

RE2000



User
Guide



Linksys

Wireless-N Range Extender

Introduction

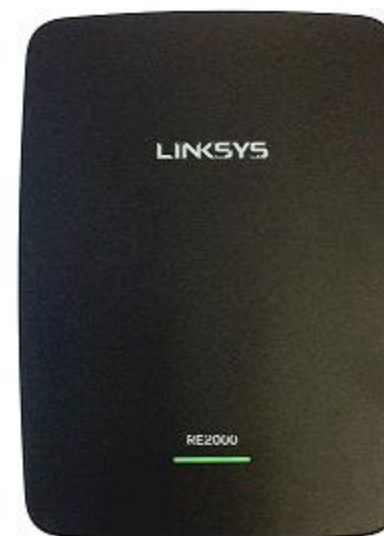
This *Getting Started* guide can help you connect the extender to your network and solve common setup issues. You can find more help from our award-winning, 24/7 customer support at Linksys.com/support.

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Overview

Front



This light indicates the power and the Wi-Fi Protected Setup status. After initial setup, if you have client devices, such as wireless printers, that support Wi-Fi Protected Setup, then you can use Wi-Fi Protected Setup to automatically configure wireless security for your wireless network.

Power When the extender is powered on, resets to factory defaults, or upgrades its firmware, the light flashes slowly (about every three seconds). When the extender is ready for use, the light is continuously lit. If there is an error, the light flashes quickly (about every second); disconnect the extender from the wall mount socket, wait two seconds, and then reconnect it.

Wi-Fi Protected Setup When the Wi-Fi Protected Setup process is active, the light flashes slowly (about every two seconds) for two minutes. When the Wi-Fi Protected Setup is successful, the light is continuously lit. If there is an error, the light flashes quickly (about every second) for two minutes; please wait and try again.


Top



-  **Power Switch** Featured only in the European versions of the extender.
-  **Reset** Press and hold this button for about five seconds to reset the extender to its factory defaults. You can also restore the defaults from the *Administration > Factory Defaults* screen in the extender's browser-based utility.
-  **Wi-Fi Protected Setup Button** After initial setup, if you have client devices, such as wireless printers, that support Wi-Fi Protected Setup, then you can use Wi-Fi Protected Setup to automatically configure wireless security for your wireless network. To use Wi-Fi Protected Setup, refer to "**Using Wi-Fi Protected Setup**" on page 7.

Bottom



-  **Ethernet** (green) Using Ethernet cables (also called network cables), this Ethernet port connects Ethernet network devices to your wireless network.
The green light turns on when an Ethernet device is connected and active on this port. The light flashes when the extender is sending or receiving data over the Ethernet port.

How to install the range extender

1. Insert the *Setup CD* into a computer that is connected to the network router. You will need to be near the router or access point and have access to a networked computer.

IMPORTANT

Set up the extender close to the computer and router to ensure a strong wireless signal. You can move it to a different location later.

2. When the *Setup* utility starts, read the license terms, then click **Next**. You are prompted to plug your extender into an electrical outlet.



3. Connect your extender to an AC power outlet. Your extender searches for wireless networks. The list of networks is displayed.

4. Select the network to use, then click **Next**.



5. Type your network's password, then click **OK**.
- OR -

If your network is hidden (your router does not broadcast its name), click **My network is hidden**, enter your network's information, then click **OK**.



6. Click **Next**. Your extender is set up, and you are prompted to move the extender to its final location.



TIP

For best performance, position the extender where the wireless signal of your router or access point is reliably strong (at least 60% strength).



7. Move the extender to its primary location, then click **Next**. Your router tests the wireless connection to your relocated extender and prompts you if it needs further adjustment.



TIP

You can also connect the range extender by using Wi-Fi Protected Setup. For more information, see ["Using Wi-Fi Protected Setup"](#) on page 7.

How to change the power plug configuration

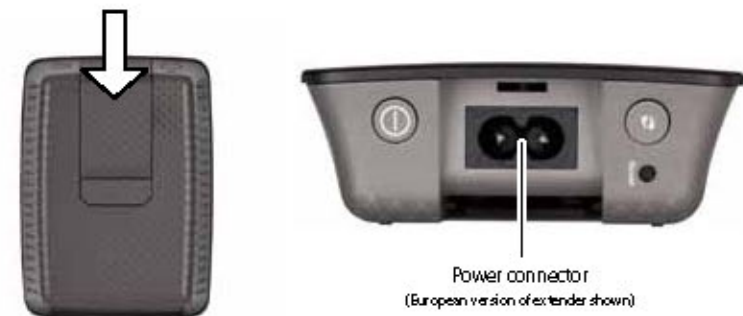
You can connect the extender's built-in power plug directly to a wall power outlet. For a desktop or table-top setup, you can also remove the built-in plug and use an AC cable instead.

