

DSL

To access the **DSL Settings** window, click the **DSL Setup** button in the **Advanced Setup** directory.

This window allows you to select the desired modulation, phone line pair, and capability. Click the **Save/Apply** button when you are finished.

Click the **Advanced Settings** button to select a DSL test mode.

DSL Settings

Select the modulation below.

- G.Dmt Enabled
- G.lite Enabled
- T1.413 Enabled
- ADSL2 Enabled
- AnnexL Enabled
- ADSL2+ Enabled
- AnnexM Enabled

Select the phone line pair below.

- Inner pair
- Outer pair

Capability

- Bitswap Enable
- SRA Enable

Print Server

To access the **Print Server** window, click the **Print Server** button in the **Advanced Setup** directory.

Tick the **Enable on-board print server** check box to support the print server.

Click the **Save/Apply** button to save the changes.

Print Server settings

This page allows you to enable / disable printer support.

Enable on-board print server.

Port Mapping

To access the **Port Mapping** window, click the **Port Mapping** button in the **Advanced Setup** directory.

Use this window to enable port mapping. Tick **Enable virtual ports on** and enter

If you are setting up the mapping groups, click the **Add** button.

Port Mapping -- A maximum 16 entries can be configured

Port Mapping supports multiple ports to PVC and bridging groups. Each group will perform as an independent network. To support this feature, you must create mapping groups with appropriate LAN and WAN interfaces using the Add button. The Remove button will remove the grouping and add the ungrouped interfaces to the Default group. Only the default group has IP interface.

Enable virtual ports on

Group Name	Enable/Disable	Remove	Edit	Interfaces	Enable/Disable
Default				USB	<input checked="" type="checkbox"/>
				ENET(1-4)	<input checked="" type="checkbox"/>
				Wireless	<input checked="" type="checkbox"/>

To create a new mapping group, enter **Group Name**, add interfaces to **Grouped Interfaces**.

Click **Save/Apply** to save the changes.

Port Mapping Configuration

To create a new mapping group:

1. Enter the Group name and select interfaces from the available interface list and add it to the grouped interface list using the arrow buttons to create the required mapping of the ports. The group name must be unique.
2. If you like to automatically add LAN clients to a PVC in the new group add the DHCP vendor ID string. By configuring a DHCP vendor ID string any DHCP client request with the specified vendor ID (DHCP option 60) will be denied an IP address from the local DHCP server.
Note that these clients may obtain public IP addresses
3. Click Save/Apply button to make the changes effective immediately

Note that the selected interfaces will be removed from their existing groups and added to the new group.

IMPORTANT If a vendor ID is configured for a specific client device, please **REBOOT** the client device attached to the modem to allow it to obtain an appropriate IP address.

Group Name:

Grouped Interfaces		Available Interfaces
<div style="border: 1px solid black; height: 150px; width: 100%;"></div>	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 5px;">-></div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin: 5px;"><-</div>	<div style="border: 1px solid black; padding: 5px; width: 100%;">ENET(1-4) USB Wireless</div>

Automatically Add Clients With the following DHCP Vendor IDs

PPTP

To access the **PPTP Setting** window, click the **PPTP** button in the **Advanced Setup** directory.

To set up Point-to-Point Tunnel Protocol, tick the Enable check box, enter the appropriate information in the fields offered, and then click the **Save/Apply** button when you are finished.

The screenshot shows the 'PPTP Setting' window with the following fields and options:

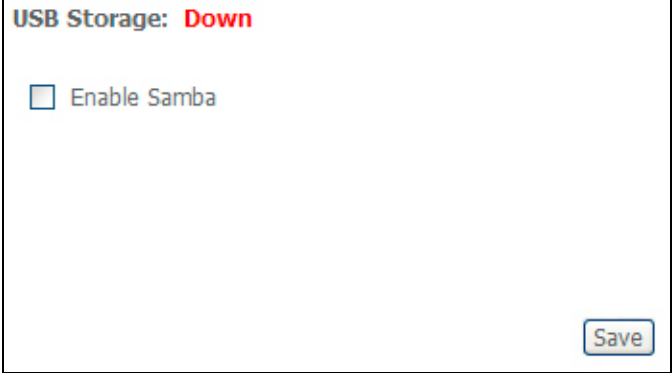
- PPTP Setting** (Section Header)
- Set Point to Point Tunnel Protocol (VPN) (Section Header)
- Enable:
- Tunnel Name:
- PPTP Server IP Address:
- User Name:
- Password:
- Authentication Method: (dropdown arrow)
- Compression Method: (dropdown arrow)
- Default Route:
- Peer IP Address:
- Peer Subnet Mask:
- Save/Apply** button (bottom right)

