



WIRELESS N ROUTER

# N450 DB

**User Manual**

F9K1105V3 8820-01286 Rev. B00

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## GETTING STARTED

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### What's in the Box

N450 DB Wireless N Router

Ethernet cable (attached to router)

Power supply (attached to router)

Network information card (attached to router)

Quick Setup Guide

### Initial Setup

#### Where to Place Your Router

For the best results, place the Router next to your modem in an open location, away from large metal objects and magnets such as those found in speakers. Raising the Router above floor level can improve the strength of your wireless signal.

### How to Set It Up

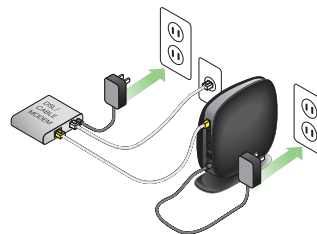
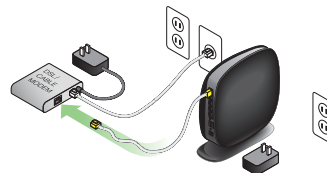
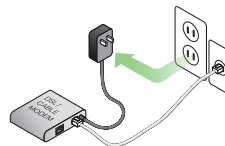
#### Connect Your N450 DB Router

Turn off your modem by disconnecting its power supply. Some modems have a battery backup; this will need to be disconnected at this time as well.

Connect your Router to your modem using the cable (already attached).

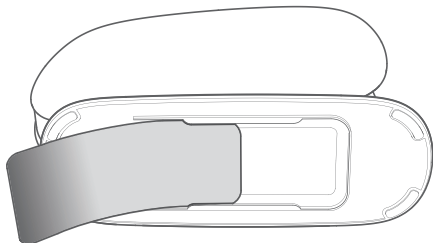
Power up your modem by plugging in its power supply. If your modem has a battery backup, it can be reconnected at this time; you may need to hold the reset button for 10 seconds.

Power up your Router by plugging in its power supply.



### Connect to Your Router

Retrieve the network ID card from the foot of your new Belkin Router.



Can't find the card? The default network name and password are also printed on the foot of the Router.

Use your computer, tablet, or smartphone to connect to the wireless network shown on the network ID card.

For information on how to connect your wireless devices, please see the "Connect Your Wireless Devices" section on page 20.

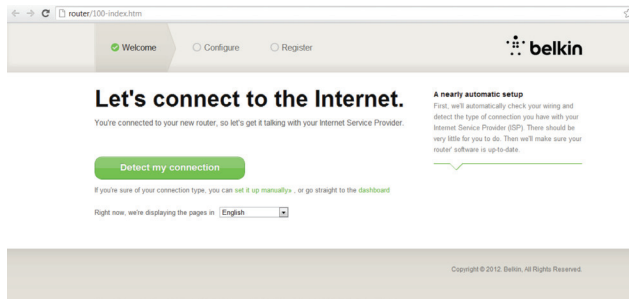


When requested, please enter the password (security key) provided on the card.

When your device has connected to the Router, use a browser to visit <http://router/>. The router homepage will appear.

## GETTING STARTED

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If the page does not load, then try visiting <http://192.168.2.1> to see the router homepage.

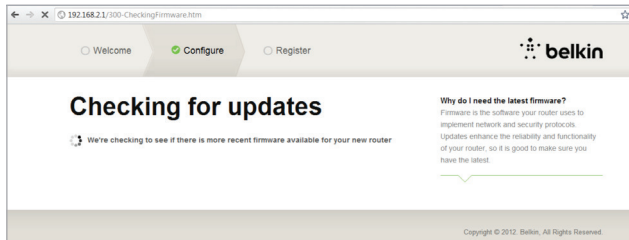
Click the "Detect my connection" button in green. (If you would rather set up the Router manually, click the "set it up manually" link and proceed to page 10.)

After several moments, your Router should automatically detect your Internet connection and restart. This can take anywhere from 30 seconds to 3 minutes depending on your connection type.

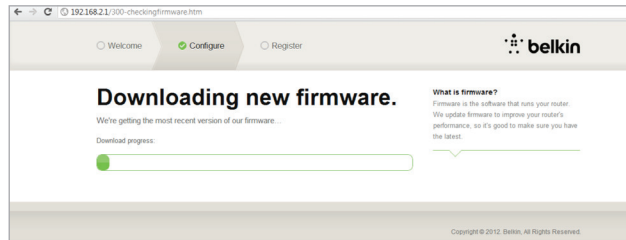
If your Router is unable to establish an Internet connection on its own, you may be asked to restart your modem or provide a username and password if your connection requires one. Follow the on-screen instructions provided.

## GETTING STARTED

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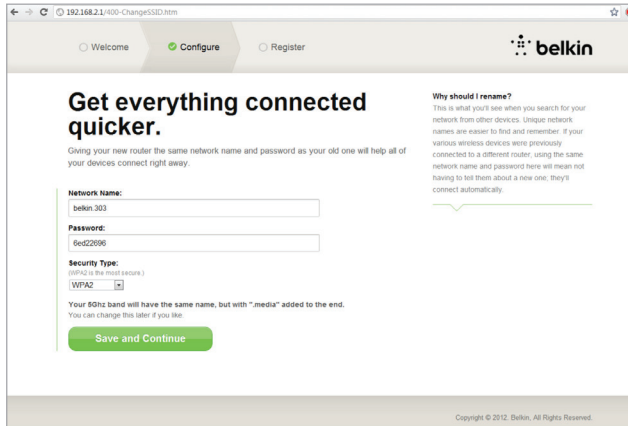
Once your Router is online, it will determine if there is a firmware update available and offer to install it. Please allow up to 5 minutes for the firmware to update.



If there are no updates available, then setup will proceed.

## GETTING STARTED

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The screenshot shows a web browser window at the address 192.168.2.1:8000-ChangeSSID.htm. The page has a navigation bar with 'Welcome', 'Configure' (active), and 'Register' tabs, and the Belkin logo. The main heading is 'Get everything connected quicker.' Below it, a sub-heading says 'Giving your new router the same network name and password as your old one will help all of your devices connect right away.' There are three input fields: 'Network Name' with 'belkin\_303', 'Password' with '6ed22696', and 'Security Type' with 'WPA2'. A note states 'Your 802.11n band will have the same name, but with ".media" added to the end. You can change this later if you like.' A green 'Save and Continue' button is at the bottom. A sidebar on the right explains why renaming is helpful. The footer contains 'Copyright © 2012, Belkin. All Rights Reserved.'

