

# Inbound Filter

**Inbound Filter** enables you to control what packets are allowed to pass through the router. Inbound filter only applies to packets that are destined for Virtual Servers or DMZ hosts.

**Inbound Filter:** Select this box to **Enable** the filter.

**Use Schedule Rule:** You may select **Always On** or choose the number of a schedule rule that you have defined.

**Copy to ID:** Copies the predefined filter to the specified ID

**ID:** Identifies the filter.

**Source IP :** Specify the local IP address

**Source Ports:** Specify the local port after the colon.

**Destination IP :** Specify the remote IP address

**Destination Ports:** Specify the remote port after the colon.

**Enable:** Select this box to enable the filter.

**Schedule Rule #:** Specify the schedule rule number.

**Previous Page:** Go back to the previous filter page.

**Next Page:** Advance to the next filter page.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

**D-Link**

DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

**INBOUND FILTER**

Packet Filter enables you to control what packets are allowed to pass the router. Inbound filter applies on packets that destined to Virtual Servers or DMZ host only.

Save Settings Don't Save Settings

**INBOUND FILTER SETTING**

Inbound Filter :  Enable

Use schedule rule ---ALWAYS ON--- Copy to ID --

**INBOUND FILTER RULES LIST**

Allow all to pass except those match the following rules.  
 Deny all to pass except those match the following rules.

ID	Source IP:Ports	Destination IP:Ports	Enable	Schedule Rule#
1	:	:	<input type="checkbox"/>	Add New Rule...
2	:	:	<input type="checkbox"/>	Add New Rule...
3	:	:	<input type="checkbox"/>	Add New Rule...
4	:	:	<input type="checkbox"/>	Add New Rule...
5	:	:	<input type="checkbox"/>	Add New Rule...
6	:	:	<input type="checkbox"/>	Add New Rule...
7	:	:	<input type="checkbox"/>	Add New Rule...
8	:	:	<input type="checkbox"/>	Add New Rule...

Previous page Next page

Save Settings Don't Save Settings

**Helpful Hints..**

- Packet Filter enables you to control what packets are allowed to pass the router. Outbound filter applies on all outbound packets. However, Inbound filter applies on packets that destined to Virtual Servers or DMZ host only. You can select one of the two filtering policies:

**More...**

# SNMP

**SNMP** (Simple Network Management Protocol) is a widely used network monitoring and control protocol that reports activity on each network device to the administrator of the network. SNMP can be used to monitor traffic and statistics of the DWR-116. The DWR-116 supports SNMP v1 or v2c.

**SNMP Local:** Select **Enabled** to allow local SNMP administration. Select **Disabled** to disallow local SNMP administration.

**SNMP Remote:** Select **Enabled** to allow local SNMP administration. Select **Disabled** to disallow local SNMP administration.

**Get Community:** Enter the password in this field to allow “Read only” access to network administration using SNMP. You can view the network, but no configuration is possible with this setting.

**Set Community:** Enter the password in this field to gain “Read and Write” access to the network using SNMP software.  
Enter up to four IP addresses of any trap targets on your network.

**IP 1, IP 2, IP 3,** Select the SNMP version of your system.

**IP 4:**

**SNMP Version:**

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The main navigation menu includes SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The current page is titled 'SNMP' and contains the following configuration options:

- SNMP Local:**  Enabled  Disabled
- SNMP Remote:**  Enabled  Disabled
- Get Community:**
- Set Community:**
- IP 1:**
- IP 2:**
- IP 3:**
- IP 4:**
- SNMP Version:**  V1  V2c
- WAN Access IP Address:**

Buttons for 'Save Settings' and 'Don't Save Settings' are located at the bottom of the configuration area. A sidebar on the right contains 'Helpful Hints..' and 'More...'.

# Routing

The **Routing** page allows you to specify custom routes that determine how data is moved around your network.

**RIP:** Select this box to enable routing.

**RIPv1:** Protocol in which the IP address is routed through the Internet.

**RIPv2:** Enhanced version of RIPv1 with added features such as authentication, routing domain, next hop forwarding, and subnet-mask exchange.

**ID:** Identifies the rule.

**Destination:** Enter the IP of the specified network that you want to access using the static route.

**Subnet Mask:** Enter the subnet mask to be used for the specified network.

**Gateway:** Enter the gateway IP address to the specified network.

**Hop:** Enter the amount of hops it will take to reach the specified network.

**Enable:** Select this box to enable the rule.

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DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

**ROUTING**

This Routing page allows you to specify custom routes that determine how data is moved around your network.

Save Settings Don't Save Settings

**RIP SETTING**

RIP :  Enable  RIPv1  RIPv2

**ROUTING RULES**

ID	Destination	Subnet Mask	Gateway	Hop	Enable
1					<input type="checkbox"/>
2					<input type="checkbox"/>
3					<input type="checkbox"/>
4					<input type="checkbox"/>
5					<input type="checkbox"/>
6					<input type="checkbox"/>
7					<input type="checkbox"/>
8					<input type="checkbox"/>

Save Settings Don't Save Settings

**Helpful Hints..**

- Each route has a check box next to it; check this box if you want the route to be enabled.
- The destination IP address is the address of the host or network you wish to reach.
- The netmask field identifies the portion of the destination IP in use.
- The gateway IP address is the IP address of the router, if any, used to reach the specified destination.

[More...](#)

# Advanced Wireless

**Advanced Wireless** contains settings which can negatively affect the performance of your router if configured improperly. Do not change these settings unless you are already familiar with them or have been instructed to do so.

**Beacon Interval:** Beacons are packets sent by an Access Point to synchronize a wireless network. Specify a value. 100 is the default setting and is recommended.

**Transmit Power:** Set the transmit power of the antennas.

**RTS Threshold:** This value should remain at its default setting of 2347. If inconsistent data flow is a problem, only a minor modification should be made.

**Fragmentation:** The fragmentation threshold, which is specified in bytes, determines whether packets will be fragmented. Packets exceeding the 2346 byte setting will be fragmented before transmission. 2346 is the default setting.

**DTIM Interval:** A Delivery Traffic Indication Message (DTIM) is a countdown informing clients of the next window for listening to broadcast and multicast messages. The default interval is 3.

**WMM Capable:** WMM (Wi-Fi Multimedia) is a QoS (Quality of Service) system for your wireless network. Enable this option to improve the quality of video and voice applications for your wireless clients.

**TX Rates:** Select the basic transfer rates based on the speed of wireless adapters on your wireless network. It is strongly recommended to keep this setting to **Auto**.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot displays the D-Link DWR-116 Advanced Wireless configuration page. The main content area is titled 'ADVANCED WIRELESS' and includes a warning: 'If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings.' Below this, there are two 'Save Settings' and 'Don't Save Settings' buttons. The 'ADVANCED WIRELESS SETTINGS' section contains the following parameters:

- Beacon Interval:** 100 (msec, range:1~1000, default: 100)
- Transmit Power:** 100%
- RTS Threshold:** 2347 (1~2347, default 2347)
- Fragmentation:** 2346 (256~2346, default 2346, even number only)
- DTIM Interval:** 1 (range: 1~255)
- WMM Capable:**  Enable  Disable
- TX Rates:** Best

At the bottom of the settings area, there are two buttons: 'Save Settings' and 'Don't Save Settings'. The left sidebar shows navigation options: VIRTUAL SERVER, APPLICATION RULES, QOS ENGINE, MAC ADDRESS FILTER, URL FILTER, OUTBOUND FILTER, INBOUND FILTER, SNMP, ROUTING, ADVANCED WIRELESS (selected), ADVANCED NETWORK, and LOGOUT. A 'Reboot' button is located at the bottom of the sidebar. The right sidebar contains 'Helpful Hints..' with a note: 'It is recommended that you leave these parameters at their default values. Adjusting them could limit the performance of your wireless network. Use 802.11d only for countries where it is required.' and a 'More...' link.

# Advanced Network

**Advanced Network** contains settings which can change the way the router handles certain types of traffic. We recommend that you do not change any of these settings unless you are already familiar with them or have been instructed to do so.

**Enable UPnP:** Click **Enable UPnP** to use the Universal Plug and Play (UPnP™) feature. UPnP provides compatibility with networking equipment, software and peripherals.

**Enable WAN Ping Respond:** Select the box to allow the WAN port to be “pinged.” Blocking the Ping option may provide some extra security from hackers.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

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DWR-116 // SETUP ADVANCED TOOLS STATUS SUPPORT

**ADVANCED NETWORK**

If you are not familiar with these Advanced Network settings, please read the help section before attempting to modify these settings.

Save Settings Don't Save Settings

**UPNP**

Universal Plug and Play (UPnP) supports peer-to-peer Plug and Play functionality for network devices.