Samba Config

To access the **Samba Config** window, click the **Samba Config** button in the **Advanced Setup** directory.

To activate the Samba function, tick the **Enable Samba** check box, and enter the NetBios Name and Directory Name.

Click the **Save** button to enable the function.



The screenshot shows a configuration window titled "Samba Config". At the top left, it displays "USB Storage: Down" in red text. Below this, there is a checkbox labeled "Enable Samba" which is currently unchecked. In the bottom right corner of the window, there is a "Save" button.

Wireless

To access the **Wireless** window, click the **Wireless** button in the **Advanced Setup** directory.

Security

In order to protect the privacy, you can setup the wireless security. Available Network Authentication methods are *Open*, *Shared*, *802.1X*, *WPA*, *WPA-PSK*, *WPA2*, *WPA2-PSK*, *Mixed WPA2/WPA* and *Mixed WPA2/WPA-PSK*.

Click **Save/Apply** to save the settings.

Wireless -- Security

This page allows you to configure security features of the wireless LAN interface. You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click "Apply" to configure the wireless security options.

Select SSID:

Network Authentication:

WEP Encryption:

MAC Filter

This page can help you to allow or deny certain MAC addresses to pass through or block out.

Click **Add** to see the following page.

Wireless -- MAC Filter

MAC Restrict Mode: Disabled Allow Deny

MAC Address	Remove
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Enter MAC Address and click **Save/Apply** to add the MAC address to MAC filter.

Wireless -- MAC Filter

Enter the MAC address and click "Apply" to add the MAC address to the wireless MAC address filters.

MAC Address:

Wireless Bridge

This page allows you to configure bridge features of the wireless LAN.

Click **Refresh** to update the remote bridges.

Click **Save/Apply** to save the settings.

Wireless -- Bridge

This page allows you to configure wireless bridge features of the wireless LAN interface. You can select Wireless Bridge (also known as Wireless Distribution System) to disables access point functionality. Selecting Access Point enables access point functionality. Wireless bridge functionality will still be available and wireless stations will be able to associate to the AP. Select Disabled in Bridge Restrict which disables wireless bridge restriction. Any wireless bridge will be granted access. Selecting Enabled or Enabled(Scan) enables wireless bridge restriction. Only those bridges selected in Remote Bridges will be granted access. Click "Refresh" to update the remote bridges. Wait for few seconds to update. Click "Save/Apply" to configure the wireless bridge options.

AP Mode:

Bridge Restrict:

Advanced

Section 3 – Configuration

This page allows you to configure advanced wireless LAN interface. Configuring these settings may increase the performance of your Router but if you are not familiar with networking devices and protocols, this section should be left at its default settings. Click **Save/Apply** to save the settings.

Wireless -- Advanced

This page allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used.
Click "Apply" to configure the advanced wireless options.

Band: 2.4GHz
Channel: 11 Current: 11
Auto Channel Timer(min): 0
54g™ Rate: Auto
Multicast Rate: Auto
Basic Rate: Default
Fragmentation Threshold: 2346
RTS Threshold: 2347
DTIM Interval: 1
Beacon Interval: 100
XPress™ Technology: Disabled
54g™ Mode: 54g Auto
54g™ Protection: Auto
Preamble Type: long
Transmit Power: 100%
WMM(Wi-Fi Multimedia): Auto
WMM No Acknowledgement: Disabled
WMM APSD: Enabled

[Save/Apply](#)

Station Info

This page shows the authenticated wireless stations and their status. Click **Refresh** to update the information.

