

QoS Classification

Choose **Add** or **Remove** to configure network traffic classes.

Quality of Service Setup

Choose Add or Remove to configure network traffic classes.

If you disable WMM function in Wireless Page, classification related to wireless will not take effects
The QoS function has been disabled. Classification rules would not take effects.

MARK				TRAFFIC CLASSIFICATION RULES													
Class Name	DSCP Mark	Queue ID	802.1P Mark	Lan Port	Protocol	DSCP	Source Addr./Mask	Source Port	Dest. Addr./Mask	Dest. Port	Source MAC Addr./Mask	Destination MAC Addr./Mask	802.1P	Order	Enable/Disable	Remove	Edit
<input type="button" value="Add"/> <input type="button" value="Save/Apply"/>																	

Section 3 – Configuration

Use this window to create a traffic class rule to classify the upstream traffic, assign a queue that defines the precedence and the interface, and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition. Please remember that all of the specified conditions on this window must be met for the rule to take effect.

Click the **Save/Apply** button to save and activate this rule.

Add Network Traffic Class Rule

The screen creates a traffic class rule to classify the upstream traffic, assign queue which defines the precedence and the interface and optionally overwrite the IP header DSCP byte. A rule consists of a class name and at least one condition below. All of the specified conditions in this classification rule must be satisfied for the rule to take effect. Click 'Save/Apply' to save and activate the rule.

Traffic Class Name:
Rule Order:
Rule Status:

Assign ATM Priority and/or DSCP Mark for the class

If non-blank value is selected for 'Assign Differentiated Services Code Point (DSCP) Mark', the corresponding DSCP byte in the IP header of the upstream packet is overwritten by the selected value.

Assign Classification Queue:
Assign Differentiated Services Code Point (DSCP) Mark:
Mark 802.1p if 802.1q is enabled:

Specify Traffic Classification Rules

Enter the following conditions either for IP level, SET-1, or for IEEE 802.1p, SET-2.

SET-1

Physical LAN Port:
Protocol:
Differentiated Services Code Point (DSCP) Check:
IP Address:
Source Subnet Mask:
UDP/TCP Source Port (port or port:port):
Destination IP Address:
Destination Subnet Mask:
UDP/TCP Destination Port (port or port:port):
Source MAC Address: (The MAC address format is xx:xx:xx:xx:xx:xx)
Source MAC Mask:
Destination MAC Address: (The MAC address format is xx:xx:xx:xx:xx:xx)
Destination MAC Mask:

SET-2

802.1p Priority:

QoS Downstream

Tick **Enable** and enter **Downstream limit** in kbps to classify downstream speed.

Downstream limit Setting

Enable:

Downstream limit: kbps

Routing

To access the **Routing** windows, click the **Routing** button in the **Advanced Setup** directory.

Default Gateway

If the **Enable Automatic Assigned Default Gateway** checkbox is ticked, the Router will accept the first default gateway assignment received from one of the enabled PPPoA, PPPoE, or MER/DHCP enabled PVC(s). If this checkbox is not ticked, enter the static default gateway and/or a WAN interface. Click the **Save/Apply** button when you are finished.

Routing -- Default Gateway

If Enable Automatic Assigned Default Gateway checkbox is selected, this router will accept the first received default gateway assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s). If the checkbox is not selected, enter the static default gateway AND/OR a WAN interface. Click 'Save/Apply' button to save it.

NOTE: If changing the Automatic Assigned Default Gateway from unselected to selected, You must reboot the router to get the automatic assigned default gateway.

Enable Automatic Assigned Default Gateway

Static Route

Click the **Add** button on the **Routing – Static Route** window to access the following window displayed on the next page.

Routing -- Static Route (A maximum 32 entries can be configured)

Destination	Subnet Mask	Gateway	Interface	Remove
-------------	-------------	---------	-----------	--------

Enter the static routing information for an entry to the routing table.

Click the **Save/Apply** button when you are finished.

Routing -- Static Route Add

Enter the destination network address, subnet mask, gateway AND/OR available WAN interface then click "Save/Apply" to add the entry to the routing table.

