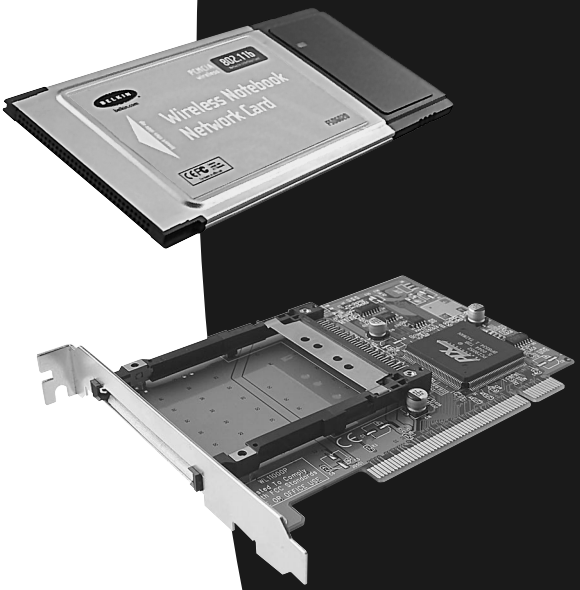
Wireless Notebook Network Card

Wireless Desktop Network Adapter

User Manual



F5D6020
F5D6000

Table of Contents

Introduction

Thank You for purchasing the Belkin 11Mbps Wireless Desktop Network Adapter and/or the Belkin 11Mbps Wireless Notebook Network Card. Now you can take advantage of the wireless world of networking that frees you from using cables with your home or office network. The Wireless Network Card Adapter serves as a way for your PCs to communicate on a wireless network.

Features

- Compatible with PCMCIA and PCI specifications
- Provides LED indicators for monitoring network traffic

Contents of Package

- One Wireless Notebook Network Card or One Wireless Desktop Network Adapter
- One CD-ROM
- User Guide

Overview

There are two ways to use your Wireless Notebook Network Adapter.

1. Use in a desktop computer with the optional PCI adapter. If you are using the Optional PCI adapter, go to the section on page 3 titled "Installing the Wireless Notebook Network Adapter using the Optional PCI Adapter"

2. Use in a laptop with PCMCIA slot. If your are installing your card directly into a laptop computer, skip to the section on page 14 titled “Installing the Notebook Network Card in your Notebook PC”.

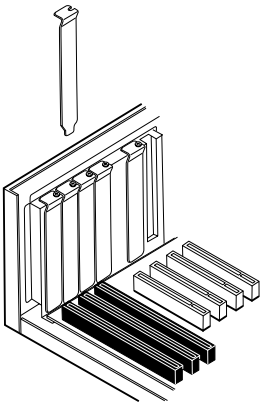
Installing the Wireless Notebook Network Adapter using the Optional PCI Adapter

1. Network cards are sensitive to static electricity, which can damage their delicate electronic components. To protect your device, always: Touch the metal chassis of your computer before you pick up the card. This grounds the electrostatic charge. Avoid touching any of the electrical components when handling the card. If possible, wear a grounded wrist strap or anti-static gloves.
   Note: Dry weather conditions or walking across a carpeted floor may cause you to acquire an electrostatic charge.

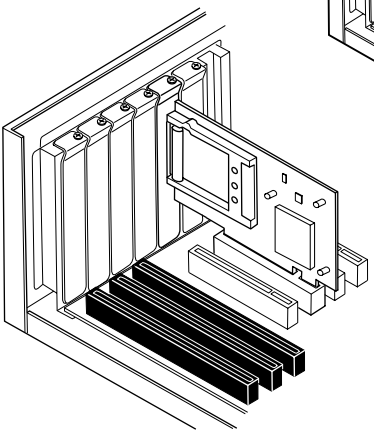
2. Turn off the power to the PC and unplug the power cord from the electrical outlet.

3. Remove the cover to the PC. Please refer to your computer's Owner's Manual for instructions on how to remove the cover.

4. Find any available PCI expansion bus slot and remove the protector bracket from the computer's case.

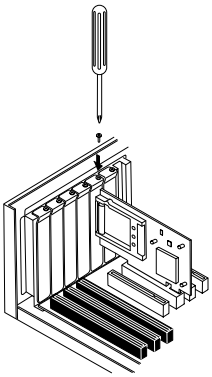


5. Carefully insert the Wireless Desktop Network Card into the slot until the connectors at the edge of the card are firmly in place.



