

## TECHNICAL DETAILS

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### Technical Features

#### **Integrated 802.11n Wireless Access Point**

Utilizing MIMO (Multiple Input Multiple Output) smart-antenna technology, your Router can reach data transfer speeds of up to 300Mbps across your network.

#### **NAT IP Address Sharing**

To save 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**

The UPnP (Universal Plug-and-Play) feature in your Router 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 your network.

#### **Belkin Router Monitor**

The Belkin Router Monitor application helps you to monitor your Router's status and change network settings.

#### **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 Software**

A computer running Windows® XP SP2 or higher, Windows Vista®, or Windows 7; or Mac OS® X v10.x

Minimum 1GHz processor and 256MB RAM

600MB of free hard-drive space for installation

### Troubleshooting

#### The Setup CD does not automatically start.

If Belkin Setup does not run when you insert the CD-ROM, your computer may not be configured to open CDs automatically.

If Belkin Setup does not appear within 15 seconds, browse to your CD-ROM drive and open the “Belkin Setup” icon. Alternatively, you may visit <http://router/> and perform the setup manually. Please see “Manual Setup Using Your Browser” earlier in this manual for more information.

#### Belkin Setup cannot find my Router.

If Belkin Setup is not able to communicate with your Router during the installation process, please check the following items.

1. Make sure that the wireless hardware on your computer is turned on, if available.
2. Try connecting your computer to one of the four “wired” ports on the Router with an Ethernet cable.
3. Ensure that the Router is on. The front-panel light should be on.
4. Unplug the Router’s power supply for 10 seconds, then plug it back in.
5. There may be firewall software on your computer preventing an outgoing connection. You may choose to temporarily disable this software before attempting setup.

If Belkin Setup still cannot find the Router, you might choose to do a manual setup. Refer to “Manually Configuring Network Settings” in this manual for details.

### **Belkin Setup cannot connect my Router to the Internet.**

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

1. Use the troubleshooting suggestions within Belkin Setup.
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 may 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.
3. If you continue to have no Internet connection, refer to "Manually Configuring Network Settings" in this manual for an alternative setup method.

### **Belkin Setup completed installation, but I cannot browse the Web. The light on the front of my Router is blinking amber.**

1. Make sure the Router is connected to your modem with an Ethernet cable via the Router's one WAN (modem) port.
2. Unplug the modem from its power source and make sure that it goes dark. Then reapply power to the modem.
3. Unplug your Router's power supply, wait 10 seconds, and plug it back in. This will cause the Router to try to reestablish communication with the modem.

**Belkin Setup completed installation, but I cannot browse the Web. The light on the front of my Router is solid amber.**

1. Use the troubleshooting suggestions within Belkin Setup.
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 may 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.
3. If you have a static connection, your ISP will have assigned you an IP address, subnet mask, and gateway address. Please re-run Belkin Setup and enter this information when a static connection is mentioned.
4. 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://www.belkin.com/support> and type in "ISP".
5. If you continue to have no Internet connection, refer to "Manually Configuring Network Settings" in this manual for an alternative setup method.

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

If the light on the front of the Router is solid green, then your Router is connected to the Internet. You may not be connected to the Router's wireless network. Please refer to "Adding Computers to Your Network" in this manual for instructions.

### **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 green.
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/> with your web browser. Click on the "Login" button in the top right-hand corner of the screen. You will be asked to enter your password. If you have never set a password, leave the "Password" field blank and click "Submit".
2. Click "Wireless" in the left-hand menu. Then click "Security" just below that.
3. Select the "WPA/WPA2" option.
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 "Apply Changes" 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/> with your web browser. Click on the "Login" button in the top right-hand corner of the screen. You will be asked to enter your password. If you have never set a password, leave the "Password" field blank and click "Submit".
2. Click "Wireless" in the left-hand menu. Then click "Security" just below that.
3. Select the "128-bit WEP" option.
4. 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.

5. Click "Apply Changes" 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 E. Waterfront Drive, Playa Vista, 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 E. Waterfront Drive, Playa Vista, CA 90094, declare under our sole responsibility that the device, **F7D6301 v1**, 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 normal operation is minimized

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.

### 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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

### Canada-Industry Canada (IC)

The wireless radio of this device complies with RSS 139 & 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.

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

### Europe

European Union Radio products with the CE or CE alert marking comply with the R&TTE Directive (1999/5/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 60950-1:2006 (IEC60950-1) – Product Safety
- EN 300 328 Technical requirement for radio equipment
- ETS 301 489 General EMC requirements for radio equipment.

### Information

Products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Product Family Standards.

- EN 55022 (CISPR 22) – Electromagnetic Interference
- EN 55024-1 – Electromagnetic Immunity
- EN 61000-3-2 (IEC610000-3-2) – Power Line Harmonics
- EN 61000-3-3 (IEC610000) – Power Line Flicker
- EN 60950-1 (IEC60950-1) – Product Safety

Products that contain the radio transmitter are sometimes labeled with the Notified Body number (CE0560) or CE alert marking if the standard used in the conformity is not harmonized across the European Community.