

Quick Router Setup Example

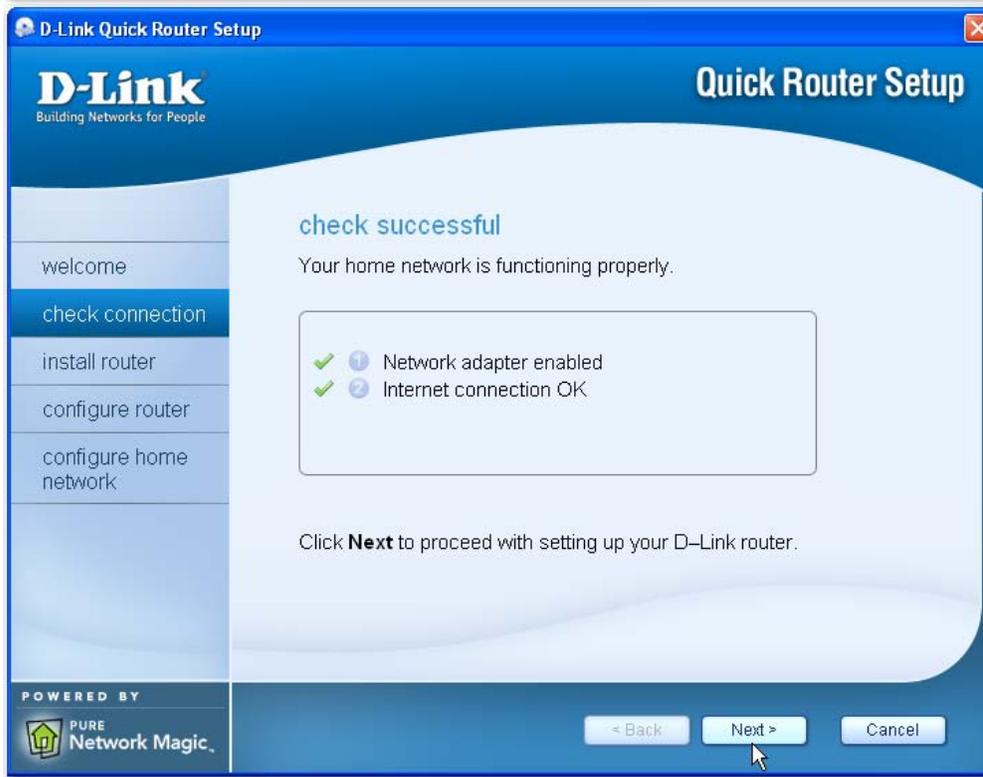
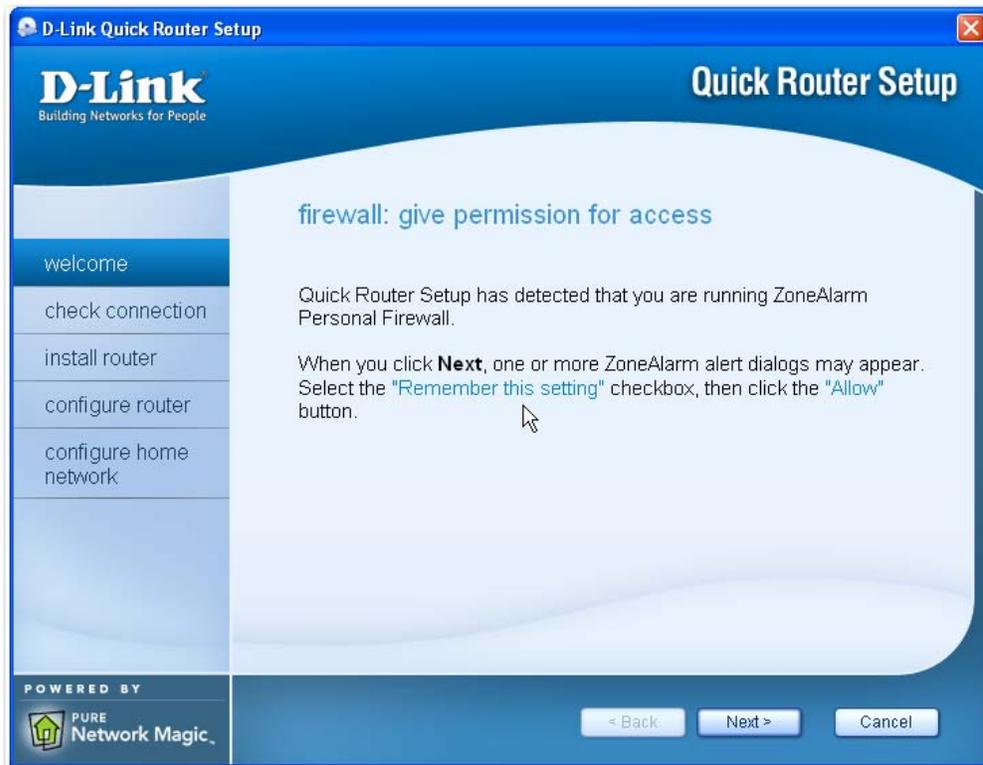
November 5, 2006 by Ron Mettler

This is the recently released setup program for a D-Link router. Note that the quick setup does not provide for any security settings such as disabling of the SSID, setting WPA encryption, and other settings outlined in the detailed settings routine below.