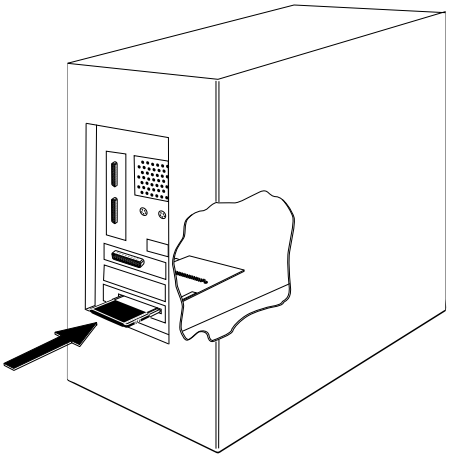
Installing the Wireless Notebook Network Adapter using the Optional PCI Adapter

6. Secure the card into the slot using a standard case screw.



7. Carefully insert the Wireless Notebook Network Card into the slot on the Wireless Desktop Network Adapter until it connects to the Network adapter. The PCMCIA card MUST be installed into the PCI adapter before installing the software drivers.

8. Replace the cover to the PC and connect the power cord to the electrical outlet. Be sure to re-connect other cables that may have come loose during the installation.



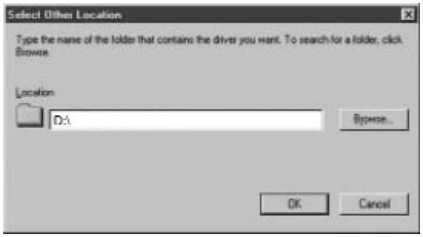
Your hardware is now installed. Next you need to install the PCI software drivers for your operating system. The next section in the manual explains how to install the PCI software drivers for your particular operating system. Find the appropriate instructions for your operating system and follow them.

Installing the PCI drivers for Windows 95

1. Turn on the power to the PC. After Windows starts up, Windows will automatically detect that a new device has been installed and will display the following windows. Insert the CD into your CD-ROM drive.

2. Windows will tell you that it is unable to locate a driver. Click "Other Locations…"

3. The screen below will appear. Make sure that the CD is inserted into your CD-ROM drive. In the "Location" bar, type "D:\": where "D:\" is the drive letter of your CD-ROM Drive.



Installing the PCI drivers for Windows 95

4. Windows will install the drivers from the CD-ROM drive. The window below will appear. Click "Finish".

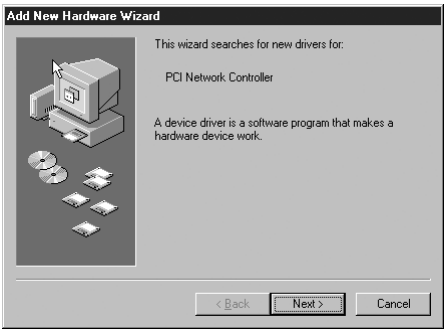
5. Windows may ask you to insert the Windows 95 CD. Insert your Windows 95 CD into the CD-ROM drive and click "OK".

6. Windows will now ask you to restart. Click "Yes" to restart your computer.

Hardware and software driver installation is now complete for Windows 95. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

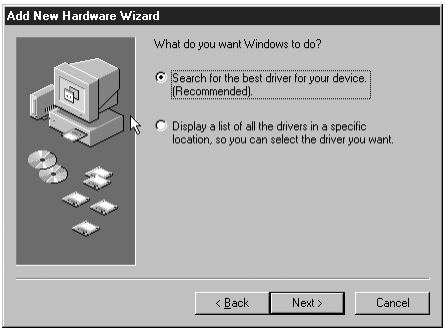
Installing the PCI drivers for Windows 98/Me

1. Turn on the power to the PC. After Windows starts up, Windows will automatically detect that a new device has been installed and will display the following window:



2. The "Add New Hardware Wizard" will begin. Click "Next".

3. When asked, "What do you want Windows to do?" select "Search for the best driver for your device. (Recommended)" and click "Next".