Enable UPnP :

**WAN PING**

If you enable this feature, the WAN port of your router will respond to ping requests from the Internet that are sent to the WAN IP Address.

Enable WAN Ping Respond :

Save Settings Don't Save Settings

Reboot

Internet Offline

**Helpful Hints..**

- UPnP helps other UPnP LAN hosts interoperate with the router. Leave the UPnP option enabled as long as the LAN has other UPnP applications.
- For added security, it is recommended that you disable the WAN Ping Respond option. Ping is often used by malicious Internet users to locate active networks or PCs.

[More...](#)

# Tools Admin

The **Admin** page allows you to change the Administrator password and enable Remote Management. The Administrator has read/write access while the user has read-only access. Only the admin has the ability to change both admin and user account passwords.

**New Password:** Enter a password that the admin account will use to access the router's management interface.

**Confirm Password:** Confirm the chosen password.

**Remote Management:** Remote management allows the DWR-116 to be configured from the Internet using a web browser. A username and password is still required to access the web-management interface. Usually only a member of your network can browse the built-in web pages to perform Administrator tasks. This feature enables you to perform Administrator tasks from the remote (Internet) host.

**IP Allowed to Access:** Enter the Internet IP address of the PC that has access to the broadband router. If you enter an asterisk (\*) in this field, then anyone will be able to access the router. Adding an asterisk (\*) into this field could present a security risk and is not recommended.

**Port:** This is the port number used to access the router. Example: 8080 is the port used for the web-management interface.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link web management interface for the DWR-116 router. The top navigation bar includes 'D-Link', 'DWR-116', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The 'TOOLS' tab is active, displaying the 'ADMINISTRATOR SETTINGS' page. The page is divided into three main sections: 'ADMINISTRATOR SETTINGS', 'ADMINISTRATOR (THE DEFAULT LOGIN NAME IS "admin")', and 'REMOTE MANAGEMENT'. The 'ADMINISTRATOR SETTINGS' section contains a message: 'To help secure your network, we recommend that you should choose a new password.' Below this message are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'ADMINISTRATOR' section has two input fields: 'New Password' and 'Confirm Password'. The 'REMOTE MANAGEMENT' section has a checkbox for 'Enable Remote Management' which is checked, an 'IP Allowed to Access' field with the value '0.0.0.0', and a 'Port' dropdown menu with the value '1080'. At the bottom of the 'REMOTE MANAGEMENT' section are two buttons: 'Save Settings' and 'Don't Save Settings'. On the left side, there is a sidebar with a 'Reboot' button and an 'Internet Offline' status indicator.

# Time

This section will help you set the time zone that you are in and the NTP (Network Time Protocol) server. Daylight Saving can also be configured to adjust the time when needed.

**Time:** Displays the current time and date of the DWR-116.

**Time Zone:** Select the appropriate **Time Zone** from the drop-down box.

**Automatically synchronize with Internet time server:** Select this checkbox to automatically synchronize the DWR-116 with an Internet time server.

**NTP Server Used:** Choose the NTP Server used for synchronizing time and date.

**Sync. Result:** Shows the result of the last time synchronization.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot displays the D-Link DWR-116 web interface. The top navigation bar includes 'D-Link' and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar shows a menu with 'ADMIN' selected, and sub-items: 'TIME', 'SYSLOG', 'EMAIL SETTINGS', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', 'SCHEDULES', and 'LOGOUT'. Below the menu is an 'Internet Offline' status indicator and a 'Reboot' button.

The main content area is titled 'TIME AND DATE' and contains the following sections:

- TIME AND DATE:** A header section with a description: "The Time and Date Configuration option allows you to configure, update, and maintain the correct time on the internal system clock. From this section you can set the time zone that you are in and set the NTP (Network Time Protocol) Server." It includes 'Save Settings' and 'Don't Save Settings' buttons.
- TIME AND DATE CONFIGURATION:** Shows the current time as 'Tue Mar 26, 2013 23:36:33' and the time zone as '(GMT -08:00) Pacific Time (US & Canada)'. There is a 'Time Zone' dropdown menu and a 'Sync. your computer's time settings' button.
- AUTOMATIC TIME AND DATE CONFIGURATION:** Features a checked checkbox for 'Automatically synchronize with Internet time server'. Below it, 'NTP Server Used' is set to 'time.nist.gov' with a dropdown menu and an 'Update Now' button.
- SYNC. RESULT:** A large empty text area for displaying synchronization results, with 'Save Settings' and 'Don't Save Settings' buttons at the bottom.

On the right side, there is a 'Helpful Hints..' section with a bullet point: "• Good timekeeping is important for accurate logs and scheduled firewall rules." and a 'More...' link.

# Syslog

The DWR-116 keeps a running log of events and activities occurring on the router. You may send these logs to a SysLog server on your network.

**Enable Logging** Select this box to send the router logs to a **Syslog Server**: Syslog server.

**Syslog Server IP Address:** Enter the address of the Syslog server that will be used to send the logs.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The top navigation bar includes 'DWR-116 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar lists menu items: ADMIN, TIME, SYSLOG (highlighted), EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, SCHEDULES, and LOGOUT. Below the sidebar is an 'Internet Offline' status indicator and a 'Reboot' button. The main content area is titled 'SYSLOG' and contains the following text: 'The SysLog options allow you to send log information to a SysLog Server.' Below this are 'Save Settings' and 'Don't Save Settings' buttons. The 'SYSLOG SETTINGS' section includes: 'Enable Logging To Syslog Server : ' and 'Syslog Server IP Address : '. At the bottom of this section are 'Save Settings' and 'Don't Save Settings' buttons. The right sidebar contains 'Helpful Hints..' with a bullet point: '• A System Logger (syslog) is a server that collects in one place the logs from different sources. If the LAN includes a syslog server, you can use this option to send the router's logs to that server.' and a 'More...' link. The bottom of the page features a 'WIRELESS' logo.



# Email Settings

**Email Settings** allows you to send the system log files, router alert messages, and firmware update notifications to an e-mail address.

**Enable E-mail Notification:** When this option is enabled, router activity logs are e-mailed to a designated e-mail address.

**SMTP Sever IP and Port:** Enter the SMTP server IP address followed by a colon and the port number (e.g. 123.123.123.1:25).

**SMTP Username:** Enter the SMTP username.

**SMTP Password:** Enter the SMTP password.

**Send E-mail Alert to:** Enter the e-mail address where you would like the e-mail sent to.

**E-mail Subject:** Enter a subject for the e-mail.

**E-mail Log Now:** Click this button to access the e-mail log.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

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- EMAIL SETTINGS** (tab)
- Send system log to a dedicated host or email to specific receipts
- Save Settings (button)
- Don't Save Settings (button)
- EMAIL SETTINGS** (sub-tab)
- Enable Email Notification :
- SMTP Server IP and Port :  :
- SMTP Username :
- SMTP Password :
- Send E-mail alert to :
- E-mail Subject :
- Email Log Now (button)
- Save Settings (button)
- Don't Save Settings (button)

The right sidebar contains 'Helpful Hints..' with a tip: 'You may want to make the email settings similar to those of your email client program.' and a 'More...' link.

# System

Here, you can save the current system settings onto the local hard drive.

**Save Settings To Local Hard Drive:** Use this option to save your current router configuration settings to a file and onto your

**Drive:** computer. Click **Save** to open a file dialog, and then select a location and file name for the settings.

**Load Settings From Local Hard Drive:** Use this option to load the previously saved router configuration settings. Browse to find

**Drive:** the saved file and then click **Upload Settings** to transfer those settings to the router.

**Restore To Factory Default Settings:** This option will restore all settings back to their defaults. Any settings that have not been backed up will be lost, including any rules that you have created.

The screenshot shows the D-Link DWR-116 web interface. The top navigation bar includes 'D-Link', 'DWR-116 //', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains a menu with options: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM (highlighted), FIRMWARE, DYNAMIC DNS, SYSTEM CHECK, SCHEDULES, LOGOUT, and a 'Reboot' button. The main content area is titled 'SYSTEM SETTINGS' and contains the following text:

The System Settings section allows you to restore the router to the factory default settings. Restoring the unit to the factory default settings will erase all settings, including any rules that you have created.

The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file created by device can be uploaded into the unit.

The 'SAVE AND RESTORE SETTINGS' section includes:

- Save Settings To Local Hard Drive :**
- Load Settings From Local Hard Drive :**
- 
- Restore To Factory Default Settings :**

The right sidebar, titled 'Helpful Hints..', contains the following text:

- Once your router is configured the way you want it, you can save the configuration settings to a configuration file.
- You might need this file so that you can load your configuration later in the event that the router's default settings are restored.

A 'More...' link is also present at the bottom of the sidebar.