Destination Network Address:

Subnet Mask:

Use Gateway IP Address

Use Interface

DNS

To access the **DNS** windows, click the **DNS** button in the **Advanced Setup** directory. The **NAT** button appears when configuring WAN interface in PPPoA, PPPoE, MER or IPoA.

DNS Server

If you have not been given specific DNS server IP addresses or if the Router is not pre-configured with DNS server information, tick the **Enable Automatic Assigned DNS** checkbox. Auto discovery DNS instructs the Router to automatically obtain the DNS IP address from the ISP through DHCP. If your WAN connection uses a Static IP address, auto discovery for DNS cannot be used.

If you have DNS IP addresses provided by your ISP, deselect the **Enable Automatic Assigned DNS** checkbox and enter these IP addresses in the available entry fields for the Primary DNS Server and the Secondary DNS Server. Click the **Save** button when you are finished.

DNS Server Configuration

If "Enable Automatic Assigned DNS" checkbox is selected, this router will accept the first received DNS assignment from one of the PPPoA, PPPoE or MER/DHCP enabled PVC(s) during the connection establishment. If the checkbox is not selected, enter the primary and optional secondary DNS server IP addresses. Click "Save" button to save the new configuration. You must reboot the router to make the new configuration effective.

Enable Automatic Assigned DNS

Dynamic DNS

The Router supports Dynamic DNS (Dynamic Domain Name Service). The Dynamic DNS service allows a dynamic public IP address to be associated with a static host name in any of the many domains, allowing access to a specified host from various locations on the Internet. This is enabled to allow remote access to a host by clicking a hyperlinked URL in the form hostname.dyndns.org. Many ISPs assign public IP addresses using DHCP, this can make it difficult to locate a specific host on the LAN using standard DNS. If for example you are running a public web server or VPN server on your LAN, this ensures that the host can be located from the Internet if the public IP address changes. DDNS requires that an account be setup with one of the supported DDNS providers.

Click **Add** to see the Add DDNS Settings section.

Enter the required DDNS information, click the **Save/Apply** button to save the information.



Note

DDNS requires that an account be setup with one of the supported DDNS servers prior to engaging it on the Router. This function will not work without an accepted account with a DDNS server.

Dynamic DNS

The Dynamic DNS service allows you to alias a dynamic IP address to a static hostname in any of the many domains, allowing your DSL router to be more easily accessed from various locations on the Internet.

Choose Add or Remove to configure Dynamic DNS.

Hostname	Username	Service	Interface	Remove
<input type="button" value="Add"/> <input type="button" value="Remove"/>				

Add dynamic DDNS

This page allows you to add a Dynamic DNS address from DynDNS.org or TZO.

D-DNS provider

Hostname

Interface

DynDNS Settings

Username

Password

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

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				eth0	<input checked="" type="checkbox"/>
				Wireless	<input checked="" type="checkbox"/>
				nas_0_0_35	<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 <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	<div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto;">-></div> <div style="border: 1px solid black; padding: 2px; width: 20px; margin: 0 auto;"><-</div>	Available Interfaces <div style="border: 1px solid black; padding: 5px; width: 100%;"><p>eth0 nas_0_0_35 Wireless</p></div>
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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.

PPTP Setting
Set Point to Point Tunnel Protocol (VPN)

Enable

Tunnel Name

PPTP Server IP Address

User Name

Password

Peer IP Address

Peer Subnet Mask

Wireless

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

Basic

This page is to configure basic settings of wireless LAN.

Click **Enable Wireless**, enter a wireless network name (SSID) and select a country to active the wireless LAN. You can also hide the network (Hide Access Point), isolate users (Clients Isolation).