The screenshot shows the 'D-Link Quick Router Setup' window. The title bar reads 'D-Link Quick Router Setup'. The main header features the 'D-Link Building Networks for People' logo on the left and 'Quick Router Setup' on the right. A vertical navigation pane on the left contains the following steps: 'welcome' (highlighted), 'check connection', 'install router', 'configure router', and 'configure home network'. The main content area displays 'D-Link setup' above an image of a D-Link wireless router. Below the image, it says 'Choose your language: English' with a dropdown arrow. A paragraph follows: 'This wizard will guide you through the setup of your new router. It will also provide you with a trial version of Network Magic, the best software for getting the most out of your home network.' Below that, it states 'This will take about 10 minutes. To begin click **Next**.' At the bottom left, it says 'POWERED BY PURE Network Magic' with a house icon. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

The program checks for the existence of a running firewall and then an existing network adapter and for an Internet connection from the modem.



You are then asked to unplug the cable Ethernet cable from the modem and plug it into the router.



You then are required to plug in the Ethernet cable from the modem to the router and the power cord for the modem.

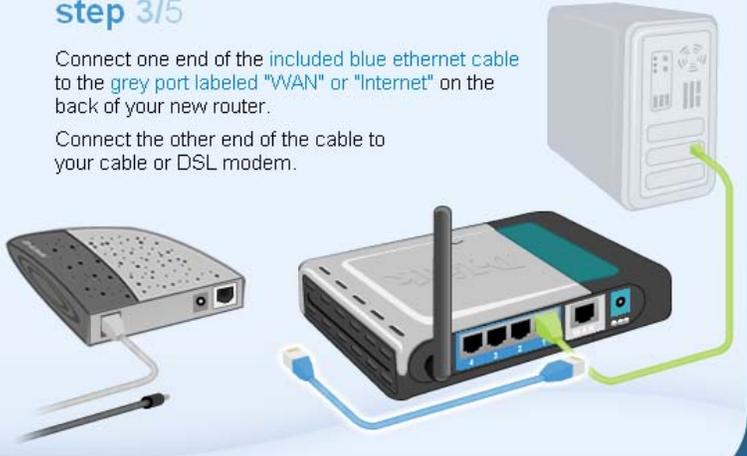
D-Link Quick Router Setup

D-Link
Building Networks for People

Quick Router Setup

step 3/5

Connect one end of the included blue ethernet cable to the grey port labeled "WAN" or "Internet" on the back of your new router.
Connect the other end of the cable to your cable or DSL modem.



welcome
check connection
install router
configure router
configure home network

POWERED BY
PURE Network Magic.

< Back Next > Cancel

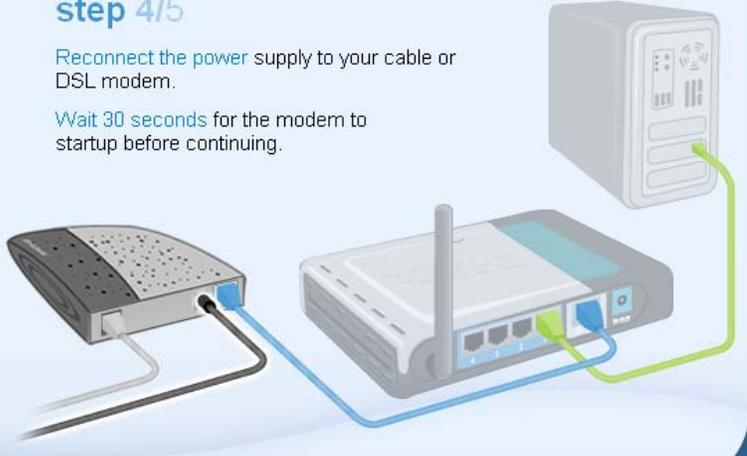
D-Link Quick Router Setup

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Quick Router Setup

step 4/5

Reconnect the power supply to your cable or DSL modem.
Wait 30 seconds for the modem to startup before continuing.