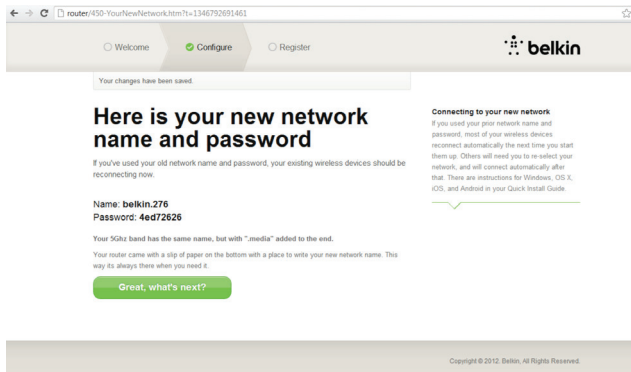
At the next screen you will be invited to change your network name and password. Re-using your previous network name (SSID) and password makes connecting your existing devices to the new router much easier.

If you decide to change these settings, then enter the new values and click "Save and Continue." (Note: The password must be at least 8 characters long.)

If you changed your network name and password, make note of it on the service card located on the foot of the Router. You will then have to connect to the new network.



## GETTING STARTED



router/450-YourNewNetwork.htm?i=1346792091461

Welcome **Configure** Register

Your changes have been saved.

### Here is your new network name and password

If you've used your old network name and password, your existing wireless devices should be reconnecting now.

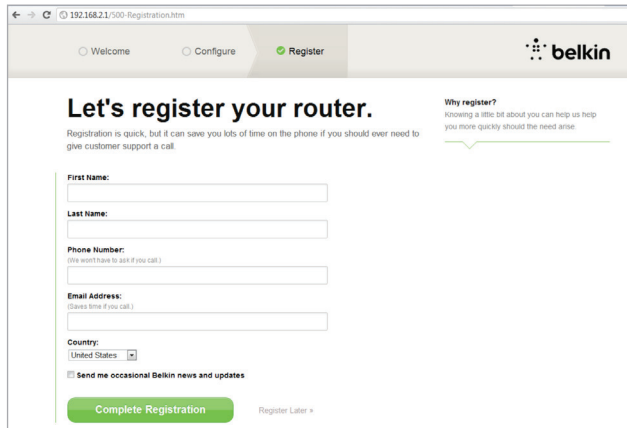
Name: **belkin.276**  
Password: **4e072626**

Your 5GHz band has the same name, but with ".media" added to the end.  
Your router came with a slip of paper on the bottom with a place to enter your new network name. This way it's always there when you need it.

[Great, what's next?](#)

Copyright © 2012, Belkin. All Rights Reserved.

Please take this opportunity to register your Router. This will help technical support if there is a problem with your Router.



192.168.21.1/500-Registration.htm

Welcome **Configure** **Register**

### Let's register your router.

Registration is quick, but it can save you lots of time on the phone if you should ever need to give customer support a call.

**Why register?**  
Knowing a little bit about you can help us help you more quickly should the need arise.

**First Name:**

**Last Name:**

**Phone Number:**  
(We won't have to ask if you call.)

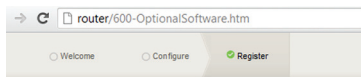
**Email Address:**  
(Saves time if you call.)

**Country:**  
United States

Send me occasional Belkin news and updates

[Complete Registration](#) [Register Later >](#)

Simply complete each of the required fields and click "Complete Registration." If you don't want to register right now, click "Register Later" to proceed.



### Get the most out of your router.

**Belkin Wi-Fi**  
**COMING SOON!**  
Your router is app-enabled. Download this app to find the router homepage quickly and easily from your phone or tablet's homepage.  
Mobile  
 

**Device Manual**  
[Download the manual for your device.](#)

Visit your router's [Optional Software](#) page to retrieve similar software for your other computers and mobile devices.

[Thanks, take me to the dashboard](#)

At the next screen you can download optional software that was bundled with your Router.

This screen shows you optional software that is available for your Router, such as the Belkin Wi-Fi app used to access your router's homepage quickly. If you wish to download and install this software program, simply click on the button appropriate for your device.

## GETTING STARTED

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**belkin.0fe** ● Online  
Password: 9a4f69f6 belkin  
unlocked

### A little more oomph.

You can squeeze more performance out of your Internet connection by setting up Intellistream. This involves running a speed test.

Set Up Intellistream

Maybe Later



Content Filtering



Connected Devices



Guest Access



Optional Software

[Advanced Settings](#)

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When finished installing optional software, click “Thanks, take me to the dashboard.”

Congratulations! You are now at your Router’s dashboard. Your Router is set up and ready to use.

### Using the WPS Button

1. Start WPS Push Button Connection (WPS PBC) on your computer or other Wi-Fi device that you would like to connect wirelessly to your Router. Often there will be a button for this purpose in software that came with the device, or a physical “WPS,” “PBC,” or “Security” button on the device itself.
2. Within two minutes, press the WPS button on your Router and hold for two seconds.

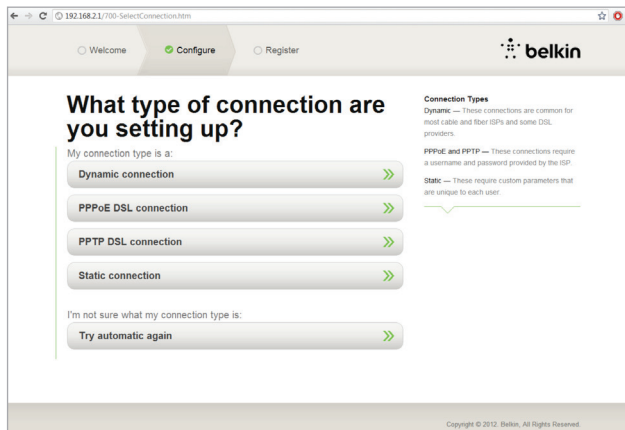
The WPS light (small light above WPS button) will blink blue while it listens for your Wi-Fi device. Once a connection is established, the light will turn blue and then go out. If a connection is not established, the light will blink amber. You may repeat the process to try again.

You can repeat this process for each WPS-enabled device you’d like to add to your network.

### Manually Set Up Your Internet Connection

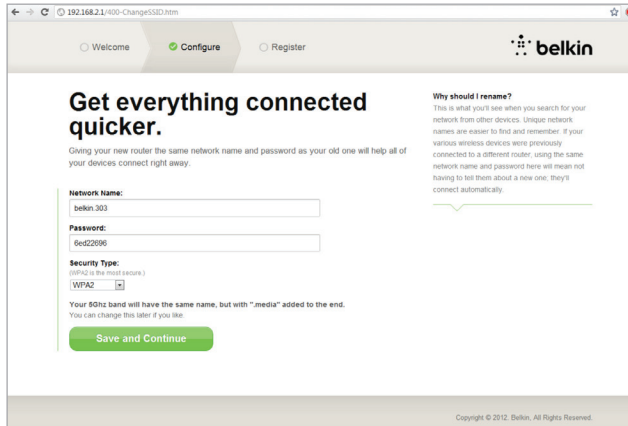
Use a browser to visit <http://router/>. You can also try visiting <http://192.168.2.1/>. The Router's Welcome page should appear.