To attach the AC power plug:

1. Press the plug release latch, then slide the AC plug off the extender.



2. Slide the clip cover into the slot that held the AC plug, then connect the AC cable to the power connector.



How to access the browser-based utility

After setting up the extender with the setup software (located on the CD), the extender will be ready for use. If you would like to change its advanced settings, use the extender's browser-based utility.

If the extender has not been set up yet

Using a wired computer:

1. Use the included Ethernet (network) cable to connect your extender to your computer.
2. Open a web browser. If you have defined a default startup page in your browser, the extender's *User Name and Password* dialog box automatically opens. If your browser's home or default page is blank, enter any valid web address and the extender's *User Name and Password* dialog box opens.



3. Leave the **User Name** blank, then enter the default password **admin**.
4. Click **OK**. You are logged in to your extender's browser-based utility.

Using a wireless computer:

1. Locate the extender's wireless network name (SSID). The extender comes with a pre-configured SSID showing as *LinksysExtenderxxxxx* in the wireless site survey of your computer, with *xxxxx* being the last five digits of your extender's serial number.
2. Connect your computer to the extender's wireless network. Refer to your computer's operating system documentation or online help for instructions.
3. Open a web browser. If you have defined a default startup page in your browser, the extender's *User Name and Password* dialog box automatically opens. If your browser's home or default page is blank, enter any valid web address and the extender's *User Name and Password* dialog box opens.



4. Leave the **User Name** blank, then enter the default password **admin**.
5. Click **OK**. You are logged into your extender's browser-based utility.

If the extender has already been set up

On a Microsoft Windows XP computer:

TIP

To follow these instructions, UPnP needs to be enabled in Windows XP. **To enable UPnP:**

1. Click **Start, Control Panel, Add or Remove Program**, then click **Add/Remove Windows Components**.
 2. Select **Network Services**, then click **Details**.
 3. Select **UPnP User Interface**, then click **OK**.
1. Open *Windows Explorer*, then click **My Network Places** on the left panel. The *RE1000/RE2000* icon appears on the right panel. (You might be required to change the firewall settings to allow the display of networked computers. Refer to your operating system's help for instructions.)
 2. Double-click the **RE1000/RE2000** icon. Your web browser opens and you are prompted for your **User Name** and **Password**.
 3. Leave the **User Name** field blank, then enter the password you created during Setup.
 4. Click **OK**.

On a Microsoft Windows 8, Windows 7, or Vista computer:

1. Open *Windows Explorer* (File Explorer in *Windows 8*), then click **Network**. The *RE1000/RE2000* icon appears on the right panel. (You might be required to change the firewall settings to allow the display of networked computers. Refer to your operating system's help for instructions.)
2. Right-click the **RE1000/RE2000** icon, then click **Properties**. Click on the address link in **Device webpage**. Your web browser opens, and you are asked for a **User Name** and **Password**.
3. Leave the **User Name** blank, and enter the password you have created.
4. Click **OK**.

On a Mac OS X computer:

Every *Mac* computer has Bonjour networking technology, which a *Mac* uses to communicate with basic devices such as cell phones and iPods.

1. Open **Safari**, click the book icon, then click **Bonjour** on the left panel. The *RE1000/RE2000* icon appears on the bottom right panel.
2. Double-click the **RE1000/RE2000** icon. You are asked for a **User Name** and **Password**.
3. Leave the **User Name** blank, and enter the password you have created.
4. Click **OK**.

How to use the browser-based utility

If you change any settings on a screen, you must click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. These controls are located at the bottom of each screen. Click **Help** on the right side of the screen for additional information on the screen's options.



Using Wi-Fi Protected Setup

Wi-Fi Protected Setup™ makes it easy to connect your extender to your network, then connect other devices to your network through the extender.

Wi-Fi Protected Setup light activity

- When the Wi-Fi Protected Setup process is active, the light flashes slowly. When the Wi-Fi Protected Setup is successful, the light is continuously lit.
- If there is an error, the light flashes quickly for two minutes; please wait and try again.
- Wait until the light is continuously lit before starting the next Wi-Fi Protected Setup session.

Connecting the extender to an existing access point

If your access point or router supports it, you can use Wi-Fi Protected Setup to connect the range extender to the access point or router. Choose from the setup methods below to connect the extender.

NOTE

If you have an access point or a router that do not support Wi-Fi Protected Setup, note the wireless settings, and then manually configure the extender.