# Firmware

Here, you can upgrade the firmware of your router. Make sure the firmware you want to use is on the local hard drive of the computer and then click **Browse** to upload the file. Please check the D-Link support site for firmware updates at <http://support.dlink.com>. You can download firmware upgrades to your hard drive from the D-Link support site.

**Current Firmware Version:** Displays your current firmware version.

**Current Firmware Date:** Displays your current firmware date.

**Browse:** After you have downloaded the new firmware, click **Browse** to locate the firmware on your computer. Tick **Accept unofficial firmware** if you want to update the DWR-116 with unofficial firmware (not recommended).

Click **Upload** to start the firmware upgrade.

The screenshot shows the D-Link web interface for the DWR-116 router. The top navigation bar includes 'D-Link', 'DWR-116', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains a menu with options like 'ADMIN', 'TIME', 'SYSLOG', 'EMAIL SETTINGS', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', 'SCHEDULES', and 'LOGOUT'. The main content area is titled 'FIRMWARE UPGRADE' and contains the following sections:

- FIRMWARE UPGRADE:** A notice stating, "There may be new firmware for your Router to improve functionality and performance. To upgrade the firmware, locate the upgrade file on the local hard drive with the Browse button. Once you have found the file to be used, click the Save Settings below to start the firmware upgrade."
- FIRMWARE INFORMATION:** Displays "Current Firmware Version : V1.00" and "Current Firmware Date : 2013/01/18".
- FIRMWARE UPGRADE:** A section with a red warning: "Note! Do not power off the unit when it is being upgraded. The upgrade procedure takes about 180 seconds. When the upgrade is done successfully, the unit will be restarted automatically." Below this, it says: "To upgrade the firmware, your PC must have a wired connection to the router. Enter the name of the firmware upgrade file, and click on the Upload button." It includes an "Upload:" field with a "Browse..." button, "Upgrade" and "Cancel" buttons, and a checkbox for "Accept unofficial firmware."
- LANGUAGE PACK UPGRADE:** A section with an "Upload:" field with a "Browse..." button, "Upgrade" and "Cancel" buttons, and a "Remove Language Pack:" field with a "Remove" button.

On the right side, there is a 'Helpful Hints...' section with a bullet point: "Firmware updates are released periodically to improve the functionality of your router and to add features. If you run into a problem with a specific feature of the router, check if updated firmware is available for your router." and a "More..." link.

# Dynamic DNS

The Dynamic Domain Name System (DDNS) feature allows you to host a server (Web, FTP, or Game Server) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address.

Sign up for D-Link's free DDNS service at [www.dlinkddns.com](http://www.dlinkddns.com).

**Enable DDNS:** DDNS is a method of keeping a domain name linked to a changing IP Address. Select this box to enable DDNS.

**Provider:** Select your DDNS provider from the drop-down box.

**Host Name:** Enter the **Host Name** that you registered with your DDNS service provider.

**Username / E-mail:** Enter the **Username** for your DDNS account.

**Password / Key:** Enter the **Password** for your DDNS account.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link DWR-116 web interface. The top navigation bar includes 'DWR-116 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains menu items: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS (highlighted), SYSTEM CHECK, SCHEDULES, LOGOUT, and a status indicator for 'Internet Offline' with a 'Reboot' button. The main content area is titled 'DYNAMIC DNS' and contains the following text: 'The Dynamic DNS feature allows you to host a server (Web, FTP, Game Server, etc...) using a domain name that you have purchased (www.whateveryournameis.com) with your dynamically assigned IP address. Most broadband Internet Service Providers assign dynamic (changing) IP addresses. Using a DDNS service provider, your friends can enter your host name to connect to your game server no matter what your IP address is.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The configuration form includes: 'Enable DDNS : ', 'Provider : DynDNS.org(Dynamic) [dropdown]', 'Host Name : [text input]', 'Username / E-mail : [text input]', and 'Password / Key : [text input]'. At the bottom of the form are two buttons: 'Save Settings' and 'Don't Save Settings'. On the right side, there is a 'Helpful Hints..' section with a bullet point: '• To use this feature, you must first have a Dynamic DNS account from one of the providers in the drop down menu.' and a 'More...' link.

# System Check

This useful diagnostic utility can be used to check if a computer is connected to the network. It sends ping packets and listens for responses from the specific host.

**Host Name or IP Address:** Enter a host name or the IP address that you want to ping and click **Ping**.

**PING Result:** The status of your Ping attempt will be displayed in the Ping Result box.

The screenshot displays the D-Link DWR-116 web interface. The top navigation bar includes 'D-Link' and tabs for 'DWR-116 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains a menu with options: ADMIN, TIME, SYSLOG, EMAIL SETTINGS, SYSTEM, FIRMWARE, DYNAMIC DNS, SYSTEM CHECK (highlighted), SCHEDULES, and LOGOUT. Below the menu is an 'Internet Offline' indicator and a 'Reboot' button. The main content area is titled 'PING TEST' and contains the following text: 'Ping Test sends "ping" packets to test a computer on the Internet.' Below this text are 'Save Settings' and 'Don't Save Settings' buttons. A second 'PING TEST' section explains: 'Ping Test is used to send "Ping" packets to test if a computer is on the Internet.' It features a text input field for 'Host Name or IP address' and a 'Ping' button. A third 'PING RESULT' section is currently empty. At the bottom of the main area are 'Save Settings' and 'Don't Save Settings' buttons. On the right side, under 'Helpful Hints..', there is a bullet point: '• "Ping" checks whether a computer on the Internet is running and responding. Enter either the IP address of the target computer or enter its fully qualified domain name.' followed by a 'More...' link.

# Schedules

This section allows you to manage schedule rules for various firewall and parental control features.

**Enable Schedule:** Tick this check box to enable schedules.

**Add New Rule...:** Click on this button to create a new rule. The following options will be available.

**Edit:** Edit the rule's start and end time.

**Delete:** Delete the rule.

**Name of Rule 1:** Enter a name for your new schedule.

**Start Time (hh:mm):** Enter the time at which you would like the schedule to become active.

**End Time (hh:mm):** Select the time at which you would like the schedule to become inactive.

Click **Save Settings** to save your changes, or click **Don't Save Settings** to discard your changes.

The screenshot shows the D-Link web interface for the DWR-116 router. The top navigation bar includes 'D-Link' logo and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains a menu with options like 'ADMIN', 'TIME', 'SYSLOG', 'EMAIL SETTINGS', 'SYSTEM', 'FIRMWARE', 'DYNAMIC DNS', 'SYSTEM CHECK', 'SCHEDULES', and 'LOGOUT'. The main content area is titled 'SCHEDULES' and contains the following text: 'The Schedule configuration option is used to manage schedule rules for "Virtual Server", "Outbound Filter" and "Inbound Filter".' Below this text are 'Save Settings' and 'Don't Save Settings' buttons. The 'SCHEDULE RULE' section features an 'Enable Schedule' checkbox, a table with columns 'Rule#', 'Rule Name', and 'Action', and 'Previous page', 'Next page', and 'Add New Rule...' buttons. At the bottom of this section are 'Save Settings' and 'Don't Save Settings' buttons. The right sidebar, titled 'Helpful Hints..', provides instructions: 'Schedules are used with a number of other features to define when those features are in effect.', 'Give each schedule a name that is meaningful to you. For example, a schedule for Monday through Friday from 3:00pm to 9:00pm, might be called "After School".', 'Click Save to add a completed schedule to the list below.', 'Click Edit icon to change an existing schedule.', and 'Click Delete icon to permanently delete a schedule.'

# Status

## Device Information

All of your Internet and network connection details are displayed on this page. The firmware version is also displayed here.

**General:** Displays the current time and firmware version.

**WAN:** Displays the MAC address and the private (local) IP settings for the router.

**3G/4G LTE Card:** Displays 3G/4G LTE card info, link status, and the **LAN:** network name.

**Wireless LAN:** Displays the MAC address and the public IP settings for the router.

**LAN Computers:** Displays the wireless MAC address and your wireless settings such as SSID, channel, and encryption type. Also displays the list of currently connected DHCP clients.

IP Address	Name	MAC
192.168.0.118	07871PCWIN7E	CC-52-AF-49-E6-75

# Logs

Here you can view logs and define events that you want to view. This router also has an internal syslog server, so you can send the log files to a computer that is running a syslog utility.