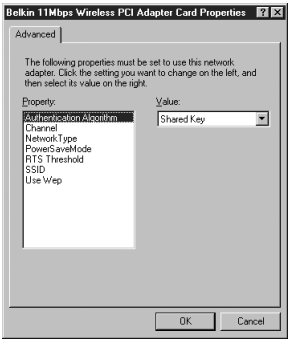


4. Select "CD-ROM". Place the CD-ROM supplied with the card in your CD-ROM drive and click "Next".

Installing the PCI drivers for Windows 98/Me

5. Windows will find the appropriate drivers and the following screen will appear: Click "Next".

6. The following screen will appear: Click "OK".



7. Click on the Finish Button to complete the wizard. Your computer may prompt you to restart, if so, allow the system to restart.

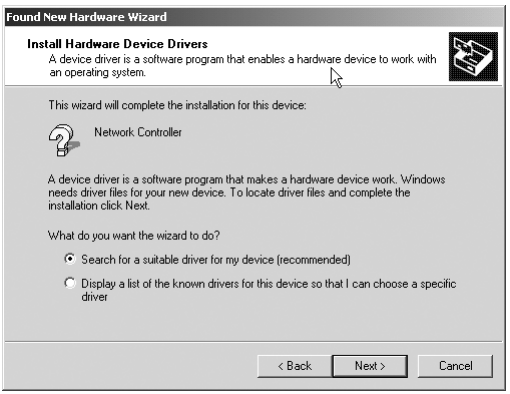
Hardware and software driver installation is now complete for Windows 98/ME. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing the PCI drivers for Windows 2000

1. Turn on the power to the PC. After Windows starts up, Windows will automatically detect that a new device has been installed and will display the following window:

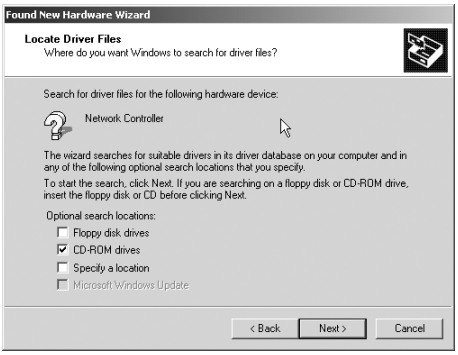
2. The "Found New Hardware Wizard" will start. Click "Next".

3. In the next screen, select "Search for a suitable driver for my device (recommended)" then click "Next".

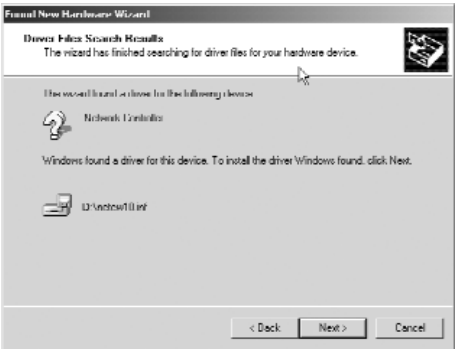


Installing the PCI drivers for Windows 2000

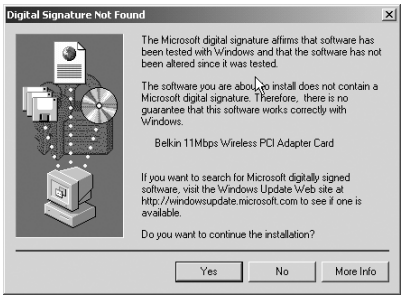
4. This screen will appear. Insert the CD (provided with the card) into your CD-ROM drive. Select "CD-ROM drive" then click "Next".



5. This screen will appear. Click "Next".



6. The "Digital Signature Not Found" screen will appear. This does not mean there is a problem. Click "Yes" to continue.



7. Windows will install the drivers. When finished, the screen below will appear. Click "Finish" to complete the installation. If Windows prompts you to restart your computer, do so.

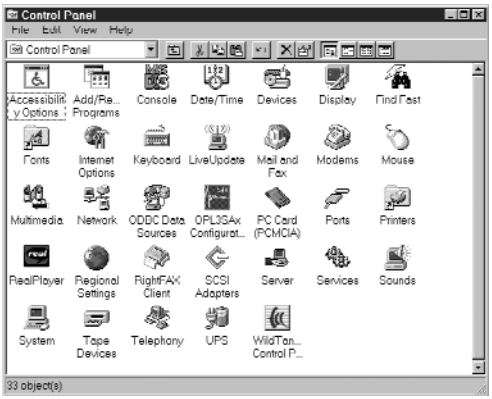
Hardware and software driver installation is now complete for Windows 2000. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing the PCI drivers for Windows NT