Connecting with the Wi-Fi Protected Setup Button

Use this method if your router or access point has a Wi-Fi Protected Setup button.



1. Click or press the **Wi-Fi Protected Setup** button on the extender.
2. Click the **Wi-Fi Protected Setup** button on the router's *Wi-Fi Protected Setup* screen (if available), OR press and hold the Wi-Fi Protected Setup button on the router for one second. When the connection is complete, the Wi-Fi Protected Setup light on the extender is continuously lit.
3. If you used the extender's *Wi-Fi Protected Setup* screen, click **OK** in that screen within two minutes.

Connecting with the range extender's PIN

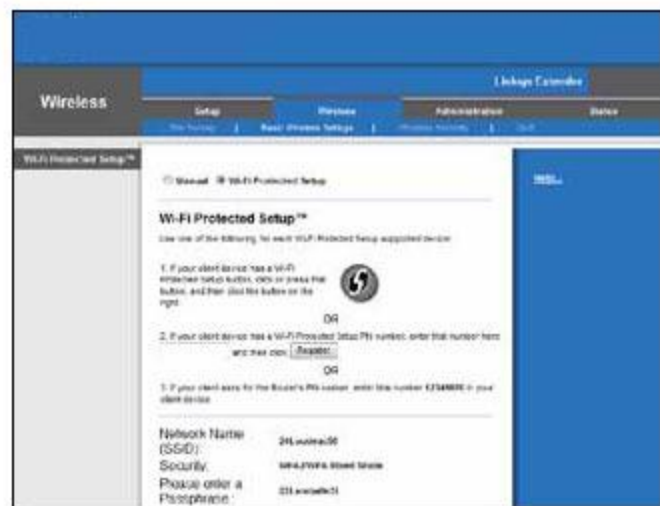
The Wi-Fi Protected Setup PIN (Personal Identification Number) can be found on the product label of the extender. You can use this method only if your router's administration utility has a Wi-Fi Protected Setup menu.

If your router asks for the client's PIN number, enter this number 14727030 in your router device

1. Enter the extender's PIN into the appropriate field on the router's *Wi-Fi Protected Setup* screen, then click **Register**. When the connection is complete, the Wi-Fi Protected Setup light on the extender is continuously lit.
2. Click **OK**.

Connecting devices to your network through the extender

If you have network devices, such as wireless printers, that support Wi-Fi Protected Setup, then you can use Wi-Fi Protected Setup to connect them to your wireless network. Choose from the methods below to connect the device to your network.



NOTE

Wi-Fi Protected Setup configures only one client device at a time. Repeat the instructions for each client device that supports Wi-Fi Protected Setup.

Connecting with the Wi-Fi Protected Setup Button

Use this method if your client device has a Wi-Fi Protected Setup button.



1. Click or press the **Wi-Fi Protected Setup** button on the client device.
2. Click the **Wi-Fi Protected Setup** button on the extender's *Wi-Fi Protected Setup* screen, OR press and hold the Wi-Fi Protected Setup button on the top panel of the extender for one second. When the connection is complete, the Wi-Fi Protected Setup light on the extender is continuously lit.
3. Click **OK** on the extender's *Wi-Fi Protected Setup* screen within two minutes.

Connecting with the client device's PIN

Use this method if your client device has a Wi-Fi Protected Setup PIN (Personal Identification Number).



1. Enter the PIN from the client device in the field on the extender's *Wi-Fi Protected Setup* screen.
2. Click **Register** on the extender's *Wi-Fi Protected Setup* screen. When the connection is complete, the Wi-Fi Protected Setup light on the extender is continuously lit.
3. Click **OK** on the extender's *Wi-Fi Protected Setup* screen within two minutes.

Connecting with the extender's PIN

Use this method if your client device asks for the extender's PIN.

3. If your client asks for the Router's PIN number, enter this number **76201196** in your client device.

1. On the client device, enter the PIN listed on the extender's *Wi-Fi Protected Setup* screen. (It is also listed on the bottom of the extender.) When the connection is complete, the *Wi-Fi Protected Setup* light on the extender is continuously lit.
2. Click **OK** on the extender's *Wi-Fi Protected Setup* screen within two minutes.

TIP

If you have client devices that do not support *Wi-Fi Protected Setup*, note the wireless settings, and then manually configure those client devices.

How to use Site Survey

The **Site Survey** gives a snapshot of all neighboring access points and wireless routers within range of the extender.

To open the Site Survey page:

1. Log into the browser-based utility (see "How to access the browser-based utility" on page 5).
2. Click the **Wireless** tab, then click the **Site Survey** page.