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

The screenshot shows the 'Wireless -- Basic' configuration page. It includes a title bar, a descriptive paragraph, and several configuration options. The 'Enable Wireless' checkbox is checked. Other options include 'Hide Access Point', 'Clients Isolation', and 'Disable WMM Advertise', all of which are unchecked. The SSID is set to 'DSL-2640U', BSSID to '00:10:18:00:00:01', and Country to 'UNITED STATES'. The Max Clients is set to '128'. There is also an 'Enable Wireless Guest Network' checkbox which is unchecked, with a Guest SSID of 'Guest'. A 'Save/Apply' button is at the bottom.

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.

The screenshot shows the 'Wireless -- Security' configuration page. It includes a title bar, a descriptive paragraph, and three dropdown menus. The 'Select SSID' dropdown is set to 'DSL-2640U', 'Network Authentication' is set to 'Open', and 'WEP Encryption' is set to 'Disabled'. A 'Save/Apply' button is at the bottom right.

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

Add Remove

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:

Save/Apply

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:

Refresh Save/Apply

Advanced

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

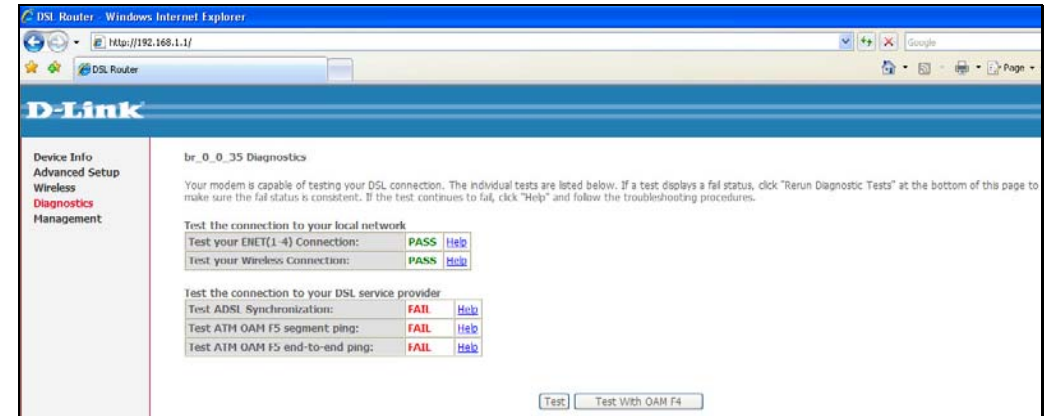
This page shows authenticated wireless stations and their status.

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.