Click the "Set it up manually" link. Please select the type of connection your ISP provides. Refer to page 16 for a description of the connection types.



If the selected connection type requires additional information (such as an ISP username and password), the system will ask you for it.

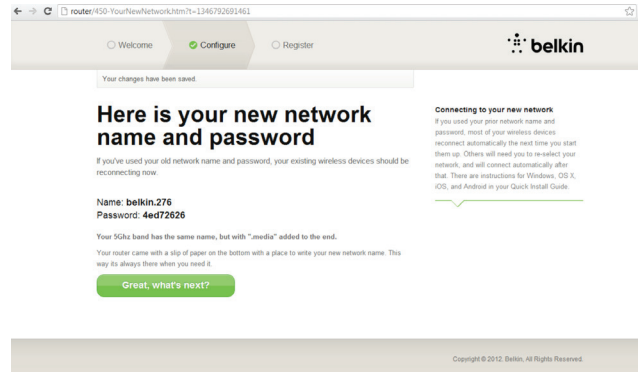
At the next screen you will be invited to change your network name and password. Reusing your previous network name (SSID) and password makes connecting your existing devices to the new router much easier.



The screenshot shows a web browser window at the URL 192.168.2.1/100-ChangeSSID.htm. The page has a navigation bar with 'Welcome', 'Configure' (selected), and 'Register'. The main heading is 'Get everything connected quicker.' Below this, there is a paragraph explaining that giving the new router the same network name and password as the old one will help devices connect. There are three input fields: 'Network Name' with 'belkin.303', 'Password' with '6ed22696', and 'Security Type' with 'WPA2'. A 'Save and Continue' button is at the bottom. A 'Why should I rename?' section explains that unique names are easier to remember and that using the same name and password will help devices connect automatically.

If you decide to change these settings, then enter the new values and click “Save and Continue.” (Note: The password must be at least 8 characters long.)

If you changed your network name and password, make note of it on the service card located on the foot of the Router. You will then have to connect to the new network. Please refer to page 20 to do this.



The screenshot shows a web browser window at the URL router/100-YourNewNetwork.htm?i=1346792691461. The page has a navigation bar with 'Welcome', 'Configure' (selected), and 'Register'. A message says 'Your changes have been saved'. The main heading is 'Here is your new network name and password'. Below this, there is a paragraph explaining that if the old network name and password were used, devices should reconnect. The new settings are: 'Name: belkin.276' and 'Password: 4ed72626'. A 'Great, what's next?' button is at the bottom. A 'Connecting to your new network' section explains that most wireless devices will connect automatically after the user selects the new network. A footer note says 'Your 5GHz band has the same name, but with "mesh" added to the end.' and 'Your router came with a slip of paper on the bottom with a place to write your new network name. This way it's always there when you need it.'

Click “Great, what’s next?”

## GETTING STARTED

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192.168.2.1/500-Registration.htm

Welcome Configure Register

belkin

### Let's register your router.

Registration is quick, but it can save you lots of time on the phone if you should ever need to give customer support a call.

**Why register?**  
Knowing a little bit about you can help us help you more quickly should the need arise.

**First Name:**

**Last Name:**

**Phone Number:**  
(We won't have to ask if you call.)

**Email Address:**  
(We won't have to ask if you call.)

**Country:**  
United States ▾

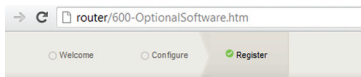
Send me occasional Belkin news and updates

[Complete Registration](#) [Register Later](#)


Please take this opportunity to register your Router. This will help technical support if there is a problem with your Router.

Simply complete each of the required fields and click "Complete Registration." If you don't want to register right now, click "Register Later" to proceed.

At the next screen you can download optional software that was bundled with your Router.





### Get the most out of your router.

**Belkin Wi-Fi**

**COMING SOON!**  
Your router is app-enabled. Download this app to find the router homepage quickly and easily from your phone or tablet's homepage.

Mobile

**Device Manual**

Download the manual for your device.

Visit your router's [Optional Software](#) page to retrieve similar software for your other computers and mobile devices.

[Thanks, take me to the dashboard](#)

This screen shows you optional software that is available for your Router, such as the USB software to allow you to print through the Router's USB port. If you wish to download and install any of these software programs, simply click on the button appropriate for your device.

When finished installing optional software, click "Thanks, take me to the dashboard."

## GETTING STARTED

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Congratulations! You are now at your Router's dashboard. Your Router is now set up and ready to use.

The status of your Internet connection is shown in the upper left corner of the Router's homepage.

If it does not say "Online," troubleshooting information will be displayed.

The screenshot displays the Belkin Ofe router's web interface. At the top left, it shows the router name "belkin.Ofe" with a green "Online" indicator and the password "9a4f69f6". The Belkin logo and "unlocked" status are in the top right. Below this, a message reads "A little more oomph." with a sub-note: "You can squeeze more performance out of your Internet connection by setting up Intellistream. This involves running a speed test." Two buttons are provided: "Set Up Intellistream" (highlighted in green) and "Maybe Later". A horizontal line separates this from a row of four configuration buttons: "Content Filtering" (with a shield icon), "Connected Devices" (with a group of people icon), "Guest Access" (with a person icon), and "Optional Software" (with a laptop icon). Another horizontal line is below, followed by a link for "Advanced Settings" with a right-pointing arrow.



### ▼ Advanced Settings

#### LAN Settings

- Local Network Settings
- Connected Devices

#### WAN Settings

- ISP Connection Type
- DNS
- MAC Address

#### IPv6

- IPv6 Connection

#### WiFi

- Network Name
- Security
- WiFi Protected Setup
- Guest Access
- Use as Access Point

#### Parental Controls

- Website Filter
- Parental Internet Control

#### Media

- Intellistream
- Traffic Statistics

#### Firewall

- Firewall
- Port Forwarding
- DMZ
- DDNS
- WAN Ping Blocking
- Security Log

#### Utilities

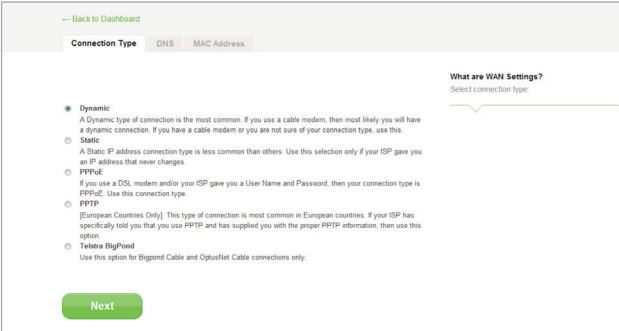
- Restart Router
- Restore Factory Defaults
- Save/Backup Settings
- Restore Settings
- Firmware Update
- System Settings
- Self-Healing
- Optional Software

## Manually Configuring Your Router's Internet from the Dashboard

To set up your ISP connection manually, select "ISP Connection Type" from the list under the header "WAN Settings."