Since Windows® NT is not a plug-and-play operating system, it will not automatically detect the installation of the PCI adapter. To manually install the PCI Software Drivers, follow the steps below. After Windows NT starts up,

1. Turn on the power to the PC. After Windows NT starts up, insert the CD into your CD-ROM drive.

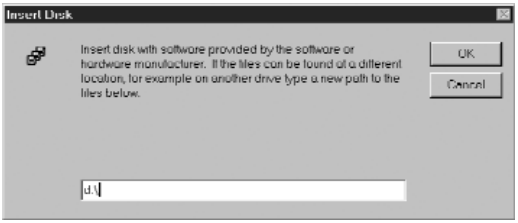
2. Click on "Start", select "Settings" then click on "Control" panel to open the "Control Panel" Window.



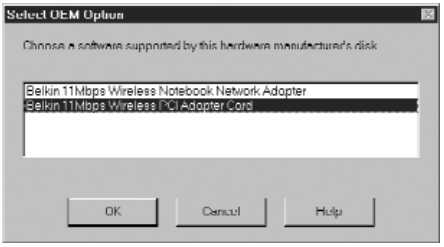
3. Double-click on the "Network Icon". The screen below will appear. A list of adapter may appear in the window, however the Belkin PCI adapter will not. Click on "Add".

Installing the PCI drivers for Windows NT

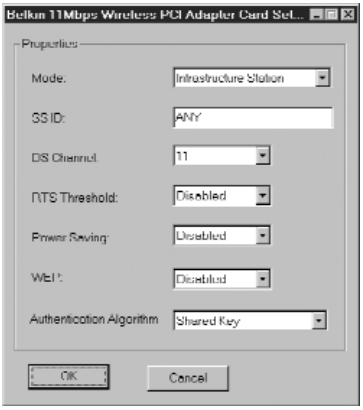
4. In the next screen, type "D:\" where D:\ is the drive letter of your CD-ROM drive. Click "OK".



5. Select "Belkin 11Mbps Wireless PCI Adapter Card" then click "OK".



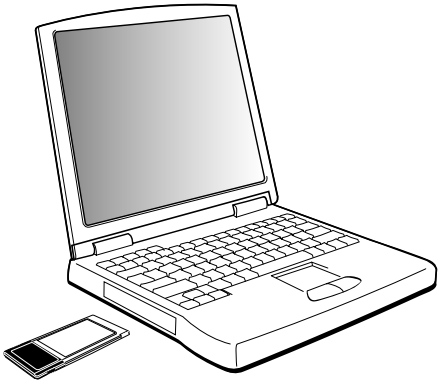
6. This screen will appear. Click "OK".



Hardware and driver installation is now complete for Windows NT. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing the Notebook Network Card in your Notebook PC

1. Insert the Wireless Notebook Network Card in the PCMCIA slot of your notebook with the color label facing up.



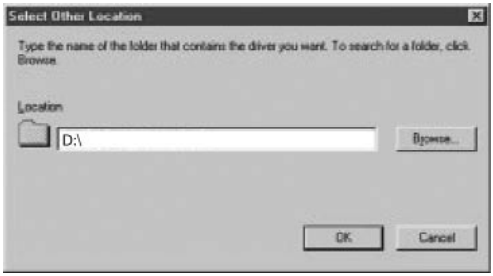
2. Install the drivers for your particular operating system. Go to the next section that applies to your operating system.

Installing the Notebook Network Card Drivers for Windows 95

1. Turn on the power to your laptop PC. After Windows starts up, Windows will automatically detect that a new device has been installed and will display the windows Below. Insert the CD into your CD-ROM drive.

2. Windows will tell you that it is unable to locate a driver. Click "Other Locations…"

3. The screen below will appear. Make sure that the CD is inserted into your CD-ROM drive. In the "Location" bar, type "D:\": where "D:\" is the drive letter of your CD-ROM Drive.