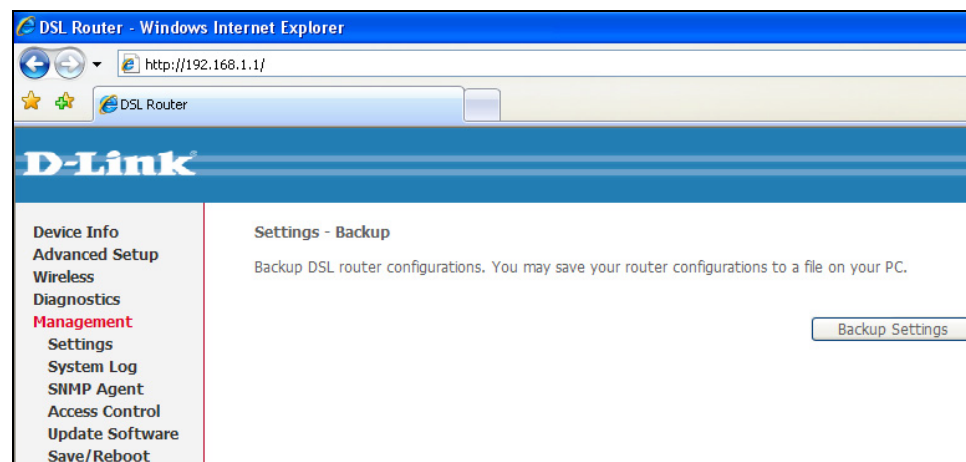
Settings

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

Settings – Backup

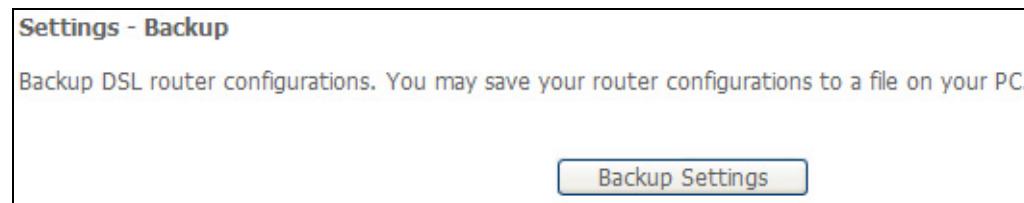
This window allows you to backup your DSL Router configurations.

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

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 -- Update Settings

Update DSL router settings. You may update your router settings using your saved files.

Settings File Path:

Tools -- Restore Default Settings

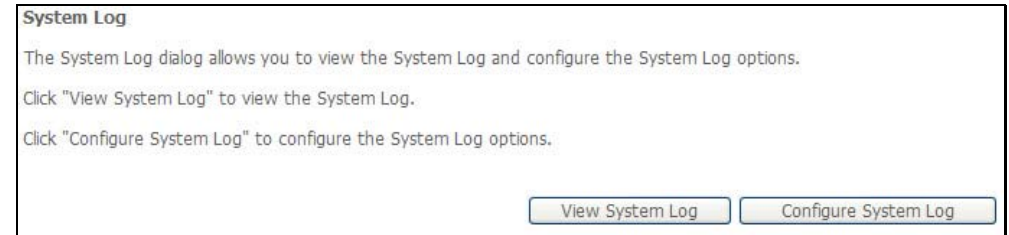
Restore DSL router settings to the factory defaults.

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.



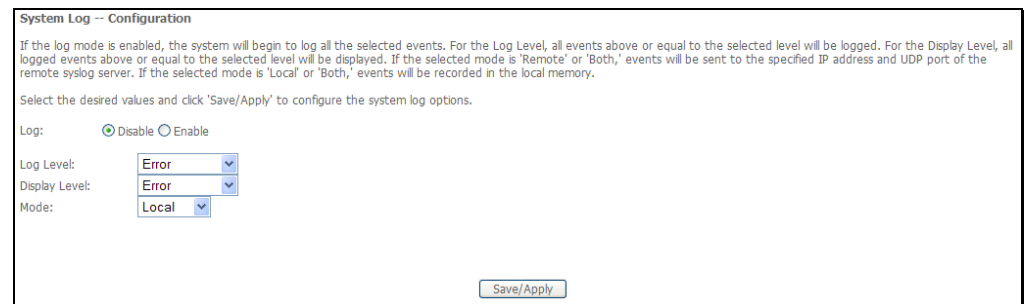
Click on the **Refresh** button to refresh the system log settings.



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:

Set Community:

System Name:

System Location:

System Contact:

Trap Manager IP:

Save/Apply

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.

Time settings

This page allows you to the modem's time configuration.

Automatically synchronize with Internet time servers

Save/Apply

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.

Save/Reboot

Troubleshooting

This chapter provides solutions to problems that might occur during the installation and operation of the DSL-2642B. 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-2642B 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 5 to 8 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.