### Dynamic Connection

Cable and fiber customers generally require a dynamic connection. Some DSL customers require a PPPoE connection. Let's try dynamic first. Select "Dynamic" from the menu that appears and press "Next."



The screenshot shows a web-based configuration interface. At the top left, there is a link that says "-- Back to Dashboard". Below this, there are three tabs: "Connection Type" (which is selected), "DNS", and "MAC Address". The main content area contains a list of radio button options for connection types:

- Dynamic:**  
A Dynamic type of connection is the most common. If you use a cable modem, then most likely you will have a dynamic connection. If you have a cable modem or you are not sure of your connection type, use this.
- Static:**  
A Static IP address connection type is less common than others. Use this selection only if your ISP gave you an IP address that never changes.
- PPPoE:**  
If you use a DSL modem and/or your ISP gave you a User Name and Password, then your connection type is PPPoE. Use this connection type.
- PPoP**  
[European Countries Only] This type of connection is most common in European countries. If your ISP has specifically told you that you use PPoP and has supplied you with the proper PPoP information, then use this option.
- Telera HighSpeed**  
Use this option for Bigpond Cable and OptusNet Cable connections only.

At the bottom left of the form is a green button labeled "Next". On the right side of the form, there is a section titled "What are WAN Settings?" with the instruction "Select connection type" and a downward-pointing arrow.

## GETTING STARTED

[← Back to Dashboard](#)

**Connection Type** | DNS | MAC Address

[← Back to Connection Type](#)

To enter your Dynamic IP settings, type in your information below and click "Save."

**Host Name** ⓘ

[Change WAN MAC Address](#)

**Save**

**Dynamic**  
A Dynamic type of connection is the most common. If you use a cable modem, then most likely you will have a dynamic connection. If you have a cable modem or you are not sure of your connection type, use this.

A host name is generally not required. Hit "Save." The Router will restart.

belkin.0fe Online

Password: 9a4f69f6

belkin

unlocked

### A little more oomph.

You can squeeze more performance out of your Internet connection by setting up Intellistream. This involves running a speed test.

[Set Up Intellistream](#)

[Maybe Later](#)



Content Filtering



Connected Devices



Guest Access



Optional Software

[▶ Advanced Settings](#)

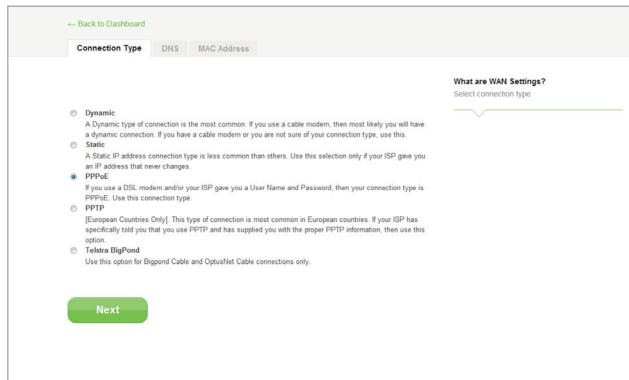
If after a few minutes your Internet Status says "Online," you're done! You can surf the Internet.

If these steps do not work, try restarting your modem and repeating the process.

If not, we'll try a PPPoE connection next.

## GETTING STARTED

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The screenshot shows a web-based configuration interface. At the top left, there is a link that says "-- Back to Dashboard". Below this, there are three tabs: "Connection Type" (which is active), "DNS", and "MAC Address". The main content area contains a list of radio button options for connection types. The "PPPoE" option is selected. To the right of the list, there is a section titled "What are WAN Settings?" with the instruction "Select connection type". At the bottom left of the form, there is a green button labeled "Next".

-- Back to Dashboard

Connection Type DNS MAC Address

Dynamic  
A Dynamic type of connection is the most common. If you use a cable modem, then most likely you will have a dynamic connection. If you have a cable modem or you are not sure of your connection type, use this.

Static  
A Static IP address connection type is less common than others. Use this selection only if your ISP gave you an IP address that never changes.

PPPoE  
If you use a DSL modem and/or your ISP gave you a User Name and Password, then your connection type is PPPoE. Use this connection type.

PPTP  
[European Countries Only]. This type of connection is most common in European countries. If your ISP has specifically told you that you use PPTP and has supplied you with the proper PPTP information, then use this option.

Telstra BigPond  
Use this option for Bigpond Cable and OptusNet Cable connections only.

What are WAN Settings?  
Select connection type

Next

### PPPoE Connection

Some DSL customers require a PPPoE connection. Select PPPoE this time and press "Next."

## GETTING STARTED

← Back to Dashboard

Connection Type DNS MAC Address

← Back to Connection Type

To enter your PPPoE settings, type in your information below and click "Save".

**User Name**

**Password**

**Retype Password**

**Service Name (Optional)**

**IP assigned by ISP**

Yes

**MTU (800-1800)**

Disconnect after

minutes of no activity

Save

**PPPoE Settings**

To set the router to use PPPoE, type in the user name and password from your ISP in the spaces provided. If you do not have a service name or do not know it, leave the "Service Name" field blank. After you have typed in your information, click "Save". After you save, the status indicator will read "Online" if your router is set up properly.

Enter the username and password supplied by your Internet provider and click "Save." Ignore the other fields unless required by your ISP. The Router will restart.

belkin.Ofe Online

Password: 9a4f69f6

belkin

unlocked

### A little more oomph.

You can squeeze more performance out of your Internet connection by setting up Intellistream. This involves running a speed test.

Set Up Intellistream

Maybe Later



Content Filtering



Connected Devices



Guest Access



Optional Software

▶ Advanced Settings

If after a few minutes your Internet Status says "Connected," you're done! You can surf the Internet.

If these steps do not work, try restarting your modem and repeating the process.

### Connect Your Wireless Devices




(iPhone, iPad, and iPod touch)

1. Open the Settings app and select the **Wi-Fi** menu item.
2. Select your wireless network from the list that appears there. If asked to do so, enter the network password.



Your Mac® provides a menu of available wireless networks at the right end of the menu bar.