4. Windows will install the drivers from the CD-ROM drive. The window below will appear. Click "Finish".

5. Windows may ask you to insert the Windows 95 CD. Insert your Windows 95 CD into the CD-ROM drive and click "OK".

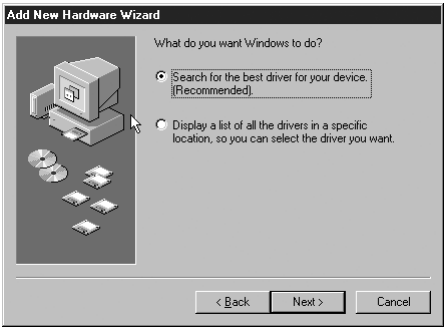
6. Windows will now ask you to restart. Click "Yes" to restart your computer.

Hardware and software driver installation is now complete for Windows 95. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing the Notebook Network Card Drivers for Windows 98/Me

1. Insert the PCMCIA card into your Notebook PC. Turn on the power to the PC. After Windows 98/Me starts up, the "Add New Hardware Wizard" will begin. Click "Next".

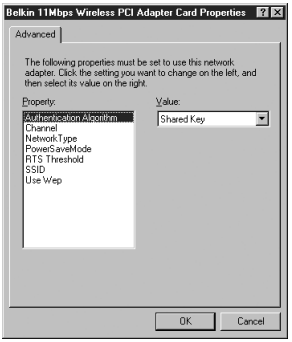
2. When asked, "What do you want Windows to do?" select "Search for the best driver for your device. (Recommended)" and click "Next".



3. Select "CD-ROM". Place the CD-ROM supplied with the card in your CD-ROM drive and click "Next".

4. Windows will find the appropriate drivers and the following screen will appear: Click "Next".

5. The following screen will appear: Click "OK".



6. Click on the Finish Button to complete the wizard. Your computer may prompt you to restart, if so, allow the system to restart.

Hardware and software driver installation is now complete for Windows 98/ME. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

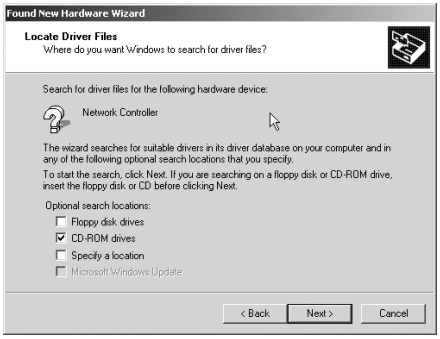
Installing the Notebook Network Card Drivers for Windows 2000

1. Insert the PCMCIA card into your Notebook PC. Turn on the power to the PC. After Windows 2000 starts up, insert the CD into your CD-ROM drive.

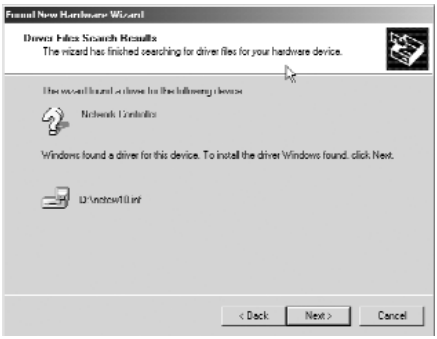
2. The "Found New Hardware Wizard" will start. Click "Next".

3. In the next screen, select "Search for a suitable driver for my device (recommended)" then click "Next".

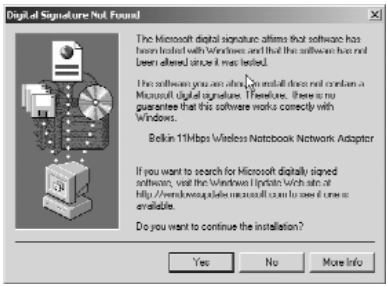
4. The screen below will appear. Insert the CD (provided with the card) into your CD-ROM drive. Select "CD-ROM drive" then click "Next".



5. This screen will appear. Click "Next".



6. The "Digital Signature Not Found" screen will appear. This does not mean there is a problem. Click "Yes" to continue.



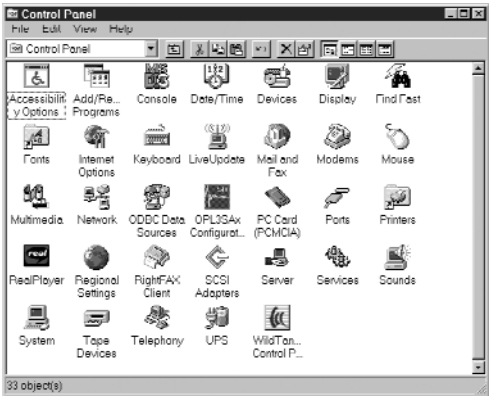
7. Windows will install the drivers. When finished, the screen below will appear. Click "Finish" to complete the installation. If Windows prompts you to restart your computer, do so.