Wireless -- Authenticated Stations

This page shows authenticated wireless stations and their status.

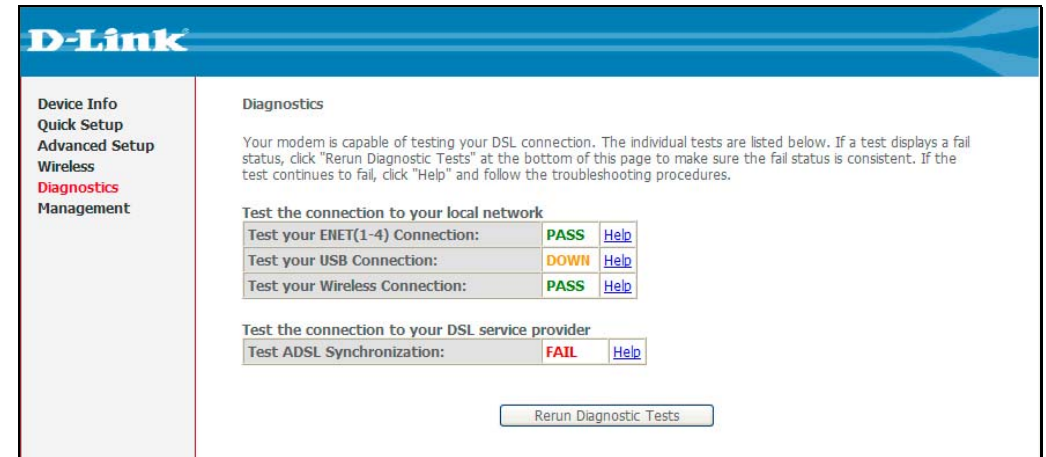
MAC	Associated	Authorized	SSID	Interface
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[Refresh](#)

Diagnostics

To access the **Diagnostics** window, click the **Diagnostics** button in the **Diagnostics** directory.

This window is used to test connectivity of the Router.



Management

The Management directory features an array of options designed to help you get the most out of your Router.

Settings

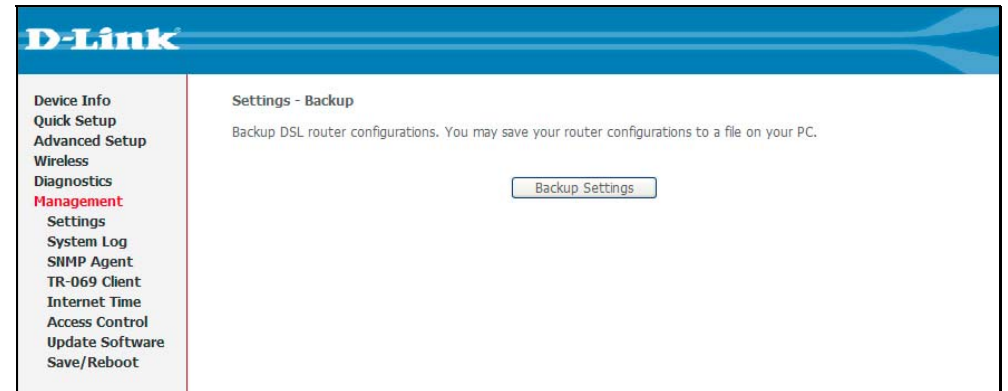
To access the **Settings - Backup** window, click the **Settings** button in the **Management** directory.

Settings – Backup

Section 3 – Configuration

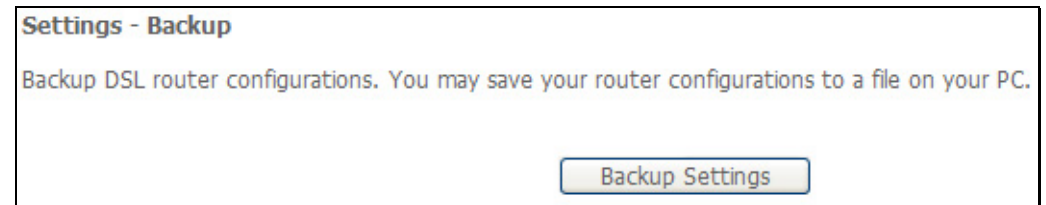
This window allows you to backup your DSL Router configurations.