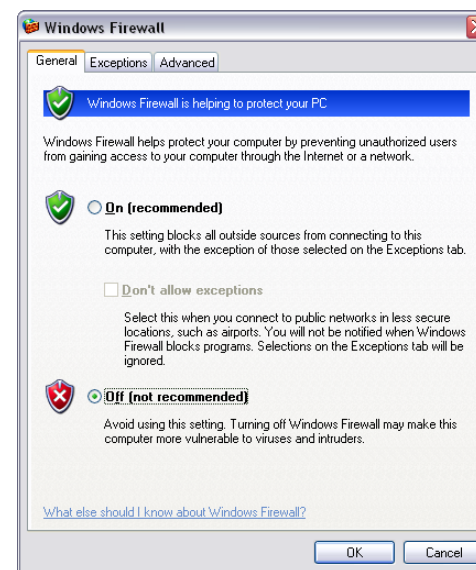
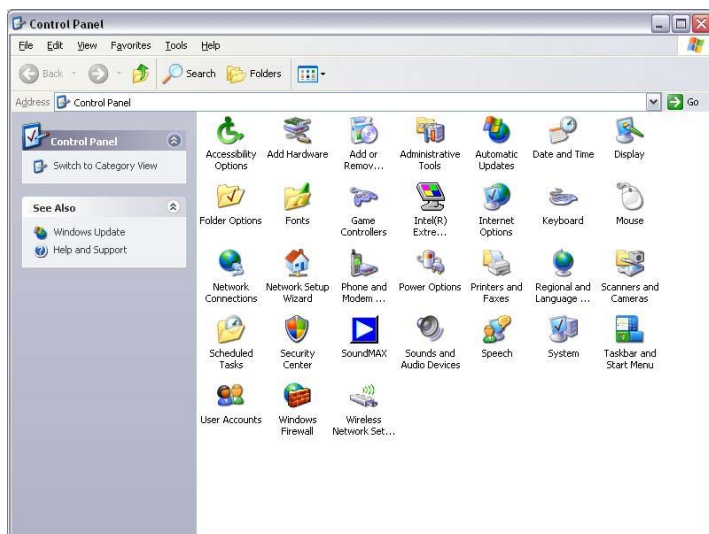
- Please ensure that the settings in the Web-based configuration manager, e.g. ISP username and password, are the same as the settings that have been provided by your ISP.

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.

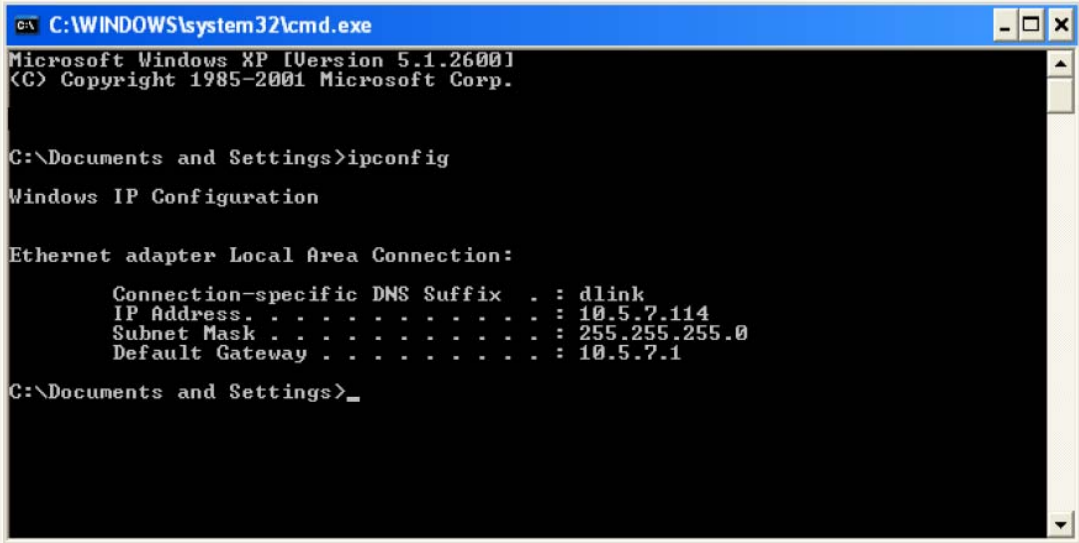
Click on **Start > Run**. In the run box type **cmd** and click on the **OK**.