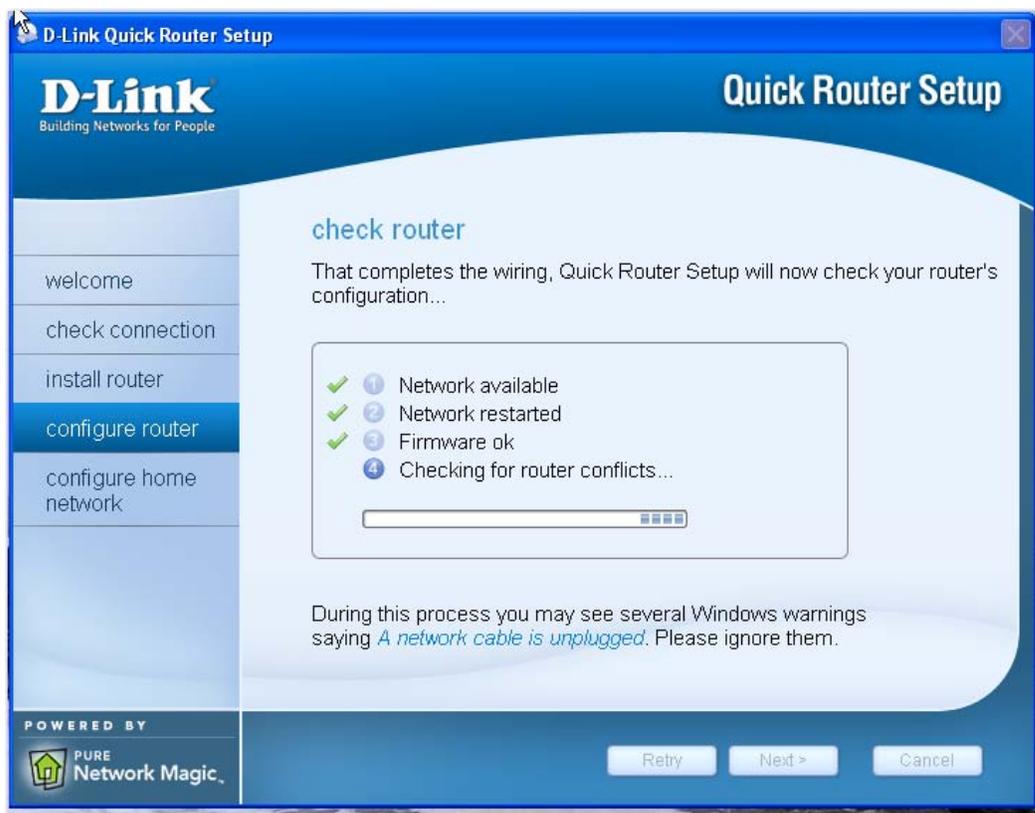


welcome
check connection
install router
configure router
configure home network

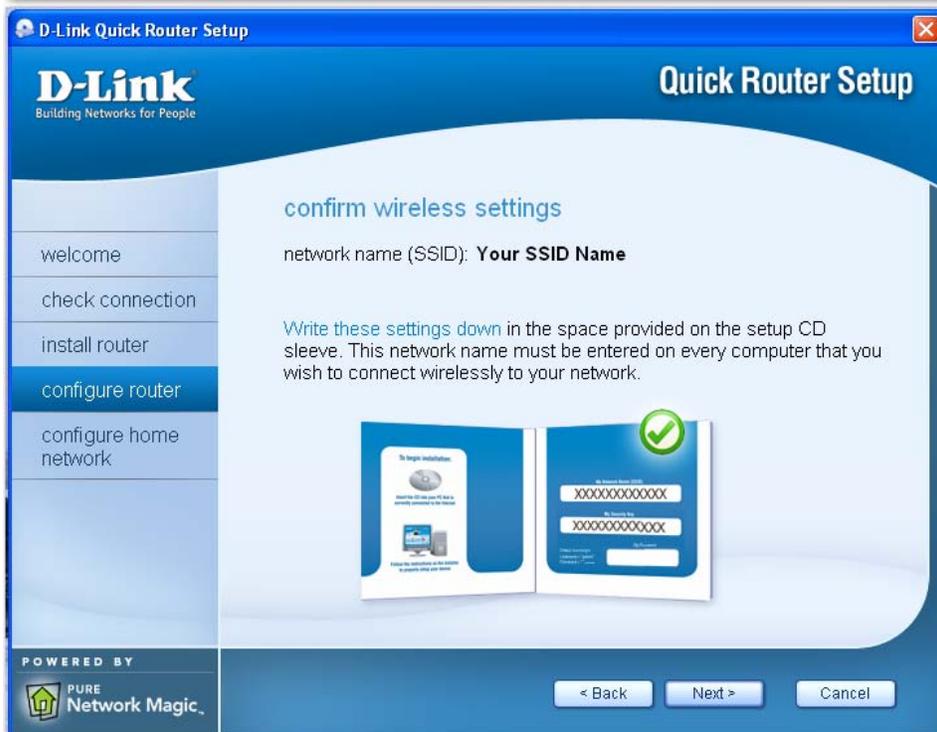
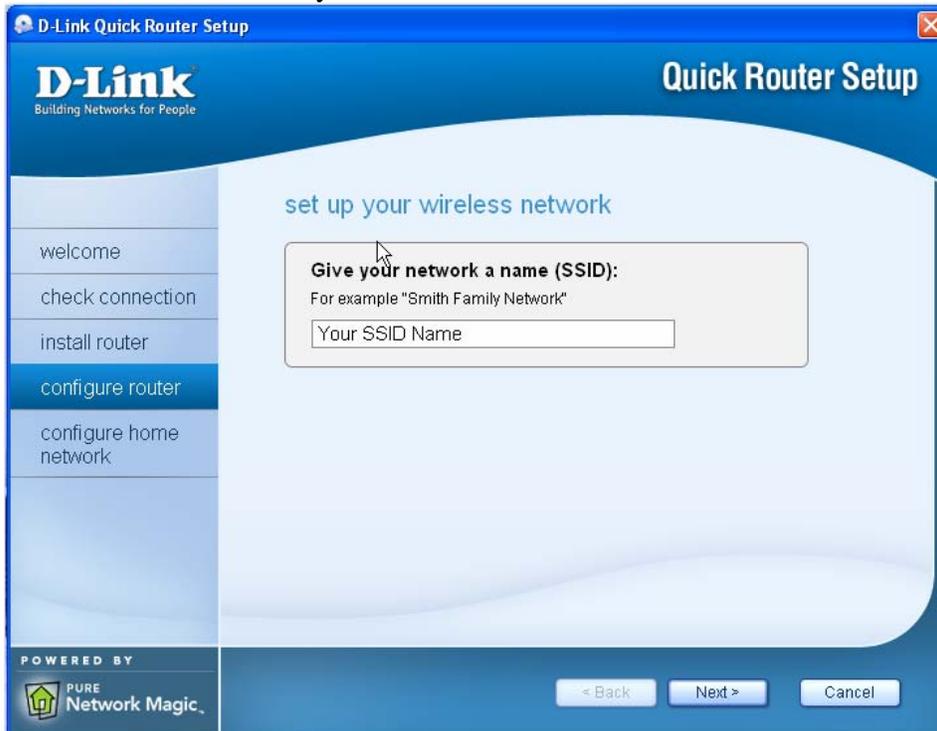
POWERED BY
PURE Network Magic.

< Back Next > Cancel

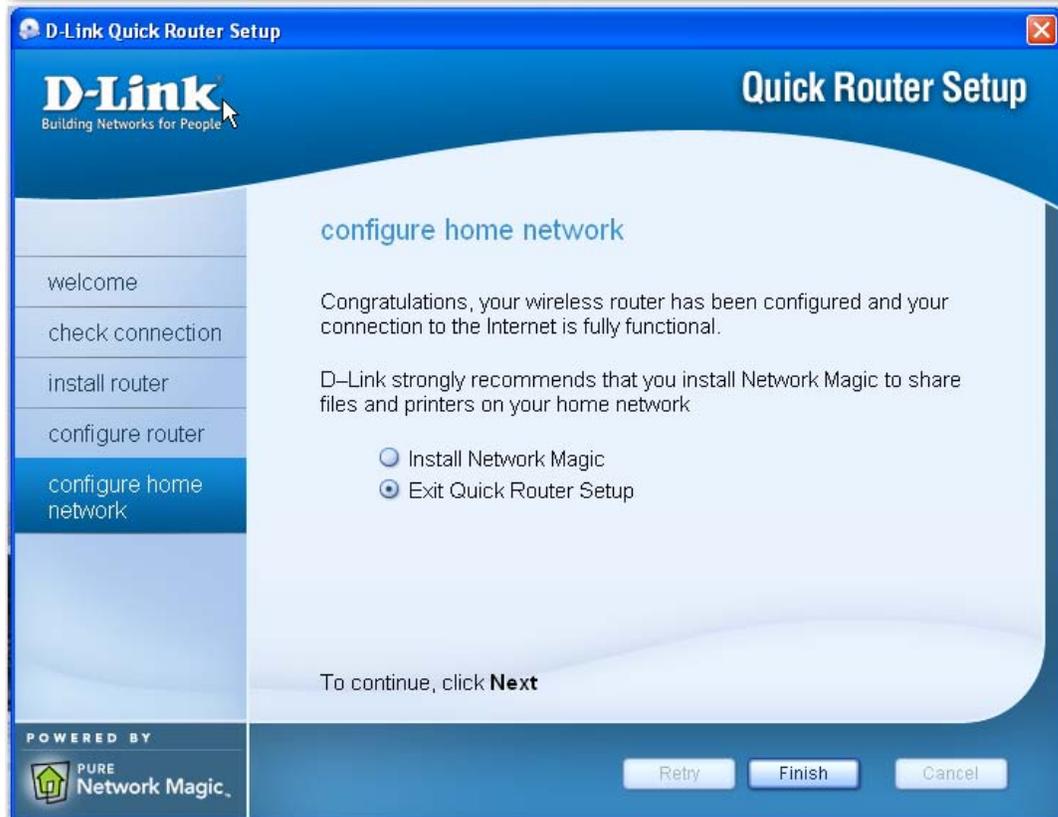
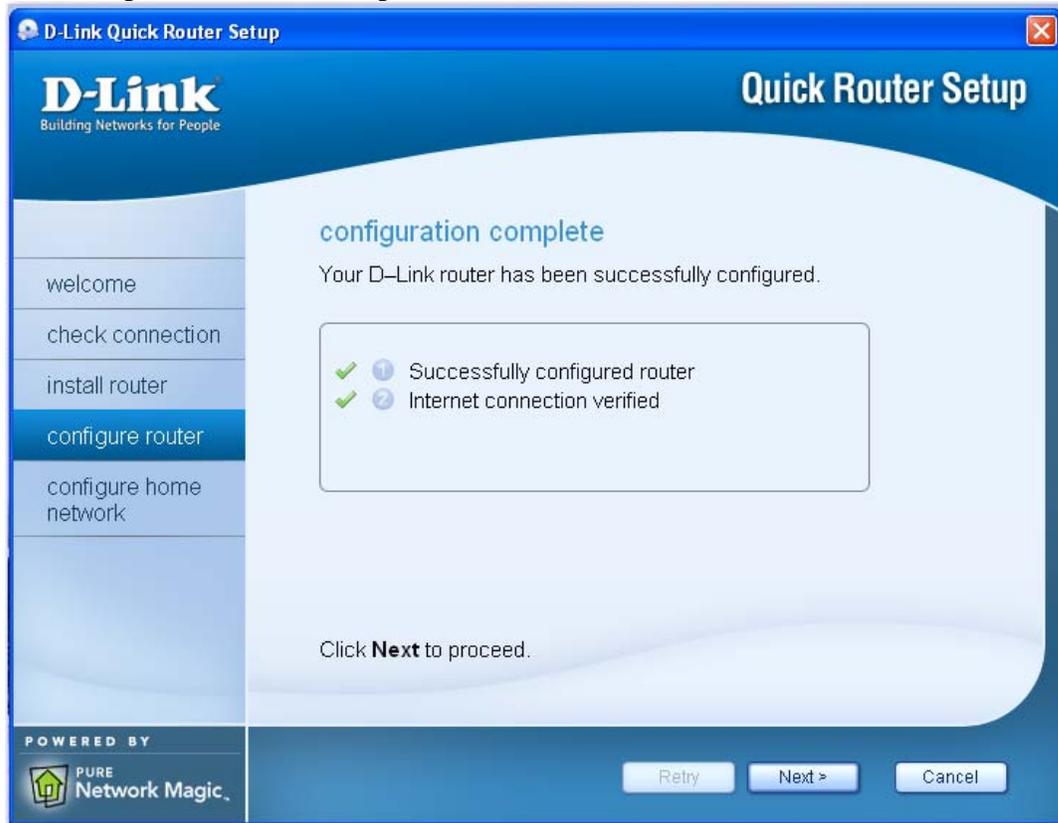
Connect the power to the router and the router will start and complete the checks.



You are now required to set the name that you would like to set for your system network. Choose a non-descript name that will not tie to your home or family name. Choose something like “TheRanch”, RiverFront”, “44yearling”, “OldCugger” etc. Be sure to write down the name so you can refer to it later.



This completes the basic setup.



Detailed Settings for a D-Link DI-624 Router

Use your browser to access the router by typing the URL address of the router. Refer to the manual for the correct address. The user interface software screen will then popup in the browser window. For D-Link routers, use 192.168.0.1, and for Linksys routers use 192.168.1.1. You will then be asked to type in a user name and password. The first time you access the router, you generally will type in admin for user name and leave the password blank.



It is suggested that you check to be sure that your router has the latest firmware furnished by the manufacturer. Note that for this example, Firmware Version 2.76 is installed. You are given the option to select a link to check for an upgrade on the support site. If an upgrade is available, download the upgrade and remember where you saved it and what the name is. For a D-Link router, it will be named by default as config.bin. When downloading the file from the support site, you can rename it before saving it. A name like DI 624 Config File.bin might be easier to recognize at a later date. Once the file is downloaded to your hard drive, you will need to start over by using your browser to access the router and then going back to the Firmware/Tools screen. You should then browse for the downloaded file, and then click on “Apply”.

The screenshot displays the web management interface for a D-Link DI-624 router. The top header features the D-Link logo and the product name "AirPlus Xtreme G High-Speed 2.4GHz Wireless Router". A navigation menu includes "Home", "Advanced", "Tools" (which is highlighted), "Status", and "Help". On the left side, a vertical menu lists various settings: "Admin", "Time", "System", "Firmware" (highlighted in yellow), "DDNS", "Misc.", and "Cable Test". The main content area is titled "Firmware Upgrade" and contains the following text: "There may be new firmware for your DI-624 to improve functionality and performance. [Click here to check for an upgrade on our support site.](#) 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 Apply button below to start the firmware upgrade." Below this text, it shows "Current Firmware Version: 2.76" and "Firmware Date: Thu, 24 Aug 2006". There is an empty text input field followed by a "Browse..." button. At the bottom right of the main area, there are three buttons: "Apply" (with a green checkmark icon), "Cancel" (with an orange 'X' icon), and "Help" (with a red plus icon).

The Home/Wireless screen setup should be the first screen to access for setting up security. If you have already selected an SSID name in the quick setup routine, the name will appear in the SSID field. If not type in the desired name. Again, choose something non-descript like “TheRanch”, RiverFront”, “44yearling”, “OldCugger” etc. Be sure to write down the name so you can refer to it later. Check “Disabled” for SSID Broadcast. Disabling the SSID broadcast sets the router such that a wireless laptop has to be looking for the specified SSID name. If the broadcast is not disabled, any wireless client will be able to see the network name being broadcast to the neighbors. Then check the places required to setup WPA, TKIP, PSK security. Select and type in a passphrase. The passphrase will have to be used by any wireless client to connect to the router. Click on “Apply” to save the settings.



It is suggested that you restrict the total number of clients that can connect to your network. The DHCP assigns an IP address to each client when a client connects to the network. You can leave the default starting IP address as shown and then set an ending IP address to one or two higher than the number of clients that you will initially have installed. Be sure to count all wired and wireless clients.

D-Link
Building Networks for People

AirPlus Xtreme G™
High-Speed 2.4GHz Wireless Router

DI-624

Wizard
Wireless
WAN
LAN
DHCP

Home Advanced Tools Status Help

DHCP Server

The DI-624 can be setup as a DHCP Server to distribute IP addresses to the LAN network.

DHCP Server Enabled Disabled

Starting IP Address 192 . 168 . 0 .

Ending IP Address 192 . 168 . 0 .

Lease Time

Static DHCP

Static DHCP is used to allow DHCP server to assign same IP address to specific MAC address.

Enabled Disabled

Name

IP 192 . 168 . 0 .

MAC Address - -

DHCP Client

Apply Cancel Help

Static DHCP Client List

Host Name	IP Address	MAC Address

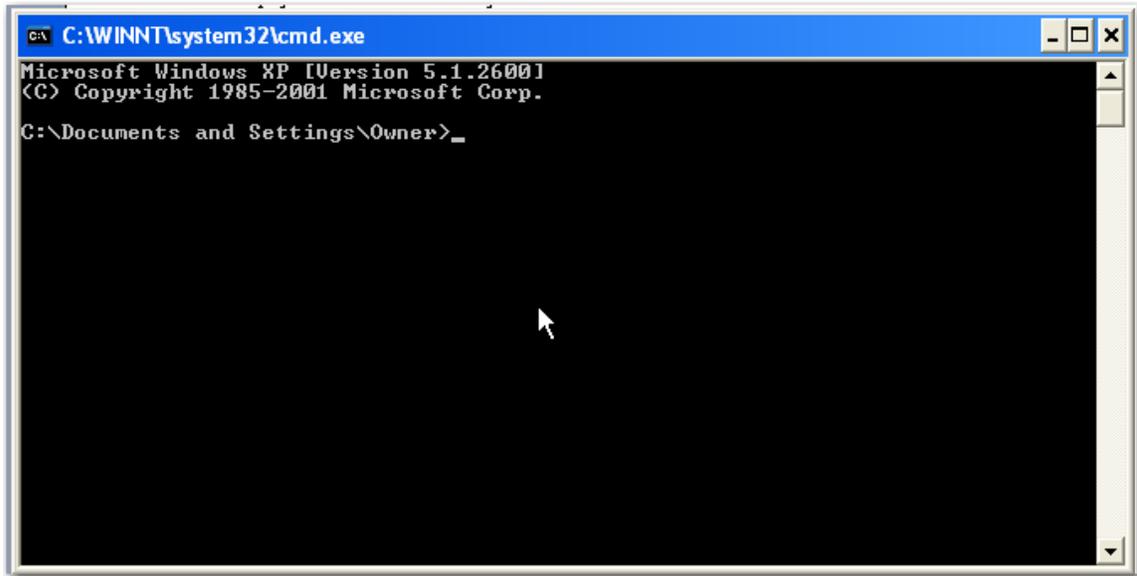
Dynamic DHCP Client List

Host Name	IP Address	MAC Address	Expired Time
unknown	192.168.0.104	00-13-46-89-d7-5c	Apr/08/2002 01:00:00
RONDESKTOP	192.168.0.102	00-03-47-db-3a-2d	Apr/08/2002 01:00:12

In the Admin/Tools tab, the Administrator password should be utilized for accessing the router with a browser. If a password is not utilized, anyone connecting to the network could access the router and install new settings. By default, the user name is fixed “admin”. Use a secure password and include one or more numbers and alpha characters. Example passwords might be “worldly2&”, giggle45\$, “happy75cugger”. You could then use the same password or a different one for signing on as “user” if you wish. Again click on “Apply” to save the settings.

The screenshot displays the web management interface for a D-Link DI-624 AirPlus Xtreme G High-Speed 2.4GHz Wireless Router. The interface is divided into a left sidebar and a main content area. The sidebar contains a navigation menu with buttons for Admin, Time, System, Firmware, DDNS, Misc., and Cable Test. The main content area has a top navigation bar with tabs for Home, Advanced, Tools (selected), Status, and Help. Under the Tools tab, the 'Administrator Settings' section is active, showing instructions for changing login passwords for the Administrator and User. The Administrator settings include fields for 'New Password' and 'Confirm Password'. The User settings also include fields for 'New Password' and 'Confirm Password'. Below these is the 'Remote Management' section, which has radio buttons for 'Enabled' and 'Disabled' (selected), an 'IP Address' field with an asterisk, and a 'Port' dropdown menu set to 8080. At the bottom right of the main content area are three icons: a green checkmark for 'Apply', an orange 'X' for 'Cancel', and a red plus sign for 'Help'.

Additional security can be setup in the router that will restrict the access to a list of computers with specific Mac addresses for their Ethernet wired and/or their wireless adapters. Each wired and each wireless adapter has a unique Mac address referred to as its physical address. You may be able to find what the Mac address for a network card by checking the paperwork included with the adapter. A quick way is to follow this procedure. In windows, click on Start, Run, and type in cmd in the run field. This will start a DOS window as follows:

A screenshot of a Windows XP command prompt window. The title bar at the top reads "C:\WINNT\system32\cmd.exe". The window content shows the following text: "Microsoft Windows XP [Version 5.1.2600] Copyright 1985-2001 Microsoft Corp." followed by the current directory path "C:\Documents and Settings\Owner>". A mouse cursor is visible in the center of the black command prompt area.

```
C:\WINNT\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\Owner>
```

Then at the cursor type the following exactly:

ipconfig /all and then press the enter key on the keyboard.

The next screen will be similar to the following:

The next screen will be similar to the following:

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

C:\Documents and Settings\Owner>ipconfig /all

Windows IP Configuration

    Host Name . . . . . : RONDESKTOP
    Primary Dns Suffix . . . . . :
    Node Type . . . . . : Hybrid
    IP Routing Enabled. . . . . : No
    WINS Proxy Enabled. . . . . : No

Ethernet adapter Local Area Connection 16:

    Connection-specific DNS Suffix . :
    Description . . . . . : Intel(R) PRO/100 UE Network Connecti
on
    Physical Address. . . . . : 00-03-47-DB-3A-2D
    Dhcp Enabled. . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IP Address. . . . . : 192.168.0.101
    Subnet Mask . . . . . : 255.255.255.0
    IP Address. . . . . : fe80::203:47ff:fedb:3a2d%4
    Default Gateway . . . . . : 192.168.0.1
    DHCP Server . . . . . : 192.168.0.1
    DNS Servers . . . . . : 192.168.0.1
                            fec0:0:0:ffff::1%1
                            fec0:0:0:ffff::2%1
                            fec0:0:0:ffff::3%1
    Lease Obtained. . . . . : Sunday, November 05, 2006 11:32:59 A
M
    Lease Expires . . . . . : Sunday, November 12, 2006 11:32:59 A
M

Tunnel adapter Teredo Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix . :
    Description . . . . . : Teredo Tunneling Pseudo-Interface
    Physical Address. . . . . : 00-00-7B-3B-E7-F6-39-2C
    Dhcp Enabled. . . . . : No
    IP Address. . . . . : 2001:0:4136:e378:0:7b3b:e7f6:392c
    IP Address. . . . . : fe80::ffff:ffff:fffd%5
    Default Gateway . . . . . : ::
    NetBIOS over Tcpip. . . . . : Disabled

Tunnel adapter Automatic Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix . :
    Description . . . . . : Automatic Tunneling Pseudo-Interface
    Physical Address. . . . . : C0-A8-00-65
    Dhcp Enabled. . . . . : No
    IP Address. . . . . : fe80::5efe:192.168.0.101%2
    Default Gateway . . . . . :
    DNS Servers . . . . . : fec0:0:0:ffff::1%1
                            fec0:0:0:ffff::2%1
                            fec0:0:0:ffff::3%1
    NetBIOS over Tcpip. . . . . : Disabled

C:\Documents and Settings\Owner>
```

You may have to expand the window size or scroll down to see the full screen as shown above. The Mac address (Physical Address) for the Ethernet adapter in the above example is 00-03-47-BB-3A-2D. For a computer equipped with an Ethernet card and a wireless card, both adapters will be shown in the window. Write down the physical address of the card that you intend to use to connect to your network (wired or wireless or both).

Back in the router setup, select the Advanced tab and then the Filters box. Check the MAC Filters selection and the selection for Only allow computers with MAC address listed below to access the network.. Then type a name that you wish to use to identify the client computer in the name field, fill in the Mac Address for that computers network adapter and click “Apply”. Repeat the procedure by accessing the Advanced/Filters screen and inputting the name and Mac address of each client computer. For a computer such as a laptop equipped with an Ethernet wired card and a wireless adapter, you may wish to permit it to be connected either way. In that case, you will need to add each of the two Mac addresses for the laptop.

The screenshot shows the configuration interface for a D-Link DI-624 router. The 'Advanced' tab is selected, and the 'Filters' section is active. Under 'MAC Filters', the option 'Only allow computers with MAC address listed below to access the network' is selected. A new filter entry is being added with the name 'Carolyn' and the MAC address '00-13-46-89-d7-5c'. The DHCP Client field is set to 'unknown,00-13-46-89-d7-5c'. Below the form is a table listing existing filters: RONDESKTOP, Laptop, Carolyn, and IPAQ HX2755, each with its corresponding MAC address and edit/delete icons.

D-Link
Building Networks for People

AirPlus Xtreme G™
High-Speed 2.4GHz Wireless Router

DI-624

Virtual Server
Applications
Filters
Parental Control
Firewall
DMZ
Performance

Home **Advanced** Tools Status Help

Filters
Filters are used to allow or deny LAN users from accessing the Internet.

IP Filters MAC Filters

MAC Filters
Use MAC address to allow or deny computers access to the network.

Disabled MAC Filters
 Only **allow** computers with MAC address listed below to access the network
 Only **deny** computers with MAC address listed below to access the network

Name Carolyn

MAC Address 00 - 13 - 46 - 89 - d7 - 5c

DHCP Client unknown,00-13-46-89-d7-5c

MAC Filter List

Name	MAC Address	
RONDESKTOP	00-03-47-db-3a-2d	<input type="button" value="edit"/> <input type="button" value="delete"/>
Laptop	00-13-02-21-27-09	<input type="button" value="edit"/> <input type="button" value="delete"/>
Carolyn	00-13-46-89-d7-5c	<input type="button" value="edit"/> <input type="button" value="delete"/>
IPAQ HX2755	00-02-78-46-65-56	<input type="button" value="edit"/> <input type="button" value="delete"/>

Apply Cancel Help

You can exit the router setup at any point by closing the browser or selecting a new URL address. You may wish to periodically look at other available screens for the router. You may check the status of all wireless connections by going back to the router setup using the router URL. For the D-Link router type 192.168.0.1, input your admin password, select the Status tab, then the Wireless box. The list of wireless adapters being used and connected to the router will be shown similar to the below example:

The screenshot displays the web management interface for a D-Link DI-624 AirPlus Xtreme G High-Speed 2.4GHz Wireless Router. The interface features a navigation menu on the left with buttons for 'Device Info', 'Log', 'Stats', and 'Wireless'. The main content area is titled 'Connected Wireless Client List' and includes a table of active wireless clients. A mouse cursor is visible over the table.

Connected Time	MAC Address	Mode
Nov/05/2006 13:39:14	00-13-02-21-27-09	2.4 GHz
Nov/05/2006 12:17:16	00-13-46-89-d7-5c	2.4 GHz

Another screen available with D-Link routers is the cable test screen. Select the Tools Tab, then the Cable Test box to see something similar to the following:



There are other screens and settings that can be utilized although the basics of the setup as detailed in this document will provide for a very secure system suitable for home or small office setups.