Click the **Backup Settings** button to save your Router configurations to a file on your computer.



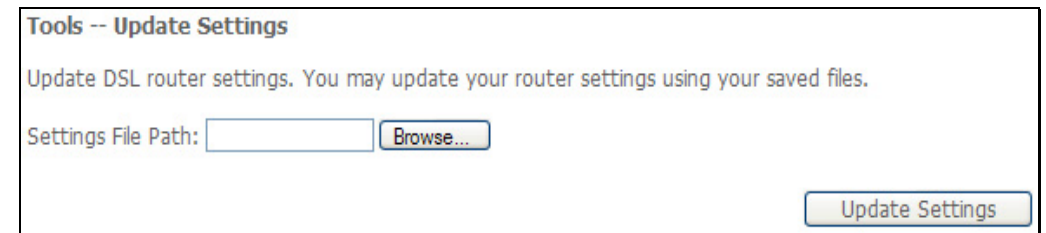
Settings – Backup

Click **Backup Settings** to save a backup file on the PC.



Settings – Update

Click **Browse** to select a file and click the **Update Settings** button to update the Router settings.



Settings – Restore Default

Section 3 – Configuration

Click the **Restore Default Settings** button to reset your Router back to the factory default settings including IP settings (192.168.1.1) and Administrator password (admin).

Tools -- Restore Default Settings

Restore DSL router settings to the factory defaults.

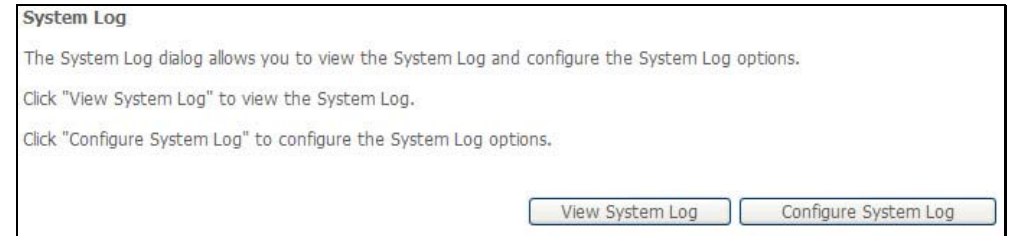
Restore Default Settings

System Log

These windows allow you to view the System Log and configure the System Log options. To access the **System Log** window, click the **System Log** button in the **Management** directory.

Click the **View System Log** button to view the System Log.

Click the **Configure System Log** button to configure the System Log options.



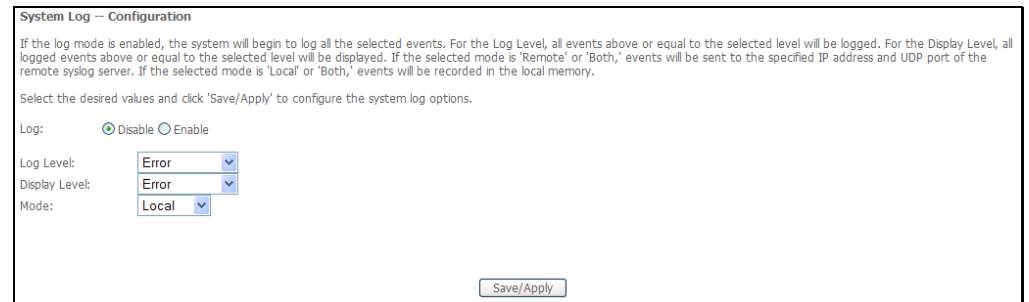
Click on the **Refresh** button to refresh the system log settings.



System Log – Configuration

The system log displays chronological event log data. The event log can be read from local host or sent to a System Log server. The available event severity levels are: **Emergency, Alert, Critical, Error, Warning, Notice, Informational, and Debugging**.

This window allows you to log selected events. When you are finished, click the **Save/Apply** button.



SNMP Agent

To access the **SNMP – Configuration** window, click the **SNMP Agent** button in the **Management** directory.

