Cell Rate (SCR) sets the average cell rate (long-term) that can be transmitted.

Maximum Burst Size: Maximum Burst Size (MBS) refers to the maximum number of cells that can be sent at the peak rate.

● **Login Information:** PPPoA and PPPoE encapsulation only.

Service Name: Type the name of your PPPoE service here

User Name: Enter the user name exactly as your ISP assigned.

Password: Enter the password provide by your ISP.

● **Connection:** The schedule rule(s) have priority over your Connection settings.

Nailed-Up Connection: Select Nailed-Up Connection when you want your connection up all the time.

Connect on Demand: Select Connect on Demand when you don't want the connection up all the time and specify an idle time-out in the Max Idle Timeout field

Max Idle Timeout: Specify an idle time-out in the Max Idle Timeout field

● **TCP MSS Option:** This will increase the current MSS limit to the number specified, hence the tweak test will report Max Packet Size as the specified number plus 40\*.

#### 4.2.4 NAT

The NAT (Network Address Translation - NAT, RFC 1631) is the translation of the IP address of a host in a packet. The default setting is **Dynamic NAPT**. It provides dynamic Network Address Translation capability between LAN and multiple WAN connections, and the LAN traffic is routed to appropriate WAN connections based on the destination IP addresses and Route Table. This eliminates the need for the static NAT session configuration between multiple LAN clients and multiple WAN connections.

### 4.2.4.1 Selecting the NAT Mode

NAT - Mode	
Network Address Translation	
<input type="radio"/> None	
<input checked="" type="radio"/> Many to One	<a href="#">Edit Details</a>
<input type="radio"/> Many to Many	<a href="#">Edit Details</a>
<input type="button" value="Apply"/>	

**None:** Select this radio button to disable NAT

**Many to One:** Select this radio button if you have just one public WAN IP address for your router.

Edit Details: Click this link to go to the NAT - Edit Port Mapping rule screen

**Many to Many:** Select this radio button if you have multiple public WAN IP addresses for your router.

Edit Details: Click this link to go to the NAT - Address Mapping Rules screen.

### 4.2.4.2 Configuring Edit Port Mapping

Click NAT, Select Many to One and click Edit Details to open the following screen.

NAT - Edit Port Mapping Rule			
	Start Port No.	End Port No.	IP Address
1	All ports	All ports	<input type="text" value="0.0.0.0"/>
2	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
3	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
4	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
5	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
6	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
7	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
8	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
9	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
10	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
11	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
12	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0.0.0.0"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>			

- **Start Port No.:** Enter a port number in this field.
- **End Port No.:** Enter a port number in this field.
- **IP Address:** Enter your server IP address in this field.

#### 4.2.4.3 Configuring Address Mapping

To change your ADSL Modem/Router's address mapping settings, click NAT, Select Many to Many and click Edit Details to open the following screen.

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

Back

● **Local Start IP:** This is the starting Inside Local IP Address. Local IP addresses are N/A for Server port mapping.

● **Local End IP:** This is the end Inside Local IP Address (ILA). If your rule is for all local IP addresses, then enter 0.0.0.0 as the Local Start IP address and 255.255.255.255 as the Local End IP address. This field is N/A for One-to-one and Server mapping types.

● **Global Start IP:** This is the starting Inside Global IP Address (IGA). Enter 0.0.0.0 here if you have a dynamic IP address from your ISP. You can only do this for Many-to-One and Server mapping types.

● **Global End IP:** This is the ending Inside Global IP Address (IGA). This field is N/A for One-to-one, Many-to-One and Server mapping types.

● **Type:**

1-1: One-to-one mode maps one local IP address to one global IP address. Note that port numbers do not change for the One-to-one NAT mapping type.

M-1: Many-to-One mode maps multiple local IP addresses to one global IP address. This is

equivalent to Many to One (i.e., PAT, port address translation).

M-M Ov (Overload): Many-to-Many Overload mode maps multiple local IP addresses to shared global IP addresses.

MM No (No Overload): Many-to-Many No Overload mode maps each local IP address to unique global IP addresses.

Server: This type allows you to specify inside servers of different services behind the NAT to be accessible to the outside world.

#### 4.2.4.4 Editing an Address Mapping Rule

To edit an address mapping rule, click the rule's link in the NAT Address Mapping Rules screen to display the screen shown next.

NAT - Edit Address Mapping Rule 1	
Type	One-to-One <input type="button" value="v"/>
Local Start IP	0.0.0.0
Local End IP	N/A
Global Start IP	0.0.0.0
Global End IP	N/A
Server Mapping Set	N/A <input type="button" value="v"/> <a href="#">Edit Details</a>
<input type="button" value="Apply"/> <input type="button" value="Reset"/> <input type="button" value="Delete"/>	

##### **Type:**

1-1: One-to-one mode maps one local IP address to one global IP address. Note that port numbers do not change for the One-to-one NAT mapping type.

M-1: Many-to-One mode maps multiple local IP addresses to one global IP address. This is equivalent to Many to One (i.e., PAT, port address translation).

M-M Ov (Overload): Many-to-Many Overload mode maps multiple local IP addresses to shared global IP addresses.

MM No (No Overload): Many-to-Many No Overload mode maps each local IP address to unique global IP addresses.

Server: This type allows you to specify inside servers of different services behind the NAT to be accessible to the outside world.

**Local Start IP:** This is the starting Inside Local IP Address (ILA). Local IP addresses are N/A for Server port mapping.

**Local End IP:** This is the end Inside Local IP Address (ILA). If your rule is for all local IP addresses, then enter 0.0.0.0 as the Local Start IP address and 255.255.255.255 as the Local End IP address. This field is N/A for One-to-one and Server mapping types.

● **Global Start IP:** This is the starting Inside Global IP Address (IGA). Enter 0.0.0.0 here if you have a dynamic IP address from your ISP.

● **Global End IP:** This is the ending Inside Global IP Address (IGA). This field is N/A for One-to-one, Many-to-One and Server mapping types.

● **Server Mapping Set:** Only available when Type is set to Server.

Select a number from 1 to 10 from the drop-down menu to choose a server set from the NAT - Address Mapping Rules screen.

Edit Details: Click this link to go to the NAT - Edit Port Mapping rule screen to edit a server set that you have selected in the Server Mapping Set field.

## 4.2.5 Security

Inbound direction of Packet Filter rules to prevent unauthorized computers or applications accessing your local network from the Internet.

You can choose all filter rules by yourself, and the security is offer to some sections: Telnet, FTP, TFTP, Web, SNMP and Ping.

<b>Internet Security</b>	
<b>Your device provides the following filter rules</b>	
<input type="checkbox"/> Telnet	Telnet traffic is blocked from the WAN to the LAN
<input type="checkbox"/> FTP	FTP traffic is blocked from the WAN to the LAN
<input type="checkbox"/> TFTP	TFTP traffic is blocked from the WAN to the LAN
<input type="checkbox"/> Web	Web traffic is blocked from the WAN to the LAN
<input type="checkbox"/> SNMP	SNMP traffic is blocked from the WAN
<input type="checkbox"/> Ping	Ping traffic is blocked from the WAN

## 4.2.6 Dynamic DNS

The Dynamic DNS function allows you to alias a dynamic IP address to a static hostname, allowing users whose ISP does not assign them a static IP address to use a domain name. This is especially useful for hosting servers via your ADSL connection, so that anyone wishing to connect to you may use your domain name, rather than having to use your dynamic IP address, which changes from time to time. This dynamic IP address is the WAN IP address of the router, which is assigned to you by your ISP.