**D-Link**

**DWR-116** // SETUP ADVANCED TOOLS STATUS SUPPORT

DEVICE INFO  
 LOG  
 STATISTICS  
 WIRELESS  
 LOGOUT

Internet Offline  
 Reboot

**VIEW LOG**  
 View Log displays the activities occurring on the device.  
 Page: 1/7 (Log Number : 98)  
 Previous Next First Page Last Page  
 Refresh Download Clear logs Link To Log Settings

**SYSTEM LOG**

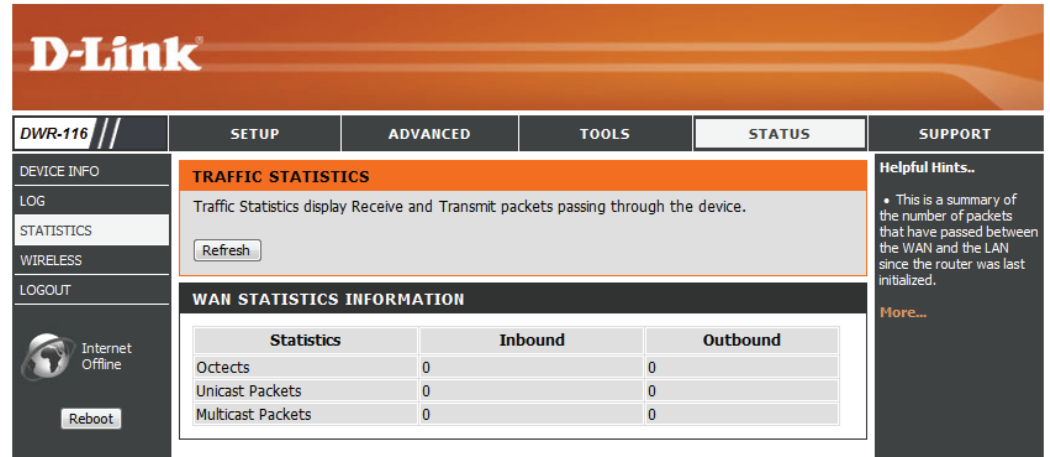
Time	Message
Mar 26 23:11:14	kernel: klogd started: BusyBox v1.3.2 (2013-01-18 15:24:41 CST)
Mar 26 23:11:15	O3G/modem_switch: MODEM_SWITCH [0x2001] [0xa80b]
Mar 26 23:11:16	BEID: BEID STATUS : 0 , STATUS OK!
Mar 26 23:11:17	syslog: Failure parsing line 12 of /etc/udhcpd.conf
Mar 26 23:11:17	syslog: server_config.pool_check = 1
Mar 26 23:11:17	syslog: start = 192.168.0, end = 192.168.0, lan_ip = 192.168.0, interface=br0, ifindex=0
Mar 26 23:11:17	udhcpd[1263]: udhcpd (v0.9.9-pre) started
Mar 26 23:11:21	commander: Init NAT Server ...
Mar 26 23:11:25	init: Starting pid 2406, console /dev/ttyS1: '/bin/ash'
Mar 26 23:11:26	commander: STOP WANTYPE 3G
Mar 26 23:11:30	commander: Synchronization Time Fail. System would re-sync later
Mar 26 23:11:35	O3G/modem_switch: MODEM_SWITCH [0x2001] [0xa80b]
Mar 26 23:11:38	O3G/modem_switch: OK, Driver buf "", -61
Mar 26 23:11:38	mmand successfully sent. Box probably switched.
Mar 26 23:11:40	O3G/hotplug: 3G modem VendorID=2001 ProductID=7d00

Helpful Hints..  
 • Check the log frequently to detect unauthorized network usage.  
 More...



# Statistics

Here you can view the packets transmitted and received passing through your router on both WAN and LAN ports. The traffic counter will reset if the device is rebooted.



The screenshot shows the D-Link web interface for the DWR-116 router. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The left sidebar contains links for DEVICE INFO, LOG, STATISTICS (selected), WIRELESS, and LOGOUT, along with an Internet Offline status indicator and a Reboot button.

The main content area is titled "TRAFFIC STATISTICS" and includes a "Refresh" button. Below this is the "WAN STATISTICS INFORMATION" table.

Statistics	Inbound	Outbound
Octets	0	0
Unicast Packets	0	0
Multicast Packets	0	0

On the right side, there is a "Helpful Hints.." section with a bullet point: "This is a summary of the number of packets that have passed between the WAN and the LAN since the router was last initialized." and a "More..." link.

# Wireless

This table displays a list of wireless clients that are connected to your wireless router. It also displays the connection time and MAC address of the connected wireless clients.

The screenshot shows the D-Link web interface for a DWR-116 router. The top navigation bar includes 'DWR-116 //', 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'SUPPORT'. The left sidebar contains 'DEVICE INFO', 'LOG', 'STATISTICS', 'WIRELESS', 'LOGOUT', and a 'Reboot' button. The main content area is titled 'WIRELESS CLIENT LIST' and contains the text: 'View the wireless clients that are connected to the router. (A client might linger in the list for a few minutes after an unexpected disconnect.)' Below this text is a 'Refresh' button. Underneath is a section titled 'WIRELESS CLIENT TABLE' with two columns: 'ID' and 'MAC Address'. On the right side, there is a 'Helpful Hints..' section with a bullet point: '• This is a list of all wireless clients that are currently connected to your wireless router.' and a 'More...' link.

# Support

The **SUPPORT** pages provide help information for each section of the device's interface. To view the Support pages, click on **SUPPORT** at the top of the screen.

The screenshot displays the D-Link DWR-116 web interface. At the top, the D-Link logo is visible. Below it, a navigation bar contains tabs for SETUP, ADVANCED, TOOLS, STATUS, and SUPPORT. The SUPPORT tab is selected. On the left side, there is a vertical menu with options: MENU, SETUP, ADVANCED, TOOLS, STATUS, and LOGOUT. Below this menu, there is a status indicator for 'Internet Offline' and a 'Reboot' button. The main content area is titled 'SUPPORT MENU' and contains a list of links: Setup, Advanced, Tools, and Status. Below this, there are four sections of help information: 'SETUP HELP' (Internet, Wireless Settings, Network Settings), 'ADVANCED HELP' (VIRTUAL SERVER, Application Rules, QoS Engine, MAC Address Filter, URL Filter, Outbound Filter, Inbound Filter, SNMP, Routing, Advanced Wireless, Advanced Network), 'TOOLS HELP' (Admin, Time, SysLog, Email settings, System, Firmware, Dynamic DNS, System Check, Schedules), and 'STATUS HELP' (Device Info, Log, Statistics, Wireless). At the bottom of the interface, the word 'WIRELESS' is displayed.

# Wireless Security

This section will show you the different levels of security you can use to protect your data from intruders. The DWR-116 offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA (Wi-Fi Protected Access)
- WEP (Wired Equivalent Privacy)
- WPA2-PSK (Pre-Shared Key)
- WPA-PSK (Pre-Shared Key)

## What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

# Configure WEP

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **Enable WEP Security**.
3. Next to *Authentication*, select **Open** or **Shared Key**.
4. Select either **64-bit** or **128-bit** encryption from the drop-down box next to *WEP Encryption*.
5. Next to *Key Type*, select either **Hex** or **ASCII**.  
Hex (recommended) - Letters A-F and numbers 0-9 are valid.  
ASCII - All numbers and letters are valid.
6. Next to *Key 1*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
7. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.

## What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy). The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven't been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard (AES) instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer's hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

# Configure WPA-PSK

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **Enable WPA-Personal Security** or **Enable WPA2-Personal Security**.
3. Next to *Cipher Mode*, select **TKIP, AES, or Auto**.
4. Next to *PSK/EAP*, select **PSK**.
5. Next to *Passphrase*, enter a key (passphrase). The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and spaces. Make sure you enter this key exactly the same on all other wireless clients.
6. Enter the passphrase again next to *Confirmed Passphrase*.
7. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK (or WPA2-PSK) on your adapter and enter the same passphrase as you did on the router.

# Configure WPA (RADIUS)

It is recommended to enable encryption on your wireless router before your wireless network adapters. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on **Wireless Settings** on the left side.
2. Next to *Security Mode*, select **Enable WPA-Personal Security** or **Enable WPA2-Personal Security**.
3. Next to *Cipher Mode*, select **TKIP, AES, or Auto**.
4. Next to *PSK/EAP*, select **EAP**.
5. Next to *RADIUS Server 1* enter the IP Address of your RADIUS server.
6. Next to *Port*, enter the port you are using with your RADIUS server. 1812 is the default port.
7. Next to *Shared Secret*, enter the security key.
8. If you have a secondary RADIUS server, enter its IP address, port, and secret key.
9. Click **Apply Settings** to save your settings.