Select—To connect to a wireless network, click the button next to the wireless network name (SSID) in the *Select* column, then click **Connect**.

SSID—Displays the name of neighboring wireless networks.

GHz—Displays the radio band (in GHz) of the neighboring wireless networks. (This column is available only with the RE2000.)

Signal Strength—Displays the relative position of the neighboring APs by indicating the power of the wireless signal received: 1 bar=20%, 2 bars=40%, 3 bars=60%, 4 bars=80%, 5 bars=100%. If no bar is displayed, the extender is located too far away from the upstream AP. Try to keep the signal strength between 60% and 100% for optimum performance. A careful site survey will help in keeping this value within acceptable range to benefit from optimum performance.

Security—Displays the mode of security in use by the neighboring APs. If a network supports *Wi-Fi Protected Setup*, the *Wi-Fi Protected Setup* icon is also displayed.

Select	SSID	GHz	Signal	Security
<input type="checkbox"/>	Linksys	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA-PSK, WPA2-PSK
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA-PSK, WPA2-PSK
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA-PSK, WPA2-PSK
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA-PSK, WPA2-PSK
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA2
<input type="checkbox"/>	Linksys2000	2.4	100%	WPA-PSK, WPA2-PSK

To associate your extender with your known access point or router:

1. Make a note of the SSID and the security passphrase that your access point or wireless router is actually configured with. This information will be useful to carry on setup after the site survey is done.
2. Select the network name (SSID) that you want to repeat with your extender by clicking the corresponding button in the **Select** column.
3. Click **Connect**. You are prompted for the passphrase used to secure your wireless network. The type of security information required in this screen needs to match your access point or router's wireless security settings.



4. Enter the passphrase, then click **Save Settings**. Your extender wireless parameters should be configured. The wireless interface restarts, and the extender associates with the access point or router you have chosen.

Troubleshooting

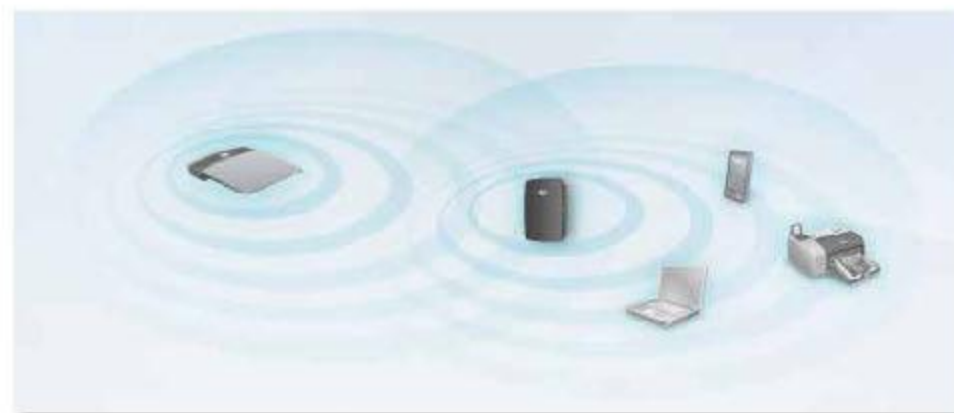
NOTE

Your RE1000 works only on the 2.4 GHz network and cannot be used on a 5 GHz network. Your RE2000 works on either a 2.4 GHz or 5 GHz network.

You cannot get your extender connected

Check the position of your router and extender

- For first-time setup, you may need to place the extender closer to the router. After you've set up your extender, you can unplug it and move it to the final location.
- To reduce signal obstructions, you can try alternate locations for the router and extender.
- Avoid placing the router and extender near metal objects, masonry walls, and reflective surfaces such as glass or mirrors.
- Avoid placing the router and extender near other electronics that may be causing signal interference.

**If you're using Wi-Fi Protected Setup to connect**

- Wait until the Wi-Fi Protected Setup indicator stops blinking before trying to make the connection again.

You cannot access your range extender

To access your range extender, you must be connected to your own network. If you currently have wireless Internet access, the problem may be that you have accidentally connected to a different wireless network.

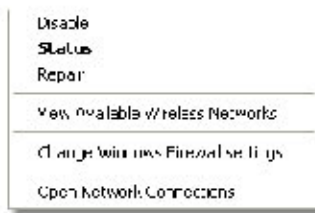
For Mac instructions, see ["To fix the problem on Mac computers:"](#) on page 12.