You will first need to register and establish an account with the Dynamic DNS provider using their website, for example <http://www.dyndns.org/>

Dynamic DNS	
<input type="checkbox"/> Active	
Service Provider	WWW.DynDNS.ORG ▾
Host Name	<input type="text"/>
E-mail Address	<input type="text"/>
User	<input type="text"/>
Password	<input type="text"/>
<input type="checkbox"/> Enable Wildcard	
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

- **Active:** Select this check box to use dynamic DNS.
- **Service Provider:** Select the name of your Dynamic DNS service provider.
- **Host Name:** Type the domain name assigned to your ADSL Modem/Router by your Dynamic DNS provider.
- **E-mail Address:** Type your e-mail address.
- **User:** Type your user name.
- **Password:** Type the password assigned to you.
- **Enable Wildcard:** Select this check box to enable DYNDNS Wildcard.

## 4.2.7 Time Zone

The router does not have a real time clock on board; instead, it uses the Simple Network Time Protocol (SNTP) to get the current time from an SNTP server outside your network. Choose your local time zone. After a successful connection to the Internet, the router will retrieve the correct local time from the SNTP server you have specified. If you prefer to specify an SNTP server other than those in the drop-down list, simply enter its IP address as shown above. Your ISP may provide an SNTP server for you to use.

Time Zone	
<b>Time Server</b>	
Use Time Server when Bootup	None
Time Server IP Address	N/A
Time Zone	(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
<input type="checkbox"/> Daylight Saving	
Start Date	1 month 1 day
End Date	1 month 1 day
<input type="checkbox"/> Calibrate system clock with Time Server now.	
(Attention! This may take up to 60 seconds if Time Server is unreachable).	
<b>Date</b>	
Current Date	2000 - 01 - 01
New Date (yyyy-mm-dd)	2000 - 01 - 01
<b>Time</b>	
Current Time	00 : 29 : 11
New Time	00 : 29 : 11
<input type="button" value="Apply"/> <input type="button" value="Reset"/>	

### Time Server:

**Use Time Server when Bootup:** Select the time service protocol that your time server sends when you turn on the Router. Not all time servers support all protocols, so you may have to check with your ISP/network administrator or use trial and error to find a protocol that works.

The main difference between them is the format.

**Daytime (RFC 867)** format is day/month/year/time zone of the server.

**Time (RFC 868)** format displays a 4-byte integer giving the total number of seconds since 1970/1/1 at 0:0:0.

The default, **NTP (RFC 1305)**, is similar to Time (RFC 868).

Select **None** to enter the time and date manually.

● **Time Server IP Address:** Enter the IP address of your time server. Check with your ISP/network administrator if you are unsure of this information.

● **Time Zone:** Choose the time zone of your location. This will set the time difference between your time zone and Greenwich Mean Time (GMT).

● **Daylight Savings:** Select this option if you use daylight savings time. Daylight saving is a period from late spring to early fall when many countries set their clocks ahead of normal local time by one hour to give more daytime light in the evening.

● **Start Date:** Enter the month and day that your daylight-savings time starts on if you selected **Daylight Savings**.

● **End Date:** Enter the month and day that your daylight-savings time ends on if you selected **Daylight Savings**.

● **Calibrate system clock with Time Server now:** Click this button to have your Router use the time server (that you configured above) to set its internal system clock.

Please wait for up to 60 seconds while the ADSL Modem/Router locates the time server. If the ADSL Modem/Router cannot find the time server, please check the time server protocol and its IP address. If the IP address was entered correctly, try pinging it for example to test the connection.

#### Date

● **Current Date:** This field displays the date of your ADSL Modem/Router.

Each time you reload this page, the router synchronizes the time with the time server.

● **New Date (yyyy-mm-dd):** This field displays the last updated date from the time server. When you select **None** in the **Use Time Server when Bootup** field, enter the new date in this field and then click **Apply**.

#### Time

● **Current Time:** This field displays the time of your router. Each time you reload this page, the ADSL Modem/Router synchronizes the time with the time server.

● **New Time:** This field displays the last updated time from the time server.

When you select **None** in the **Use Time Server when Bootup** field, enter the new time in this field and then click **Apply**.

## 4.2.8 Remote Management

Remote management allows you to determine which services/protocols can access which ADSL Modem/Router interface from which computers.

You can configure the router for remote Telnet access or upload and download router firmware and configuration files using FTP. To use this feature, your computer must have an FTP client. And can use the ADSL Modem/Router's embedded web configurator for configuration and file management.

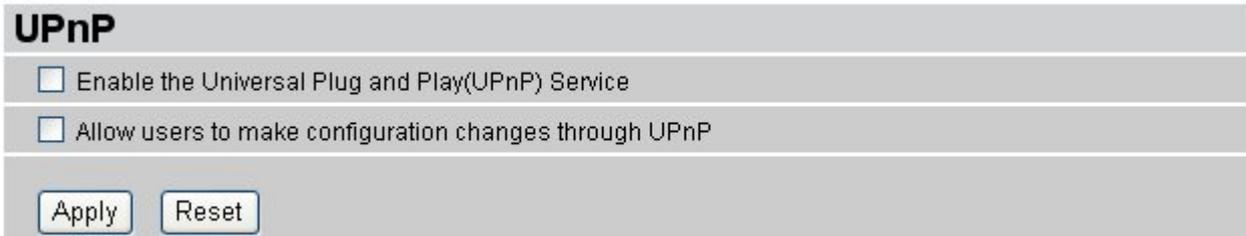
Remote Management Control			
Server Type	Access Status	Port	Secured Client IP
Telnet	All <input type="button" value="v"/>	23	0.0.0.0
FTP	All <input type="button" value="v"/>	21	0.0.0.0
Web	All <input type="button" value="v"/>	80	0.0.0.0

- **Server Type:** Each of these labels denotes a service that you may use to remotely manage the ADSL Modem/Router.
- **Access Status:** Select the access interface. Choices are **All**, **LAN Only**, **WAN Only** and **Disable**.
- **Port:** This field shows the port number for the remote management service. You may change the port number for a service in this field, but you must use the same port number to use that service for remote management.
- **Secured Client IP:** The default 0.0.0.0 allows any client to use this service to remotely manage the ADSL Modem/Router. Type an IP address to restrict access to a client with a matching IP address.

## 4.2.9 UPnP

UPnP offers peer-to-peer network connectivity for PCs and other network devices, along with control and data transfer between devices. UPnP offers many advantages for users running NAT routers through UPnP NAT Traversal, and on supported systems makes tasks such as port forwarding much easier by letting the application control the required settings, removing the need for the user to control advanced configuration of their device. Both the user's Operating System and the relevant application must support UPnP in addition to the router. Windows XP and Windows Me natively support UPnP (when the

component is installed), and Windows 98 users may install the Internet Connection Sharing client from Windows XP in order to support UPnP. Windows 2000 does not support UPnP.