# Windows® 8

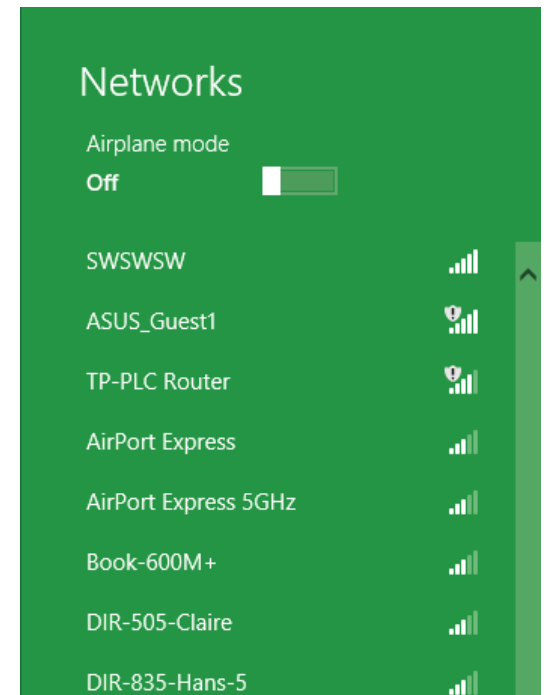
## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key (Wi-Fi password) being used.

To join an existing network, locate the wireless network icon in the taskbar, next to the time display.

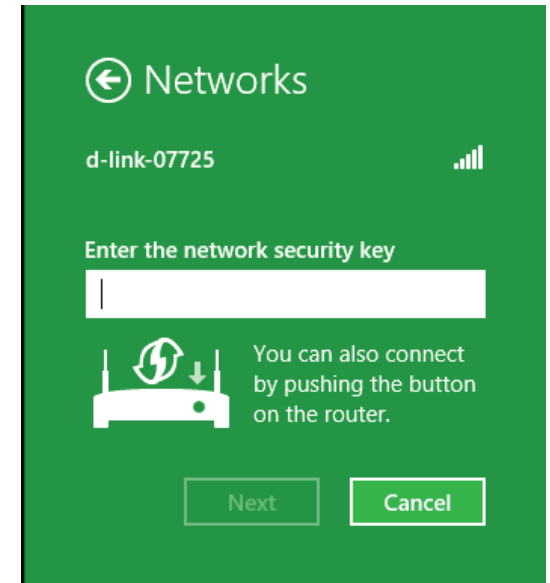


Clicking on this icon will display a list of wireless networks which are within connecting proximity of your computer. Select the desired network by clicking on the network name.

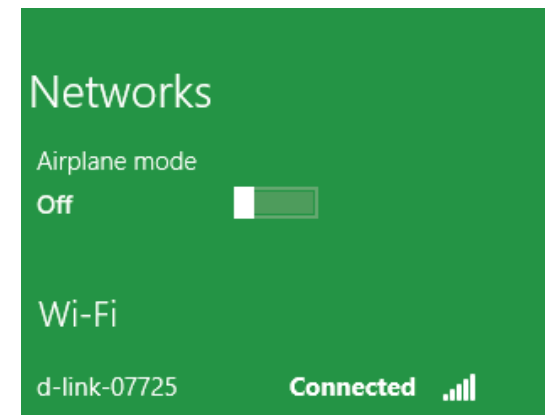


You will then be prompted to enter the network security key (Wi-Fi password) for the wireless network. Enter the password into the box and click **Next**.

If you wish to use Wi-Fi Protected Setup (WPS) to connect to the router, you can also press the WPS button on your router at this point to enable the WPS function.



When you have established a successful connection with a wireless network, the word **Connected** will appear next to the name of the network to which you are connected.

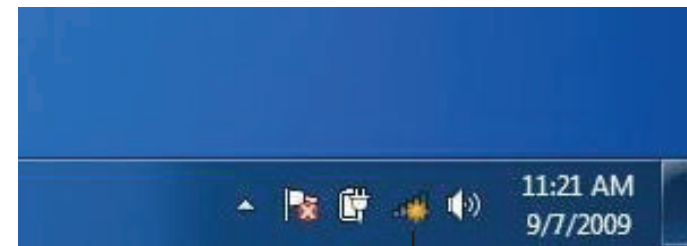


# Windows® 7

## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

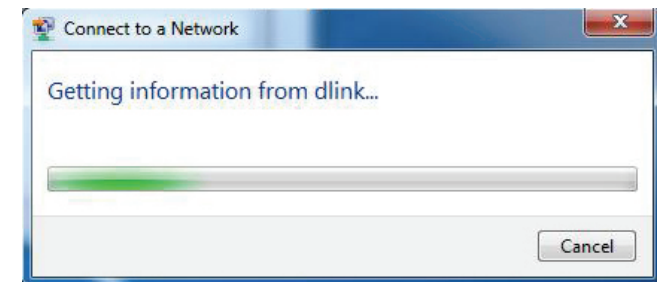


3. Highlight the wireless connection with Wi-Fi name (SSID) you would like to connect to and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

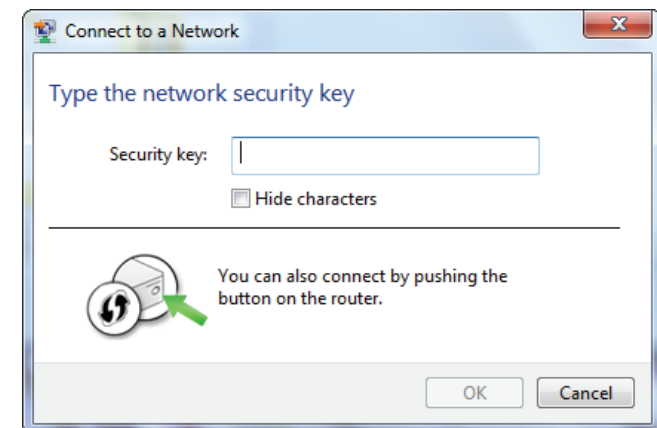


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase (Wi-Fi password) that is on your router and click **Connect**. You can also connect by pushing the WPS button on the router.

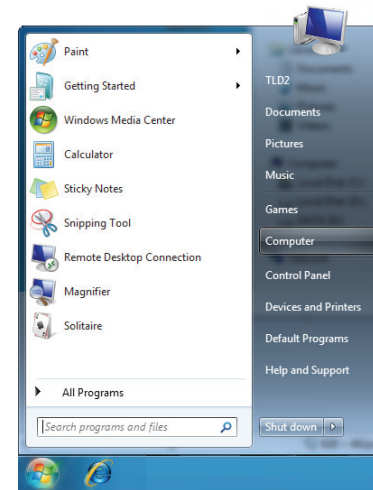
It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



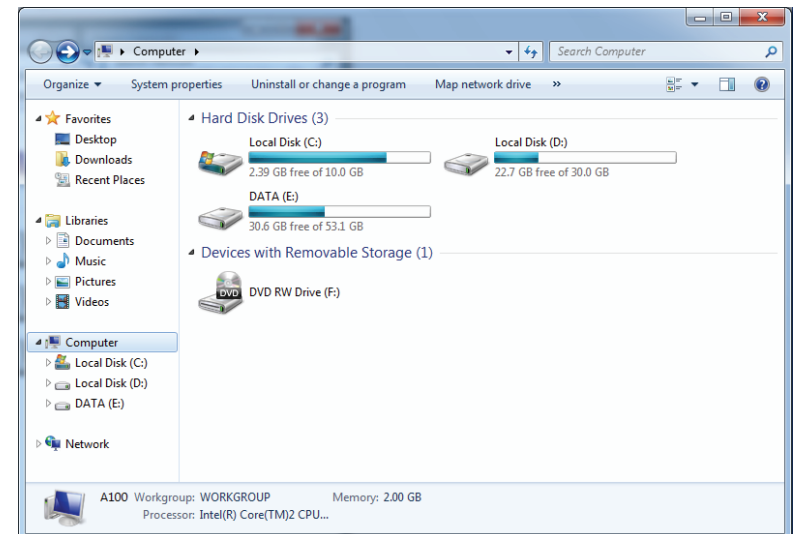
# WPS

The WPS feature of the DWR-116 can be configured using Windows® 7. Carry out the following steps to use Windows® 7 to configure the WPS feature:

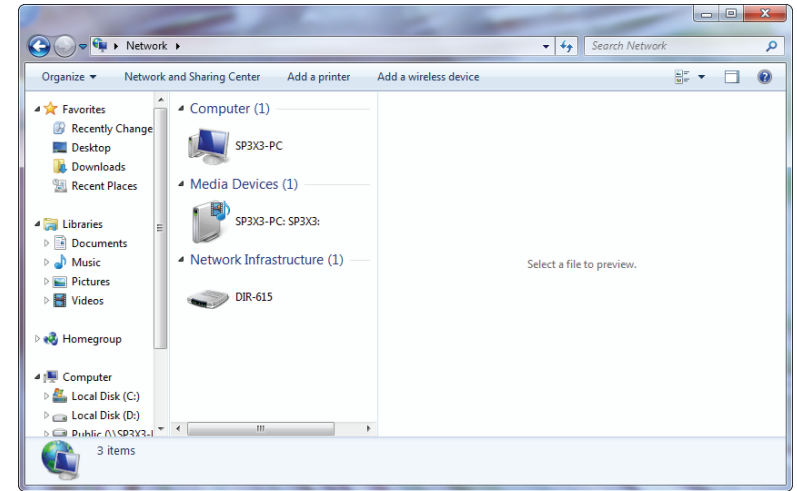
1. Click the **Start** button and select **Computer** from the Start menu.