Hardware and software driver installation is now complete for Windows 2000. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing the Notebook Network Card Drivers for Windows NT

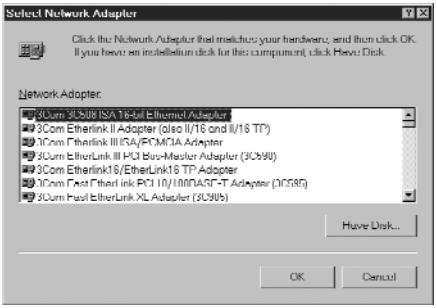
1. Insert the PCMCIA card into your Notebook PC. Turn on the power to the PC. After Windows NT starts up, insert the CD into your CD-ROM drive.

2. Click on "Start", select "Settings" then click on "Control" panel to open the "Control Panel" Window.

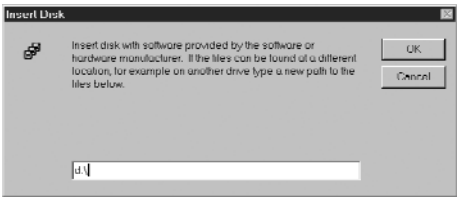


3. Double-click on the "Network Icon". The screen below will appear. A list of adapter may appear in the window, however the Belkin PCI adapter will not. Click on "Add".

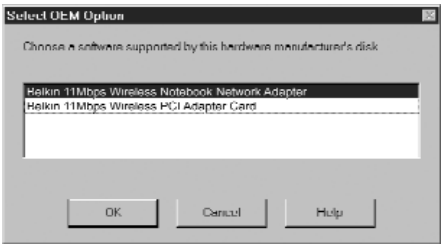
4. The screen below will appear. Select "Have Disk".



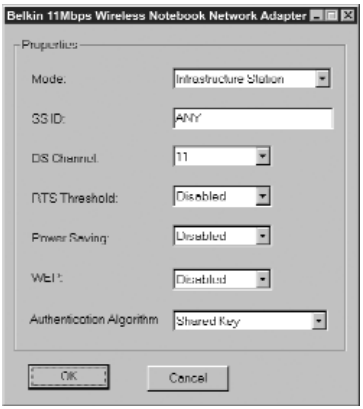
5. In the next screen, type "D:\" where D:\ is the drive letter of your CD-ROM drive. Click "OK".



6. Select "Belkin 11Mbps Wireless PCI Adapter Card" then click "OK".



7. This screen will appear. Click "OK".



Hardware and driver installation is now complete for Windows NT. The next step is to install the Belkin 11Mbps Wireless Setup Utility. Go to page 23.

Installing Belkin 11Mbps Wireless Setup Utility

The Belkin 11Mbps Wireless Setup Utility allows you to setup the Wireless Network Card/Adapter's wireless Ethernet settings.

1. Insert the CD-ROM that came with your Belkin Wireless Notebook Network Card or Belkin Wireless Desktop Adapter into your CD-ROM.

2. From your desktop, double-click on "My Computer", then double-click on your CD-ROM Drive.

3. Double-click on the Setup icon. Windows will automatically install the program onto your PC. After the program is installed, Windows may ask you to restart your computer. Please do so.

Using the Belkin 11Mbps Wireless Setup Utility

The Belkin 11Mbps Wireless Setup Utility will launch automatically when your computer starts with a Wireless adapter installed. To launch the Belkin 11Mbps Wireless Setup Utility manually, click "Start", "Programs", then select "Belkin 11Mbps Network" and select "Configuration Utility".

When the utility is running, the Icon below will appear in the system tray. When the icon is green it indicates that the wireless link is good. When the icon is yellow, it indicates that the wireless link is fair. When the icon is red, there is no link established.