● **Enable the Universal Plug and Play (UPnP) Service:** Select this checkbox to activate UPnP. Be aware that anyone could use a UPnP application to open the web configurator's login screen without entering the ADSL Modem/Router 's IP address

● **Allow users to make configuration changes through UPnP:** Select this check box to allow UPnP-enabled applications to automatically configure the ADSL Modem/Router so that they can communicate through the ADSL Modem/Router, for example by using NAT traversal, UPnP applications automatically reserve a NAT forwarding port in order to communicate with another UPnP enabled device; this eliminates the need to manually configure port forwarding for the UPnP enabled application.

#### 4.2.9.1 Installing UPnP in Windows Example

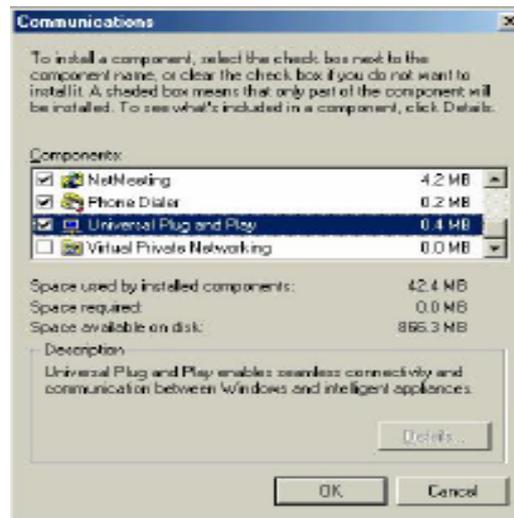
Follow the steps below to install the UPnP in Windows Me.

**Step 1.** Click Start and Control Panel. Double-click Add/Remove Programs.

**Step 2.** Click on the Windows Setup tab and select Communication in the Components selection box. Click Details.



**Step 3.** In the Communications window, select the Universal Plug and Play check box in the Components selection box.



**Step 4.** Click OK to go back to the Add/Remove Programs Properties window and click Next.

**Step 5.** Restart the computer when prompted.

Follow the steps below to install the UPnP in Windows XP.

**Step 1.** Click Start and Control Panel.

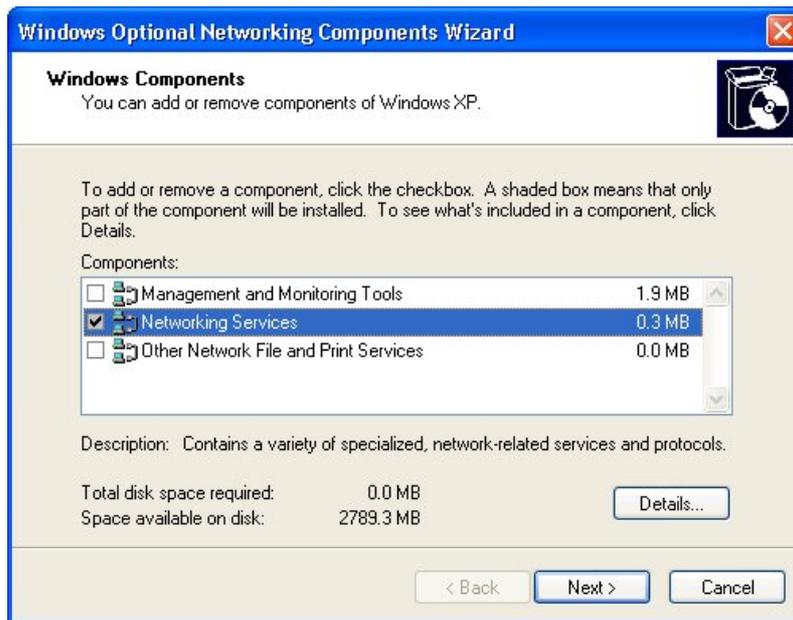
**Step 2.** Double-click Network Connections.

**Step 3.** In the Network Connections window, click Advanced in the main menu and select Optional Networking Components ....



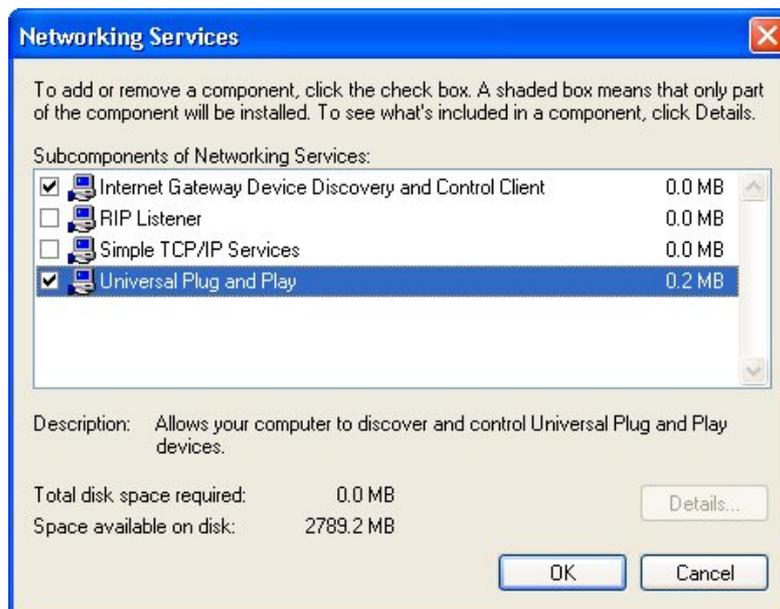
The Windows Optional Networking Components Wizard window displays.

Step 4. Select Networking Service in the Components selection box and click Details.



Step 5. In the Networking Services window, select the Universal Plug and Play check box.

Step 6. Click OK to go back to the Windows Optional Networking Component Wizard window and click Next.



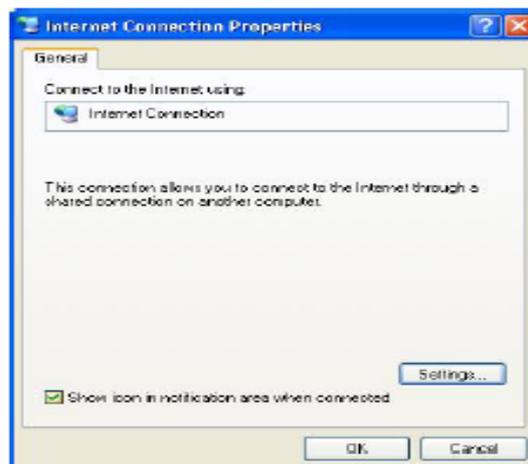
## Auto-discover Your UPnP-enabled Network Device

**Step 1.** Click start and Control Panel. Double-click Network Connections. An icon displays under Internet Gateway.

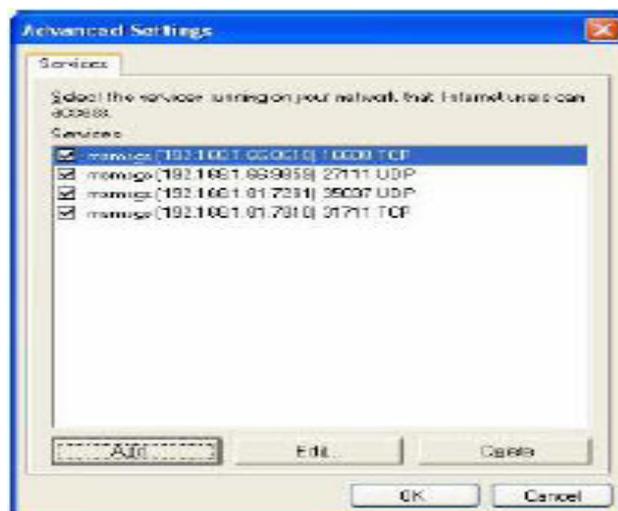
**Step 2.** Right-click the icon and select Properties.