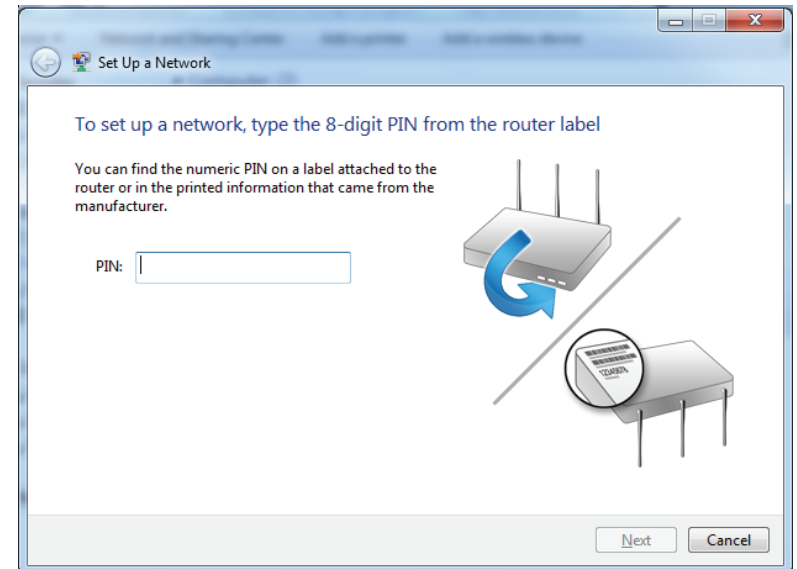
2. Click **Network** on the left side.



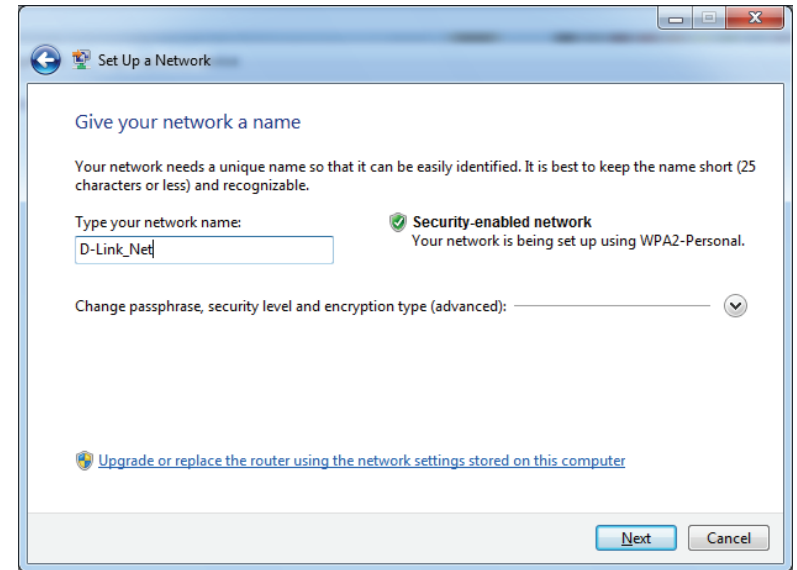
3. Double-click the DWR-116



4. Input the WPS PIN number (displayed in the WPS window on the Router's LCD screen or in the **Setup** > **Wireless Setup** menu in the Router's Web UI) and click **Next**.

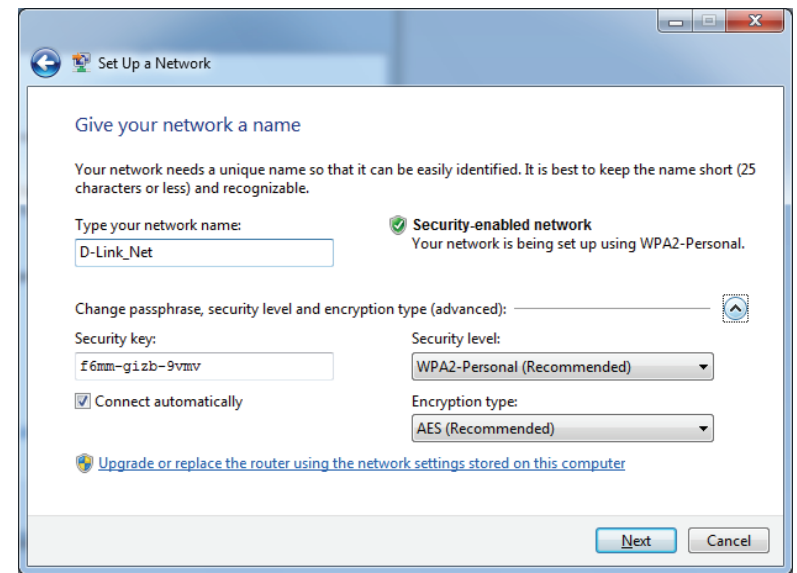


5. Type a name to identify the network.



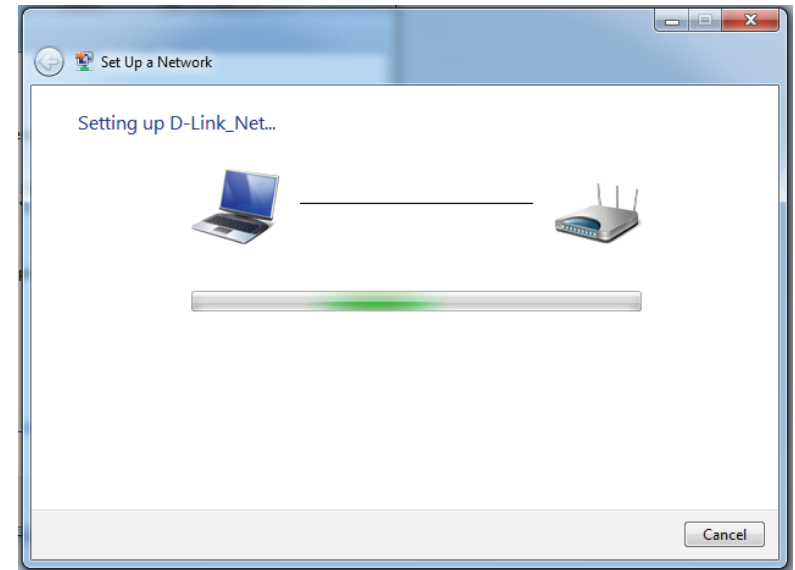
6. To configure advanced settings, click the  icon.

Click **Next** to continue.



7. The following window appears while the Router is being configured.

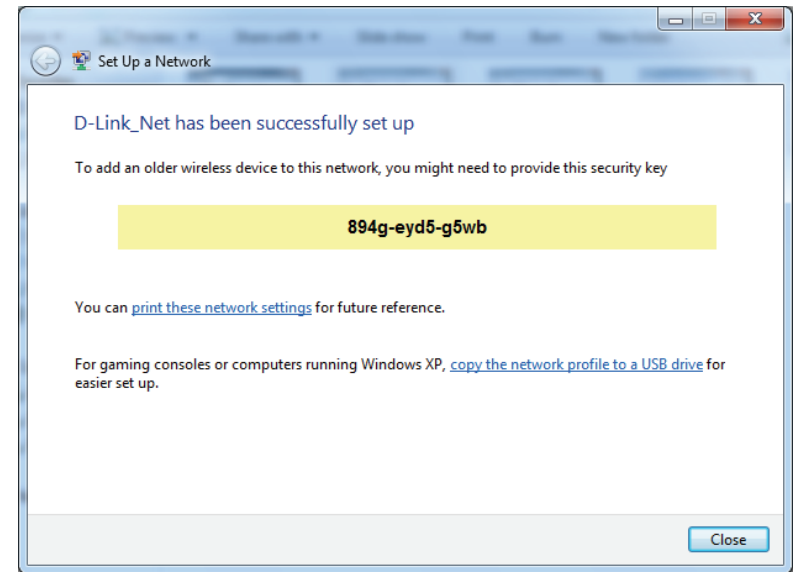
Wait for the configuration to complete.



8. The following window informs you that WPS on the router has been setup successfully.

Make a note of the security key as you may need to provide this security key if adding an older wireless device to the network in the future.

9. Click **Close** to complete WPS setup.





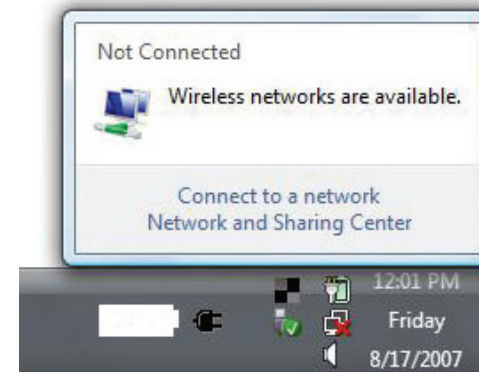
# Windows Vista®

Windows Vista® users may use the built-in wireless utility. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista® utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

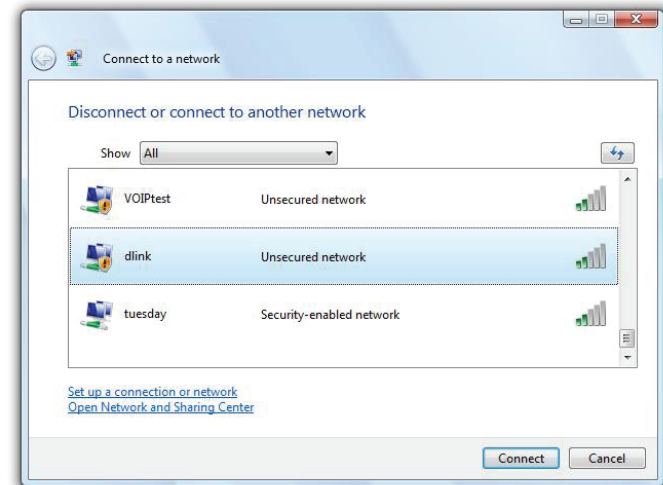
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

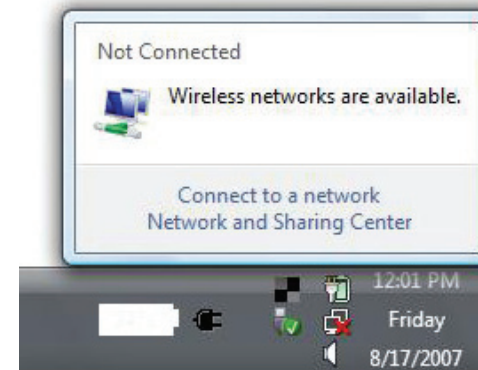
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



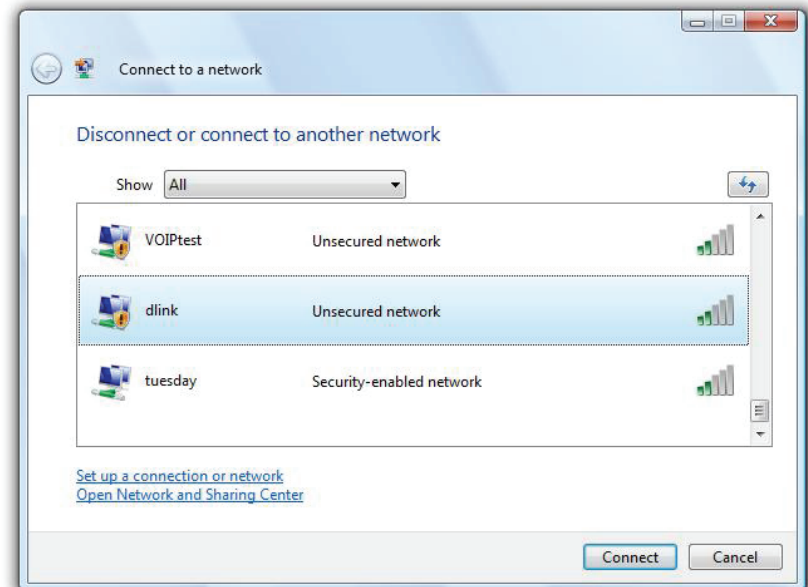
## WPA/WPA2

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.

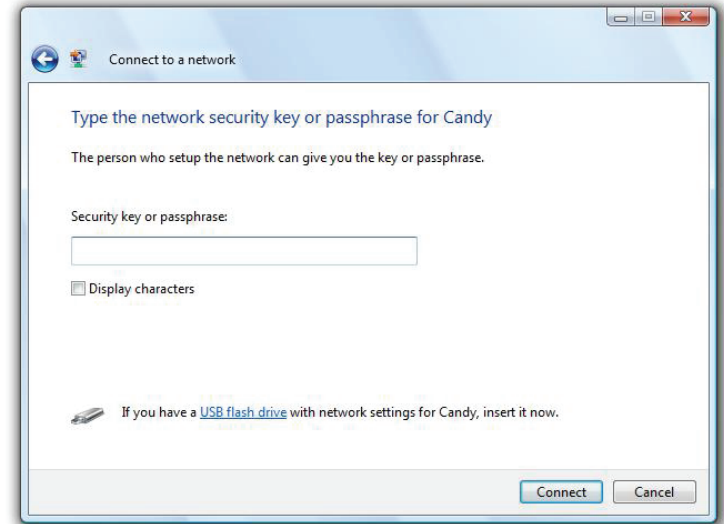


2. Highlight the Wi-Fi name (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase (Wi-Fi password) that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



## WPS/WCN 2.0

The router supports Wi-Fi protection, referred to as WCN 2.0 in Windows Vista®. The following instructions for setting this up depends on whether you are using Windows Vista® to configure the router or third party software.

When you first set up the router, Wi-Fi protection is disabled and not configured. To enjoy the benefits of Wi-Fi protection, the router must be both enabled and configured. There are three basic methods to accomplish this: use Windows Vista's built-in support for WCN 2.0, use software provided by a third party, or manually configure.

If you are running Windows Vista®, log into the router and click the **Enable** checkbox in the **Basic > Wireless** section. Use the Current PIN that is displayed on the **Advanced > Wi-Fi Protected Setup** section or choose to click the **Generate New PIN** button or **Reset PIN to Default** button.



If you are using third party software to set up Wi-Fi Protection, carefully follow the directions. When you are finished, proceed to the next section to set up the newly-configured router.

# Windows® XP

Windows® XP users may use the built-in wireless utility (Zero Configuration Utility). The following instructions are for Service Pack 2 users. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows® XP utility as seen below.

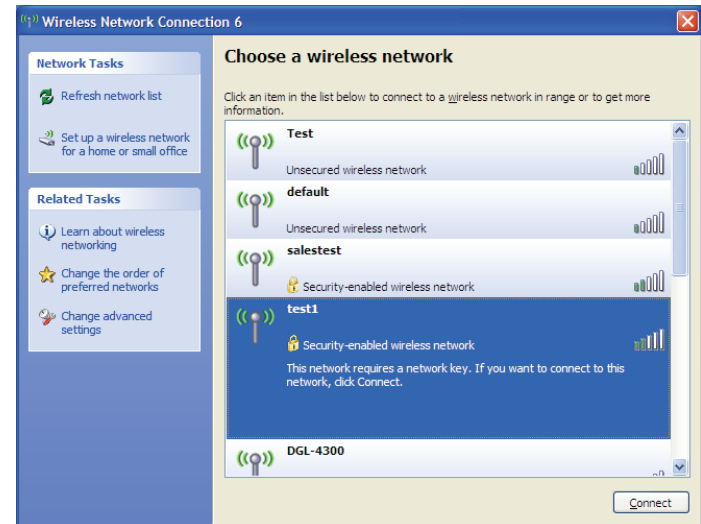
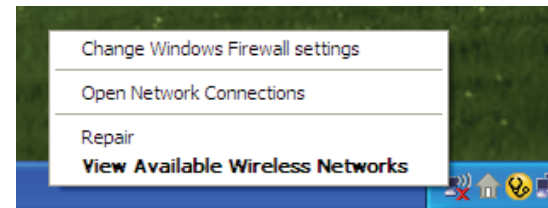
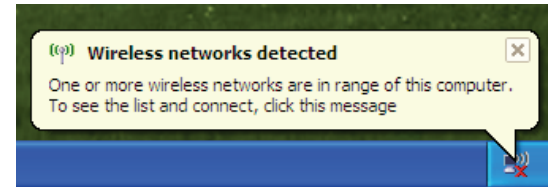
If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.

The utility will display any available wireless networks in your area. Click on a Wi-Fi network (displayed using the SSID) and click the **Connect** button.

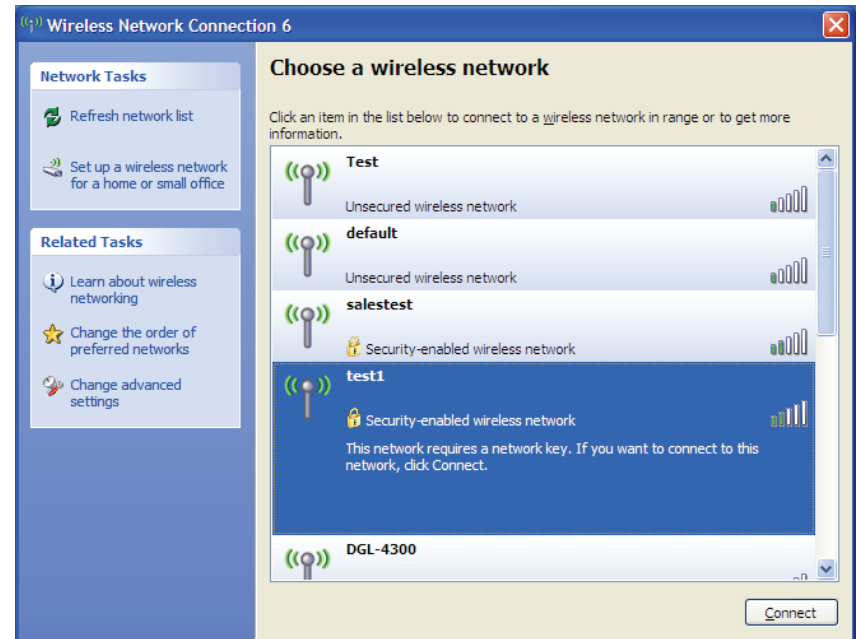
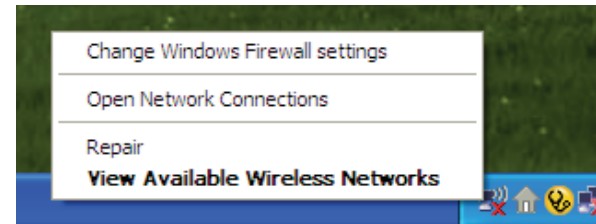
If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



## WPA/WPA2

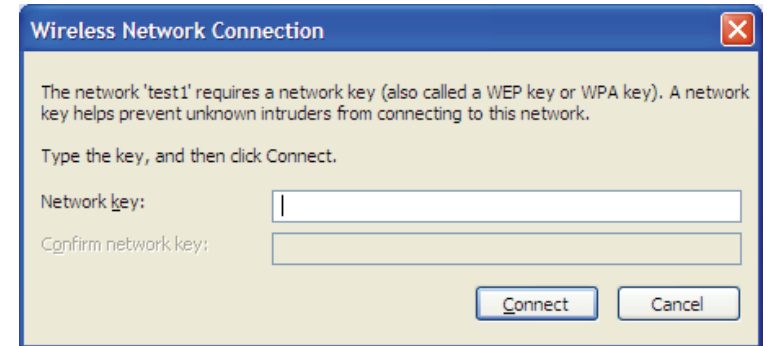
It is recommended to enable WPA on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA key being used.

1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower-right corner of screen). Select **View Available Wireless Networks**.
2. Highlight the Wi-Fi network (SSID) you would like to connect to and click **Connect**.



3. The **Wireless Network Connection** box will appear. Enter the WPA-PSK Wi-Fi password and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The Wi-Fi password must be exactly the same as on the wireless router.



# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWR-116. 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. Why can't I access the web-based configuration utility?**

When entering the IP address of the D-Link router (192.168.0.1 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Internet Explorer 6.0 or higher
  - Netscape 8 or higher
  - Mozilla 1.7.12 (5.0) or higher
  - Opera 8.5 or higher
  - Safari 1.2 or higher (with Java 1.3.1 or higher)
  - Camino 0.8.4 or higher
  - Firefox 1.5 or higher
  
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.



- Configure your Internet settings:
  - Go to **Start > Settings > Control Panel**. Double-click the **Internet Options** Icon. From the **Security** tab, click the button to restore the settings to their defaults.
  - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
  - Go to the **Advanced** tab and click the button to restore these settings to their defaults. Click **OK** three times.
  - Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

## **2. What can I do if I forgot my password?**

If you forgot your password, you must reset your router. Unfortunately this process will change all your settings back to the factory defaults. To reset the router, locate the reset button (hole) on the rear panel of the unit. With the router powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the router will go through its reboot process. Wait about 30 seconds to access the router. The default IP address is 192.168.0.1. When logging in, the username is **admin** and leave the password box empty.

# Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more WNA-2330 wireless network Cardbus adapters.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc network contains only clients, such as laptops with wireless cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

# Networking Basics

## Check your IP address

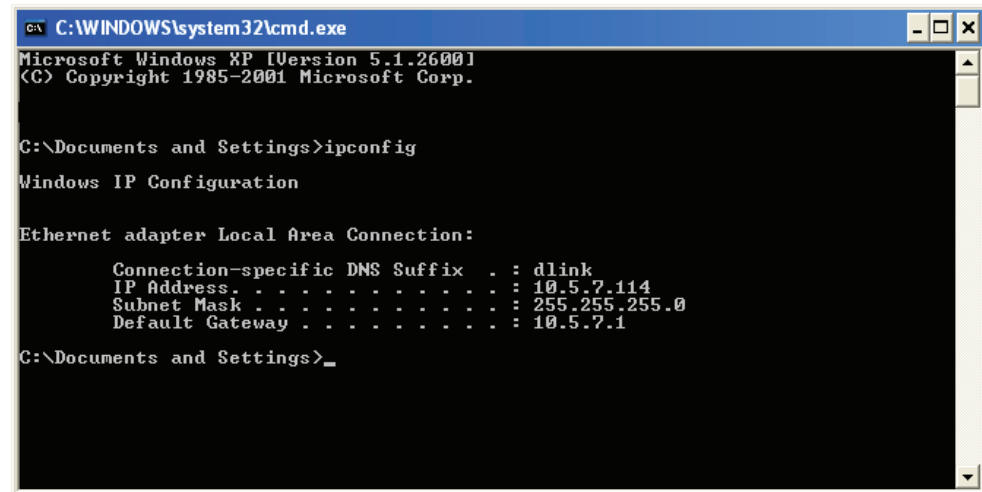
After you install your new D-Link adapter, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

Click on **Start > Run**. In the run box type **cmd** and click **OK**. (Windows® Vista™ users type *cmd* in the **Start Search** box.)

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.



```
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® Vista™ -

Click on **Start > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.**

Windows® XP -

Click on **Start > Control Panel > Network Connections.**

Windows® 2000 -

From the desktop, right-click **My Network Places > Properties.**

### Step 2

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

### Step 3

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

### Step 4

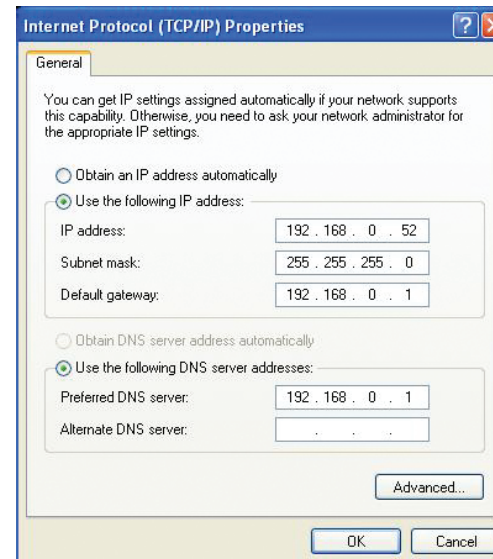
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router.

**Example:** If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.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 (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

### Step 5

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



# Technical Specifications

## Data Rates \*\*

300,150,135,120,90,60,45,30,15 Mbps in 802.11n mode  
6/9/11/12/18/24/36/48/54Mbps in 802.11g mode  
1/2/5.5/11Mbps in 802.11b mode

## Standards

IEEE 802.11n compliant (2Tx2R)  
IEEE 802.11b/g  
IEEE 802.3  
IEEE 802.3u

## Frequency

2.4 - 2.4835 GHz

## Wireless Security

64/128-bit WEP (Wired Equivalent Privacy)  
WPA & WPA2 (Wi-Fi Protected Access)

## Firewall

IP Filtering  
Network Address Translation (NAT)  
MAC Filtering

## VPN

L2TP/PPTP/IPSEC VPN Pass-through

## Ports

4 x LAN (RJ-45)  
1x WAN  
1 x USB

## Antenna

2 x External 5 dBiWi-Fi antenna

## LED Status Indicators

3G / 4G LTE  
WAN  
Wi-Fi  
LAN 1, LAN 2, LAN 3, LAN 4

## Power

External 5 V DC 2 A power adapter

## Dimensions (L x W x H)

• 148.5 x 113.5 x 25 mm (5.85 x 4.47 x .98 inches)

## Operating Temperature

Operating: 0 to 40 °C (32 to 104 °F)

## Operating Humidity

Operating: 10% to 95% non-condensing

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## Federal Communication Commission Interference Statement

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

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the 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.

### IMPORTANT NOTE:

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.