Simple Network Management Protocol allows a management application to retrieve statistics and status from the SNMP agent in the Router. When you are finished, click the **Save/Apply** button.

SNMP - Configuration

Simple Network Management Protocol (SNMP) allows a management application to retrieve statistics and status from the SNMP agent in this device.

Select the desired values and click "Apply" to configure the SNMP options.

SNMP Agent Disable Enable

Read Community:	<input type="text" value="public"/>
Set Community:	<input type="text" value="private"/>
System Name:	<input type="text" value="DSL-2650U"/>
System Location:	<input type="text" value="D-Link"/>
System Contact:	<input type="text" value="ADSL"/>
Trap Manager IP:	<input type="text" value="0.0.0.0"/>

TR-069 Client

To access the **TR-069 Client** window, click the **TR-069 Client** button in the **Management** directory.

TR069 management allows the remote configuration to the Router. Click the **Enable** radio button in **Inform** and configure the TR069 management access information.

Click the **Apply** button when you are satisfied that all the settings are configured correctly.

TR-069 client - Configuration

WAN Management Protocol (TR-069) allows a Auto-Configuration Server (ACS) to perform auto-configuration, provision, collection, and diagnostics to this device.

Select the desired values and click "Apply" to configure the TR-069 client options.

Inform Disable Enable

Inform Interval:

ACS URL:

ACS User Name:

ACS Password:

Connection Request Authentication

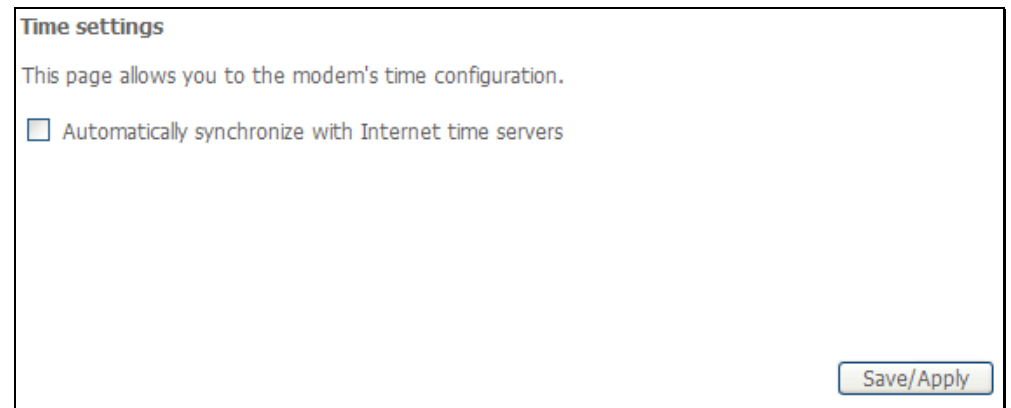
Connection Request User Name:

Connection Request Password:

Internet Time

To access the **Time settings** window, click the **Internet Time** button in the **Management** directory.

This window allows you to set the Router's time configuration. When you are finished, click the **Save/Apply** button.



The screenshot shows a web browser window titled "Time settings". The page content includes the following text and controls:

- Time settings** (Section Header)
- This page allows you to the modem's time configuration.
- Automatically synchronize with Internet time servers
- Save/Apply** button

Access Control

To access the **Access Control** windows, click the **Access Control** button in the **Management** directory.

Access Control – Services

Enable or disable the desired LAN services. When you are finished, click the **Save/Apply** button.

Access Control -- Services

A Service Control List ("SCL") enables or disables services from being used.

Services	LAN
FTP	<input checked="" type="checkbox"/> Enable
HTTP	<input checked="" type="checkbox"/> Enable
ICMP	Enable
SNMP	<input checked="" type="checkbox"/> Enable
SSH	<input checked="" type="checkbox"/> Enable
TELNET	<input checked="" type="checkbox"/> Enable
TFTP	<input checked="" type="checkbox"/> Enable

Access Control – IP Address

This window allows you to enable or disable Access Control Mode. To add an IP address management station, click the **Add** button.