1. Click on the  icon showing wireless waves.
2. Select your wireless network from the list that appears there. If asked to do so, enter the network password.



(phones and tablets)


1. Open the **Settings** app and select **Wireless and Network**.
2. From there, select **Wi-Fi** to see the list of available networks.
3. Select your wireless network from the list. If asked to do so, enter your network password.

## GETTING STARTED

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### Windows® 7

Your computer provides a menu of available wireless networks at the right end of the task bar.

1. Left-click on the  icon that looks like signal strength bars.
2. Select your wireless network from the list. If asked, enter your network password (network key).

### Windows Vista® and Windows XP

Your device provides a menu of available wireless networks at the right end of the task bar.

1. Right-click on the icon that shows a computer with wireless waves (XP ) or two computers (Windows Vista) .
2. Choose “View Available Wireless Networks (XP)” or “Connect to a network (Vista)” from the menu.
3. Select your wireless network from the list. If asked, enter your network password (network key).

## ADDITIONAL CAPABILITIES

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### Optional Software

#### Belkin WiFi App

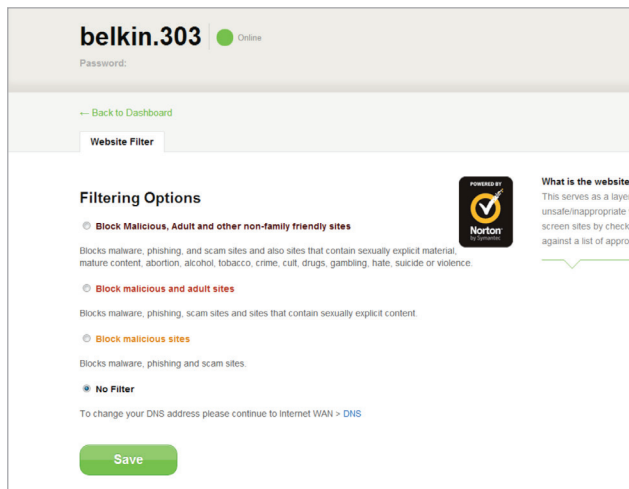
For easy access to your Router's dashboard, download the Belkin Wi-Fi app from Google play or the App Store.



### **Guest Access**

You can allow guests to use your Internet connection without joining your personal network. The network name and password for the guest network is located on the network information card found under the foot of your Router.

A person using your guest network will be able to join without a password, but will be shown a login page when they attempt to surf the Web. They will need to enter the guest password into this page to continue.



### Website Filters. Powered by Norton

Web filters provide a first layer of whole-home Internet protection to guard you from unsafe and inappropriate websites on any device on your network.

**There are four different filtering options:**

1. Block malicious, adult, and other non-family-friendly sites
2. Block malicious and adult sites
3. Block malicious sites
4. No filters

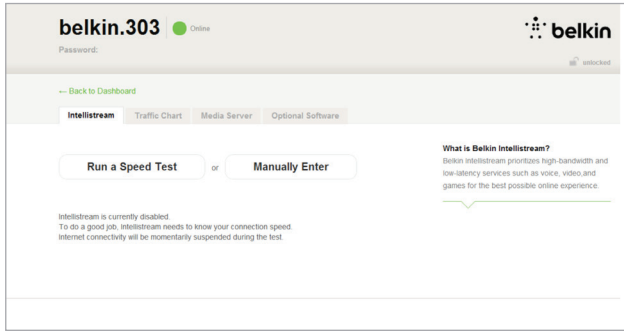
If you think a site should be added to the filtering list, submit a request at [safeweb.norton.com](https://safeweb.norton.com).

**Content filtering may not work as intended if:**

1. You are connecting through a VPN router.
2. You are routing traffic through a proxy server.
3. You have previously visited the site and it has been stored in your cache.
4. You manually set the DNS servers on your computer, tablet, or smartphone.

## ADDITIONAL CAPABILITIES

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### Intellistream QoS

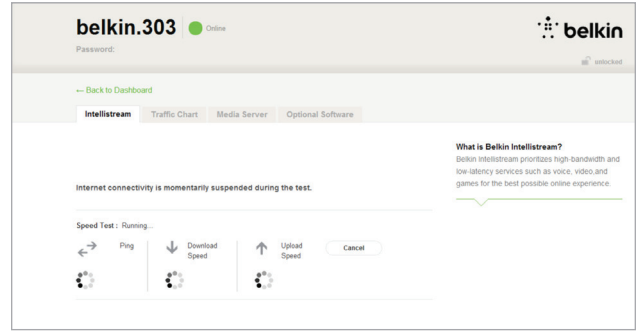
Intellistream prioritizes video and gaming traffic for a better online entertainment experience.

**There are two ways to enable Intellistream:**

#### Run a Speed Test:

In order for Intellistream to provide you the best media experience, your Router needs to know what your approximate Internet speeds are.

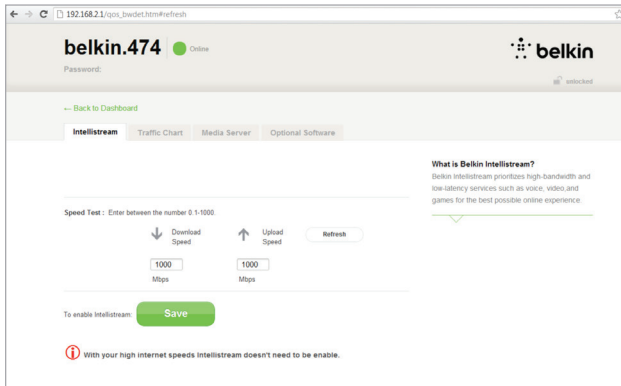
Click "Run a Speed Test" and the test will begin.



Once complete you will see the results.

## ADDITIONAL CAPABILITIES

---



If your Internet speed is greater than 70Mbps when downloading, Intelstream QoS will only improve your uploading experience.

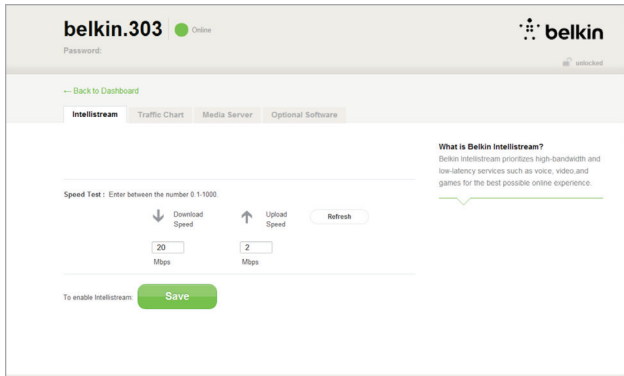
**Refresh** – This will retest your Internet speed.