To fix the problem on Windows computers:

1. On your Windows desktop, right-click the wireless icon in the system tray.



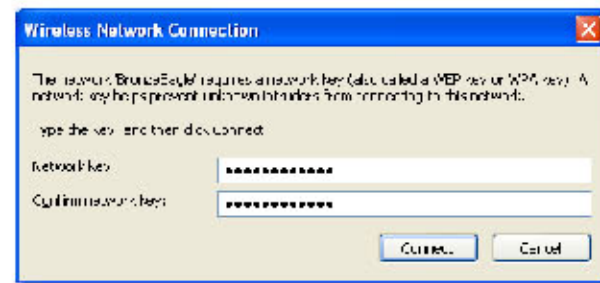
2. Click **View Available Wireless Networks**. A list of available networks appears.



3. Click your own network name, then click **Connect**. In the example below, the computer was connected to another wireless network named *JimsRouter*. The name of the correct network, *BronzeEagle* in this example, is shown selected.



4. If you are prompted to enter a network key, type your password (Security Key) into the **Network key** and **Confirm network key** fields, then click **Connect**.



Your computer connects to the network, and you should now be able to access the range extender's browser-based utility.

To fix the problem on Mac computers:

1. In the menu bar across the top of the screen, click the **AirPort** icon. A list of wireless networks appears. Cisco Connect has automatically assigned your network a name.

In the example below, the computer was connected to another wireless network named *JimsRouter*. The name of the Linksys E-Series network, *BronzeEagle* in this example, is shown selected.



2. Click the wireless network name of the router your range extender is connected to.
3. Type your wireless network password (Security Key) into the **Password** field, then click **OK**.



Your computer connects to the network, and you should now be able to access the range extender's browser-based utility.

You have intermittent connection problems

When you position your range extender, place it in a location where the signal strength can be kept between 60% and 100% for optimum performance.

RE2000

Model Name	Linksys RE2000
Model Description	Dual-band Wireless-N Range Extender
Model Number	RE2000
Standards	IEEE 802.11a, 802.11n, 802.11g, 802.11b, 802.3u
Ports	Fast Ethernet, C7 connector for localized AC cable or clip
Buttons	Reset, Wi-Fi Protected Setup™, Power (European model only)
LEDs	Power/Wi-Fi Protected Setup, Ethernet (link, activity)
Cabling Type	CAT 5e
Antennas	2 (internal)
Detachable (y/n)	No
Wireless Security	Wi-Fi Protected Access™ 2 (WPA2), Wi-Fi Protected Access™ (WPA), WEP
Security Key Bits	Up to 128-bit encryption

Environmental

Dimensions	4.92" x 3.62" x 1.29" (125 x 92 x 33 mm)
Weight	5.4 oz (152 g)
Power	Internal AC/DC power supply 100-240V, 50/60Hz, 0.5A
Certification	FCC, UL/cUL, ICES-003, RSS210, CE, Wi-Fi (IEEE 802.11a/b/g/n), WPA2™, WMM®, Wi-Fi Protected Setup™
Operating Temperature	32 to 104°F (0 to 40°C)
Storage Temperature	-4 to 140°F (-20 to 60°C)
Operating Humidity	10 to 80% noncondensing
Storage Humidity	5 to 90% noncondensing

Specifications are subject to change without notice.

Visit linksys.com/support for award-winning 24/7 technical support.

Linksys RE2000
Regulatory Information



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Wireless Regulatory Information

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This product has been tested and complies with the specifications 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 according to 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 is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

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.

IEEE 802.11b or 802.11g operation of this product in the USA is firmware-limited to channels 1 through 11.

The device for the band 5150-5250 MHz is only for indoor usage to reduce the potential for harmful interference to co-channel mobile satellite systems.

FCC Radiation Exposure Statement

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

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

Safety Notices



WARNING: Do not use this product near water, for example, in a wet basement or near a swimming pool.



WARNING: Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.



WARNING: This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Safety Guidelines



WARNING: Use the following safety guidelines to ensure your own personal safety and to help protect your product from potential damage. To reduce the risk of bodily injury, electrical shock, fire, and damage to the equipment, observe the following precautions.

- Do not service this product except as explained in your system documentation.
- If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your service provider/retailer:
 - The power cable or plug is damaged.
 - An object has fallen into the product.
 - The product has been exposed to water.
 - The product has been dropped or damaged.
 - The product does not operate correctly when you follow the operating instructions.
- Keep your system away from radiators and heat sources.
- Install product in a manner and location to ensure ventilation openings are not blocked.
- Do not spill food or liquids on your system components, and never operate the product in a wet environment. If the system gets wet, contact your service provider/retailer.
- Do not push any objects into the openings of your system. Doing so can cause fire or electric shock by shorting out interior components.
- Operate the product only from the type of external power source indicated on the electrical ratings label.