Access Control -- IP Address

The IP Address Access Control filters IP address from WAN. If enabled, permits access to local management services from IP addresses contained in the Access Control List. If the Access Control mode is disabled, the system will not validate IP addresses for incoming packets. The services are the system applications listed in the Service Control List

Access Control Mode: Disable Enable

Section 3 – Configuration

Enter the IP address of the management station permitted to access the local management services. When you are finished, click the **Save/Apply** button.

Access Control

Enter the IP address of the management station permitted to access the local management services, and click 'Save/Apply.'

IP Address:

Access Control – Passwords

This window allows you to change the password on the Router. When you are finished, click the **Save/Apply** button.

Access Control -- Passwords

Access to your DSL router is controlled through three user accounts: admin, support, and user.

The user name "admin" has unrestricted access to change and view configuration of your DSL Router.

The user name "support" is used to allow an ISP technician to access your DSL Router for maintenance and to run diagnostics.

The user name "user" can access the DSL Router, view configuration settings and statistics, as well as, update the router's software.

Use the fields below to enter up to 16 characters and click "Apply" to change or create passwords. Note: Password cannot contain a space.

Username:

Old Password:

New Password:

Confirm Password:

(Note: The length of password can not be greater than 16.)

Update Software

To access the **Tools - Update Software** window, click the **Update Software** button in the **Management** directory. This window allows you to update the Router's software.

Tools -- Update Software

Step 1: Obtain an updated software image file from your ISP.

Step 2: Enter the path to the image file location in the box below or click the "Browse" button to locate the image file.

Step 3: Click the "Update Software" button once to upload the new image file.

NOTE: The update process takes about 2 minutes to complete, and your DSL Router will reboot.

Software File Path:

Save/Reboot

To access this window, click the **Save/Reboot** button in the **Management** directory.

To save your settings and reboot the system, click the **Save/Reboot** button.

Click the button below to save and reboot the router.

Troubleshooting

This chapter provides solutions to problems that might occur during the installation and operation of the DSL-2650U. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

1. How do I configure my DSL-2650U Router without the CD-ROM?

- Connect your PC to the Router using an Ethernet cable.
- Open a web browser and enter the address `http://192.168.1.1`
- The default username is 'admin' and the default password is 'admin'.
- If you have changed the password and cannot remember it, you will need to reset the Router to the factory default setting (see question 2), which will set the password back to 'admin'.

Note: Please refer to the next section “Networking Basics” to check your PC’s IP configuration if you can’t see the login windows.

2. How do I reset my Router to the factory default settings?

- Ensure the Router is powered on.
- Press and hold the reset button on the back of the device for approximately 3 to 5 seconds.
- This process should take around 30~60 seconds.

Note: Resetting the Router to the factory default settings will erase the current configuration settings. To reconfigure your settings, login to the Router as outlined in question 1, then run the Quick Setup wizard.

3. What can I do if my Router is not working correctly?

There are a few quick steps you can take to try and resolve any issues:

- Follow the directions in Question 2 to reset the Router.
- Check that all the cables are firmly connected at both ends.
- Check the LEDs on the front of the Router. The Power indicator should be on, the Status indicator should flash, and the DSL and LAN indicators should be on as well.

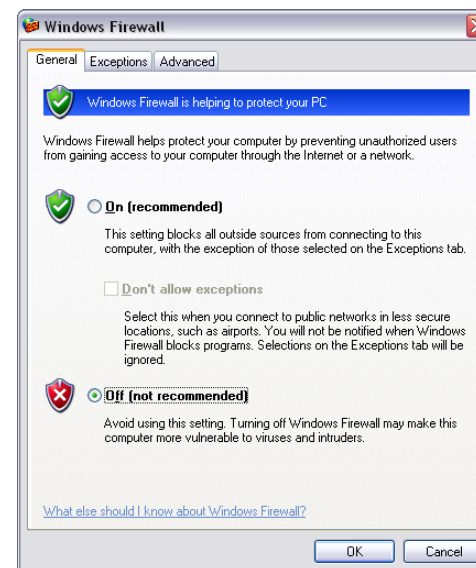
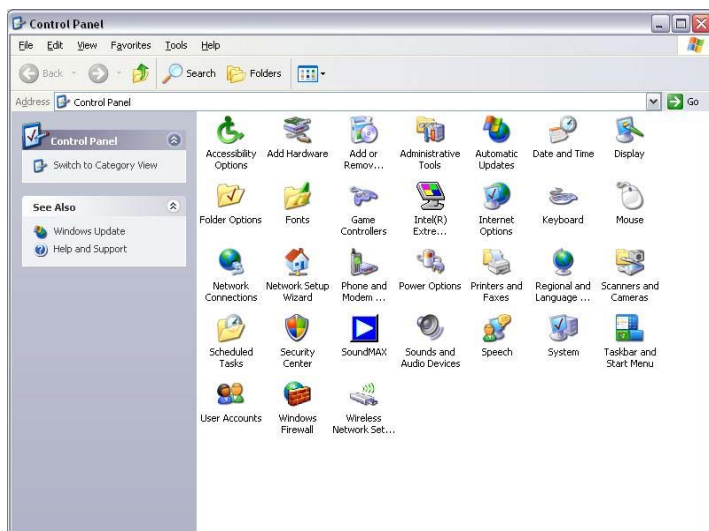
- Please ensure that the settings in the Web-based configuration manager, e.g. ISP username and password, are the same as the settings that have been provided by your ISP.

4. Why can't I get an Internet connection?

For ADSL ISP users, please contact your ISP to make sure the service has been enabled/connected by your ISP and that your ISP username and password are correct.

5. What can I do if my Router can't be detected by running installation CD?

- Ensure the Router is powered on.
- Check that all the cables are firmly connected at both ends and all LEDs work correctly.
- Ensure only one network interface card on your PC is activated.
- Click on **Start > Control Panel > Security Center** to disable the setting of **Firewall**.



Note: There might be a potential security issue if you disable the setting of Firewall on your PC. Please remember to turn it back on once you have finished the whole installation procedure and can surf on Internet without any problem.

Networking Basics

Check Your IP Address

After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

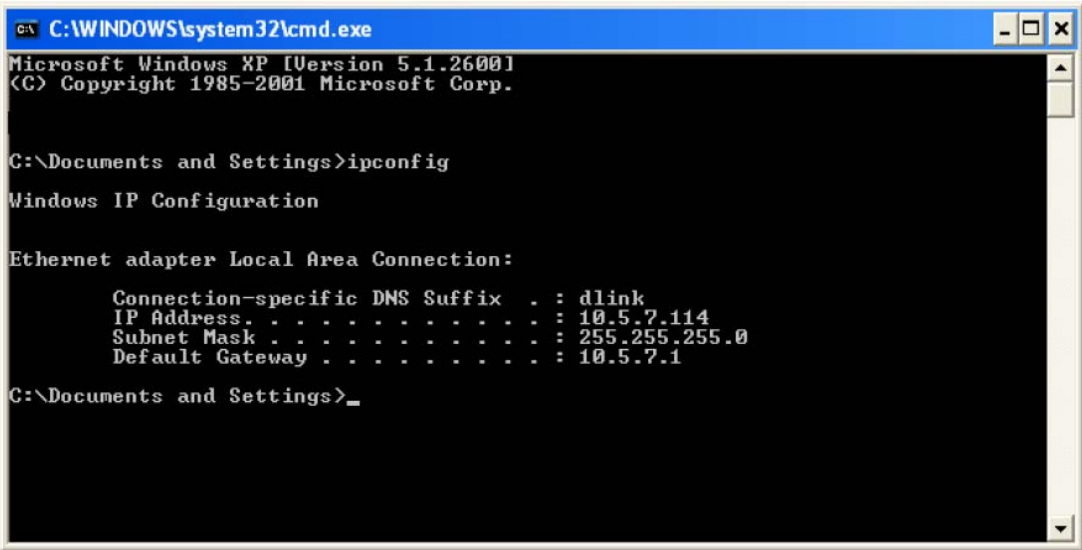
Click on **Start > Run**. In the run box type *cmd* and click on the **OK**.