When you click “Save,” your Router will save your changes.

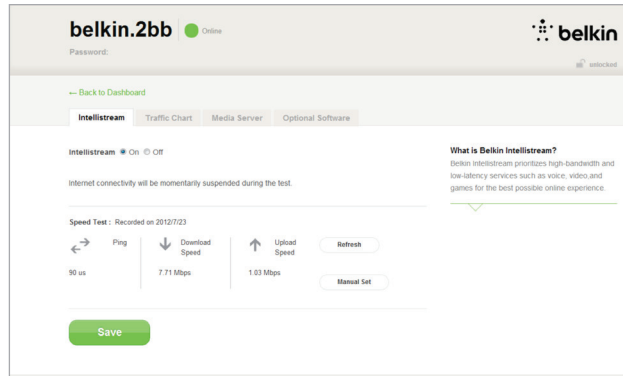
## ADDITIONAL CAPABILITIES

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**Manual set** – This will let you set your approximate Internet speeds. If you do not know your Internet speeds, contact your ISP.



When you click “Save,” your Router will save your changes.

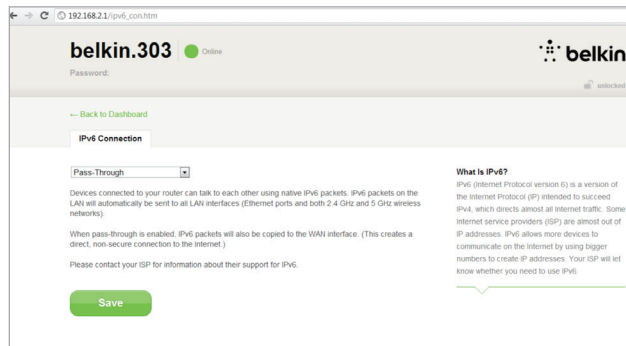


IntelliStream is now enabled.

### IPv6 Configuration

A new version of Internet Protocol (IP) uses a 128-bit address to implement additional features that are not present in current IP addresses.

Contact your ISP to inquire about their support for IPv6.



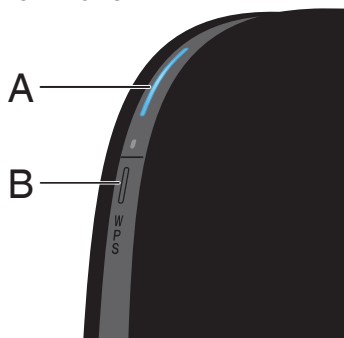
### Pass-Through

Devices connected to your Router can talk to each other using native IPv6 packets, but information will be sent to all connected devices. Pass-through is not efficient and is not recommended for consistent use.

## GETTING TO KNOW YOUR ROUTER

---

### Front Panel



#### A) Router Status Light

Your Router's status is shown by the light on the front.

**Off:** The Router is not plugged into a power source.

**Blinking Blue:** The Router is starting up.

**Solid Blue:** The Router is connected to the Internet.

**Blinking Amber:** The Router can't detect the modem. Either the modem is off, is not plugged into the Router, or is unresponsive.

#### B) Wi-Fi Protected Setup (WPS) Light and Button

The WPS button on the front of your Router can be used to help establish a secure connection between your Router and other WPS-enabled Wi-Fi devices such as computers. To use WPS, refer to page 9.

The small light near the WPS button shows what is happening while you are using WPS to establish a connection.

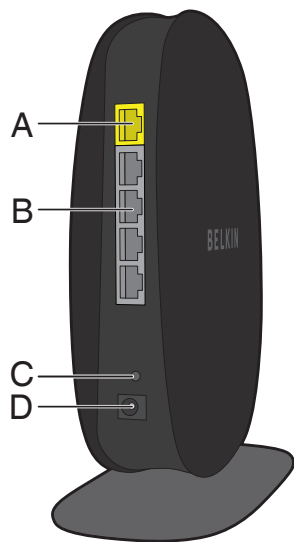
**Off:** Idle

**Blinking Blue:** The Router is listening for a WPS-enabled computer or other device.

**Solid Blue:** The Router has made a secure connection with the computer or other device.

**Amber:** A connection was not created.

### Back Panel



#### A) Modem (WAN) Connector

*Connect your modem to this port using an Ethernet cable.*

#### B) Wired (LAN) Connectors

*Connect computers and other wired network devices to these ports using Ethernet cables.*

#### C) Reset Button

*This button is used to restart your Router in rare cases when it functions incorrectly. Resetting the Router will preserve your settings. This button may also be used to restore the factory default settings. Please see the Troubleshooting section for more information.*

#### D) Power Connector

*Connect the included power supply to this jack.*



## TECHNICAL DETAILS

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### Technical Features

#### Integrated 802.11n Wireless Access Point

Utilizing Dual-Band Network technology, your Router creates two separate networks (one at 2.4GHz band and the other at 5GHz band), allowing increased bandwidth to all your connected wireless devices and computers.

#### NAT IP Address Sharing

To save you the cost of adding IP addresses per cosave you the cost of adding IP addresses per computer in your house, your Belkin Router uses Network Address Translation (NAT) technology, allowing you to share a single IP address across your network.

#### SPI Firewall

Your Router is equipped with a firewall that will protect your network from a wide array of common attacks and viruses.

#### Universal Plug-and-Play (UPnP) Compatibility

UPnP offers seamless operation of voice and video messaging, games, and other applications that are UPnP-compliant.

#### Web-Based Advanced User Interface

You can easily make changes to your Router's advanced settings through your web browser. These changes can be made from any computer on network.

#### Integrated 4-Port 10/100 Switch

Your Router has a built-in, 4-port network switch to allow your wired computers to share: printers, data, MP3 files, digital photos, and much more.

### System Requirements

Router

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

A computer running Internet Explorer® 8 or higher, Firefox®, Google Chrome™, or Safari®

Minimum 1GHz processor and 512MB RAM

Or a smart device running iOS or Android operating systems

### **Auto Update on Your Belkin Router**

The Router will automatically check for a newer version of firmware every time you log into the dashboard and alert you with a message at the top of the screen if there is an update available. You can choose to download the new version or ignore it.

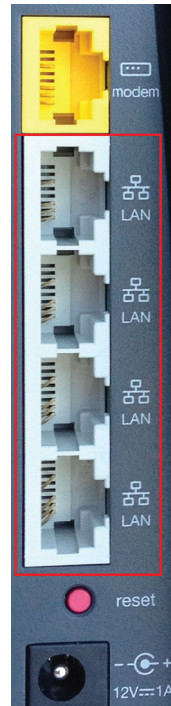
You will see a series of prompts warning you that the firmware is about to be updated. Please do not disconnect the power from the Router at this time as it could cause the system to fail.

### Updating the Router's Firmware via the Web Interface

The following steps show you how to update your Router's firmware using its web interface. You do not need to be connected to the Internet as this interface is built into the Router itself.

#### Setup steps:

1. Locate and download the firmware file from the Belkin support site. (Type your part number into the search box in the top right corner and look for "Firmware" in the title.)
2. Save the file to a location on your computer where you can get to it easily, such as your desktop.
3. Connect the computer to one of the four LAN ports on the Router (refer to image).
4. Open a web browser on the computer.
5. In the address bar of the web browser, type "http://router" or "http://192.168.2.1" and press "Enter" on your keyboard.



### ▼ Advanced Settings

#### LAN Settings

Local Network Settings  
Connected Devices

#### WAN Settings

ISP Connection Type  
DNS  
MAC Address

#### IPv6

IPv6 Connection

#### WiFi

Network Name  
Security  
WiFi Protected Setup  
Guest Access  
Use as Access Point

#### Parental Controls

Website Filter  
Parental Internet Control

#### Media

IntelliStream  
Traffic Statistics

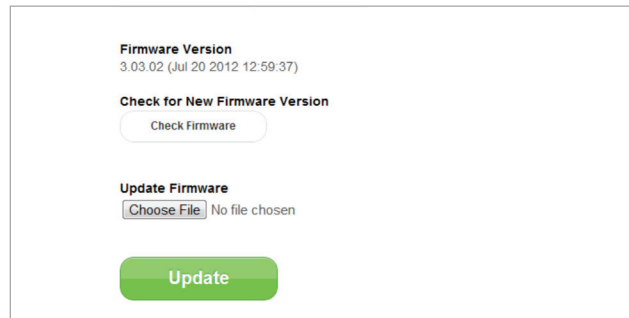
#### Firewall

Firewall  
Port Forwarding  
DMZ  
DDNS  
WAN Ping Blocking  
Security Log

#### Utilities

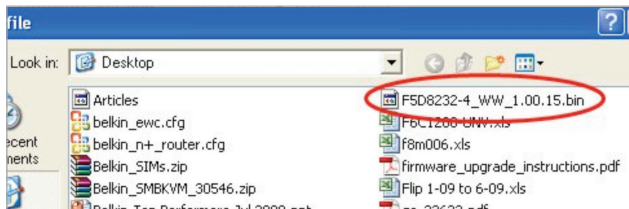
Restart Router  
Restore Factory Defaults  
Save/Backup Settings  
Restore Settings  
**Firmware Updates**  
System Settings  
Self-Healing  
Optional Software

6. Click on “Firmware Update” toward the bottom.

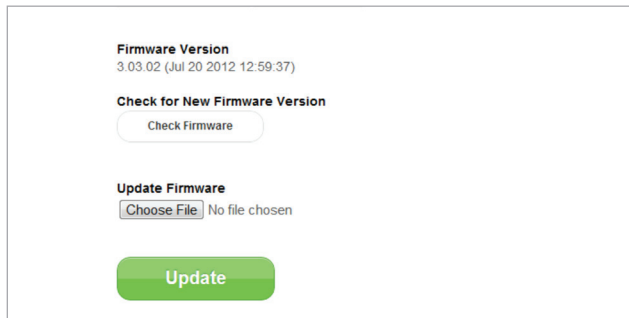


7. Click the “Choose File” button toward the middle of the screen to search for the file you saved previously.

**Note:** The firmware version in the image above is depicted as an example. Your file name will vary depending on your model and version.



8. Select the firmware file by left-clicking on it and then click the “Open” button in the lower-right corner of the window. This will take you back into the Router’s interface.



9. Click the “Update” button.
10. A prompt asking, “Are you sure you want to continue with upgrading?” will appear. Click “OK”.
11. A second prompt will open telling you the Router will not respond during the upgrade and warning you not to remove the power supply from the Router. Click “OK” once more.

Congratulations. The firmware has been updated successfully.

### Resetting the Router

#### Reset Button – Red

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 custom password.

#### 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.

### Restoring Your Router to Factory Defaults

Press and hold the “Reset” button for at least 5 seconds, and 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 restore is complete.

### Restoring the Router to Default Settings Using the Web Interface

#### Symptoms

You need to restore the factory defaults using the web interface. This may be because the Router is not performing as expected or you wish to remove all previously configured settings.

#### Setup steps

1. Open a web browser on the computer.
2. In the address bar of the web browser, type "http://router" or "http://192.168.2.1".

#### ▼ Advanced Settings

##### LAN Settings

Local Network Settings  
Connected Devices

##### WAN Settings

ISP Connection Type  
DNS  
MAC Address

##### IPv6

IPv6 Connection

##### WiFi

Network Name  
Security  
WiFi Protected Setup  
Guest Access  
Use as Access Point

##### Parental Controls

Website Filter  
Parental Internet Control

##### Media

IntelliStream  
Traffic Statistics

##### Firewall

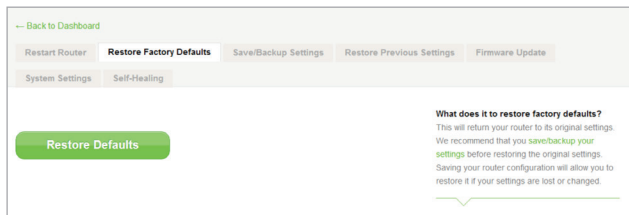
Firewall  
Port Forwarding  
DMZ  
DDNS  
WAN Ping Blocking  
Security Log

##### Utilities

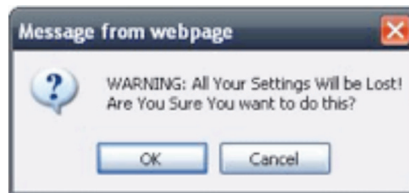
Backup Router  
**Restore Factory Defaults**  
Save/Backup Settings  
Restore Settings  
Firmware Update  
System Settings  
Self-Healing  
Optional Software

3. Click on "Restore Factory Defaults" in the left-hand column under the "Utilities" heading.





4. Click on the "Restore Defaults" button.



5. A warning box will open that says, "Warning: All your settings will be lost. Are you sure you want to do this?" Click "OK".
6. The Router will begin the restoring process. Once the restore is complete, the Router will reboot.

**Note:** This may take several minutes.

Your Router has successfully been restored to its factory settings.

### Troubleshooting

#### **I can't connect to the Internet wirelessly.**

If the light on the front of the Router is solid blue, then your Router is connected to the Internet. You may not be connected to the Router's wireless network. Please refer to "Connect Your Wireless Devices" on page 20 of this manual for instructions.

If your Windows XP computer is running SP2, you will not be able to set up the Router via the wireless setup process. You will need to either update to Windows XP SP3 or complete the setup via a wired connection.

#### **I can't connect to the Internet wirelessly and my network name is not listed in Available Networks.**

1. Verify that your Router is on and the front-panel light shows solid blue.
2. If you are far from the Router, you might try moving closer to see if you might have been out of range.
3. Using a computer attached to the Router via a network cable, visit <http://router/> and ensure that "Broadcast SSID" is ON. This setting is found on the "Channel and SSID" page.

#### **My wireless network performance is slow, inconsistent, suffers from weak signal, or I'm having difficulty maintaining a VPN connection.**

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. Note also that connection speed may decrease as you move farther away from the Router.

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

**Changing the wireless channel**—Depending on local wireless traffic and interference, switching the wireless channel of your network can improve performance and reliability. See the section titled "Changing the Wireless Channel" for instructions on how to choose other channels.

**Limiting the wireless transmit rate**—Limiting the wireless transmit rate can help improve range and connection stability. Most wireless cards have the ability to limit the transmission rate. To change this property in Windows, 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, 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.

**I’ve installed this new Router and some of my network clients (computers, game consoles, etc.) are now unable to connect.**

Your new Router came pre-configured with a network name and password, found printed on an attached card. All clients must use this network name and password to connect wirelessly to your Router. You will need to find the network settings on your client, select the network name printed on the card from the list of available networks, and enter the password when prompted to join the wireless network.

### Does the Router support Wireless Protected Access (WPA) security?

The Router ships with WPA/WPA2 security turned on. Windows XP and some older network hardware may require a software update to support WPA/WPA2.

### I am having difficulty setting up WPA security on my Router.

1. Log in to your Router by visiting “http://router/” or “http://192.168.2.1” with your web browser. Click “Security” under the WiFi heading. You should now be on the Security page.
2. Under Security Mode, select WPA/WPA2-Personal (PSK).
3. Select “WPA/WPA2” from the drop-down menu under the Authentication heading.
4. Enter a password. This can be from 8–63 characters of your choice, including spaces and punctuation, OR a 64-digit hexadecimal number (using only the numbers 0–9 and letters A–F).

5. Click “Save” to finish. Your wireless connection is now encrypted. Each computer using your wireless network will need to use the new key.

**Note:** If you are configuring the Router over a wireless connection, you will have to re-connect to the Router after changing any security settings.

**Note:** Some older networking hardware supports only WEP encryption. If your older computers cannot connect to your network, try 128-bit or 64-bit WEP, or seek software updates from their manufacturers.

### **I am having difficulty setting up Wired Equivalent Privacy (WEP) security on my Router.**

1. Log in to your Router. Visit "http://router/" or "http://192.168.2.1" with your web browser. Click "Security" under the WiFi heading. You should now be on the Security page.
2. Under Security Mode, select the "128-bit WEP" option.
3. You may type in a WEP key manually, or generate one from a passphrase. Type a phrase in the "Passphrase" field and click the "Generate" button. A WEP key is composed of 26 hexadecimal digits (0–9, A–F). For example, C3 03 0F AF 4B B2 C3 D4 4B C3 D4 EE 74 is a valid 128-bit WEP key.
4. Click "Save" to finish. Your wireless activity is now encrypted. Each computer using your wireless network will need to use the new key.

**Note:** If you are configuring the Router over a wireless connection, you will have to re-connect to the Router after changing any security settings.

**Note:** Some older networking hardware supports only 64-bit WEP encryption. If your older computers cannot connect to your network, try 64-bit WEP.

### Technical Support

#### US

<http://www.belkin.com/support>

#### UK

<http://www.belkin.com/uk/support>

#### Australia

<http://www.belkin.com/au/support>

#### New Zealand

<http://www.belkin.com/au/support>

#### Singapore

1800 622 1130

#### Europe

<http://www.belkin.com/uk/support>

### **Belkin International, Inc., Limited 2-Year 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 two years.

#### **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). Belkin reserves the right to discontinue any of its products without notice, and disclaims any limited warranty to repair or replace any such discontinued products. In the event that Belkin is unable to repair or replace the product (for example, because it has been discontinued), Belkin will offer either a refund or a credit toward the purchase of another product from Belkin.com in an amount equal to the purchase price of the product as evidenced on the original purchase receipt as discounted by its natural use.

#### **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 International, Inc., at 12045 Waterfront Drive, Los Angeles, CA 90094, Attn: Customer Service, or call (800)-223-5546, within 15 days of the Occurrence. Be prepared to provide the following information:
  - a. The part number of the Belkin product.
  - b. Where you purchased the product.
  - c. When you purchased the product.
  - d. Copy of original receipt.

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.

## REGULATORY INFORMATION

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### FCC Statement

#### DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin International, Inc., of 12045 Waterfront Drive, Los Angeles, CA 90094, declare under our sole responsibility that the device, **F9K1105 V3**, 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 radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, 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. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

### 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:

#### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instructions as documented in this manual.

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

SAR compliance has been established in typical laptop computer(s) with USB slots, and this product could be used in typical laptop computers with USB slots. Other applications, such as handheld PCs or similar devices, have not been verified and may not comply with related RF exposure rules and such use shall be prohibited.

The availability of some specific channels and/or operational frequency bands is country-dependent and firmware is programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

### 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.

#### Industry Canada Statement

This device complies with RSS-210 of the Industry Canada Rules. 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 IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with IC RF exposure compliance requirements, please follow operation instructions as documented in this manual.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

### IMPORTANT NOTICE:

#### 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 23cm between the radiator and your body.

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

#### IC Statement:

This Class B digital apparatus complies with Canadian ICES-003

*Cet appareil numérique de la classe B conforme à la norme NMB-003 du Canada*

#### Industry Canada Statement:

This device complies with RSS standards of the Industry Canada 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.

*Ce dispositif est conforme à la norme CNR- standards d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.*

### IMPORTANT NOTE:

#### Radiation Exposure Statement:

This equipment complies with IC 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.

#### Déclaration d'exposition aux radiations:

*Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.*

#### Caution

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

**Avertissement:**

*(i) les dispositifs fonctionnant dans la bande 5 150-5 250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;*

*(ii) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5 250-5 350 MHz et 5 650-5 850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.*

This radio transmitter (IC: **3623A-F9K1105V3**/ Model: F9K1105V3) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

*Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de PCB dipole antenne avec dB [3.1]. Une antenne à gain plus élevé est strictement interdite par les règlements d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms.*

*Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.*

Le présent émetteur radio (IC: **3623A-F9K1105V3**/ Model: F9K1105V3) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

[belkin.com](http://belkin.com)

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