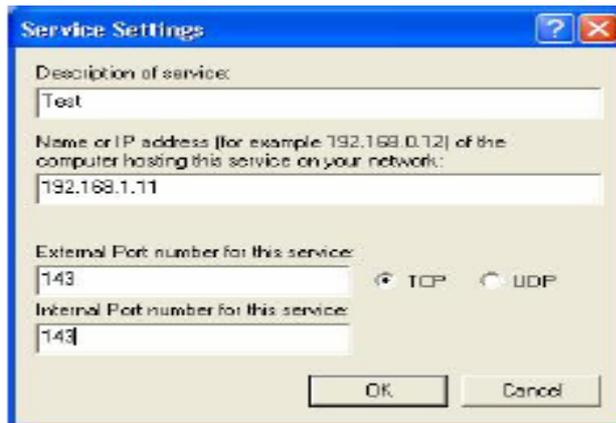


**Step 3.** In the Internet Connection Properties window, click Settings to see the port mappings there were automatically created.



**Step 4.** You may edit or delete the port mappings or click Add to manually add port mappings.





Step 5. Select Show icon in notification area when connected option and click OK. An icon displays in the system tray



Step 6. Double-click on the icon to display your current Internet connection status.



## Web Configurator Easy Access

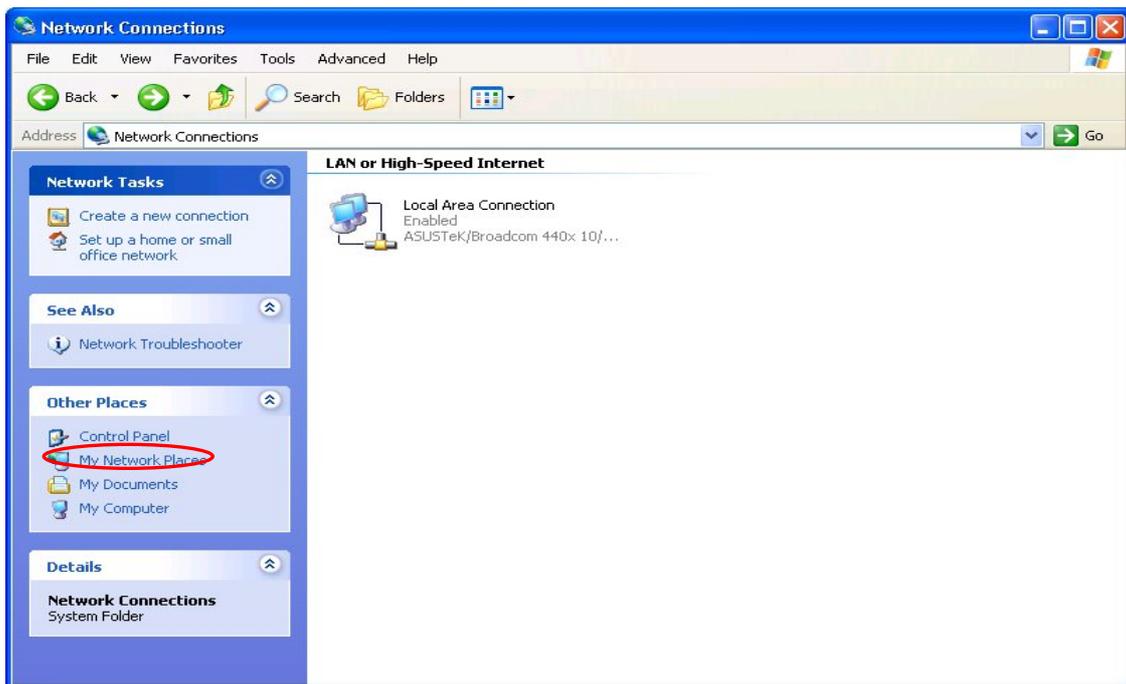
With UPnP, you can access the web-based configurator on the ADSL Modem/Router without finding out the IP address of the ADSL Modem/Router first. This comes helpful if you do not know the IP address of the ADSL Modem/Router.

Follow the steps below to access the web configurator.

**Step 1.** Click Start and then Control Panel.

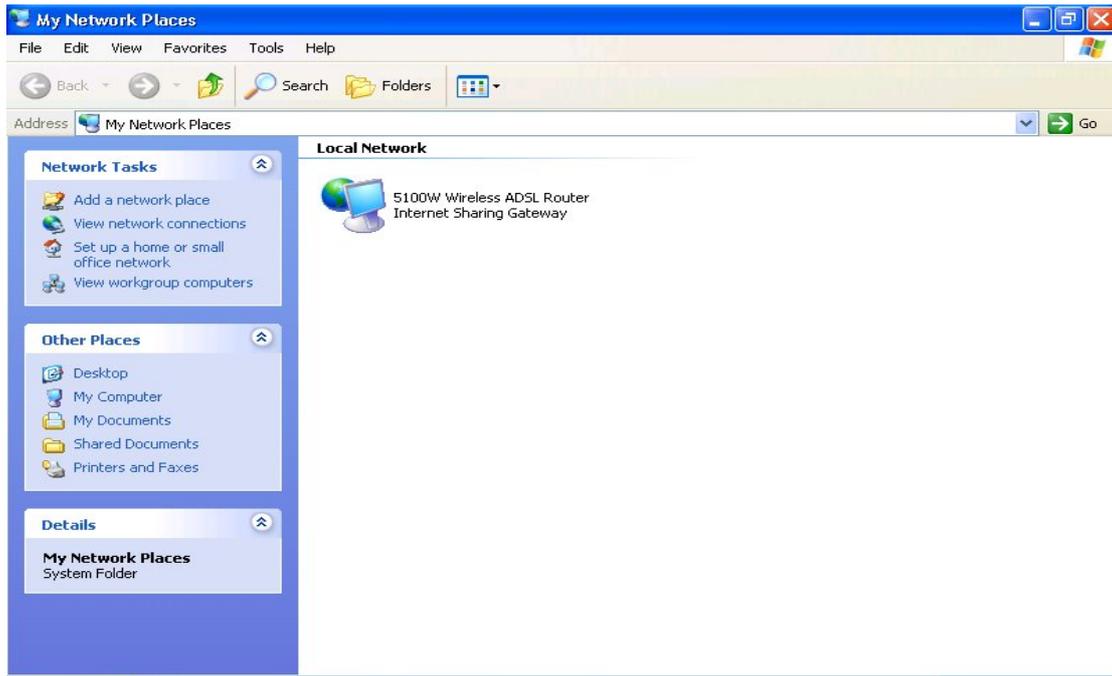
**Step 2.** Double-click Network Connections.

**Step 3.** Select My Network Places under Other Places.



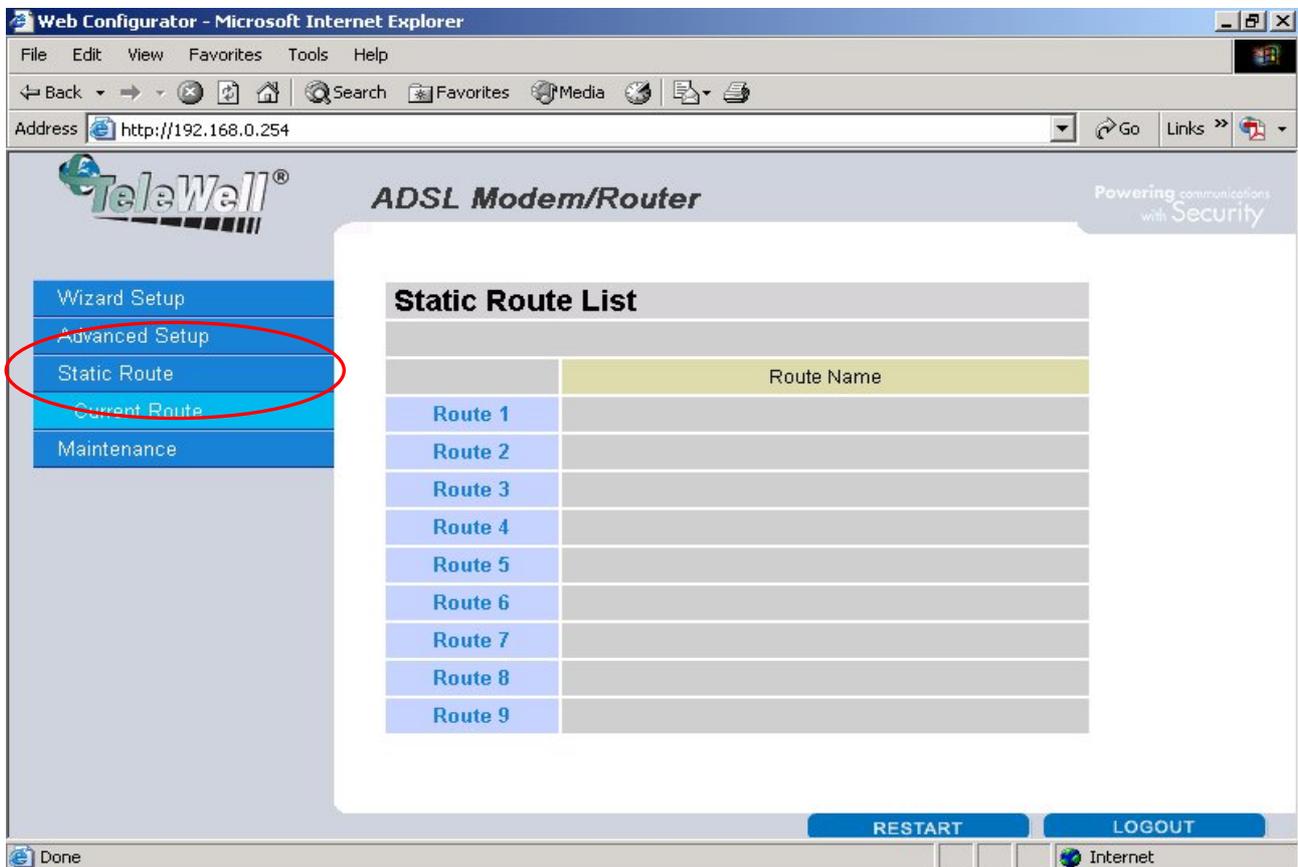
**Step 4.** An icon with the description for each UPnP-enabled device displays under Local Network.

**Step 5.** Right-click on the icon for your ADSL Modem/Router and select Invoke. The web configurator login screen displays.



Step 6. Right-click on the icon for your ADSL Modem/Router and select Properties. A properties window displays with basic information about the ADSL Modem/Router.

### 4.3 Static Route



### 4.3.1 Current Route

If you have another router with a LAN-to-LAN connection, you may create a static routing on the router that is the gateway to Internet.

Static Route List	
	Route Name
Route 1	
Route 2	
Route 3	
Route 4	
Route 5	
Route 6	
Route 7	
Route 8	
Route 9	

Static Route - Route 1	
Active	<input type="checkbox"/> No
Name	<input type="text"/>
Destination IP	<input type="text" value="0.0.0.0"/>
Subnet Mask	<input type="text" value="0.0.0.0"/>
Gateway IP	<input type="text" value="0.0.0.0"/>
Metric	<input type="text" value="0"/>
Private	<input type="checkbox"/> No

- **Active:** Whether the connection is currently active.
- **Name:** Enter the name of your Internet Service Provider
- **Destination IP :** This is the destination subnet IP address.
- **Subnet Mask :** It is the destination IP addresses based on above destination subnet IP
- **Gateway IP :** This is the gateway IP address to which packets are to be forwarded.

● **Metric** : It represents the cost of transmission for routing purposes. The number need not be precise, but it must be between 1 and 15.

● **Private** : This parameter determines if the Prestige will include the route to the remote node in its RIP broadcasts. Set "Yes", it is kept private and is not included in RIP broadcasts. Set "No", the remote node will be propagated to other hosts through RIP broadcasts.

## 4.4 Maintenance

Use the maintenance screens to view system information, upload new firmware, manage configuration and restart your ADSL Modem/Router

**System Status**

<b>System Status</b>	
System Name :	router
RAS F/W Version:	2.2.16(W/S2.B2)3.0.10
DSL F/W Version:	TrendChip, FwVer:3.0.10.3_A_TC HwVer:T14.F7_0.0Multi-Mode
Standard:	Multi-Mode
<b>WAN Information:</b>	
IP Address:	0.0.0.0
IP Subnet Mask:	0.0.0.0
Default Gateway:	0.0.0.0
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0
VPI/VCI:	0/33
<b>LAN Information:</b>	

## 4.4.1 System Status

<b>System Status</b>	
<b>System Status</b>	
System Name :	router
RAS F/W Version:	2.2.16(WS2.B2)3.0.10
DSL FW Version:	TrendChip, FwVer:3.0.10.3_A_TC HwVer:T14.F7_0.0Multi-Mode
Standard:	Multi-Mode
<b>WAN Information:</b>	
IP Address:	0.0.0.0
IP Subnet Mask:	0.0.0.0
Default Gateway:	0.0.0.0
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0
VPI/VCI:	0/ 33
<b>LAN Information:</b>	
MAC Address:	00:04:ed:01:23:45
IP Address:	192.168.0.254
IP Subnet Mask:	255.255.255.0
DHCP:	Server
DHCP Start IP:	192.168.0.100
DHCP Pool Size:	100
<input type="button" value="Show Statistics"/>	

### System Status:

- **System Name:** This is the name of the router. It is for identification purposes.
- **RAS F/W Version:** This is the firmware version and the date created.
- **DSL FW Version:** This is the DSL firmware version associated with your router
- **Standard:** This is the standard that the router is using.

### WAN Information:

- **IP Address:** This is the WAN port IP address
- **IP Subnet Mask:** This is the WAN port IP subnet mask.
- **Default Gateway:** This is the IP address of the default gateway

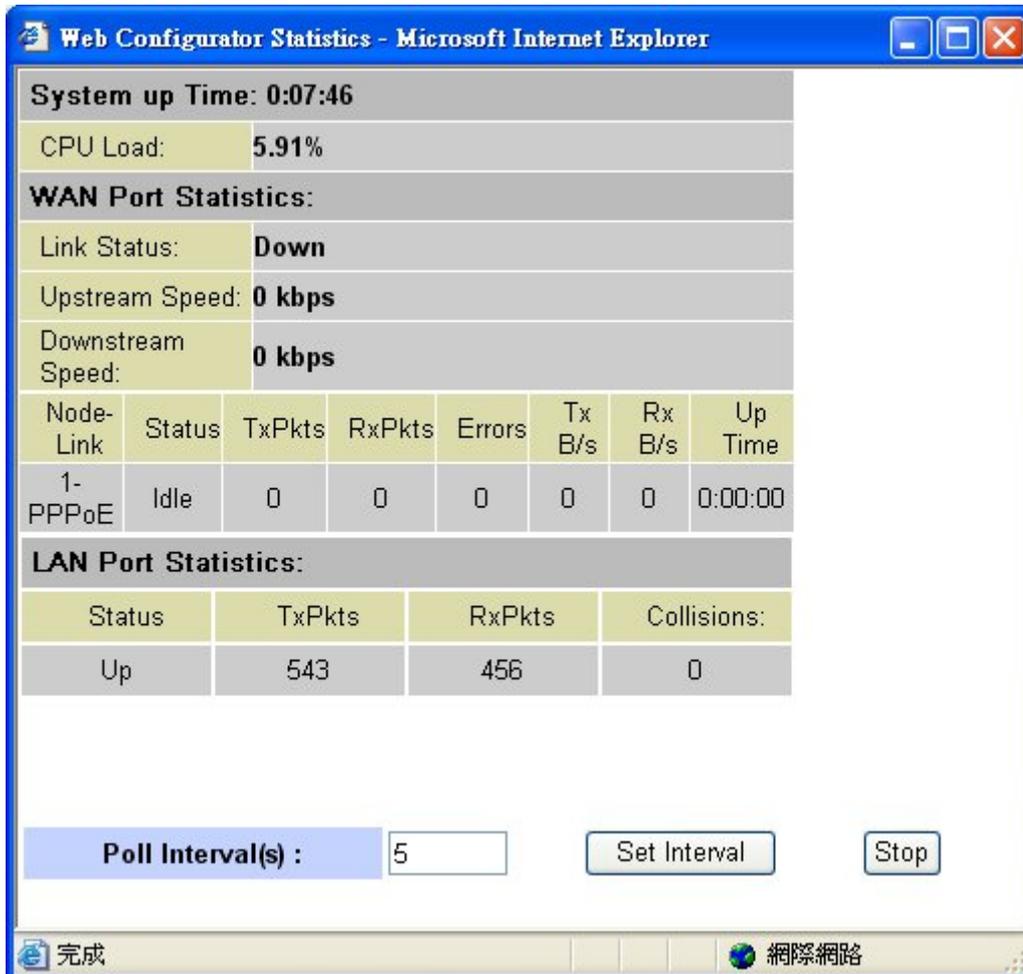
● **VPI/VCI:** This is the Virtual Path Identifier and Virtual Channel Identifier that you entered in the first Wizard screen.

LAN Information

- **MAC Address:** This is the MAC (Media Access Control) or Ethernet address
- **IP Address:** This is the LAN port IP address.
- **IP Subnet Mask:** This is the LAN port IP subnet mask.
- **DHCP Server:** This is the WAN port DHCP role - Server, Relay or None.
- **DHCP Start IP:** This is the first of the contiguous addresses in the IP address pool.
- **DHCP Pool Size:** This is the number of IP addresses in the IP address pool.

### 4.4.2 System Statistics

Read-only information here includes port status and packet specific statistics. Also provided are "system up time" and "poll interval(s)".



- **System up Time:** This is the elapsed time the system has been up
- **CPU Load:** This field specifies the percentage of CPU utilization.

- **WAN Port Statistics:** This is the WAN port.
- **Link Status:** This is the status of your WAN link.
- **Transfer Rate:** This is the transfer rate in kbps.
- **Upstream Speed:** This is the upstream speed of the router
- **Downstream Speed:** This is the downstream speed of the router
- **Node-Link:** This field displays the remote node index number and link type. Link types are PPPoA, ENET, RFC 1483 and PPPoE.
- **LAN Port Statistics:** This is the LAN port
- **Interface:** This field displays the type of port
- **Status:** For the WAN port, this displays the port speed and duplex setting if you're using Ethernet encapsulation and **down** (line is down), **idle** (line (ppp) idle), **dial** (starting to trigger a call) and **drop** (dropping a call) if you're using PPPoE encapsulation. For a LAN port, this shows the port speed and duplex setting.
- **TxPkts:** This field displays the number of packets transmitted on this port.
- **RxPkts:** This field displays the number of packets received on this port.
- **Errors:** This field displays the number of error packets on this port.
- **Tx B/s:** This field displays the number of bytes transmitted in the last second.
- **Rx B/s:** This field displays the number of bytes received in the last second.
- **Up Time:** This field displays the elapsed time this port has been up.
- **Collisions:** This is the number of collisions on this port.
- **Poll Interval(s):** Type the time interval for the browser to refresh system statistics.
- **Set Interval:** Click this button to apply the new poll interval you entered in the **Poll Interval** field above.
- **Stop:** Click this button to halt the refreshing of the system statistics.

### 4.4.3 DHCP Table

DHCP (Dynamic Host Configuration Protocol, RFC 2131 and RFC 2132) allows individual clients to obtain TCP/IP configuration at start-up from a server.

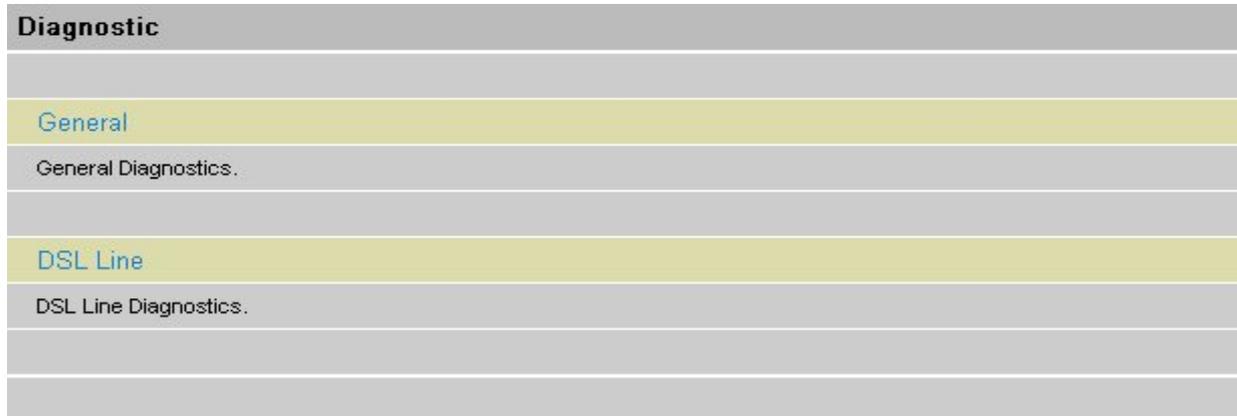
#### **DHCP Table**

Host Name	IP Address	MAC Address

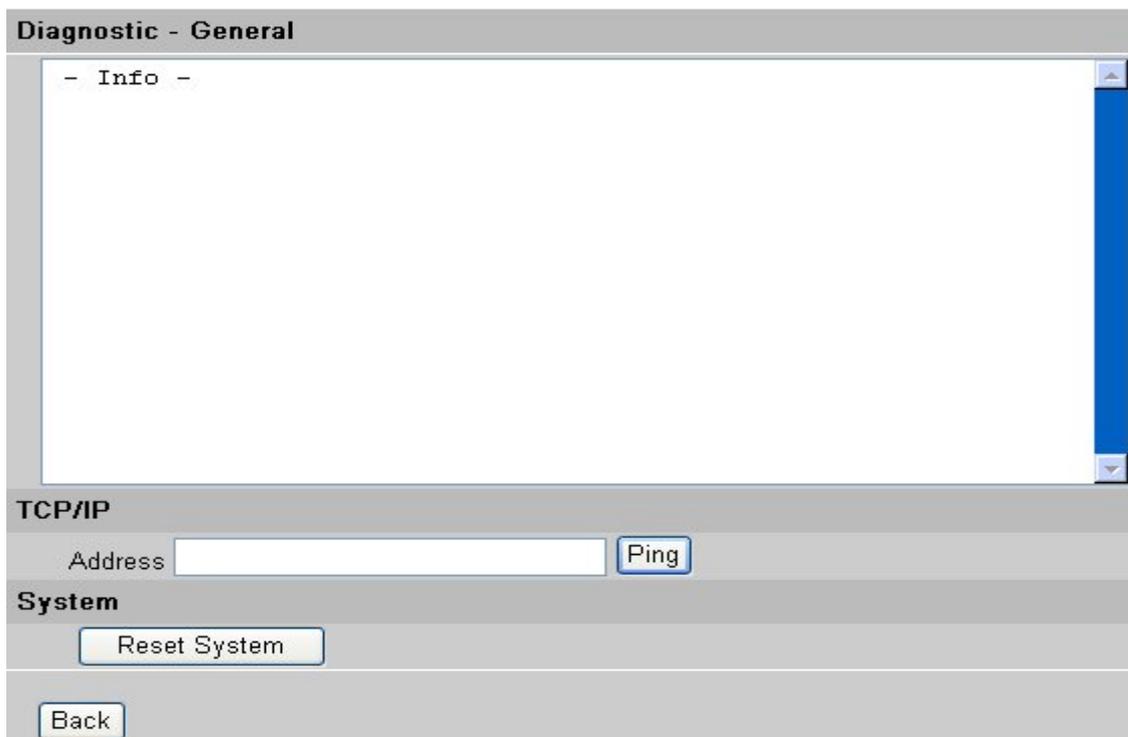
- **Host Name:** This is the name of the host computer.
- **IP Address:** This field displays the IP address relative to the **Host Name** field
- **MAC Address:** This field displays the MAC (Media Access Control) address of the computer with the displayed host name.

## 4.4.4 Diagnostic

These read-only screens display information to help you identify problems with the ADSL Modem/Router.

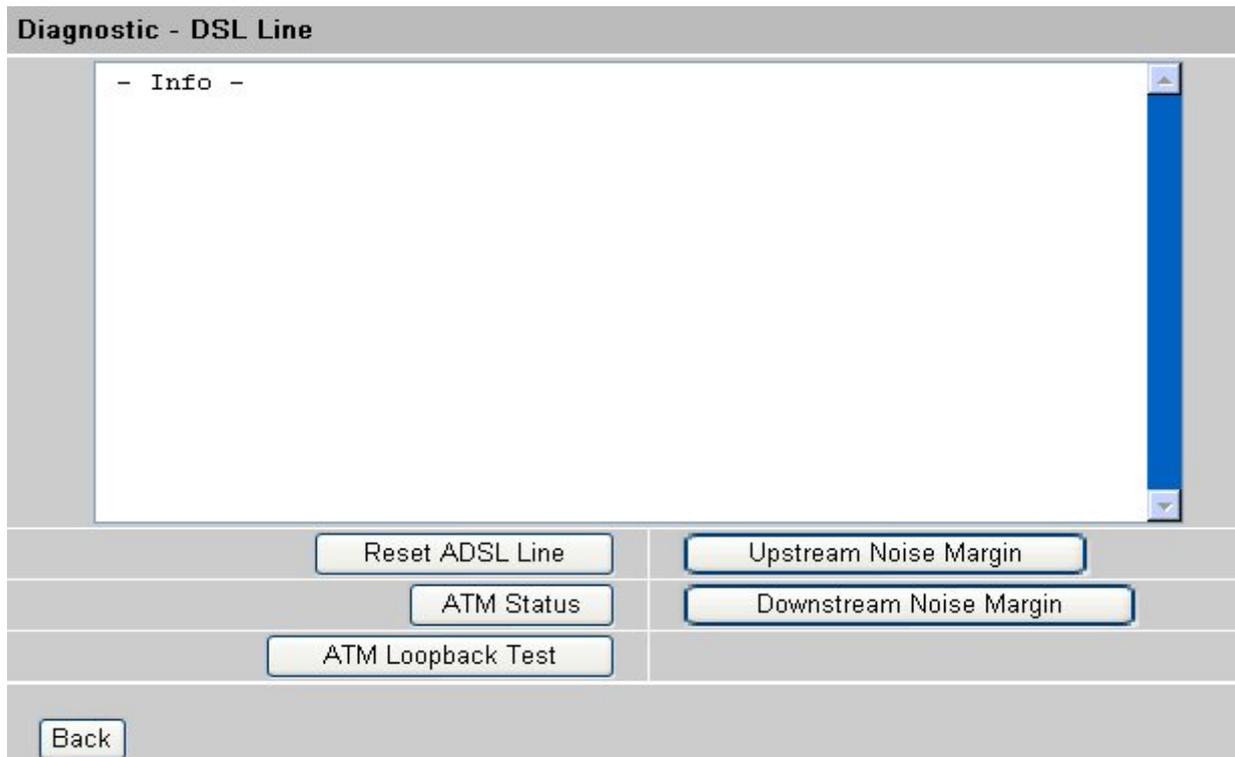


### 4.4.4.1 Diagnostic-General



- **TCP/IP Address:** Type the IP address of a computer that you want to ping in order to test a connection.
- **Ping:** Click this button to ping the IP address that you entered.
- **Reset System:** Click this button to reboot the ADSL Modem/Router. A warning dialog box is then displayed asking you if you're sure you want to reboot the system. Click **OK** to proceed.

#### 4.4.4.2 Diagnostic DSL Line



- **Reset ADSL Line:** Click this button to reinitialize the ADSL line. The large text box above then displays the progress and results of this operation
- **ATM Status:** Click this button to view ATM status.
- **ATM Loopback Test:** Click this button to start the ATM loopback test. Make sure you have configured at least one PVC with proper VPIs/VCIs before you begin this test. The ATM loopback test is useful for troubleshooting problems with the DSLAM and ATM network.
- **Upstream Noise Margin:** Click this button to display the upstream noise margin.
- **Downstream Noise Margin:** Click this button to display the downstream noise margin.

#### 4.4.5 Firmware

Your router's "firmware" is the software that allows it to operate and provides all its functionality. Think of your router as a dedicated computer, and the firmware as the software it runs. Over time this software may be improved and modified, and your router allows you to upgrade the software it runs to take advantage of these changes. To upgrade the firmware of ADSL Modem/Router, you should download or copy the firmware to your local environment first. Press the "Browse..." button to specify the path of the firmware file. Then, click "Upgrade" to start upgrading. When the procedure is completed, ADSL Modem/Router will reset automatically to make the new firmware work.

<b>Firmware</b>		
<b>Firmware Upgrade</b>		
To upgrade the internal router firmware, browse to the location of the firmware (.ras) upgrade file and click upload.		
File Path:	<input type="text"/>	<input type="button" value="Browse..."/> <input type="button" value="Upload"/>
<b>CONFIGURATION FILE</b>		
Click Reset to clear all user-defined configurations and return to the factory defaults.		
<input type="button" value="Reset"/>		

- **File Path:** Type in the location of the file you want to upload in this field or click Browse ... to find it.
- **Browse...:** Click Browse... to find the .ras file you want to upload. Remember that you must decompress compressed (.zip) files before you can upload them.
- **Upload:** Click Upload to begin the upload process. This process may take up to two minutes.
- **Reset:** Click this button to clear all user-entered configuration information and return the ADSL Modem/Router to its factory defaults. Refer to the Resetting the ADSL Modem/Router section.

After two minutes, log in again and check your new firmware version in the System Status screen.

If the upload was not successful, the following screen will appear. Click Back to go back to the Firmware screen.

**Error Message:**

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ERROR: FAIL TO UPDATE DUE TO... The uploaded file was not accepted by the router.

---



**DO NOT** power down the router or interrupt the firmware upgrading while it is still in process. Improper operation could damage the router.

**Warning**

## 4.4.6 Restart

Click **Restart** with option **Current Settings** to reboot your router (and restore your last saved configuration).



The screenshot shows a web interface for restarting a router. At the top is a blue button labeled "RESTART". Below it is a grey box titled "Restart Router" with the instruction "After restarting. Please wait for several seconds to let the system". Underneath, there is a section "Restart Router with" with two radio button options: "Current Settings" (which is selected) and "Factory Default Settings". At the bottom of this section is a "Restart" button.

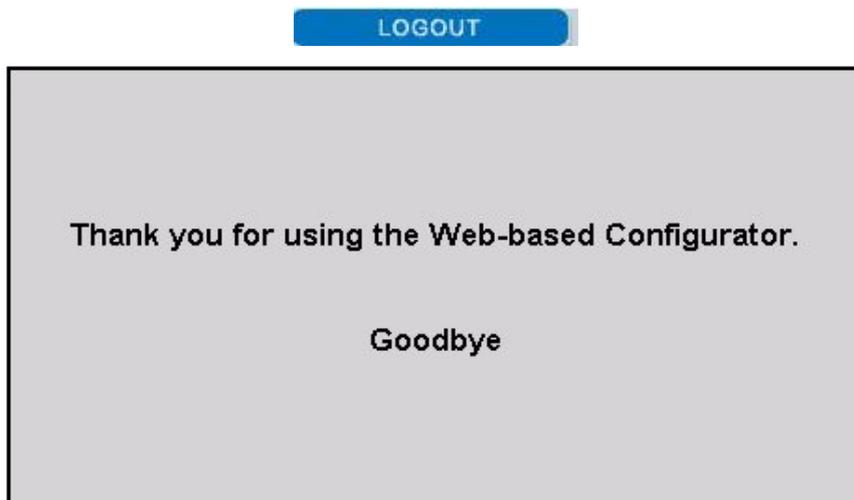
If you wish to restart the router using the factory default settings (for example, after a firmware upgrade or if you have saved an incorrect configuration), select **Factory Default Settings** to reset to factory default settings.

You may also reset your router to factory settings by holding the small Reset pinhole button on the back of your router in for 10-12 seconds whilst the router is turned on.

## 4.5 Logout

To exit the router's web interface, choose **Logout**. Please ensure that you have saved the configuration settings before you logout.

Be aware that the router is restricted to only one PC accessing the configuration web pages at a time. Once a PC has logged into the web interface, other PCs cannot get access until the current PC has logged out of the web interface. If the previous PC forgets to logout, the second PC can access the page after a user-defined period, by default 3 minutes.



The screenshot shows a blue button labeled "LOGOUT" at the top. Below it is a large grey box with a black border containing the text "Thank you for using the Web-based Configurator." and "Goodbye" centered below it.

# Chapter 5

## Troubleshooting

If the ADSL Router is not functioning properly, you can refer first to this chapter for simple troubleshooting before contacting your service provider. This could save your time and effort but if the symptoms persist, then consult your service provider.

### Problems starting up the router

Problem	Corrective Action
None of the LEDs are on when you turn on the router.	Check the connection between the adapter and the router. If the error persists, you may have a hardware problem. In this case you should contact technical support.
You have forgotten your router login and/or password.	Try the default login and password, please refers to Chapter 3. If this fails, you can restore your router to its factory settings by holding the Reset button on the back of your router for 6 seconds above.

### Problems with the WAN Interface

Problem	Corrective Action
Initialization of the PVC connection ("linesync") failed.	Ensure that the telephone cable is connected properly from the ADSL port to the wall jack. The ADSL LED on the front panel of the router should be on. Check that your VPI, VCI, encapsulation type and type of multiplexing settings are the same as those provided by your ISP. Reboot the router GE. If you still have problems, you may need to verify these settings with your ISP.

<p>Frequent loss of ADSL linesync (disconnections).</p>	<p>Ensure that all other devices connected to the same telephone line as your router (e.g. telephones, fax machines, analogue modems) have a line filter connected between them and the wall socket (unless you are using a Central Splitter or Central Filter installed by a qualified and licensed electrician), and ensure that all line filters are correctly installed and the right way around. Missing line filters or line filters installed the wrong way around can cause problems with your ADSL connection, including causing frequent disconnections.</p>
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## Problems with the LAN Interface

Problem	Corrective Action
<p>Can't ping any PCs on the LAN.</p>	<p>Check the Ethernet LEDs on the front panel. The LED should be on for a port that has a PC connected. If it is off, check the cables between your router and the PC. Make sure you have uninstalled any software firewall for troubleshooting.</p>
	<p>Verify that the IP address and the subnet mask are consistent between the router and the workstations.</p>

## *Declaration of Conformity*

**Manufacturer's Name:** TeleWell Oy  
**Manufacturer's Address:** Alhotie 14 b  
04430 Järvenpää

declares that the product

**Model Name:** TeleWell TW-EA501 ADSL modem

**Type of Product:**

conforms to the following Product Specifications:

**Safety:** EN60950 (1992) + A1 (1993) + A2 (1993) + A3 (1995) + A4 (1997) + A11 (199

**EMC:** EN 55022 (1998) Class B

EN 55024 (1998)

EN 61000-3-2 (1995)

EN 61000-3-3 (1995)

### **Supplementary Information:**

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EE, the EMC Directive 89/336/EEC, and the R&TTE Directive 1999/5/EC (Annex II) and carries CE-marking accordingly.



JARVENPAA, FINLAND 17.01.2005

A handwritten signature in black ink, appearing to read "Markku Åberg", written over a horizontal line.

Markku Åberg  
General Manager