At the prompt, type *ipconfig* and press **Enter**.

This will display the IP address, subnet mask, and the default gateway of your adapter.

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your Router. Some firewall software programs may block a DHCP request on newly installed adapters.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : dlink
    IP Address. . . . .               : 10.5.7.114
    Subnet Mask . . . . .            : 255.255.255.0
    Default Gateway . . . . .        : 10.5.7.1

C:\Documents and Settings>_
```

Statically Assign An IP Address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

Step 1

Windows® XP - Click on **Start > Control Panel > Network Connections**.

Windows® 2000 - From the desktop, right-click on the **My Network Places > Properties**.

Step 2

Right-click on the **Local Area Connection** which represents your D-Link network adapter and select **Properties**.

Step 3

Highlight **Internet Protocol (TCP/IP)** and click on the **Properties**.

Step 4

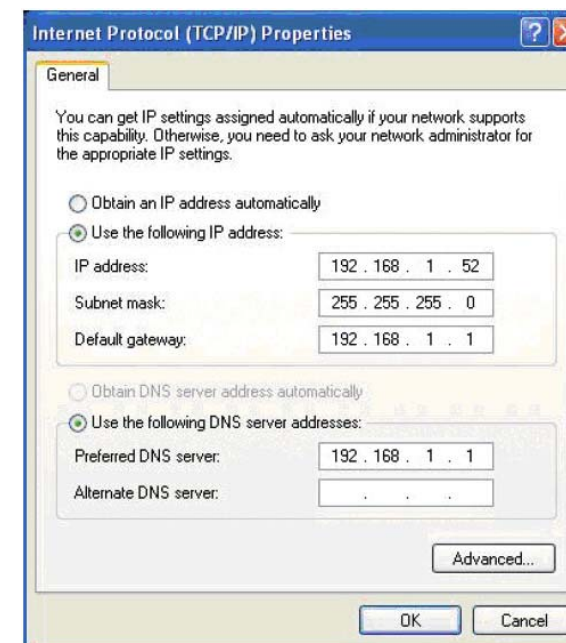
Click on the **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

Example: If the router's LAN IP address is 192.168.1.1, make your IP address 192.168.1.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network. Set Default Gateway the same as the LAN IP address of your router (192.168.1.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.1.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

Step 5

Click on the **OK** twice to save your settings.



Technical Specifications

ADSL Standards

- ANSI T1.413 Issue 2
- ITU G.992.1 (G.dmt) Annex A
- ITU G.992.2 (G.lite) Annex A
- ITU G.994.1 (G.hs)

ADSL2 Standards

- ITU G.992.3 (G.dmt.bis) Annex A/L/M

RE-ADSL2 (Reach Extended SDSL2) Standards

- Annex L

ADSL2+ Standards

- ITU G.992.5 Annex A/M

Protocols

- IEEE 802.1d Spanning Tree
- TCP/UDP
- ARP
- RARP
- ICMP
- RFC1058 RIP v1
- RFC1213 SNMP v1 & v2c
- RFC1334 PAP
- RFC1389 RIP v2
- RFC1577 Classical IP over ATM
- RFC1483/2684 Multiprotocol Encapsulation over ATM Adaptation Layer 5 (AAL5)
- RFC1661 Point to Point Protocol
- RFC1994 CHAP
- RFC2131 DHCP Client / DHCP Server
- RFC2364 PPP over ATM
- RFC2516 PPP over Ethernet

Data Transfer Rate

- G.dmt full rate downstream: up to 8 Mbps / upstream: up to 1 Mbps
- G.lite: ADSL downstream up to 1.5 Mbps / upstream up to 512 Kbps
- G.dmt.bis full rate downstream: up to 12 Mbps / upstream: up to 1 Mbps
- ADSL full rate downstream: up to 24 Mbps / upstream: up to 1 Mbps

Wireless Transfer Rates

- IEEE 802.11b: 11, 5.5, 2, and 1Mbps
- IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps

Media Interface

- ADSL interface: RJ-11 connector for connection to 24/26 AWG twisted pair telephone line
- LAN interface: RJ-45 port for 10/100BASE-T Ethernet connection