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

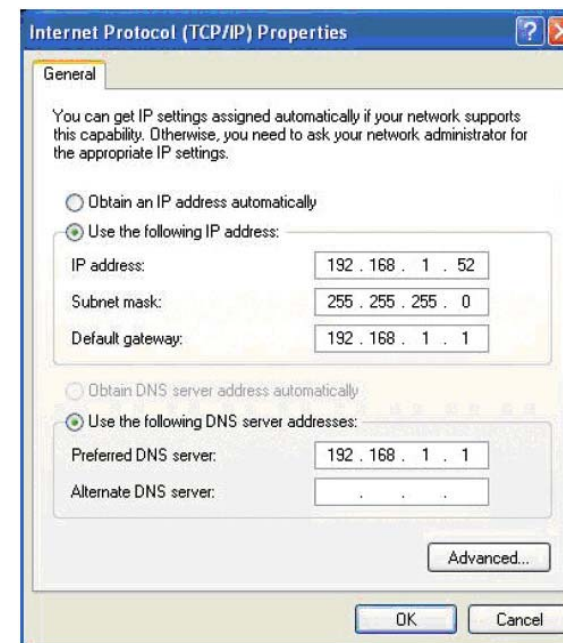
Click on the **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

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
- ITU G.992.4 (G.lite.bis) Annex A

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

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

0. Key Component

Item	Key Component	Description
0.1	Network Processor and ADSL Chipset	DSP: BCM6348S ADSL Line driver: BCM6301
0.2	WLAN Chipset	BCM4318
0.3	Switch Controller	BCM5325E
0.4	Memory	4MB Flash 16MB SDRAM

1. Hardware Specification

Item	Product Feature	Description
1.1	Network Interface	
1.1.1	One ADSL port	RJ-11, inner pair (pin 2,3)
1.1.2	Standard Compliance	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: RE-ADSL2 (Reach Extended ADSL2) Annex L ADSL2+ Standards: ITU G.992.5 Annex A/M Physical Layer Management for Digital Subscriber Line (DSL) Transceivers.
1.1.3	Line Rate	Downstream: up to 24Mbps Upstream : up to 1Mbps
1.1.4	Performance	Pass DSL Forum TR-067 Performance Criteria
1.2	LAN/Host Interface	
1.2.1	Four Fast Ethernet ports	RJ-45, 10/100Mbps, MDI/MDIX Auto-sensing
1.2.2	Standard Compliance	IEEE802.3, IEEE802.3u
1.3	Wireless Access Point Embedded	
1.3.1	Standard Compliance	IEEE 802.11 IEEE 802.11b IEEE 802.11g
1.3.2	Radio and Modulation Type	PSK/CCK, DQPSK, DBPSK, OFDM
1.3.3	Operating Frequency	2400 ~ 2497MHz ISM band
1.3.4	Channel Numbers	13 channels for European Countries
1.3.5	Data Rate	IEEE 802.11b: 11, 5.5, 2, and 1Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
1.3.6	RF Output Power	20dBm maximum
1.3.7	Media Access Protocol	CSMA/CA with ACK
1.3.8	Form Factor and Interface	Radio on board
1.3.9	Antenna type	Detachable Antenna
1.3.10	Diversity	Hardware support diversity- Transmit and Receive
1.3.11	Power Consumption	Average < 20mW
1.4	Antenna Type	Detachable

2. Default Configuration

Item	Product Feature	Description
2.1	IP Address/Mask	192.168.1.1/255.255.255.0
2.2	VPI/VCI	8/35
2.3	ADSL Mode	Multi-mode
2.4	Connection Mode	PPPoE LLC
2.5	User Name/Password	admin/admin

3. Safety/EMC Requirement

Item	Product Feature	Description
3.1	Safety Requirement	To be certified
3.1.1	CSA International Mark	Including CSA950, UL1950, IEC60950, EN60950
3.2	EMC Specification	To be certified
3.2.1	FCC part15 class B	
3.2.2	CE Class B	
3.3	PTT Test	To be certified
3.3.1	FCC part68	
3.4	Wireless Certification	
3.4.1	Wi-Fi certified	
3.4.2	FCC part15 Subpart C	
3.4.3	CE EN 300 328	
3.5	Environmental Requirement	
3.5.1	Operating Temperature	0 °C to 40 °C
3.5.2	Storage Temperature	-20 °C to 70 °C
3.5.3	Operating Humidity Range	5% to 95% Non-condensing

FCC Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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

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

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance."