BELKIN®

WIRELESS G
Router
User Manual

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INTRODUCTION

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Thank you for purchasing the Belkin Wireless G Router (the Router). The following two short sections discuss the benefits of home networking and outline best practices for maximizing your wireless home network range and performance. Please be sure to read through this User Manual completely, and pay special attention to the section entitled "Placement of your Router for Optimal Performance" on page 2.

Benefits of a Home Network

- Share one high-speed Internet connection with all the computers in your home

- Share resources, such as files and hard drives among all the connected computers in your home

- Share a single printer with the entire family
- Share documents, music, video, and digital pictures
- Store, retrieve, and copy files from one computer to another
- Simultaneously play games online, check Internet email, and chat

Advantages of a Wireless Network

- Mobility – you'll no longer need a dedicated "computer room"—now you can work on a networked laptop or desktop computer anywhere within your wireless range

- Easy installation – The Belkin Setup Assistant software makes setup simple

- Flexibility – set up and access printers, computers, and other networking devices from anywhere in your home

- Easy expansion – the wide range of Belkin networking products lets you expand your network to include devices such as printers and gaming consoles

- No cabling required – you can spare the expense and hassle of retrofitting Ethernet cabling throughout the home or office

- Widespread industry acceptance – choose from a wide range of interoperable networking products

Placement of your Router for Optimal Performance

Important Factors for Placement and Setup

Your wireless connection will be stronger the closer your computer is to your Router. Typical indoor operating range for wireless devices is between 100 and 200 feet.

In the same way, your wireless connection and performance will degrade somewhat as the distance between your Router and connected devices increases. This may or may not be noticeable to you. As you move farther from your Router, connection speed may decrease. Factors that can weaken signals simply by getting in the way of your network's radio waves are metal appliances or obstructions, and walls.

If you have concerns about your network's performance that might be related to range or obstruction factors, try moving the computer to a position between five and 10 feet away from the Router in order to see if distance is the problem. If difficulties persist even at close range, please contact Belkin Technical Support.

Note: While some of the items listed below can affect network performance, they will not prohibit your wireless network from functioning; if you are concerned that your network is not operating at its maximum effectiveness, this checklist may help.

1. Wireless Router Placement

Place your Router, the central connection point of your network, as close as possible to the center of your wireless network devices.

To achieve the best wireless network coverage for your "wireless clients" (i.e., computers enabled by Belkin Wireless Notebook Network Cards, Wireless Desktop Network Cards, and Wireless USB Adapters):

- Ensure that your Router's networking antennas are parallel to each other, and are positioned vertically (toward the ceiling). If your Router itself is positioned vertically, point the antennas as much as possible in an upward direction.

- In multistory homes, place the Router on a floor that is as close to the center of the home as possible. This may mean placing the Router on an upper floor.

- Try not to place the Router near a cordless phone.

2. Avoid Obstacles and Interference

Avoid placing your Router near devices that may emit radio "noise," such as microwave ovens. Dense objects that can inhibit wireless communication include:

- Refrigerators
- Washers and/or dryers
- Metal cabinets
- Large aquariums
- Metallic-based, UV-tinted windows

If your wireless signal seems weak in some spots, make sure that objects such as these are not blocking the signal's path (between your computers and Router).

3. Cordless Phones

If the performance of your wireless network is impaired after attending to the above issues, and you have a cordless phone:

• Try moving cordless phones away from the Router and your wireless-enabled computers.

• Unplug and remove the battery from any cordless phone that operates on the 2.4GHz band (check the manufacturer's information). If this fixes the problem, your phone may be interfering.

• If your phone supports channel selection, change the channel on the phone to the farthest channel from your wireless network. For example, change the phone to channel 1 and move your Router to channel 11. See your phone's user manual for detailed instructions.

• If necessary, consider switching to a 900MHz cordless phone.

4. Choose the "Quietest" Channel for your Wireless Network

In locations where homes or offices are close together, such as apartment buildings or office complexes, there may be wireless networks nearby that can conflict with yours.

Use the Site Survey capabilities found in the wireless utility of your wireless adapter or card to locate any other wireless networks that are available (see your wireless adapter's or card's user manual), and move your Router and computers to a channel as far away from other networks as possible.

• Experiment with more than one of the available channels in order to find the clearest connection and avoid interference from neighboring cordless phones or other wireless devices.

• For Belkin wireless networking products, use the detailed Site Survey and wireless channel information included with your Wireless Network Card or Adapter. See your Network Card's user guide for more information.

These guidelines should allow you to cover the maximum possible area with your Router. Should you need to cover an even wider area, we suggest the Belkin Wireless G Universal Range Extender/Access Point.

5. Secure Connections, VPNs, and AOL

Secure connections typically require a user name and password, and are used where security is important. Secure connections include:

•   Virtual Private Network (VPN) connections, often used to connect remotely to an office network

•   The "Bring Your Own Access" program from America Online (AOL), which lets you use AOL through broadband provided by another cable or DSL service

•   Most online banking websites

•   Many commercial websites that require a user name and password to access your account

Secure connections can be interrupted by a computer's power management setting, which causes it to "go to sleep." The easiest solution to avoid this is to simply reconnect by rerunning the VPN or AOL software, or by re-logging into the secure website.

A second alternative is to change your computer's power management settings so it does not go to sleep; however, this may not be appropriate for portable computers. To change your power management setting under Windows, see the "Power Options" item in the Control Panel.

If you continue to have difficulty with secure connections, VPNs, and AOL, please review the steps above to be sure you have addressed these issues.

For more information regarding our networking products, visit our website at **www.belkin.com/networking**.

PRODUCT OVERVIEW

Product Features

In minutes you will be able to share your Internet connection and network your computers. The following is a list of features that make your new Belkin Wireless G Router an ideal solution for your home or small office network.

Works with Both PCs and Mac® Computers

The Router supports a variety of networking environments including Mac OS® X, Linux®, Windows® 2000, XP, Vista®, and others. All that is needed is an Internet browser and a network adapter that supports TCP/IP (the standard language of the Internet).

Patent-Pending Network Status Display

Lighted LEDs on the front of the Router indicate which functions are in operation. You'll know at a glance whether your Router is connected to the Internet. This feature eliminates the need for advanced software and status-monitoring procedures.

Web-Based Advanced User Interface

You can set up the Router's advanced functions easily through your web browser, without having to install additional software onto the computer. There are no disks to install or keep track of and, best of all, you can make changes and perform setup functions from any computer on the network quickly and easily.

NAT IP Address Sharing

Your Router employs Network Address Translation (NAT) to share the single IP address assigned to you by your Internet Service Provider while saving the cost of adding IP addresses to your Internet service account.

SPI Firewall

Your Router is equipped with a firewall that will protect your network from a wide array of common hacker attacks including IP Spoofing, Land Attack, Ping of Death (PoD), Denial of Service (DoS), IP with zero length, Smurf Attack, TCP Null Scan, SYN flood, UDP flooding, Tear Drop Attack, ICMP defect, RIP defect, and fragment flooding.

Integrated 10/100 4-Port Switch

The Router has a built-in, 4-port network switch to allow your wired computers to share printers, data and MP3 files, digital photos, and much more. The switch features automatic detection so it will adjust to the speed of connected devices. The switch will transfer data between computers and the Internet simultaneously without interrupting or consuming resources.

Universal Plug-and-Play (UPnP) Compatibility

UPnP (Universal Plug-and-Play) is a technology that offers seamless operation of voice messaging, video messaging, games, and other applications that are UPnP-compliant.

Support for VPN Pass-Through

If you connect to your office network from home using a VPN connection, your Router will allow your VPN-equipped computer to pass through the Router and to your office network.

Built-In Dynamic Host Configuration Protocol (DHCP)

Built-In Dynamic Host Configuration Protocol (DHCP) on-board makes for the easiest possible connection of a network. The DHCP server will assign IP addresses to each computer automatically so there is no need for a complicated networking setup.

Setup Assistant Software

The Setup Assistant Software takes the guesswork out of setting up your Router. This automatic software determines your network settings for you and sets up the Router for connection to your Internet Service Provider (ISP). In a matter of minutes, your Wireless Router will be up and running on the Internet.

NOTE: Setup Assistant Software is compatible with Windows 2000, XP, Vista, and Mac OS X. If you are using another operating system, the Wireless Router can be set up using the Alternate Setup Method described in this User Manual (see page 25).

Integrated 802.11g Wireless Access Point

802.11g is an exciting new wireless technology that achieves data rates up to 54Mbps, nearly five times faster than 802.11b.

MAC Address Filtering

For added security, you can set up a list of MAC addresses (unique client identifiers) that are allowed access to your network. Every computer has its own MAC address. Simply enter these MAC addresses into a list using the Web-Based Advanced User Interface and you can control access to your network.

KNOWING YOUR ROUTER

Package Contents

- Belkin G Wireless Router
- Quick Installation Guide
- Belkin Setup Assistant Software CD with User Manual
- Belkin RJ45 Ethernet Networking Cable
- Power Supply

System Requirements

- Broadband Internet connection such as a cable or DSL modem with RJ45 (Ethernet) connection
- At least one computer with an installed network interface adapter
- TCP/IP networking protocol installed on each computer
- RJ45 Ethernet networking cable
- Internet browser

Setup Assistant Software System Requirements

- A computer running Windows 2000, XP, or Vista, or Mac OS X v10.x
- Minimum 1GHz processor and 128MB RAM
- Internet browser

The Router has been designed to be placed on a desktop. All of the cables exit from the rear of the Router for better organization and utility. The Network Status Display is easily visible on the FRONT of the Router to provide you with information about network activity and status.

(A) (B) (C) (D) (E) (F) (G)

A. Internet Status

This unique icon shows you when the Router is connected to the Internet. When the light is off, the Router is NOT connected to the Internet. When the light is blinking amber, the Router is attempting to connect to the Internet. When the light is solid blue, the Router is connected to the Internet. When using the "Disconnect after x minutes" feature, this icon becomes extremely useful in monitoring the status of your Router's connection.

Off	Router is NOT connected to the Internet
Blinking Green	Router is attempting to connect to the Internet
Solid Green	Router is connected to the Internet

B. Modem Status

This icon lights in blue to indicate that your modem is connected properly to the Router. It turns amber when problem is detected.

Off	Router is NOT connected to modem
Blinking Green	Router is connecting to the ISP
Solid Green	Router is connected to modem and functioning properly

C. Router/Power Status

When you apply power to the Router or restart it, a short period of time elapses while the Router boots up. During this time, the "router" icon blinks. When the Router has completely booted up, the "router" icon becomes a solid light, indicating the Router is ready for use.

Off	Router is off
Blinking Green	Router is booting up
Solid Green	Router is on and ready

D. Wired-Computer Status

Off	Wired computer is not present
Solid Green	Wired computer is connected to the Router
Blinking Green	Data is transmitting between the Router and wired computer(s)

E. Wireless-Computer Status

Off	Wireless computer is not present
Solid Green	Wireless computer is connected to the Router
Blinking Green	Data is transmitting between the Router and wireless computer(s)

F. Wireless Security

Off	Wireless security is off
Solid Green	Wireless security is on
Blinking Green	WPS sync in progress

G. Wi-Fi Protected Setup (WPS) button

This button is used for the Wi-Fi Protected Setup™ feature. Please refer to the "Changing the Wireless Security Settings" section.

H. Connection to Modem – Yellow

This port is for connection to your cable or DSL modem. Use the cable that was provided with the Router to connect the modem to this port. Use of a cable other than the cable supplied with the Router may not work properly.

I. Connections to Computers – Gray

Connect your wired (non-wireless) computers to these ports. These ports are RJ45, 10/100 auto-negotiation, auto-uplinking ports for standard UTP category 5 or 6 Ethernet cable. The ports are labeled 1 through 4.

J. Power Jack

Connect the included 9V/1A DC power supply to this jack.

K. Reset Button

The "Reset" button is used in rare cases when the Router may function improperly. Resetting the Router will restore the Router's normal operation while maintaining the programmed settings. You can also restore the factory default settings by using the "Reset" button. Use the restore option in instances where you may have forgotten your login password.

a. Resetting the Router

Push and release the "Reset" button. The lights on the Router will momentarily flash. The "router" light will begin to blink. When the "router" light becomes solid again, the reset is complete.

b. Restoring the Factory Defaults

Press and hold the "Reset" button for at least 10 seconds, then release it. The lights on the Router will momentarily flash. The "router" light will begin to blink. When the "router" light becomes solid again, the reset is complete.

(H)   (I)   (J) (K)
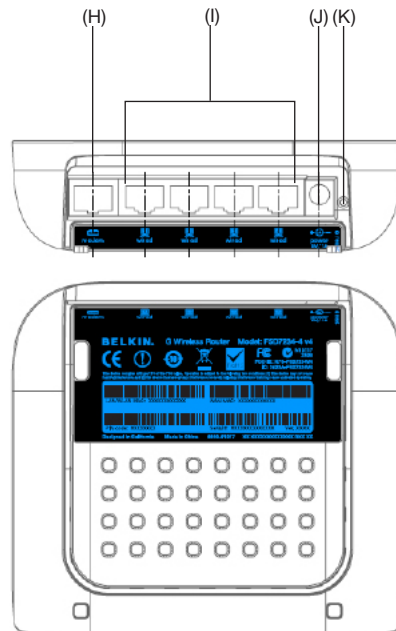
CONNECTING AND CONFIGURING YOUR ROUTER

Verify the contents of your box. You should have the following:

- Belkin G Wireless Router
- Quick Installation Guide
- Belkin Setup Assistant Software CD with User Manual
- RJ45 Ethernet Networking Cable (for connection of the Router to the modem)
- Power Supply

Modem Requirements

Your cable or DSL modem must be equipped with an RJ45 Ethernet port. Many modems have both an RJ45 Ethernet port and a USB connection. If you have a modem with both Ethernet and USB, and are using the USB connection at this time, you will be instructed to use the RJ45 Ethernet port during the installation procedure. If your modem has only a USB port, you can request a different type of modem from your ISP, or you can, in some cases, purchase a modem that has an RJ45 Ethernet port on it.

ALWAYS INSTALL YOUR ROUTER FIRST! IF YOU ARE INSTALLING NUMEROUS NETWORK DEVICES FOR THE FIRST TIME, IT IS IMPORTANT THAT YOUR ROUTER IS CONNECTED AND RUNNING BEFORE ATTEMPTING TO INSTALL OTHER NETWORK COMPONENTS SUCH AS NOTEBOOK CARDS AND DESKTOP CARDS.

Setup Assistant

Belkin has provided our Setup Assistant software to make installing your Router a simple and easy task. You can use it to get your Router up and running in minutes. The Setup Assistant requires that your Windows 2000/XP, Vista, or Mac OS X v10.4 or v10.5 computer be connected directly to your cable or DSL modem and that the Internet connection is **active and working** at the time of installation. If it is not, you must use the "Alternate Setup Method" section of this User Manual to configure your Router. Additionally, if you are using an operating system other than Windows 2000/XP, Vista, or Mac OS X v10.4 or v10.5, you must set up the Router using the "Alternate Setup Method" section of this User Manual.

[1] Make sure your DSL or cable line is plugged into your modem.

Put the Router next to your DSL or cable modem.

[2] Remove the power cord from your DSL or cable modem.

Connect the modem to the Router's "modem" port with an Ethernet cable. (Your computer might be plugged into the modem already.)

Connect your computer to the Router with another Ethernet cable (temporarily, if need be).

[3] Plug in your modem and make sure it turns on. If your modem is already on, unplug it, wait a few seconds, and plug it back in.

Plug the Router's power supply into the Router and a power outlet.

Put the CD into your computer. If the Setup Assistant doesn't run automatically, browse the CD, find the Setup Assistant icon, and run it.

IMPORTANT: Run the Setup Assistant from the computer that is directly connected to the Router from Step 2.

Note for Windows Users: If the Setup Assistant does not start up automatically, select your CD-ROM drive from "My Computer" and double-click on the file named "SetupAssistant" to start the Setup Assistant.

Select Country

Select your country from the drop-down box. Click "Begin" to continue.

Confirmation Screen

Verify that you have completed all QIG steps by checking the box to the right of the arrow. Click "Next" to continue.
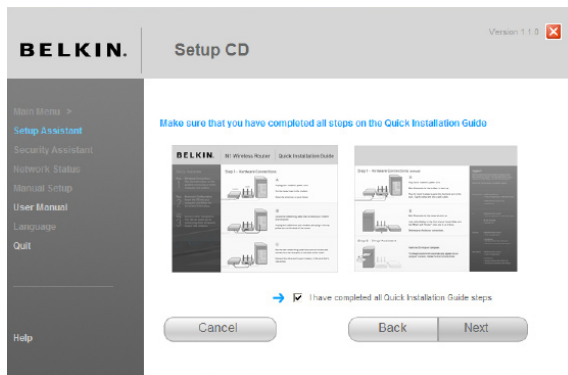
Progress Screen

Setup Assistant will show you a progress screen each time a step in the setup has been completed.

2.1 Checking Settings

The Setup Assistant will now examine your computer's network settings and gather information needed to complete the Router's connection to the Internet.
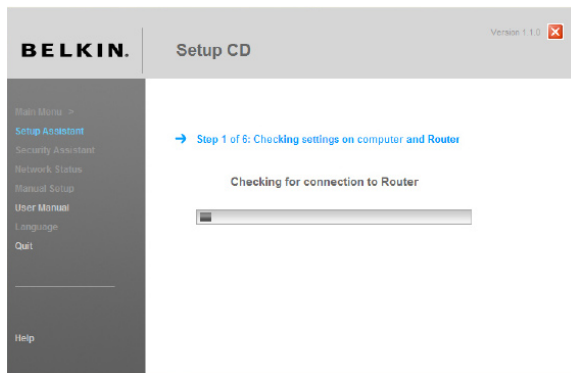
2.2 Verifying Hardware Connections

The Setup Assistant will now verify your hardware connection.

2.3 Naming your Wireless Network

The Setup Assistant will display the default wireless network name or Service Set Identifier (SSID). This is the name of your wireless network to which your computers or devices with wireless network adapters will connect. You can either use the default or change it to something unique. Write down this name for future reference.

2.4 Requesting Internet Account Info (if needed)

Select your ISP from the drop-down boxes.

CONNECTING AND CONFIGURING YOUR ROUTER

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If your Internet account requires a login and password, you will be prompted with a screen similar to the illustration below. Click "Next" to continue.

2.5 Configuring the Router

The Setup Assistant will now configure your Router by sending data to the Router and restarting it. Wait for the on-screen instructions.

Note: Do not disconnect any cable or power off the Router while the Router is rebooting. Doing so will render your Router inoperable.
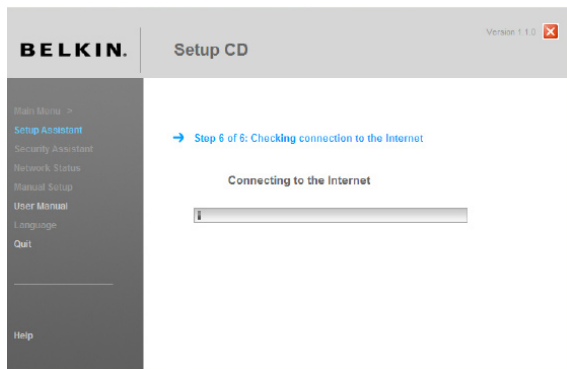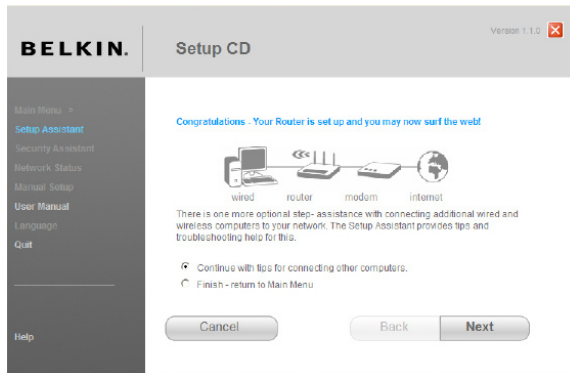
2.6 Checking Internet Connection

We are almost done. The Setup Assistant will now check your connection to the Internet.

Congratulations

You have finished installing your new Belkin Router. You will see the Congratulations screen when your Router can connect to the Internet. You can begin surfing by opening your browser and going to any website.

You can use the Setup Assistant to set up your other wired and wireless computers to connect to the Internet by clicking "Next". If you decide to add computers to your Router later, select "Finish—return to Main Menu" and then click "Next".
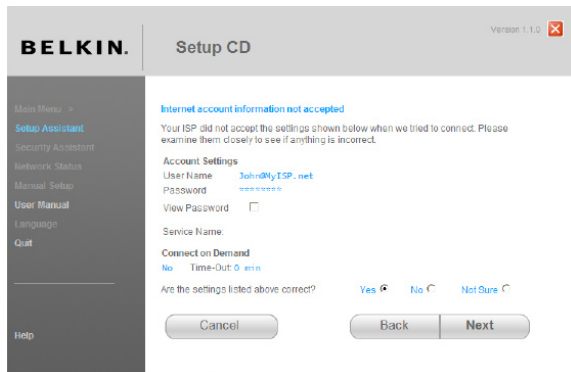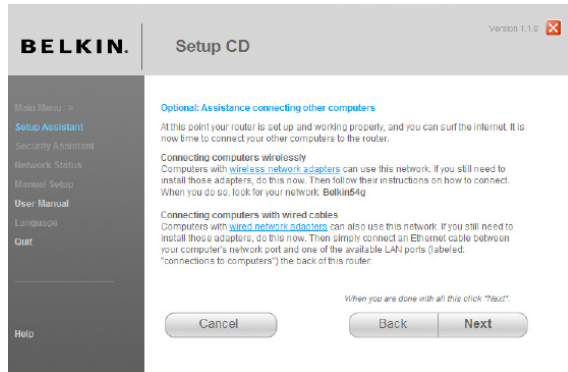
Troubleshooting

If the Setup Assistant is not able to connect to the Internet, you will see the following screen. Follow the on-screen instructions to go through the troubleshooting steps.

2.7 Optional: Assistance Connecting Other Computers

This optional step will help you to connect additional wired and wireless computers to your network. Follow the on-screen instructions.

Once you have verified that your other wired and wireless computers are properly connected, your network is set up and working. You can now surf the Internet. Click "Next" to return to the main menu.

Step 3: Set Up Wireless Security – Run the Security Assistant Software

Now that your network is set up and working, it is recommended that you turn on wireless security to prevent unauthorized access to your network from neighboring wireless-enabled computers. The Security Assistant will guide you through the process. Click "Security Assistant" and follow the on-screen instructions.

IMPORTANT: Run the Setup Assistant from the computer that is directly connected to the Router.

Progress Screen

The Security Assistant will show you a progress screen each time a step has been completed.

3.1 Picking the Security Type

Select the security type for your wireless network and click "Next" to continue.

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3.2 Creating a Network Key

Enter a network key (PSK) for your wireless network and click "Next" to continue.

3.3 Transferring the Key

After setting up your wireless security, you will have to transfer the network key to each of your wireless computers. Click on "Transfer Key" if you have a USB flash drive. Follow the on-screen instructions, or click on "Print" to print the information. Manually enter it to each wireless computer. Then, click "Next" to continue.

3.4 Verifying the Connection

If all your wireless computers are able to connect to the Router, click "Next". If you are having trouble, select "I had problem with at least one computer" and click "Next". Then, follow on-screen instructions.

Congratulations

Once you have verified that your wireless computers are properly connected, your wireless network is set up and secured. You now can run your network wirelessly and securely. Click "Finish" to take you back to the main menu.
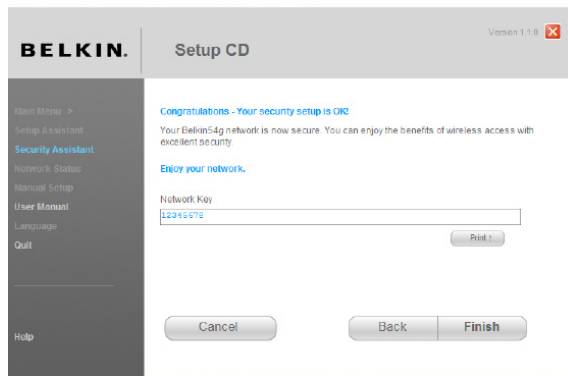
ALTERNATE SETUP METHOD

The Web-Based Advanced User Interface is a web-based tool that you can use to set up the Router if you don't want to use the Setup Assistant Software. You can also use it to manage advanced functions of the Router. From the Web-Based Advanced User Interface, you can perform the following tasks:

- View the Router's current settings and status

- Configure the Router to connect to your ISP with the settings that they provided you

- Change the current network settings such as the Internal IP address, the IP address pool, DHCP settings, and more

- Set the Router's firewall to work with specific applications (port forwarding)

- Set up security features such as client restrictions, MAC address filtering, WEP, and WPA

- Enable the DMZ feature for a single computer on your network

- Change the Router's internal password

- Enable/Disable UPnP (Universal Plug-and-Play)

- Reset the Router

- Back up your configuration settings

- Reset the Router's default settings

- Update the Router's firmware

Step 1 Set up your Computer's Network Settings to Work with a DHCP Server

See the section in this User Manual called "Manually Configuring Network Settings" for directions.

Step 2 Configure the Router Using the Web-Based Advanced User Interface

Using your Internet browser, you can access the Router's Web-Based Advanced User Interface. In your browser, type "192.168.2.1" (you do not need to type in anything else such as "http://" or "www"). Then press the "Enter" key.

Address	192.168.2.1

PLEASE NOTE: If you have difficulty accessing the Router's Web-Based Advanced User Interface, go to the section entitled "Manually Configuring Network Settings".

Logging into the Router

You will see the Router's home page in your browser window. The home page is visible to any user who wants to see it. To make any changes to the Router's settings, you have to log in. Clicking the "Login" button or clicking on any one of the links on the home page will take you to the login screen. The Router ships with no password entered. In the login screen, leave the password blank and click the "Submit" button to log in.

Logging out of the Router

One computer at a time can log into the Router for the purposes of making changes to the settings of the Router. Once a user has logged in to make changes, there are two ways that the computer can be logged out. Clicking the "Logout" button will log the computer out. The second method is automatic. The login will time out after a specified period of time. The default login time-out is 10 minutes. This can be changed from 1 to 99 minutes. For more information, see the section in this manual entitled "Changing the Login Time-Out Setting".

Login

Before you can change any settings, you need to log in with a password.
If you have not yet set a custom password, then leave this field blank and
click "Submit."

Password   [   ]

Default – leave blank

[Clear   ]   [Submit   ]

Using the Web-Based Advanced User Interface

The home page is the first page you will see when you access the Web-Based Advanced User Interface (UI). The home page shows you a quick view of the Router's status and settings. All advanced setup pages can be reached from this page.

1.   Quick-Navigation Links

You can go directly to any of the Router's UI pages by clicking directly on these links. The links are divided into logical categories and grouped by tabs to make finding a particular setting easier to find. Clicking on the purple header of each tab will show you a short description of the tab's function.

2.   Home Button

The "Home" button is available in every page of the UI. Pressing this button will take you back to the home page.

3.   Internet Status Indicator

This indicator is visible in all pages of the UI, indicating the connection status of the Router. When the indicator says "Connected" in BLUE, the Router is connected to the Internet. When the Router is not connected to the Internet, the indicator will read "no connection" in RED. The indicator is automatically updated when you make changes to the settings of the Router.

4.   Login/Logout Button

This button enables you to log in and out of the Router with the press of one button. When you are logged into the Router, this button will change to read "Logout". Logging into the Router will take you to a separate login page where you will need to enter a password. When you are logged into the Router, you can make changes to the settings. When you are finished making changes, you can log out of the Router by clicking the "Logout" button. For more information about logging into the Router, see the section called "Logging into the Router".

5.   Help Button

The "Help" button gives you access to the Router's help pages. Help is also available on many pages by clicking "more info" next to certain sections of each page.

6.   Language

This shows the active language for the User Interface. Select a desirable language by clicking one of the available languages.

7.   LAN Settings

Shows you the settings of the Local Area Network (LAN) side of the Router. Changes can be made to the settings by clicking on any one of the links (IP Address, Subnet Mask, DHCP Server) or by clicking the "LAN" "Quick Navigation" link on the left side of the screen.

8.   Features

Shows the status of the Router's Firewall and Wireless features. Changes can be made to the settings by clicking on any one of the links or by clicking the "Quick Navigation" links on the left side of the screen.

9.   Internet WAN Settings

Shows the settings of the Internet/WAN side of the Router that connects to the Internet. Changes to any of these settings can be made by clicking on the links or by clicking on the "Internet/WAN" "Quick Navigation" link on the left side of the screen.

10.   Version Info

Shows the firmware version, boot-code version, hardware version, and serial number of the Router.

11.   Page Name

The page you are on can be identified by this name. This User Manual will sometimes refer to pages by name. For instance "LAN > LAN Settings" refers to the "LAN Settings" page.

Step 3 Configure your Router for Connection to your Internet Service Provider (ISP)

The "Internet/WAN" tab is where you will set up your Router to connect to your Internet Service Provider (ISP). The Router is capable of connecting to virtually any ISP's system provided you have correctly configured the Router's settings for your ISP's connection type. Your ISP connection settings are provided to you by your ISP. To configure the Router with the settings that your ISP gave you, click "Connection Type" **(A)** on the left side of the screen. Select the connection type you use. If your ISP gave you DNS settings, clicking "DNS" **(B)** allows you to enter DNS address entries for ISPs that require specific settings. Clicking "MAC address" **(C)** will let you clone your computer's MAC address or type in a specific WAN MAC address, if required by your ISP. When you have finished making settings, the "Internet Status" indicator will read "Connected" if your Router is set up properly.

Setting your Connection Type

From the "Connection Type" page, you can select the type of connection you use. Select the type of connection you use by clicking the button **(1)** next to your connection type and then clicking "Next" **(2)**.

Setting your Internet Service Provider (ISP) Connection Type to Dynamic IP

A dynamic connection type is the most common connection type used with cable modems. Setting the connection type to "dynamic" in many cases is enough to complete the connection to your ISP. Some dynamic connection types may require a host name. You can enter your host name in the space provided if you were assigned one. Your host name is assigned by your ISP. Some dynamic connections may require that you clone the MAC address of the PC that was originally connected to the modem.

Change WAN MAC Address

If your ISP requires a specific MAC address to connect to the service, you can enter a specific MAC address or clone the current computer's MAC address through this link.

BELKIN. Router Setup Utility   Home | Help | Logout Internet Status: No Connection

LAN Setup
LAN Settings
DHCP Client List

Internet WAN
Connection Type
DNS
MAC Address

Wireless
Channel and SSID
Security
Wi-Fi Protected Setup
Use as Access Point
Wireless Bridging

Firewall
Virtual Servers
Client IP Filters

WAN > Connection Type > Dynamic IP

To enter your Dynamic IP settings, type in your information below and click "Apply changes". More Info

Host Name >

Host Name = A name that some Internet Service Providers require for connection to their system.

Change WAN MAC Address

[Clear Changes]   [Apply Changes]

BELKIN. Router Setup Utility   Home | Help | Logout Internet Status: No Connection

LAN Setup
LAN Settings
DHCP Client List

Internet WAN
Connection Type
DNS
MAC Address

Wireless
Channel and SSID
Security
Wi-Fi Protected Setup
Use as Access Point
Wireless Bridging

Firewall
Virtual Servers
Client IP Filters

WAN > MAC address

Some ISPs require that you clone (copy) the MAC address of your computer's network card into the Router. If you are not sure then simply clone the MAC address of the computer that was originally connected to the modem before installing the Router. Cloning your MAC address will not cause any problems with your network. More Info

Wan Mac Address >   00 . 17 . 3f . ef . 7c . 73

Clone Computer's MAC Address >   [Clone]

[Clear Changes]   [Apply Changes]

Setting your Internet Service Provider (ISP) Connection Type to Static IP

A static IP address connection type is less common than other connection types. If your ISP uses static IP addressing, you will need your IP address **(1)**, subnet mask **(2)**, and ISP gateway address **(3)**. This information is available from your ISP or on the paperwork that your ISP left with you. Type in your information, then click "Apply Changes". After you apply the changes, the "Internet Status" indicator will read "Connected" if your Router is set up properly.

1. **IP Address**

   Provided by your ISP. Enter your IP address here.

2. **Subnet Mask**

   Provided by your ISP. Enter your subnet mask here.

3. **ISP Gateway Address**

   Provided by your ISP. Enter the ISP gateway address here.

Setting your ISP Connection Type to PPPoE

Most DSL providers use PPPoE as the connection type. If you use a DSL modem to connect to the Internet, your ISP may use PPPoE to log you into the service. If you have an Internet connection in your home or small office that doesn't require a modem, you may also use PPPoE.

Your connection type is PPPoE if:

- Your ISP gave you a user name and password, which is required to connect to the Internet;

- Your ISP gave you software such as WinPOET or Enternet300 that you use to connect to the Internet; or

- You have to double-click on a desktop icon other than your browser to get on the Internet.

1.   User Name

This space is provided to type in your user name that was assigned by your ISP.

2.   Password

Type in your password and re-type it into the "Retype Password" box to confirm it.

3.   Service Name

A service name is rarely required by an ISP. If you are not sure if your ISP requires a service name, leave this blank.

4.   MTU

The MTU setting should never be changed unless your ISP gives you a specific MTU setting. Making changes to the MTU setting can cause problems with your Internet connection including disconnection from the Internet, slow Internet access, and problems with Internet applications working properly.

5.   Maximum Idle Time

This feature is used to automatically disconnect the Router from your ISP when there is no activity for a specified period of time. For instance, placing a check mark next to this option and entering "5" into the minute field will cause the Router to disconnect from the Internet after five minutes of no Internet activity. This option should be used if you pay for your Internet service by the minute.

ALTERNATE SETUP METHOD

Setting your Internet Service Provider (ISP) Connection Type to Point-to-Point Tunneling Protocol (PPTP)

[European Countries Only]. Some ISPs require a connection using PPTP protocol, a type of connection most common in European countries. This sets up a direct connection to the ISP's system. Type in the information provided by your ISP in the space provided. When you have finished, click "Apply Changes". After you apply the changes, the "Internet Status" indicator will read "Connected" if your Router is set up properly.

1.   User ID

Provided by your ISP. Enter your PPTP User ID here.

2.   Password

Provided by your ISP. Type in your password here.

3.   PPTP Gateway

Provided by your ISP. Enter your PPTP gateway/service IP address here.

4.   Idle Time Out

This feature is used to automatically disconnect the Router from your ISP when there is no activity for a specified period of time. For instance, entering "10" into the minute field will cause the Router to disconnect from the Internet after 10 minutes of no Internet activity. This option should be used if you pay for your Internet service by the minute.

5.   Get IP by DHCP

Select the method of getting your Internet IP address from your ISP server. It depends on your ISP service type. Check this box if your ISP will automatically assign an IP address for you. If you are not sure of this, please contact your ISP's technical-support hotline. If your ISP provided an IP address for you, enter the information in the following fields.

a. IP Address

Provided by your ISP. Enter the IP address here.

b. Subnet Mask

Provided by your ISP. Enter the IP address here.

c. Default Gateway

Provided by your ISP. Enter the gateway address here.

**Setting your Connection Type if you are a Telstra®
BigPond/OptusNet Cable User**

Follow the on-screen steps and click "Apply Changes" to complete
your setup.

Setting Custom Domain Name Server (DNS) Settings

A "Domain Name Server" is a server located on the Internet that
translates Universal Resource Locators (URLs) like "www.belkin.com"
into IP addresses. Many Internet Service Providers (ISPs) do not require
you to enter this information into the Router. The "Automatic from ISP"
box should be checked if your ISP did not give you a specific DNS
address. If you are using a static IP connection type, then you may
need to enter a specific DNS address and secondary DNS address for
your connection to work properly. If your connection type is dynamic
or PPPoE, it is likely that you do not have to enter a DNS address.
Leave the "Automatic from ISP" box checked. To enter the DNS
address settings, uncheck the "Automatic from ISP" box and enter your
DNS entries in the spaces provided. Click "Apply Changes" to save
the settings.

Configuring your WAN Media Access Controller (MAC) Address

All network components including cards, adapters, and routers, have a unique "serial number" called a MAC address. Your Internet Service Provider may record the MAC address of your computer's adapter and only let that particular computer connect to the Internet service. When you install the Router, its own MAC address will be "seen" by the ISP and may cause the connection not to work. Belkin has provided the ability to clone (copy) the MAC address of the computer into the Router. This MAC address, in turn, will be seen by the ISP's system as the original MAC address and will allow the connection to work. If you are not sure whether your ISP needs to see the original MAC address, simply clone the MAC address of the computer that was originally connected to the modem. Cloning the address will not cause any problems with your network.

Cloning your MAC Address

To clone your MAC address, make sure that you are using the computer that was ORIGINALLY CONNECTED to your modem before the Router was installed. Click the "Clone" button **(1)**. Click "Apply Changes". Your MAC address is now cloned to the Router.

Entering a Specific MAC Address

In certain circumstances you may need a specific WAN MAC address. You can manually enter one in the "MAC Address" page. Type a MAC address in the spaces provided **(2)** and click "Apply Changes" to save the changes. The Router's WAN MAC address will now be changed to the MAC address you specified.

USING THE WEB-BASED ADVANCED USER INTERFACE

Using your Internet browser, you can access the Router's Web-Based Advanced User Interface. In your browser, type "192.168.2.1" (do not type in anything else such as "http://" or "www"), then press the "Enter" key.

You will see the Router's home page in your browser window.

Viewing the LAN Settings

Clicking on the header of the "LAN Setup" tab **(1)** will take you to its header page. A quick description of the functions can be found here. To view the settings or make changes to any of the LAN settings, click on "LAN Settings" **(2)**, or to view the list of connected computers, click on "DHCP Client List" **(3)**.

Changing LAN Settings

All settings for the internal LAN setup of the Router can be viewed and changed here.

1.   IP Address

The "IP address" is the internal IP address of the Router. The default IP address is "192.168.2.1". To access the Web-Based Advanced User Interface, type this IP address into the address bar of your browser. This address can be changed if needed. To change the IP address, type in the new IP address and click "Apply Changes". The IP address you choose should be a non-routable IP. Examples of a non-routable IP are: 192.168.x.x (where x is anywhere between 0 and 255), and 10.x.x.x (where x is anything between 0 and 255).

2.   Subnet Mask

There is no need to change the subnet mask. This is a unique, advanced feature of your Belkin Router. It is possible to change the subnet mask if necessary; however, do **NOT** make changes to the subnet mask unless you have a specific reason to do so. The default setting is "255.255.255.0".

3.   DHCP Server

The DHCP server function makes setting up a network very easy by assigning IP addresses to each computer on the network automatically. The default setting is "On". The DHCP server can be turned OFF if necessary; however, in order to do so you must manually set a static IP address for each computer on your network. To turn off the DHCP server, select "Off" and click "Apply Changes".

4.   IP Pool

The range of IP addresses set aside for dynamic assignment to the computers on your network. The default is 2–100 (99 computers). If you want to change this number, you can do so by entering a new starting and ending IP address and clicking on "Apply Changes". The DHCP server can assign 100 IP addresses automatically. This means that you cannot specify an IP address pool larger than 100 computers. For example, starting at 50 means you have to end at 150 or lower so as not to exceed the 100-client limit. The starting IP address must be lower in number than the ending IP address.

5.   Lease Time

The length of time the DHCP server will reserve the IP address for each computer. We recommend that you leave the lease time set to "Forever". The default setting is "Forever", meaning that any time a computer is assigned an IP address by the DHCP server, the IP address will not change for that particular computer. Setting lease times for shorter intervals such as one day or one hour frees IP addresses after the specified period of time. This also means that a particular computer's IP address may change over time. If you have set any of the other advanced features of the Router such as DMZ or client IP filters, these are dependent on the IP address. For this reason, you will not want the IP address to change.

6.   Local Domain Name

The default setting is "Belkin". You can set a local domain name (network name) for your network. There is no need to change this setting unless you have a specific advanced need to do so. You can name the network anything you want such as "MY NETWORK".

Viewing the DHCP Client List Page

You can view a list of the computers (known as clients), which are connected to your network. You are able to view the IP address **(1)** of the computer, the host name **(2)** (if the computer has been assigned one), and the MAC address **(3)** of the computer's network interface card (NIC). Pressing the "Refresh" **(4)** button will update the list. If there have been any changes, the list will be updated.

Configuring the Wireless Network Settings

Clicking on the header of the "Wireless" tab will take you to the "Wireless" header page. Under the "Wireless" tab, there are links that allow you to make changes to the wireless network settings.

Changing the Wireless Network Name (SSID)

To identify your wireless network, a name called the SSID (Service Set Identifier) is used. The default SSID of the Router is "belkin54g". You can change this to anything you want to or you can leave it unchanged. If there are other wireless networks operating in your area, you will want to make sure that your SSID is unique (does not match that of another wireless network in the area). To change the SSID, type the SSID that you want to use in the "SSID" field **(1)** and click "Apply Changes" **(2)**. The change is immediate. If you make a change to the SSID, your wireless-equipped computers may also need to be reconfigured to connect to your new network name. Refer to the documentation of your wireless network adapter for information on making this change.

Wireless > Channel and SSID

To make changes to the wireless settings of the router, make the changes here. Click "Apply Changes" to save the settings. More info

SSID >	belkin54g —— (1)
SSID Broadcast >	● Enable ○ Disable
Wireless Mode >	Mixed (11b+11g) ▼
Wireless Channel >	Auto ▼ (current channel: 6)
Extend Range >	○ Enable ● Disable
Protected Mode >	OFF ▼
WMM Mode >	ON ▼
Turbo Mode >	Disable ▼

[Clear Changes] [Apply Changes] —— (2)

SSID Broadcast Feature

Note: This advanced feature should be employed by advanced users only.

For security, you can choose not to broadcast your network's SSID. Doing so will keep your network name hidden from computers that are scanning for the presence of wireless networks. To turn off the broadcast of the SSID, select "Disable", and then click "Apply Changes". Each computer now needs to be set to connect to your specific SSID; an SSID of "ANY" will no longer be accepted. Refer to the documentation of your wireless network adapter for information on making this change.

Using the Wireless Mode Switch

Your Router can operate in three different wireless modes: "Mixed (11b+11g)", "11g Only", "11b Only", and "Off". The different modes are explained below.

Wireless > Channel and SSID

To make changes to the wireless settings of the router, make the changes here. Click "Apply Changes" to save the settings. More Info

SSID >	belkin54g
SSID Broadcast >	⊙ Enable ○ Disable
Wireless Mode >	Mixed (11b+11g) ▾
	Mixed (11b-11g)
	11g Only
Wireless Channel >	11b Only
	Off
Extend Range >	
Protected Mode >	OFF ▾
WMM Mode >	ON ▾
Turbo Mode >	Disable ▾

Clear Changes   Apply Changes

Mixed (11b+11g) Mode

In this mode, the Router is compatible with 802.11b and 802.11g wireless clients simultaneously. This is the factory default mode and ensures successful operation with all Wi-Fi-compatible devices. If you have a mix of 802.11b and 802.11g clients in your network, we recommend setting the Router to mixed (11b+11g) mode. This setting should only be changed if you have a specific reason to do so.

11g Only Mode

11g mode works with 802.11g clients only. This mode is recommended only if you want to prevent 802.11b clients from accessing your network. To switch modes, select the desired mode from the "Wireless Mode" drop-down box. Then, click "Apply Changes".

11b Only Mode

We recommend you DO NOT use this mode unless you have a very specific reason to do so. This mode exists only to solve unique problems that may occur with some 802.11b client adapters and is NOT necessary for interoperability of 802.11g and 802.11b standards.

When to Use 11b Only Mode

In some cases, older 802.11b clients may not be compatible with 802.11g wireless. These adapters tend to be of inferior design and may use older drivers or technology. Switching to this mode can solve problems that sometimes occur with these clients. If you suspect that you are using a client adapter that falls into this category of adapters, first check with the adapter vendor to see if there is a driver update. If there is no driver update available, switching to b only mode may fix your problem. **Please note that switching to 11b only mode will decrease 802.11g performance.**

Off

This option will turn off wireless functionality.

Changing the Wireless Channel

There are a number of operating channels you can choose from. In the United States, there are 11 channels. In Australia, the United Kingdom, and most of Europe, there are 13 channels. In a small number of other countries, there are other channel requirements. Your Router is configured to operate on the proper channels for the country you reside in. The default channel is "Auto". The channel can be changed if needed. If there are other wireless networks operating in your area, your network should be set to operate on a channel that is different than the other wireless networks. For best performance, use a channel that is at least five channels away from the other wireless network. For instance, if another network is operating on channel 11, then set your network to channel 6 or below. To change the channel, select the channel from the drop-down list. Click "Apply Changes".

Wireless > Channel and SSID

To make changes to the wireless settings of the router, make the changes here. Click "Change" to save the settings. More Info

SSID >	belkin54g
SSID Broadcast >	⊙ Enable ○ Disable
Wireless Mode >	Mixed (11b+11g) ▾
Wireless Channel >	Auto ▾ (current channel 6)
Extend Range >	
Protected Mode >	
WMM Mode >	
Turbo Mode >	

Auto
1
2
3
4
5
6
7
8
9
10
11

Protected Mode Switch

As part of the 802.11g specification, Protected mode ensures proper operation of 802.11g clients and access points when there is heavy 802.11b traffic in the operating environment. When Protected mode is ON, 802.11g scans for other wireless network traffic before it transmits data. Therefore, using this mode in environments with HEAVY 802.11b traffic or interference achieves best performance results. If you are in an environment with very little—or no—other wireless network traffic, your best performance will be achieved with Protected mode OFF.

Wireless > Channel and SSID

To make changes to the wireless settings of the router, make the changes here. Click "Apply Changes" to save the settings. More Info

SSID >	belkin54g
SSID Broadcast >	⊙ Enable ○ Disable
Wireless Mode >	Mixed (11b+11g) ▼
Wireless Channel >	Auto ▼ (current channel: 6)
Extend Range >	○ Enable ⊙ Disable
Protected Mode >	OFF ▼
	OFF
	ON
WMM Mode >	
Turbo Mode >	Disable ▼

Clear Changes   Apply Changes

Securing your Wi-Fi® Network

Here are a few different ways you can maximize the security of your wireless network and protect your data from prying eyes and ears. This section is intended for the home, home office, and small office user.

At the time of this User Manual's publication, there are four encryption methods available.

Name	64-Bit Wired Equivalent Privacy	128-Bit Wired Equivalent Privacy	Wi-Fi Protected Access-TKIP	Wi-Fi Protected Access 2
Acronym	64-bit WEP	128-bit WEP	WPA-TKIP/AES (or just WPA)	WPA2-AES (or just WPA2)
Security	Good	Better	Best	Best
Features	Static keys	Static keys	Dynamic key encryption and mutual authentication	Dynamic key encryption and mutual authentication
	Encryption keys based on RC4 algorithm (typically 40-bit keys)	More secure than 64-bit WEP using a key length of 104 bits plus 24 additional bits of system-generated data	TKIP (Temporal Key Integrity Protocol) added so that keys are rotated and encryption is strengthened	AES (Advanced Encryption Standard) does not cause any throughput loss

Wired Equivalent Privacy (WEP)

WEP is a common protocol that adds security to all Wi-Fi-compliant wireless products. WEP was designed to give wireless networks the equivalent level of privacy protection as a comparable wired network.

64-Bit WEP

64-bit WEP was first introduced with 64-bit encryption, which includes a key length of 40 bits plus 24 additional bits of system-generated data (64 bits total). Some hardware manufacturers refer to 64-bit as 40-bit encryption. Shortly after the technology was introduced, researchers found that 64-bit encryption was too easy to decode.

128-Bit WEP

As a result of 64-bit WEP's potential security weaknesses, a more secure method of 128-bit encryption was developed. 128-bit encryption includes a key length of 104 bits plus 24 additional bits of system-generated data (128 bits total). Some hardware manufacturers refer to 128-bit as 104-bit encryption.

Most of the new wireless equipment in the market today supports both 64-bit and 128-bit WEP encryption, but you might have older equipment that only supports 64-bit WEP. All Belkin wireless products will support both 64-bit and 128-bit WEP.

Encryption Keys

After selecting either the 64-bit or 128-bit WEP encryption mode, it is critical that you generate an encryption key. If the encryption key is not consistent throughout the entire wireless network, your wireless networking devices will be unable to communicate with one another on your network and you will not be able to successfully communicate within your network.

You can enter your key by typing in the hex key manually, or you can type in a passphrase in the "Passphrase" field and click "Generate" to create a key. A hex (hexadecimal) key is a combination of numbers and letters from A–F and 0–9. For 64-bit WEP, you need to enter 10 hex keys. For 128-bit WEP, you need to enter 26 hex keys.

For instance:

AF 0F 4B C3 D4 = 64-bit WEP key

C3 03 0F AF 0F 4B B2 C3 D4 4B C3 D4 E7 = 128-bit WEP key

The WEP passphrase is NOT the same as a WEP key. Your Router uses this passphrase to generate your WEP keys, but different hardware manufacturers might have different methods on generating the keys. If you have multiple vendors' equipment in your network, the easiest thing to do is to use the hex WEP key from your Router or access point and enter it manually into the hex WEP key table in your Router's configuration screen.

Wi-Fi Protected Access™ (WPA™)

WPA is a new Wi-Fi standard that was designed to improve upon the security features of WEP. To use WPA security, the drivers and software of your wireless equipment must be upgraded to support WPA. These updates will be found on the wireless vendor's website. There are two types of WPA security: WPA-PSK and WPA2.

WPA-PSK uses what is known as a pre-shared key as the network key. A network key is basically a password that is between eight and 63 characters long. It can be a combination of letters, numbers, or characters. Each client uses the same network key to access the network. Typically, this is the mode that will be used in a home environment.

WPA2™ requires Advanced Encryption Standard (AES) for encryption of data, which offers much greater security than WPA. WPA uses both Temporal Key Integrity Protocol (TKIP) and (AES) for encryption.

Sharing the Same Network Keys

Most Wi-Fi products ship with security turned off. So once you have your network working, you need to activate WEP or WPA and make sure your wireless networking devices are sharing the same network key.

The following diagram shows the effect of not having the correct network key throughout your network.
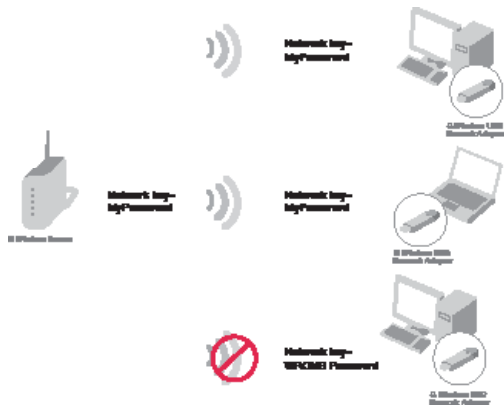
The network adapter cannot access the network because it uses a different network key than the one configured on the wireless router.

Using a Hexadecimal Key

A hexadecimal key is a combination of numbers and letters from A–F and 0–9. 64-bit keys are five two-digit numbers. 128-bit keys are 13 two-digit numbers.

For instance:

AF 0F 4B C3 D4 = 64-bit key

C3 03 0F AF 0F 4B B2 C3 D4 4B C3 D4 E7 = 128-bit key

In the boxes below, make up your key by writing in two characters between A–F and 0–9 in each box. You will use this key to program the encryption settings on your Router and your wireless computers.

Note to Mac users: Original Apple® AirPort® products support 64-bit encryption only. Apple AirPort 2 products can support 64-bit or 128-bit encryption. Please check your product to see which version you are using. If you cannot configure your network with 128-bit encryption, try 64-bit encryption.

WEP Setup
64-Bit WEP Encryption

1. Select "WEP" from the "Security" menu's "Allowed Client Type".

2. Select "64 bit" from the drop-down menu in "WEP Mode".

3. After selecting your WEP encryption mode, you can enter your key by typing in the hex key manually, or you can type in your passphrase. Click "Generate" to generate four different hex keys.

A hex (hexadecimal) key is a combination of numbers and letters from A–F and 0–9. For 64-bit WEP, you need to enter 10 hex keys.

For instance:

AF 0F 4B C3 D4 = 64-bit WEP key

Wireless > Security

The router can transmit your data securely over the wireless network. Matching security mechanisms must be setup on your router and wireless client devices. You can choose the allowed security mechanisms on this page and configure them in the sub-pages. More Info

Allowed Client Type >	WEP ▼
WEP Mode >	64 bit ▼
Key Entry Method >	HEX ▼

Key 1 >	_____
Key 2 >	_____
Key 3 >	_____
Key 4 >	_____
Default Key ID >	1 ▼
PassPhrase >	_____ [Generate]

[Apply Changes] [Clear Changes]

WARNING: If you are configuring the G Wireless Router or access point from a computer with a wireless client, you will need to reconnect to the Router and set up the connection with the security key you've set up.

128-Bit WEP Encryption

Note to Mac users: The passphrase option will not operate with Apple AirPort. To configure encryption for your Mac computer, set the encryption using the manual method described in the next section.

1. Select "WEP" from the "Security" menu's "Allowed Client Type".

2. Select "128 bit" from the drop-down menu in "WEP Mode".

3. After selecting your WEP encryption mode, you can enter your key by typing in the hex key manually, or you can put a check mark in "Passphrase", then type in your passphrase. Click "Apply Changes" to generate four different hex keys.

A hex (hexadecimal) key is a combination of numbers and letters from A–F and 0–9. For 128-bit WEP, you need to enter 26 hex keys.

For instance:

C3 03 0F AF 0F 4B B2 C3 D4 4B C3 D4 E7 = 128-bit WEP key

Wireless > Security

The router can transmit your data securely over the wireless network. Matching security mechanisms must be setup on your router and wireless client devices. You can choose the allowed security mechanism. The below and configure them in the sub-pages. More info

Allowed Client Type >	WEP ▼
WEP Mode >	128 bit ▼
Key Entry Method >	HEX ▼
Key 1 >	
Key 2 >	
Key 3 >	
Key 4 >	
Default Key ID >	1 ▼
PassPhrase >	[ ] Generate

Apply Changes   Clear Changes

WARNING: If you are configuring the G Wireless Router or access point from a computer with a wireless client, you will need to reconnect to the Router and set up the connection with the security key you've set up.

Changing the Wireless Security Settings

Your Router is equipped with the latest security standard called Wi-Fi Protected Access 2 (WPA2) and the legacy security standard called Wired Equivalent Privacy (WEP). Your Router also supports the Wi-Fi Protected Setup (WPS) specification, which simplifies the setup of a wireless network. WPS uses familiar methodologies, such as typing in a Personal Identification Number (PIN) or pushing a button, to enable users to automatically configure network names and strong WPA/WPA2 data encryption and authentication. By default, wireless security is disabled. To enable security, you will need to determine which standard you want to use. To access the security settings, click "Security" on the "Wireless" tab.

Using Wi-Fi Protected Setup

WPS uses WPA2 (described below) for encryption. It does not provide additional security, but rather, standardizes the method for securing your wireless network. You may use either the Push Button Configuration (PBC) method or PIN method to allow a device access to your wireless network. Conceptually, the two methods work as follows:

PBC: Click the "Start PBC" button located on the Wi-Fi Protected Setup page. Then, initiate the WPS procedure on the client device within two minutes. Refer to your client's documentation on this procedure. Clicking the "Start PBC" button will automatically enable WPS. The client has now been securely added to your wireless network.

PIN: The client device has a PIN number (either four or eight digits) that is associated with WPS. Enable WPS through the GUI. Enter the client's PIN into the Router's internal registrar (accessed through this GUI). The client will be automatically enrolled into your wireless network within two minutes.

1. Wi-Fi Protected Setup (WPS): Enabled or Disabled.

2. Personal Identification Number (PIN) Method: In this method, a wireless client wishing to access your network must supply an 8-digit PIN to the Router. After clicking "Enroll", you must start the WPS handshaking procedure from the client within two minutes.

3. Router PIN: If an external registrar is available, you may enter in the Router's PIN to the registrar. Click "Generate New PIN" to change the PIN from the default value. Click "Restore Default PIN" to reset the PIN value.

4. Push Button Configuration (PBC) Method: PBC is an alternate method to connect to a WPS network. Click the "Start PBC" button to start this process. After clicking "Start PBC", you must start the WPS handshaking procedure from the client within two minutes.

5. Manual Configuration Method: This section lists the current security settings to set up in your client devices.

The Router features WPA2, which is the second generation of the WPA-based 802.11i standard. It offers a higher level of wireless security by combining advanced network authentication and stronger Advanced Encryption Standard (AES) encryption methods.

WPA Setup

Note: To use WPA security, all your clients must be upgraded to drivers and software that support it. At the time of this User Manual's publication, a security patch download is available, for free, from Microsoft®. This patch works only with the Windows XP operating system. You also need to download the latest driver for your Belkin Wireless G Desktop or Notebook Network Card from the Belkin support site. Other operating systems are not supported at this time. Microsoft's patch only supports devices with WPA-enabled drivers such as Belkin 802.11g products.

WPA uses a so-called pre-shared key as the security key. A pre-shared key is a password that is between eight and 63 characters long. It can be a combination of letters, numbers, and other characters. Each client uses the same key to access the network. Typically, this mode will be used in a home environment.

WPA2 is the second generation of WPA, offering a more advanced encryption technique over WPA.

Setting WPA/WPA2

1. Select "WPA/WPA2" from the "Allowed Client Type" drop-down box.

2. Select "Password(PSK)" from the "Authentication" drop-down box. Then, select "Passphrase(8~63 characters)" from the "Password(PSK) type" drop-down box.

3. Enter your pre-shared key. This can be from eight to 63 characters and can be letters, numbers, or symbols. This same key must be used on all of the clients that you set up. This pre-shared key will allow users full access to your network including shared files and printers.

4. Click "Apply Changes" to finish. You must now set all clients to match these settings.

Guest Access (Optional)

The guest pre-shared key allows guest users Internet-only access to restrict them from entering your network and having access to files on your PCs. Enter your pre-shared key for guest access. This can be from eight to 63 characters and can be letters, numbers, or symbols. Click "Apply Changes" to finish.

Wireless > Security

The router can send your data securely over the wireless network. Matching security mechanisms must be setup on your router and wireless client devices. You can choose the allowed security mechanism on this page and configure them in the sub-pages. More info

Allowed Client Type >	WPA/WPA2 ▾
Authentication >	Password(PSK) ▾
Password(PSK) type >	Passphrase (8~63 characters) ▾
Password(PSK) >	[ ]

☑ Obscure PSK

To enable Guest Access which allows guests access to only the internet connection and not the local network please enter a password below for quest to use

Guest Password(PSK) > [   ]

[Apply Changes] [Clear Changes]

Setting up WPA for Wireless Desktop and Wireless Notebook Cards that are NOT Manufactured by Belkin

If you do NOT have a Belkin WPA Wireless Desktop or Wireless Notebook Card and it is not equipped with WPA-enabled software, a file from Microsoft called "Windows XP Support Patch for Wireless Protected Access" is available for free download.

Please Note: The file that Microsoft has made available works only with Windows XP. Other operating systems are not supported at this time.

Important: You also need to ensure that the wireless card manufacturer supports WPA and that you have downloaded and installed the latest driver from their support site.

Supported Operating Systems:

• Windows XP Professional

• Windows XP Home Edition

Setting up Windows XP Wireless Network Utility to use WPA-PSK

In order to use WPA-PSK, ensure you are using the Windows Wireless Network Utility by doing the following:

1. Under Windows XP, click "Start > Control Panel > Network Connections".

2. Right-click on "Wireless Network Connection Properties" and select "Properties".

3. Clicking on the "Wireless Networks" tab will display the following screen. Ensure the "Use Windows to configure my wireless network settings" box is checked.
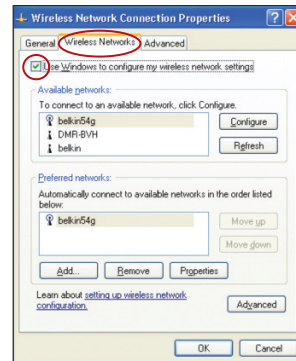
4. Under the "Wireless Networks" tab, click the "Configure" button and you will see the following screen.
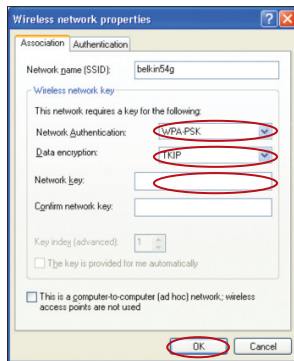
5. For a home or small business user, select "WPA-PSK" under "Network Authentication".

Note: Select "WPA" if you are using this computer to connect to a corporate network that supports an authentication server such as a radius server. Please consult your network administrator for further information.

6. Select "TKIP" or "AES" under "Data Encryption". This setting will have to be identical to the Router that you set up.

7. Type in your encryption key in the "Network key" box.

Important: Enter your pre-shared key. This can be from eight to 63 characters and can be letters, numbers, or symbols. This same key must be used on all of the clients that you set up.

8. Click "OK" to apply settings.

Using the Access Point Mode

Note: This advanced feature should be employed by advanced users only. The Router can be configured to work as a wireless network access point. Using this mode will defeat the NAT IP sharing feature and DHCP server. In Access Point (AP) mode, the Router will need to be configured with an IP address that is in the same subnet as the rest of the network that you will bridge to. The default IP address is 192.168.2.254 and subnet mask is 255.255.255.0. These can be customized for your need.

1. Enable the AP mode my selecting "Enable" in the "Use as Access Point only" page. When you select this option, you will be able to change the IP settings.

2. Set your IP settings to match your network. Click "Apply Changes".

3. Connect a cable from the "Modem" port on the Router to your existing network.

The Router is now acting as an access point. To access the Router's Web-Based Advanced User Interface again, type the IP address you specified into your browser's navigation bar. You can set the encryption settings, MAC address filtering, SSID, and channel normally.

Configuring the Firewall

Your Router is equipped with a firewall that will protect your network from a wide array of common hacker attacks including:

*   IP Spoofing
*   SYN flood
*   Land Attack
*   UDP flooding
*   Ping of Death (PoD)
*   Tear Drop Attack
*   Denial of Service (DoS)
*   ICMP defect
*   IP with zero length
*   RIP defect
*   Smurf Attack
*   Fragment flooding
*   TCP Null Scan

The firewall also masks common ports that are frequently used to attack networks. These ports appear to be "Stealth", meaning that for all intents and purposes, they do not exist to a would-be hacker. You can turn the firewall function off if needed; however, while disabling the firewall protection will not leave your network completely vulnerable to hacker attacks, it is recommended that you leave the firewall enabled.

Firewall >

Your Router is equipped with a firewall that will protect your network from a wide array of common hacker attacks including Ping of Death (PoD) and Denial of Service (DoS) attacks. You can turn the firewall function off if needed. Turning off the firewall protection will not leave your network completely vulnerable to hacker attacks, but it is recommended that you turn the firewall on whenever possible.

Firewall Enable / Disable >   ○ Disable ● Enable

[Clear Changes]   [Apply Changes]

Configuring Internal Forwarding Settings

The "Virtual Servers" function will allow you to route external (Internet) calls for services such as a web server (port 80), FTP server (Port 21), or other applications through your Router to your internal network. Since your internal computers are protected by a firewall, computers outside your network (over the Internet) cannot get to them because they cannot be "seen." You will need to contact the application vendor to find out which port settings you need.

Entering Settings into the Virtual Server

To enter settings, enter the IP address in the space provided for the internal (server) machine, and the port(s) required to pass. Then select the port type (TCP or UDP), port number, check the "Enable" box, and click "Set". Opening ports in your firewall can pose a security risk. You can enable and disable settings very quickly. It is recommended that you disable the settings when you are not using a specific application.
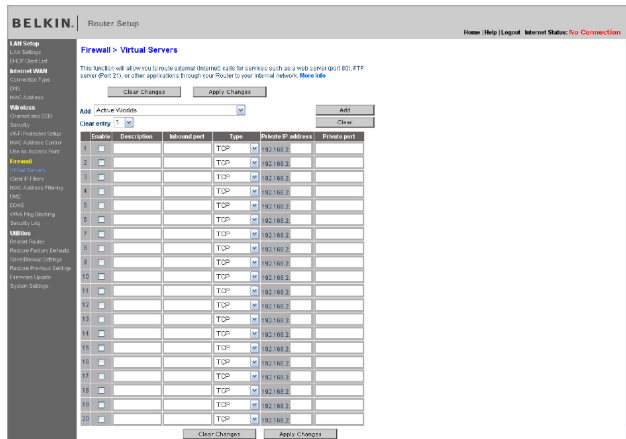
Setting Client IP Filters

The Router can be configured to restrict access to the Internet, email, or other network services at specific days and times. Restriction can be set for a single computer, a range of computers, or multiple computers.

To restrict Internet access to a single computer, for example, enter the IP address of the computer to which you wish to restrict access in the IP fields. Next, enter "80" in both the port fields. Select "Both". Select "Block". You can also select "Always" to block access all of the time. Select the day to start on top, the time to start on top, the day to end on the bottom, and the time to stop on the bottom. Select "Enable". Click "Apply Changes". The computer at the IP address you specified will now be blocked from Internet access at the times you specified. Note: Be sure you have selected the correct time zone under "Utilities > System Settings > Time Zone".

Setting MAC Address Filtering

The MAC address filter is a powerful security feature that allows you to specify which computers are allowed on the network. Any computer attempting to access the network that is not specified in the filter list will be denied access. When you enable this feature, you must enter the MAC address of each client (computer) on your network to allow network access to each.

To enable this feature, select "MAC Address Filtering" and click "Enable" **(1)**. Next, select the MAC address you would like to add to the list from the drop-down menu of currently connected computers, click "Copy to", and select the slot to which to add the MAC address **(2)**. You can also manually enter the MAC address in the space provided **(3)**. Click "Apply Changes" to save the settings. You can have a MAC-address-filtering list of up to 32 computers.
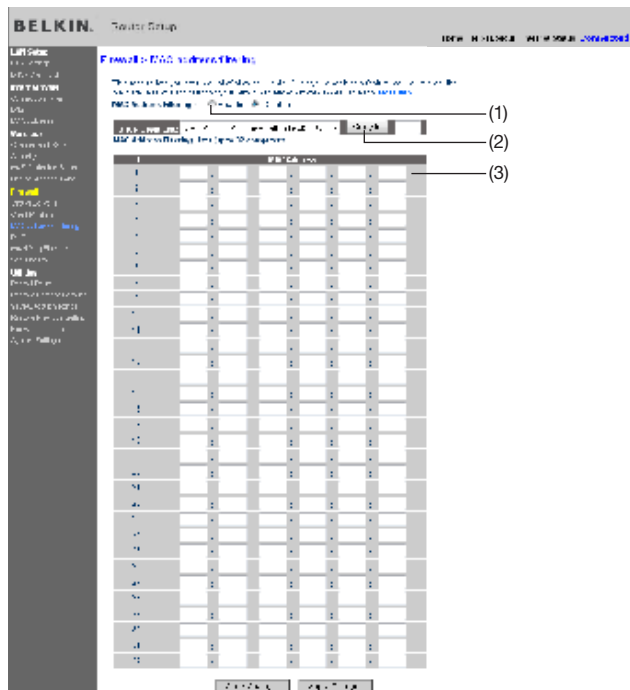
Enabling the Demilitarized Zone (DMZ)

The DMZ feature allows you to specify one computer on your network to be placed outside of the firewall. This may be necessary if the firewall is causing problems with an application such as a game or video conferencing application. Use this feature on a temporary basis. The computer in the DMZ is NOT protected from hacker attacks. Note: If your ISP subscription provides you with additional public (WAN) IP addresses, additional computers can be placed outside the firewall provided each computer uses a different public (WAN) IP.

To put a computer in the DMZ, enter the last digits of its IP address in the IP field and select "Enable". Click "Apply Changes" for the change to take effect.

Using Dynamic DNS

The Dynamic DNS service allows you to alias a dynamic IP address to a static host name in any of the many domains DynDNS.org offers, allowing your network computers to be more easily accessed from various locations on the Internet. DynDNS.org provides this service, for up to five host names, free to the Internet community.

The Dynamic DNS^{SM} service is ideal for a home website, file server, or to make it easy to access your home PC and stored files while you're at work. Using the service can ensure that your host name always points to your IP address, no matter how often your ISP changes it. When your IP address changes, your friends and associates can always locate you by visiting yourname.dyndns.org instead!

Firewall > DDNS

Dynamic DNS allows you to provide Internet users with a fixed domain name (instead of an IP address which may periodically change), allowing your router and applications set up in your router's virtual servers to be accessed from various locations on the Internet without knowing your current IP address. Your Wireless Router supports dynamic DNS through DynDNS.org (http://www.dyndns.org). You must create an account before using this service. **More Info**

DDNS Service >	DynDNS [Web Site]	(1)
DDNS Status >	Disabled	
User Name >		(2)
Password >		(3)
Domain Name >		(4)
	[Clear Changes] [Update Dynamic DNS]	(5)

Setting up the Router's Dynamic DNS Update Client

You must register with DynDNS.org's free update service before using this feature. Once you have your registration, follow the directions below.

1. Select DynDNS as the "DDNS Service" **(1)**.

2. Enter your DynDNS.org user name in the "User Name" field **(2)**.

3. Enter your DynDNS.org password in the "Password" field **(3)**.

4. Enter the DynDNS.org domain name you set up with DynDNS.org in the "Domain Name" field **(4)**.

5. Click "Update Dynamic DNS" (5) to update your IP address. Whenever your IP address assigned by your ISP changes, the Router will automatically update DynDNS.org's servers with your new IP address. You can also do this manually by clicking the "Update Dynamic DNS" button **(5)**.

USING THE WEB-BASED ADVANCED USER INTERFACE

WAN Ping Blocking

Computer hackers use what is known as "pinging" to find potential victims on the Internet. By pinging a specific IP address and receiving a response from the IP address, a hacker can determine that something of interest might be there. The Router can be set up so it will not respond to an ICMP ping from the outside. This heightens the level of security of your Router.

Firewall > WAN Ping Blocking

ADVANCED FEATURE! You can configure the Router not to respond to an ICMP Ping (ping to the WAN port). This offers a heightened level of security. More Info

Block ICMP Ping >   ☑

Clear Changes   Apply Changes

To turn off the ping response, select "Block ICMP Ping" and click "Apply Changes". The Router will not respond to an ICMP ping.

Utilities Tab

This screen lets you manage different parameters of the Router and perform certain administrative functions.

Utilities >

This screen lets you manage different parameters of the Router and perform certain administrative functions.

- **Restart Router**
  Sometimes it may be necessary to Reset or Reboot the Router if it begins working improperly. Resetting or Rebooting the Router will not delete any of your configuration settings.

- **Restore Factory Defaults**
  Using this option will restore all of the settings in the Router to the factory (default) settings. It is recommended that you backup your settings before you restore all of the defaults.

- **Save/Backup Current Settings**
  You can save your current configuration by using this feature. Saving your configuration will allow you to restore it later if your settings are lost or changed. It is recommended that you backup your current configuration before performing a firmware update.

- **Restore Previous Saved Settings**
  This option will allow you to restore a previously saved configuration.

- **Firmware Update**
  From time to time, Belkin may release new versions of the Router's firmware. Firmware updates contain feature improvements and fixes to problems that may have existed.

- **System Settings**
  The System Settings page is where you can enter a new administrator password, set the time zone, enable remote management, turn on and off UPNP, turn on and off Auto Update Firmware, and turn on and off the NAT function of the Router.

Restarting the Router

Sometimes it may be necessary to restart or reboot the Router if it begins working improperly. Restarting or rebooting the Router will NOT delete any of your configuration settings.

Utilities > Restart Router

Sometimes it may be necessary to Restart or Reboot the Router if it begins working improperly. Restartting or Rebooting the Router will not delete any of your configuration settings. Click the "Restart Router" button below to Restart the Router.

[Restart Router]
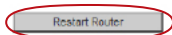
Restoring Factory Default Settings

Using this option will restore all of the settings in the Router to the factory (default) settings. It is recommended that you back up your settings before you restore all of the defaults.

Utilities > Restore factory defaults

Restore factory defaults

Using this option will restore all of the settings in the Router to the factory (default) settings. It is recommended that you backup your settings before you restore all of the defaults. To restore the factory default settings, click the "Restore Defaults" button below.
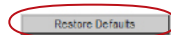
[Restore Defaults]

Saving a Current Configuration

You can save your current configuration by using this feature. Saving your configuration will allow you to restore it later if your settings are lost or changed.

Utilities > Save/Backup current settings

You can save your current configuration by using this feature. Saving your configuration will allow you to restore it later if your settings are lost or changed. It is recommended that you backup your current configuration before performing a firmware update.
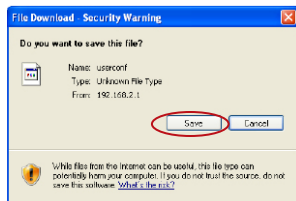
1. Click "Save". A window called "File Download" will open. Click "Save".

2. A window will open that allows you to select the location where you want to save the configuration file. Select a location. You can name the file anything you want, or use the default name. Be sure to name the file so you can locate it yourself later. When you have selected the location and name of the file, click "Save".
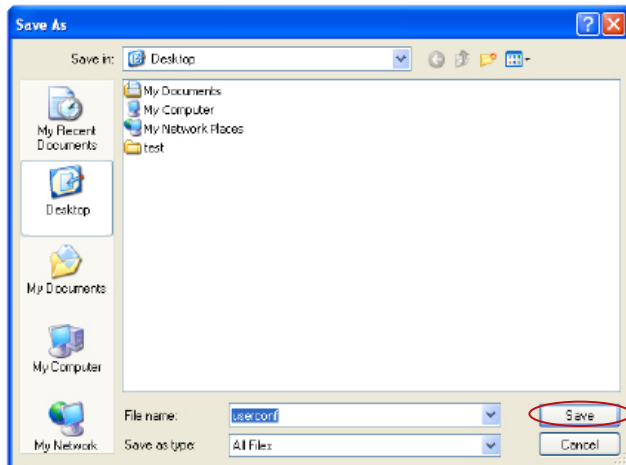
Restoring a Previous Configuration

This option will allow you to restore a previously saved configuration.

Utilities > Restore previous saved settings

This option will allow you to restore a previously saved configuration.

Browse...

Restore

1. Click "Browse". A window will open that allows you to select the location of the configuration file. All configuration files end with a ".conf". Locate the configuration file you want to restore and double-click on it.
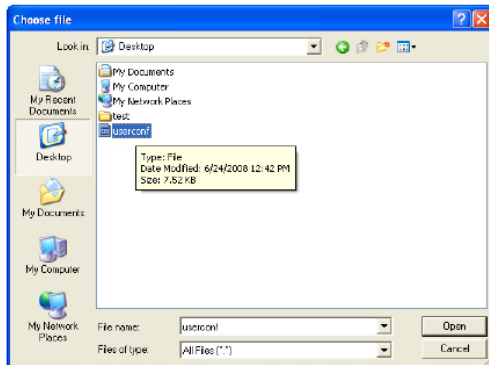
2. Please wait while the Router loads the configuration file. The Router's home page should appear automatically. If not, type the Router's address (default = 192.168.2.1) into the navigation bar of your browser.

BELKIN. | Router Setup   Home | Help | Logout   Internet Status: Connected

Writing Data, please wait..

Updating the Firmware

From time to time, Belkin may release new versions of the Router's firmware. Firmware updates contain feature improvements and fixes to problems that may exist. When Belkin releases new firmware, you can download the firmware from the Belkin update website and update your Router's firmware to the latest version.

Searching for a New Version of Firmware

From http://www.belkin.com/support/, type the Belkin part number "F5D7234-4" in the "Search" field. Click "Search".

Click on "F5D7234-4 Firmware Update" to find and download the latest firmware available.

Updating the Router's Firmware

In the "Firmware update" page, click "Browse". A window will open that allows you to select the location of the firmware update file.

Changing System Settings

The "System Settings" page is where you can enter a new administrator password, set the time zone, enable remote management, and turn on and off the UPnP function of the Router.
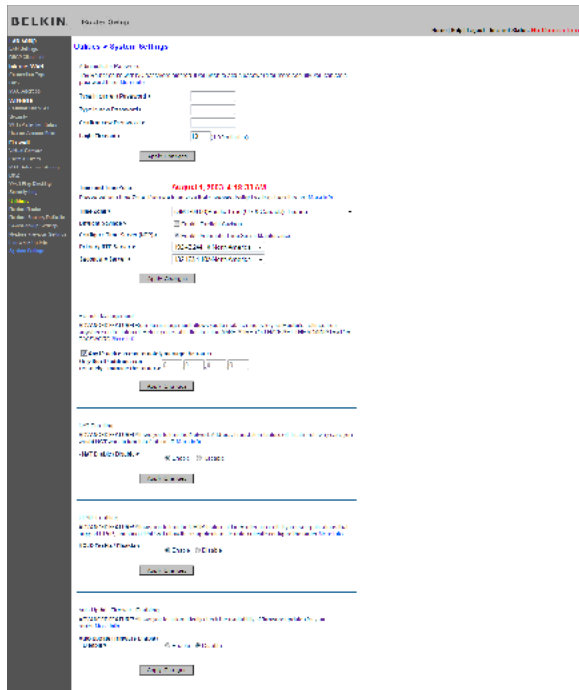
Setting or Changing the Administrator Password

The Router ships with NO password entered. If you wish to add a password for greater security, you can set a password here. Write down your password and keep it in a safe place, as you will need it if you need to log into the Router in the future. It is also recommended that you set a password if you plan to use the remote management feature of your Router.

Changing the Login Time-Out Setting

The login time-out option allows you to set the period of time that you can be logged into the Router's Web-Based Advanced User Interface. The timer starts when there has been no activity. For example, you have made some changes in the Web-Based Advanced User Interface, then left your computer alone without clicking "Logout". Assuming the time-out is set to 10 minutes, then 10 minutes after you leave, the login session will expire. You will have to log into the Router again to make any more changes. The login time-out option is for security purposes and the default is set to 10 minutes.

Note: Only one computer can be logged into the Router's Web-Based Advanced User Interface at one time.

Setting the Time and Time Zone

The Router keeps time by connecting to a Simple Network Time Protocol (SNTP) server. This allows the Router to synchronize the system clock to the global Internet. The synchronized clock in the Router is used to record the security log and control client filtering. Select the time zone that you reside in. If you reside in an area that observes daylight saving, then place a check mark in the box next to "Automatically Adjust Daylight Saving". The system clock may not update immediately. Allow at least 15 minutes for the Router to contact the time servers on the Internet and get a response. You cannot set the clock yourself.

Enabling Remote Management

Before you enable this advanced feature of your Belkin Router, MAKE SURE YOU HAVE SET THE ADMINISTRATOR PASSWORD. Remote management allows you to make changes to your Router's settings from anywhere on the Internet. There are two methods of remotely managing the Router. The first is to allow access to the Router from anywhere on the Internet by selecting "Any IP address can remotely manage the Router". By typing in your WAN IP address from any computer on the Internet, you will be presented with a login screen where you need to type in the password of your Router. The second method is to allow a specific IP address only to remotely manage the Router. This is more secure, but less convenient. To use this method, enter the IP address you know you will be accessing the Router from in the space provided and select "Only this IP address can remotely manage the Router". Before you enable this function, it is STRONGLY RECOMMENDED that you set your administrator password. Leaving the password empty will potentially open your Router to intrusion.

Enabling/Disabling UPnP

UPnP (Universal Plug-and-Play) is yet another advanced feature offered by your Belkin Router. It is a technology that offers seamless operation of voice messaging, video messaging, games, and other applications that are UPnP-compliant. Some applications require the Router's firewall to be configured in a specific way to operate properly. This usually requires opening TCP and UDP ports. An application that is UPnP-compliant has the ability to communicate with the Router, basically "telling" the Router which way it needs the firewall configured. The Router ships with the UPnP feature disabled. If you are using any applications that are UPnP-compliant, and wish to take advantage of the UPnP features, you can enable the UPnP feature. Simply select "Enable" in the "UPnP Enabling" section of the "System Settings" page. Click "Apply Changes" to save the change.

Enabling/Disabling Auto Firmware Update

This innovation provides the Router with the built-in capability to automatically check for a new version of firmware and alert you that the new firmware is available. When you log into the Router's Web-Based Advanced User Interface, the Router will perform a check to see if new firmware is available. If so, you will be notified. You can choose to download the new version or ignore it. The Router ships with this feature enabled. If you want to disable it, select "Disable" and click "Apply Changes".

MANUALLY CONFIGURING NETWORK SETTINGS

In order for your computer to properly communicate with your Router, you will need to change your PC's TCP/IP settings to DHCP.

Manually Configuring Network Adapters in Windows 2000, NT, XP, or Vista

1. Click "Start", "Settings", then "Control Panel".

2. Double-click on the "Network and dial-up connections" icon (Windows 2000) or the "Network" icon (Windows XP or Vista).

3. Right-click on the "Local Area Connection" associated with your network adapter and select "Properties" from the drop-down menu.

4. In the "Local Area Connection Properties" window, click "Internet Protocol (TCP/IP)" and click the "Properties" button. The following screen will appear:

5. If "Use the following IP address" **(2)** is selected, your Router will need to be set up for a static IP connection type. Write the address information in the table below. You will need to enter this information into the Router.

IP address:	
Subnet Mask:	
Default gateway:	
Preferred DNS server:	
Alternate DNS server:	
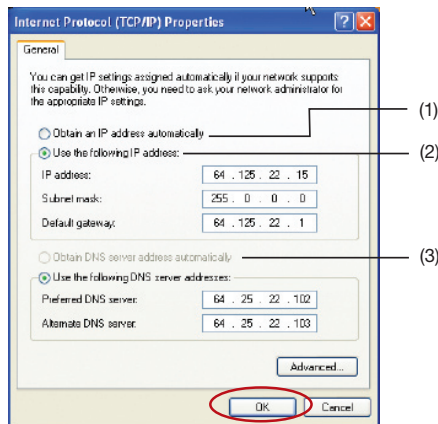
6. If not already selected, select "Obtain an IP address automatically" **(1)** and "Obtain DNS server address automatically" **(3)**. Click "OK".

Your network adapter(s) are now configured for use with the Router.

Manually Configuring Network Adapters in Windows 98SE or Me

1. Right-click on "My Network Neighborhood" and select "Properties" from the drop-down menu.

2. Select "TCP/IP -> settings" for your installed network adapter. You will see the following window.

3. If "Specify an IP address" is selected, your Router will need to be set up for a static IP connection type. Write the address information in the table below. You will need to enter this information into the Router.

4. Write in the IP address and subnet mask from the "IP Address" tab **(3)**.

5. Click the "Gateway" tab **(2)**. Write the gateway address down in the chart.

6. Click the "DNS Configuration" tab **(1)**. Write the DNS address(es) in the chart.

7. If not already selected, select "Obtain IP address automatically" in the "IP Address" tab. Click "OK".

Restart the computer. When the computer restarts, your network adapter(s) are now configured for use with the Router.

Set up the computer that is connected to the cable or DSL modem FIRST using these steps. You can also use these steps to add computers to your Router after the Router has been set up to connect to the Internet.
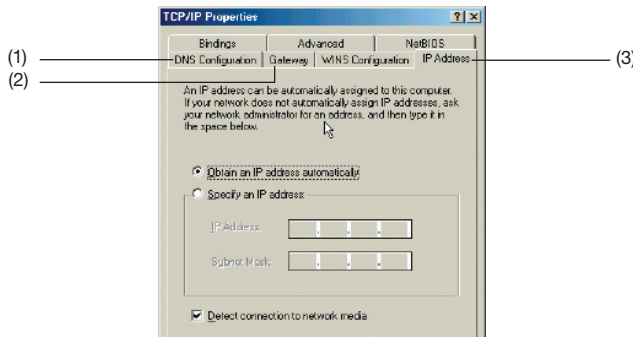
IP address: _____

Subnet Mask: _____

Default gateway: _____

Preferred DNS server: _____

Alternate DNS server: _____

Manually Configuring Network Adapters in Mac OS up to v9.x

In order for your computer to properly communicate with your Router, you will need to change your Mac computer's TCP/IP settings to DHCP.

1. Pull down the Apple menu. Select "Control Panels" and select "TCP/IP".

2. You will see the TCP/IP control panel. Select "Ethernet Built-In" or "Ethernet" in the "Connect via:" drop-down menu **(1)**.
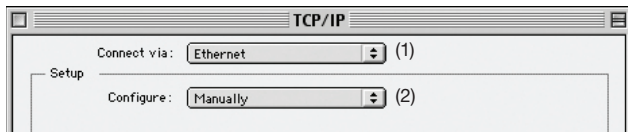
3. Next to "Configure" **(2)**, if "Manually" is selected, your Router will need to be set up for a static IP connection type. Write the address information in the table below. You will need to enter this information into the Router.

IP address:	
Subnet Mask:	
Default gateway:	
Preferred DNS server:	
Alternate DNS server:	

4. If not already set, at "Configure:", choose "Using DHCP Server". This will tell the computer to obtain an IP address from the Router.
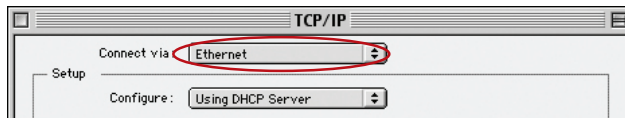
5. Close the window. If you made any changes, the following window will appear. Click "Save".
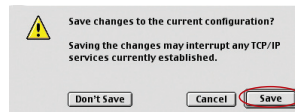
Restart the computer. When the computer restarts, your network settings are now configured for use with the Router.

Manually Configuring Network Adapters in Mac OS X

1. Click on the "System Preferences" icon.

2. Select "Network" from the "System Preferences" menu.
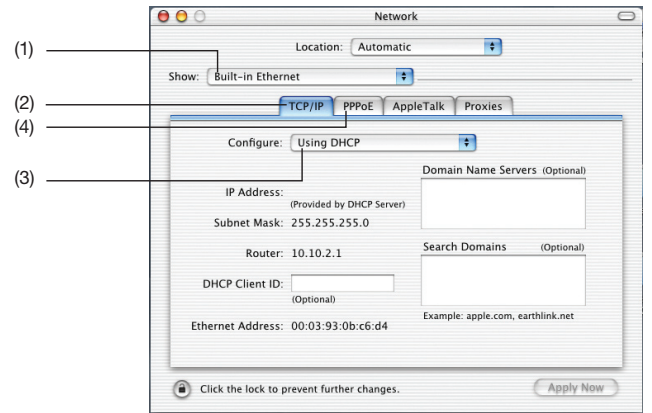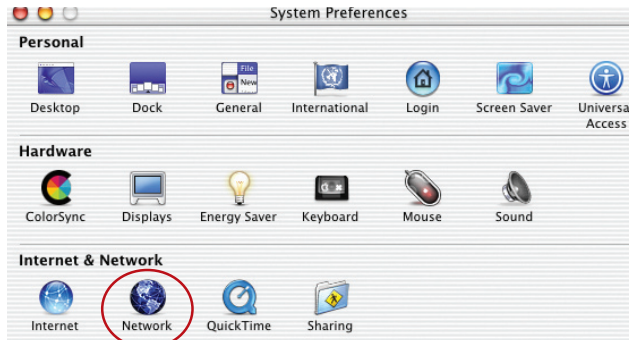
3. Select "Built-in Ethernet" **(1)** next to "Show" in the "Network" menu.

4. Select the "TCP/IP" tab **(2)**. Next to "Configure:" **(3)**, you should see "Manually" or "Using DHCP". If you do not, check the PPPoE tab **(4)** to make sure that "Connect using PPPoE" is NOT selected. If it is, you will need to configure your Router for a PPPoE connection type using your user name and password.

5. If "Manually" is selected, your Router will need to be set up for a static IP connection type. Write the address information in the table below. You will need to enter this information into the Router.

IP address:	
Subnet Mask:	
Router Address:	
Name Server Address:	

6. If not already selected, select "Using DHCP" next to "Configure:" **(3)**, then click "Apply Now".

Your network adapter(s) are now configured for use with the Router.

(1)

(2)

(4)

(3)

Network

Location: Automatic

Show: Built-in Ethernet

TCP/IP   PPPoE   AppleTalk   Proxies

Configure: Using DHCP

IP Address:
(Provided by DHCP Server)
Subnet Mask: 255.255.255.0

Router: 10.10.2.1

DHCP Client ID:
(Optional)

Ethernet Address: 00:03:93:0b:c6:d4

Domain Name Servers (Optional)

Search Domains (Optional)

Example: apple.com, earthlink.net

Click the lock to prevent further changes.   Apply Now
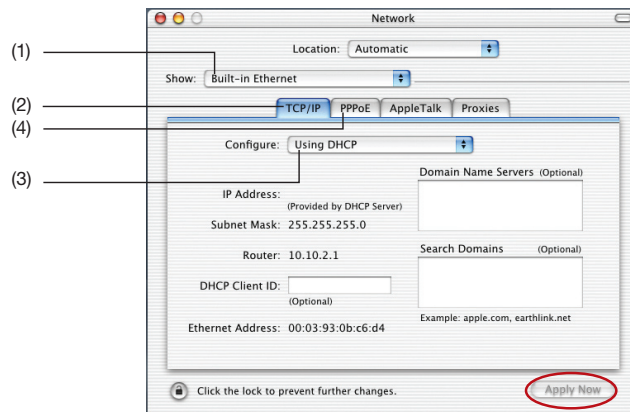
RECOMMENDED WEB BROWSER SETTINGS

In most cases, you will not need to make any changes to your web browser's settings. If you are having trouble accessing the Internet or the Web-Based Advanced User Interface, then change your browser's settings to the recommended settings in this section.

Internet Explorer 4.0 or Higher

1. Start your web browser. Select "Tools" then "Internet Options".

2. In the "Internet Options" screen, there are three selections: "Never dial a connection", "Dial whenever a network connection is not present", and "Always dial my default connection". If you can make a selection, select "Never dial a connection". If you cannot make a selection, go to the next step.

3. Under the "Internet Options" screen, click on "Connections" and select "LAN Settings…".

4. Make sure there are no check marks next to any of the displayed options: "Automatically detect settings", "Use automatic configuration script", and "Use a proxy server". Click "OK". Then click "OK" again in the "Internet Options" page.
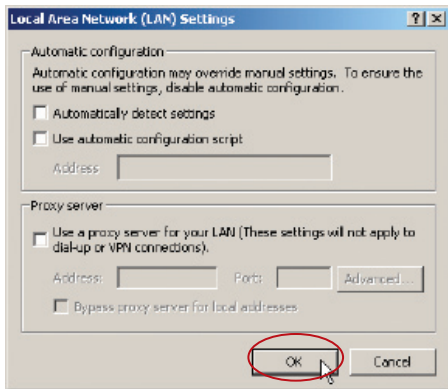
Netscape® Navigator® 4.0 or Higher

1. Start Netscape. Click on "Edit" then "Preferences".

2. In the "Preferences" window, click on "Advanced" then select "Proxies". In the "Proxies" window, select "Direct connection to the Internet".
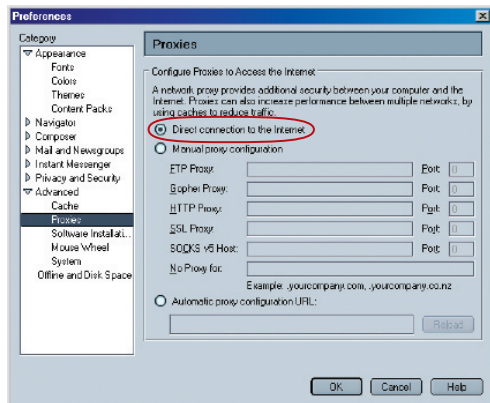
TROUBLESHOOTING

Problem:

Installation CD does not automatically start.

Solution:

If the CD-ROM does not start the Setup Assistant automatically, it could be that the computer is running other applications that are interfering with the CD drive.

1. If the Setup Assistant screen does not appear within 15–20 seconds, open up your CD-ROM drive by double-clicking on the "My Computer" icon that is located on your desktop.

2. Next, double-click on the CD-ROM drive that the Setup Assistant Software CD has been placed in to start the installation.
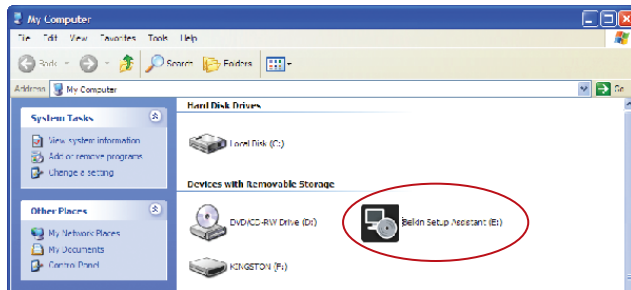
3. The Setup Assistant should start within a few seconds. If, instead, a window appears showing the files on the CD, double-click on the icon labeled "SetupAssistant.exe".

4. If the Setup Assistant still does not start, reference the section titled "Manually Configuring Network Settings" (page 76 of this User Manual) for an alternate setup method.
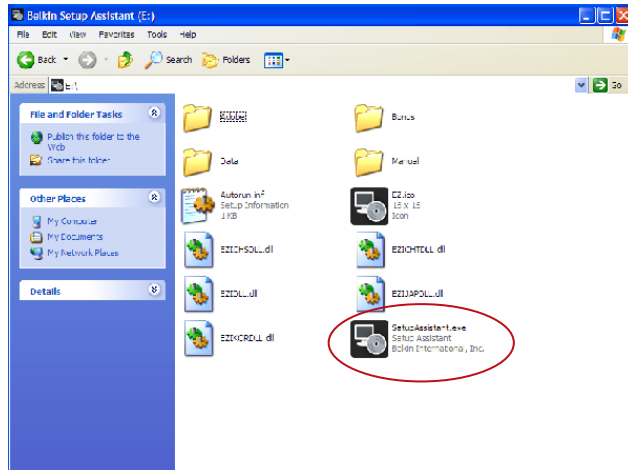
Problem:

The Setup Assistant cannot find my Router.

Solution:

If the Setup Assistant is not able to find the Router during the installation process, please check the following items:

1. If the Setup Assistant is not able to find the Router during the installation process, there may be third-party firewall software installed on the computer attempting to access the Internet. Examples of third-party firewall software are ZoneAlarm, BlackICE PC Protection, McAfee Personal Firewall, and Norton Personal Firewall.

If you do have firewall software installed on your computer, please make sure that you properly configure it. You can determine if the firewall software is preventing Internet access by temporarily turning it off. If, while the firewall is disabled, Internet access works properly, you will need to change the firewall settings to function properly when it is turned on.

Please refer to the instructions provided by the publisher of your firewall software for instructions on configuring the firewall to allow Internet access.

2. Unplug power to the Router for 10 seconds, and then plug the power back into the Router. Ensure that the Router's Power light is on; it should be solid green. If not, check to make sure that the AC adapter is correctly connected to the Router and plugged into a wall outlet.

3. Ensure that you have a cable (use the cable included with the Router) connected between (1) the network (Ethernet) port on the back of the computer and (2) one of the LAN ports, labeled "1" through "4", on the back of the Router.

Note: The computer should NOT be connected to the port labeled "Modem" on the back of the Router.

4. Try shutting down and restarting your computer, then rerunning the Setup Assistant.

If the Setup Assistant is still unable to find the Router, reference the section titled "Manually Configuring Network Settings" for installation steps.

Problem:

The Setup Assistant cannot connect my Router to the Internet.

Solution:

If the Setup Assistant is not able to connect the Router to the Internet, please check the following items:

1. Use the troubleshooting suggestions within the Setup Assistant. If the troubleshooting screen does not open automatically, click on the "Troubleshoot" button in the lower, right-hand corner of the Setup Assistant window.

2. If your ISP requires a user name and password, make sure that you have typed in your user name and password correctly. Some user names require that the ISP's domain be at the end of the name. Example: "myname@myisp.com". The "@myisp.com" part of the user name may need to be typed as well as your user name.

If you continue to have no Internet connection, reference the section titled "Manually Configuring Network Settings" (page 76 of this User Manual) for alternate setup method.

Problem:

• The Setup Assistant completed installation, but my web browser doesn't work.

• I am unable to connect to the Internet. The Router's "Modem" light is off and the "Internet" light is blinking.

Solution:

If you cannot connect to the Internet, the "Modem" light is off, and the "Internet" light is blinking, the problem may be that your modem and Router are not connected properly.

1. Make sure the network cable between the modem and the Router is connected. We strongly recommend using the cable that was supplied with your cable or DSL modem for this purpose. The cable should be connected at one end to the Router's "Modem" port, and at the other end to the network port on your modem.

2. Unplug the cable or DSL modem from its power source for three minutes. After three minutes, plug the modem back into its power source. This may force the modem to properly recognize the Router.

3. Unplug the power to your Router, wait 10 seconds, and then reconnect the power. This will cause the Router to reattempt communication with the modem.

If the "Modem" light on the Router is not lit after completing these steps, please contact Belkin Technical Support.

4. Try shutting down and restarting your computer.

Problem:

• The Setup Assistant completed installation, but my web browser doesn't work.

• I am unable to connect to the Internet. The Router's "Modem" light is on and the "Internet" light is blinking.

Solution:

If you cannot connect to the Internet, the "Modem" light is on, and the "Internet" light is blinking, the problem may be that your connection type may not match the ISP's connection.

• If you have a "static IP address" connection, your ISP must assign you the IP address, subnet mask, and gateway address. Please refer to the section entitled "Alternate Setup Method" for details on changing this setting.

• If you have a "PPPoE" connection, your ISP will assign you a user name and password and sometimes a service name. Make sure the Router connection type is configured to PPPoE and the settings are entered properly. Please refer to the section entitled "Alternate Setup Method" for details on changing this setting.

• You may need to configure your Router to meet the specific requirements of your ISP. To search our Knowledge Base for ISP-specific issues, go to: http://web.belkin.com/support and type in "ISP".

If you are still unable to access the Internet after verifying these settings, please contact Belkin Technical Support.

Problem:

• The Setup Assistant completed, but my web browser doesn't work.

• I am unable to connect to the Internet. The "Modem" light on my Router is blinking and the "Internet" light is solid.

Solution:

If the "Modem" light is blinking and the "Internet" light is solid, but you are unable to access the Internet, there may be third-party firewall software installed on the computer attempting to access the Internet. Examples of third-party firewall software are ZoneAlarm, BlackICE PC Protection, McAfee Personal Firewall, and Norton Personal Firewall.

If you do have firewall software installed on your computer, please make sure that you properly configure it. You can determine if the firewall software is preventing Internet access by temporarily turning it off. If, while the firewall is disabled and Internet access works properly, you will need to change the firewall settings to function properly when it is turned on.

Please refer to the instructions provided by the publisher of your firewall software for instructions on configuring the firewall to allow Internet access.

If you are still unable to access the Internet after disabling any firewall software, please contact Belkin Technical Support.

Problem:

I can't connect to the Internet wirelessly.

Solution:

If you are unable to connect to the Internet from a wireless computer, please do the following:

1. Look at the lights on your Router. Your Belkin Router's lights should be as follows:

    • The "Power" light should be on.

    • The "Internet" light should be on.

    • The "Modem" light should be either on or blinking.

2. Open your wireless utility software by clicking on the icon in the system tray at the bottom, right-hand corner of the screen. If you are also using a Belkin Wireless Card or Adapter with this Router, the tray icon should look like this:

3. The exact window that opens will vary depending on the model of wireless card you have; however, any of the utilities should have a list of "Available Networks"—those wireless networks it can connect to.

Does the name of your wireless network appear in the results?

Yes, my network name is listed—go to the troubleshooting solution titled "I can't connect to the Internet wirelessly, but my network name is listed".

No, my network name is not listed—go to the troubleshooting solution titled "I can't connect to the Internet wirelessly, and my network name is not listed".

Problem:

I can't connect to the Internet wirelessly, but my network name is listed.

Solution:

If the name of your network is listed in the "Available Networks" list, please follow the steps below to connect wirelessly:

1. Click on the correct network name in the "Available Networks" list.

2. If the network has security (encryption) enabled, you will need to enter the network key. For more information regarding security, see the section entitled "Securing your Wi-Fi Network" in this User Manual.

3. Within a few seconds, the tray icon in the lower, left-hand corner of your screen should turn green, indicating a successful connection to the network.

Problem:

I can't connect to the Internet wirelessly, and my network name is not listed.

Solution:

If the correct network name is not listed under "Available Networks" in the wireless configuration utility, please attempt the following troubleshooting steps:

1. Temporarily move your computer, if possible, five to 10 feet away from the Router. Close the wireless configuration utility, and reopen it. If the correct network name now appears under "Available Networks", you may have a range or interference problem. Please see the suggestions discussed in the section titled "Placement of your Router for Optimal Performance" in this User Manual.

2. Using a computer that is connected to the Router through a network cable (as opposed to wirelessly), ensure that "Broadcast SSID" is enabled. This setting is found on the Router's wireless "Channel and SSID" configuration page.

If you are still unable to access the Internet after completing these steps, please contact Belkin Technical Support.

Problem:

My wireless network performance is inconsistent.

Data transfer is sometimes slow.

Signal strength is poor.

I am having difficulty establishing and/or maintaining a Virtual Private Network (VPN) connection.

Solution:

Wireless technology is radio-based, which means connectivity and the throughput performance between devices decreases when the distance between devices increases. Other factors that will cause signal degradation (metal is generally the worst culprit) are obstructions such as walls and metal appliances. As a result, the typical indoor range of your wireless devices will be between 100 to 200 feet. Note also that connection speed may decrease as you move farther away from the Router or access point.

In order to determine if wireless issues are related to range, we suggest temporarily moving the computer, if possible, five to 10 feet away from the Router.

Changing the Wireless Channel

Depending on local wireless traffic and interference, switching the wireless channel of your network can improve performance and reliability. The default channel the Router is shipped with is channel 11. You may choose from several other channels depending on your region (see the section titled "Changing the Wireless Channel" on page 47 for instructions on how to choose other channels).

Limiting the Wireless Transmit Rate

Limiting the wireless transmit rate can help improve the maximum wireless range, and connection stability. Most wireless cards have the ability to limit the transmission rate. To change this property, go to the Windows Control Panel, open "Network Connections" and double-click on your wireless card's connection. In the "Properties" dialog, select the "Configure" button on the "General" tab (Windows 98 users will have to select the wireless card in the list box and then click "Properties"), then choose the "Advanced" tab and select the rate property. Wireless client cards are usually set to automatically adjust the wireless transmit rate for you, but doing so can cause periodic disconnects when the wireless signal is too weak; as a rule, slower transmission rates are more stable. Experiment with different connection rates until you find the best one for your environment; note that all available transmission rates should be acceptable for browsing the Internet. For more assistance, see your wireless card's user manual.

Problem:

How do I extend the range of my wireless network?

Solution:

Belkin recommends using one of the following products to extend wireless network coverage throughout large homes or offices:

• Wireless Access Point: A wireless access point can effectively double the coverage area of your wireless network. An access point is typically placed in the area not currently covered by your G Wireless Router, and is connected to the Router using either an Ethernet cable or through your home's power lines using two Powerline Ethernet Adapters.

• For 802.11g (54g™) wireless networks, Belkin offers a Wireless G Range Extender/Access Point that can be connected wirelessly to a Belkin G Wireless Router, without requiring an Ethernet cable or Powerline Ethernet Adapters.

These Belkin products are available at your local retailer, or can be ordered from Belkin directly.

For network/range extension information, please visit: www.belkin.com/networking to find out more about:

Wireless G Range Extender/Access Point (F5D7130)

Powerline Ethernet Adapter (F5D4070)

Problem:

I am having difficulty setting up Wired Equivalent Privacy (WEP) security on a Belkin Wireless Router or Belkin Access Point.

Solution:

1.   Log into your Wireless Router or Access Point.

Open your web browser and type in the IP address of the Wireless Router or Access Point. (The Router's default is 192.168.2.1, the Access Point's default is 192.168.2.254.) Log into your Router by clicking on the "Login" button in the top, right-hand corner of the screen. You will be asked to enter your password. If you never set a password, leave the password field blank and click "Submit".

Click the "Wireless" tab on the left of your screen. Select the "Encryption" or "Security" tab to get to the security settings page.

2.   Select "128-bit WEP" from the drop-down menu.

3.   After selecting your WEP encryption mode, you can type in your hex WEP key manually, or you can type in a passphrase in the "Passphrase" field and click "Generate" to create a WEP key from the passphrase. Click "Apply Changes" to finish. You must now set all of your clients to match these settings. A hex (hexadecimal) key is a combination of numbers and letters from A–F and 0–9. For 128-bit WEP, you need to enter 26 hex keys.

For example:

C3 03 0F AF 4B B2 C3 D4 4B C3 D4 E7 E4 = 128-bit key

4.   Click "Apply Changes" to finish. Encryption in the Wireless Router is now set. Each of your computers on your wireless network will now need to be configured with the same security settings.

WARNING: If you are configuring the Wireless Router or Access Point from a computer with a wireless client, you will need to ensure that security is turned on for this wireless client. If this is not done, you will lose your wireless connection.

Note to Mac users: Original Apple AirPort products support 64-bit encryption only. Apple AirPort 2 products can support 64-bit or 128-bit encryption. Please check your Apple AirPort product to see which version you are using. If you cannot configure your network with 128-bit encryption, try 64-bit encryption.

Problem:

I am having difficulty setting up Wired Equivalent Privacy (WEP) security on a Belkin client card (Wireless Network Card or Adapter).

Solution:

The client card must use the same key as the G Wireless Router or access point. For instance, if your Wireless Router or access point uses the key 00112233445566778899AABBCC, then the client card must be set to the exact same key.

1. Double-click the "Signal Indicator" icon to bring up the "Wireless Network Utility" screen. The "Advanced" button will allow you to view and configure more options of your client card.

2. Once the "Advanced" button is clicked, the Belkin Wireless LAN Utility will appear. This Utility will allow you to manage all the advanced features of the Belkin client card.

3. Under the "Wireless Network Properties" tab, select a network name from the "Available Networks" list and click the "Properties" button.

4. Under "Data Encryption", select "WEP".

5. Ensure the box "The key is provided for me automatically" at the bottom is unchecked. If you are using this computer to connect to a corporate network, please consult your network administrator if this box needs to be checked.

6. Type your WEP key in the "Network key" box.

Important: A WEP key is a combination of numbers and letters from A–F and 0–7. For 128-bit WEP, you need to enter 26 keys. This network key needs to match the key you assign to your G Wireless Router or access point.

For example: **C3030FAF4BB2C3D44BC3D4E7E4 =** 128-bit key

7. Click "OK", and then "Apply" to save the settings.

If you are NOT using a Belkin wireless client card, please consult the manufacturer's user manual for that wireless client card.

Problem:

Do Belkin products support WPA?

Solution:

Note: To use WPA security, all your clients must be upgraded to drivers and software that support it. At the time of this publication, a security patch download is available, for free, from Microsoft. This patch works only with the Windows XP operating system.

Download the patch here:

http://www.microsoft.com/downloads/details.aspx?FamilyID=009d8425-ce2b-47a4-abec-274845dc9e91&displaylang=en

You also need to download the latest driver for your Belkin Wireless 802.11g Desktop or Notebook Network Card from the Belkin support site. Other operating systems are not supported at this time. Microsoft's patch only supports devices with WPA-enabled drivers such as Belkin 802.11g products.

Download the latest drivers at http://www.belkin.com/support.

Problem:

I am having difficulty setting up Wi-Fi Protected Access (WPA) security on a Belkin Wireless Router or Belkin Access Point for a home network.

Solution:

1. From the "Security Mode" drop-down menu, select "WPA-PSK (no server)".

2. For "Encryption Technique", select "TKIP" or "AES". This setting will have to be identical on the clients that you set up.

3. Enter your pre-shared key. This can be from eight to 63 characters and can be letters, numbers, symbols, or spaces. This same key must be used on all of the clients that you set up. For example, your PSK might be something like: "Smith family network key".

4. Click "Apply Changes" to finish. You must now set all clients to match these settings.

Problem:

I am having difficulty setting up Wi-Fi Protected Access (WPA) security on a Belkin client card (Wireless Network Card or Adapter) for a home network.

Solution:

Clients must use the same key that the G Wireless Router or access point uses. For instance, if the key is "Smith Family Network Key" in the G Wireless Router or access point, the clients must also use that same key.

1. Double-click the "Signal Indicator" icon to bring up the "Wireless Network Utility" screen. The "Advanced" button will allow you to view and configure more options of your client card.

2. Once the "Advanced" button is clicked, the Belkin Wireless LAN Utility will appear. This Utility will allow you to manage all the advanced features of the Belkin client card.

3. Under the "Wireless Network Properties" tab, select a network name from the "Available Networks" list and click the "Properties" button.

4. Under "Network Authentication", select "WPA-PSK (no server)".

5. Type your WPA key in the "Network key" box.

Important: WPA-PSK is a combination of numbers and letters from A-Z and 0-9. For WPA-PSK, you can enter eight to 63 characters. This network key needs to match the key you assign to your G Wireless Router or access point.

6. Click "OK", then "Apply" to save the settings.

Problem:

I am having difficulty setting up Wi-Fi Protected Access (WPA) security on a Belkin client card (Wireless Network Card or Adapter) for a business.

Solution:

1. Double-click the "Signal Indicator" icon to bring up the "Wireless Network Utility" screen. The "Advanced" button will allow you to view and configure more options of your client card.

2. Once the "Advanced" button is clicked, the Belkin Wireless LAN Utility will appear. This Utility will allow you to manage all the advanced features of the Belkin client card.

3. Under the "Wireless Network Properties" tab, select a network name from the "Available Networks" list and click the "Properties" button.

4. Under "Network Authentication", select "WPA".

5. In the "Authentication" tab, select the settings that are indicated by your network administrator.

6. Click "OK", then "Apply" to save the settings.

Problem:

I am having difficulty setting up Wi-Fi Protected Access (WPA) security and I am NOT using a Belkin client card for a home network.

Solution:

If you are NOT using a Belkin WPA Wireless Desktop or Wireless Notebook Network Card and it is not equipped with WPA-enabled software, a file from Microsoft called "Windows XP Support Patch for Wireless Protected Access" is available for free download:

http://www.microsoft.com/downloads/search.aspx?displaylang=en

Note: The file that Microsoft has made available works only with Windows XP. Other operating systems are not supported at this time. You also need to ensure that the wireless card manufacturer supports WPA and that you have downloaded and installed the latest driver from their support site.

Supported Operating Systems:

• Windows XP Professional

• Windows XP Home Edition

Enabling WPA-PSK (no server)

1. In systems running Windows XP, click "Start > Control Panel > Network Connections".

2. Right-click on the "Wireless Networks" tab. The "Wireless Network Connection Properties" screen appears. Ensure the "Use Windows to configure my wireless network settings" box is checked.

3. Under the "Wireless Networks" tab, click the "Configure" button, and you will see the client card properties screen.

4. For a home or small business user, select "WPA-PSK" under "Network Administration".

5. Select "TKIP" or "AES" under "Date Encryption". This setting will have to be identical to the G Wireless Router or access point that you set up.

6. Type your encryption key in the "Network key" box.

Important: Enter your pre-shared key. This can be from eight to 63 characters and can be letters, numbers, or symbols. This same key must be used on all of the clients that you set up.

7. Click "OK" to apply settings.

Wireless Comparison Chart

Wireless Technology	G	Enhanced	N MIMO	N1 MIMO
	(802.11g)	(1x1 draft 802.11n)	(draft 802.11n with MIMO)	(draft 802.11n with MIMO)
Speed/Data Rate*	Up to 54Mbps*	Up to 150Mbps*	Up to 300Mbps*	Up to 300Mbps*
Frequency	Common household devices such as cordless phones and microwave ovens may interfere with the unlicensed band 2.4GHz	Common household devices such as cordless phones and microwave ovens may interfere with the unlicensed band 2.4GHz	Common household devices such as cordless phones and microwave ovens may interfere with the unlicensed band 2.4GHz	Common household devices such as cordless phones and microwave ovens may interfere with the unlicensed band 2.4GHz
Compatibility	Compatible with 802.11b/g	Compatible with 802.11b/g, draft 802.11n, and Belkin G+ MIMO	Compatible with draft 802.11n** and 802.11b/g	Compatible with draft 802.11n** and 802.11b/g
Coverage*	Up to 400 ft.*	Up to 600 ft.*	Up to 1,200 ft.*	Up to 1,400 ft.*
Advantage	Common—widespread use for Internet sharing	Better coverage and consistent speed and range	Enhanced speed and coverage	Leading edge— best coverage and throughput

*Distance and connection speeds will vary depending on your networking environment.

**This Router is compatible with products based on the same version of the draft 802.11n specifications and may require a software upgrade for best results.

Free Tech Support* *National call rates may apply* **www.belkin.com**

You can find additional support information on our website www.belkin.com through the tech-support area. If you want to contact technical support by phone, please call the number you need from this list*.

COUNTRY	NUMBER	INTERNET ADRESS
AUSTRIA	0820 200766	www.belkin.com/de/networking/
BELGIUM	07 07 00 073	www.belkin.com/nl/networking/ www.belkin.com/fr/networking/
CZECH REPUBLIC	239 000 406	www.belkin.com/uk/networking/
DENMARK	701 22 403	www.belkin.com/uk/networking/
FINLAND	0972519123	www.belkin.com/uk/networking/
FRANCE	08 - 25 54 00 26	www.belkin.com/fr/networking/
GERMANY	0180 - 500 57 09	www.belkin.com/de/networking/
GREECE	00800 - 44 14 23 90	www.belkin.com/uk/networking/
HUNGARY	06 - 17 77 49 06	www.belkin.com/uk/networking/
ICELAND	800 8534	www.belkin.com/uk/networking/
IRELAND	0818 55 50 06	www.belkin.com/uk/networking/
ITALY	02 - 69 43 02 51	www.belkin.com/it/networking/
LUXEMBOURG	34 20 80 85 60	www.belkin.com/uk/networking/
NETHERLANDS	0900 - 040 07 90 €0.10 per minute	www.belkin.com/nl/networking/
NORWAY	81 50 0287	www.belkin.com/uk/networking/
POLAND	00800 - 441 17 37	www.belkin.com/uk/networking/
PORTUGAL	707 200 676	www.belkin.com/uk/networking/
RUSSIA	495 580 9541	www.belkin.com/networking/
SOUTH AFRICA	0800 - 99 15 21	www.belkin.com/uk/networking/
SPAIN	902 - 02 43 66	www.belkin.com/es/networking/
SWEDEN	07 - 71 40 04 53	www.belkin.com/uk/networking/
SWITZERLAND	08 - 48 00 02 19	www.belkin.com/de/networking/ www.belkin.com/fr/networking/
UNITED KINGDOM	0845 - 607 77 87	www.belkin.com/uk/networking/
OTHER COUNTRIES	+44 - 1933 35 20 00	

INFORMATION

FCC Statement
DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin International, Inc., of 501 West Walnut Street, Compton, CA 90220, declare under our sole responsibility that this device,

F5D7234-4

to which this declaration relates:

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: Exposure to Radio Frequency Radiation

The device shall be used in such a manner that the potential for human contact during normal operation is minimized.

When connecting an external antenna to the device, the antenna shall be placed in such a manner to minimize the potential for human contact during normal operation. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Federal Communications Commission Notice

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 and correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.

• Increase the distance between the equipment and the receiver.

• Connect the equipment to 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2.4GHz operation of this product in the USA is firmware-limited to channels 1 through 11.

Modifications

The FCC requires the user to be notified that any changes or modifications to this device that are not expressly approved by Belkin International, Inc., may void the user's authority to operate the equipment.

Canada-Industry Canada (IC)

The wireless radio of this device complies with RSS 210 Industry Canada. This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions:

1)   this device may not cause interference, and

2)   this device must accept any interference, including interference that may cause undesired operation of the device.

IMPORTANT NOTE:
IC Radiation Exposure Statement:

This equipment complies with Canada radiation exposure limits set forth for uncontrolled environments. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil numérique de la classe B conforme á la norme NMB-003 du Canada.

Europe-European Union Notice

Radio products with the CE 0682 or CE alert marking comply with the R&TTE Directive (1995/5/EC) issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards).

•   EN 60950-1 (IEC60950) – Product Safety

•   EN 300 328 Technical requirement for radio equipment

•   EN 301 489 General EMC requirements for radio equipment.

To determine the type of transmitter, check the identification label on your Belkin product.

Products with the CE marking comply with the EMC Directive (89/336/ EEC) and the Low Voltage Directive (72/23/EEC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Norms (in brackets are the equivalent international standards).

•   EN 55022 (CISPR 22) – Electromagnetic Interference

•   EN 55024 (IEC61000-4-2,3,4,5,6,8,11) – Electromagnetic Immunity

•   EN 61000-3-2 (IEC610000-3-2) – Power Line Harmonics

•   EN 61000-3-3 (IEC610000) – Power Line Flicker

•   EN 60950-1 (IEC60950) – Product Safety

Products that contain the radio transmitter are labeled with CE 0682 or CE alert marking and may also carry the CE logo.

EU DECLARATION OF CONFORMITY

Česky [Czech]	*[Belkin Ltd]* tímto prohlašuje, že tento *[F5D7234-4-H]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]	Undertegnede *[Belkin Ltd]* erklærer herved, at følgende udstyr *[F5D7234-4-H]* overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt *[Belkin Ltd]*, dass sich das Gerät *[F5D7234-4-H]* in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]	Käesolevaga kinnitab *[Belkin Ltd]* seadme *[F5D7234-4-H]* vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, *[Belkin Ltd]*, declares that this product *[F5D7234-4-H]* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente *[Belkin Ltd]* declara que el *[F5D7234-4-H]* cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *[Belkin Ltd]* ΔΗΛΩΝΕΙ ΟΤΙ *[F5D7234-4-H]* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente *[Belkin Ltd]* déclare que l'appareil *[F5D7234-4-H]* est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente *[Belkin Ltd]* dichiara che questo *[F5D7234-4-H]* è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo *[Belkin Ltd Belkin Ltd]* deklarē, ka *[F5D7234-4-H] / iekārtas tips]* atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo *[Belkin Ltd]* deklaruoja, kad šis *[F5D7234-4-H]* atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart *[Belkin Ltd]* dat het toestel *[F5D7234-4-H]* in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, *[Belkin Ltd]*, jiddikjara li dan *[F5D7234-4-H]* jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, *[Belkin Ltd]* nyilatkozom, hogy a *[F5D7234-4-H]* megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Polski [Polish]	Niniejszym *[Belkin Ltd]* oświadcza, że *[F5D7234-4-H]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	*[Belkin Ltd]* declara que este *[F5D7234-4-H]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	*[I Belkin Ltd]* izjavlja, da je ta *[F5D7234-4-H]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Suomi [Finnish]	*[Belkin Ltd]* vakuuttaa täten että *[F5D7234-4-H]* tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar *Belkin Ltd]* att denna *[F5D7234-4-H]* står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.
Íslenska [Icelandic]	Hér með lýsir *[Belkin Ltd]* yfir því að *[F5D7234-4-H]* er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.
Norsk [Norwegian]	*[Belkin Ltd]* erklærer herved at utstyret *[F5D7234-4-H]* er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

http://www.belkin.com/doc/

For information on product disposal please refer to
http://environmental.belkin.com

CE ①

FOR USE IN	AT	BE	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE
	IT	LV	LT	LU	MT	NL	PL	PT	SK	SI	ES	SE	GB	IS	LI
	NO	CH	BG	RO	TR					**OPERATES ON CHANNELS 1-13**

Restricted Use in Certain Countries...................................**Class 2 Equipment**

Belkin International, Inc., Lifetime Product Warranty

What this warranty covers.
Belkin International, Inc. ("Belkin") warrants to the original purchaser of this Belkin product that the product shall be free of defects in design, assembly, material, or workmanship.

What the period of coverage is.
Belkin warrants the Belkin product for the lifetime of the product.

What will we do to correct problems?
Product Warranty.
Belkin will repair or replace, at its option, any defective product free of charge (except for shipping charges for the product).

What is not covered by this warranty?
All above warranties are null and void if the Belkin product is not provided to Belkin for inspection upon Belkin's request at the sole expense of the purchaser, or if Belkin determines that the Belkin product has been improperly installed, altered in any way, or tampered with. The Belkin Product Warranty does not protect against acts of God such as flood, lightning, earthquake, war, vandalism, theft, normal-use wear and tear, erosion, depletion, obsolescence, abuse, damage due to low voltage disturbances (i.e. brownouts or sags), non-authorized program, or system equipment modification or alteration.

How to get service.
To get service for your Belkin product you must take the following steps:

1. Contact Belkin Limited using the details provided on page 98.

2. Your Belkin Customer Service Representative will then instruct you on how to forward your receipt and Belkin product and how to proceed with your claim.

Belkin reserves the right to review the damaged Belkin product. All costs of shipping the Belkin product to Belkin for inspection shall be borne solely by the purchaser. If Belkin determines, in its sole discretion, that it is impractical to ship the damaged equipment to Belkin, Belkin may designate, in its sole discretion, an equipment repair facility to inspect and estimate the cost to repair such equipment. The cost, if any, of shipping the equipment to and from such repair facility and of such estimate shall be borne solely by the purchaser. Damaged equipment must remain available for inspection until the claim is finalized. Whenever claims are settled, Belkin reserves the right to be subrogated under any existing insurance policies the purchaser may have.

How state law relates to the warranty.
THIS WARRANTY CONTAINS THE SOLE WARRANTY OF BELKIN. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR, EXCEPT AS REQUIRED BY LAW, IMPLIED, INCLUDING THE IMPLIED WARRANTY OR CONDITION OF QUALITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SUCH IMPLIED WARRANTIES, IF ANY, ARE LIMITED IN DURATION TO THE TERM OF THIS WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

IN NO EVENT SHALL BELKIN BE LIABLE FOR INCIDENTAL, SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR MULTIPLE DAMAGES SUCH AS, BUT NOT LIMITED TO, LOST BUSINESS OR PROFITS ARISING OUT OF THE SALE OR USE OF ANY BELKIN PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This warranty gives you specific legal rights, and you may also have other rights, which may vary from state to state. Some states do not allow the exclusion or limitation of incidental, consequential, or other damages, so the above limitations may not apply to you.

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