(green)

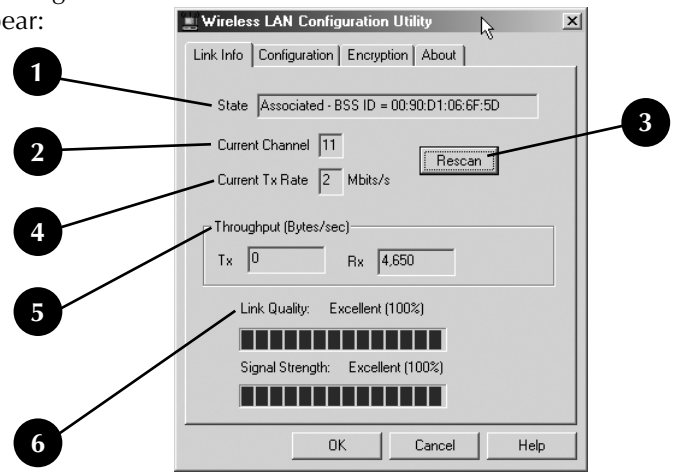

(yellow)


(red)

To make any changes to the configuration of your network use the Wireless Setup Utility.

1. Click on the  icon found in your icon tray of your PC.

2. The following screen will appear:



1. State

Associated: The PC is connected to the wireless network.

Scanning: The PC is searching for an available Wireless Network Access Point (WAP). If "associated" does not appear, the card cannot detect the SSID for the WAP.

2. Current Channel

Each country's regulatory commission (FCC for the US) has a specified set of channels for 802.11b to operate on. Each country is different. To comply with the standards for each country, the Wireless Network Cards/Adapters must be set to any number between 1 and 11.

3. Rescan Button

Clicking on the Rescan button will cause the Wireless Network Card to find the associated Ad Hoc network or the WAP's SSID.

4. Current Tx Rate

This shows the speed of your network connection using the Wireless Network Card.

5. Throughput

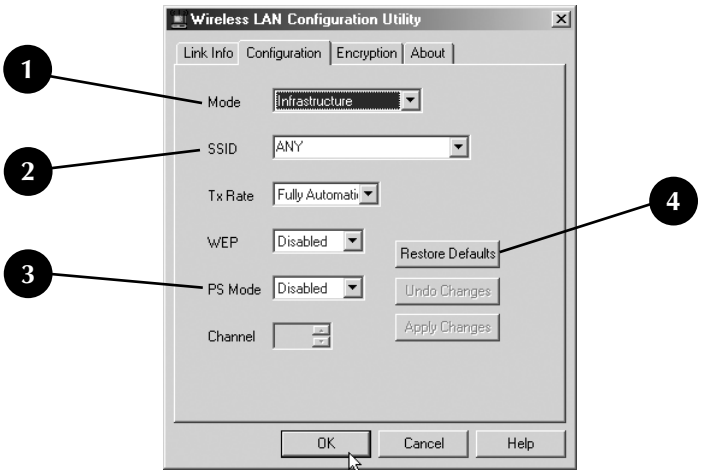
Tx: This field shows the wireless transmission throughput in bytes per second.

Rx: This field shows the wireless receipt throughput in bytes per second.

6. Link Quality/Signal Strength

This is only available when the Wireless Desktop Network Adapter is running in infrastructure mode. The link quality bar indicates the quality of the link between the PC and the WAP. The signal strength bar indicates the quality of the link coming from the radio waves.

Click-on the Configuration tab and the following screen will appear:

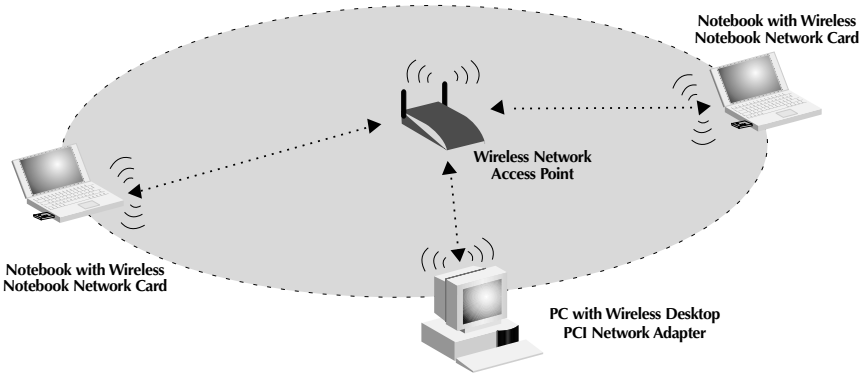


1. Mode

Infrastructure Mode

A setup that uses a WAP to connect a wireless LAN to a wired LAN is called an infrastructure configuration, and the setup is referred to as being in Infrastructure Mode. The WAP serves as a bridge between the wired and wireless network. Connecting the WAP to any port on the wired network will give wireless access to all wireless equipped computers within its coverage area. An WAP is configured with a Service Set Identifier. This is a "name" that is given to the wireless network and is used by the wireless equipped computers to access the wireless network. The WAP can also be configured to use encryption or grant access to computers with specific MAC addresses. The WAP also effectively doubles the distance that computers in the wireless LAN can be located from one another. This is because the WAP serves as a central point for routing of all the wireless network traffic between the wireless computers. Wireless equipped computers networked together in infrastructure mode form a group called a Basic Service Set (BSS). Up to 64 individual

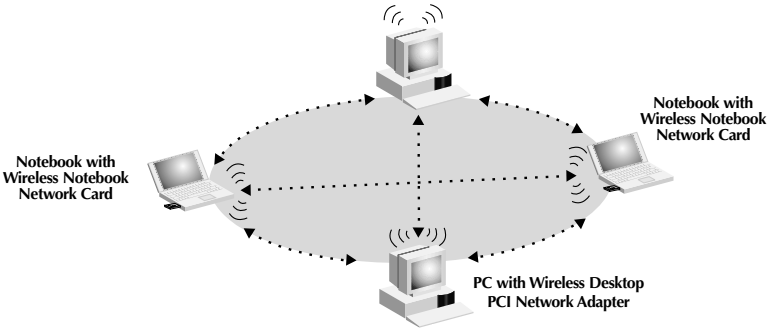
computers can exist at a single time in a BSS. This is due to the ability of the WAP to handle no more than 64 clients. The diagram below illustrates how the access point will effectively double the distance between wireless equipped computers in a BSS.



Infrastructure mode: *This is used when you want to connect your wired network to your wireless network. Often, Infrastructure Mode is used when there is use of a WAP.*

Ad-Hoc Mode

Ad-Hoc or Peer-to-Peer refers to a configuration in which each computer in a wireless network communicates directly with another. An Ad-Hoc wireless LAN consists of a group of computers, each equipped with a wireless adapter, connected directly via radio signals to form an independent wireless LAN. Computers in a specific Ad-Hoc wireless LAN must be configured to the same radio channel to communicate with one another. More than one Ad-Hoc network can exist in the same space if it is configured to operate on a different channel. There are a varying number of channels depending on the part of the world you are operating in. The US has 11 channels, Europe has 13 channels and Japan has 14 channels. The following diagram shows a typical Ad-Hoc wireless LAN configuration.



Ad-Hoc mode: *This is used when the network is set up wirelessly. This mode allows wireless PC card to wireless PC card communications and does not require the use of a WAP.*

2. SSID

The Service Set Identifier (SSID) is like a name for the wireless network and is sometimes called the "Network Name".

Infrastructure mode: The SSID should be set to the same value as the WAP.

Ad-Hoc mode: The SSID on all Wireless Notebook Network Cards in the network are set to the same value.

3. PS Mode

The power save mode enables or disables the PC from going into sleep mode.

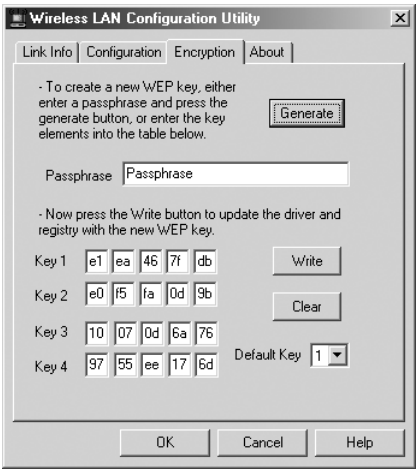
Enabled: Allows your PCs to enter sleep mode, but this can disrupt steady communication when the PC goes to sleep

Disabled: Disables PC from going into sleep mode and will allow uninterrupted data communication over your network.

4. Restore Defaults

To restore the factory default settings, click on the restore defaults button. The Wireless Notebook Network Card settings will be restored.

Click-on the Encryption tab and the following screen will appear:



Encryption

For secure data transmissions the Belkin Wireless Desktop Network Adapters are capable of encrypting, or "scrambling" the information that is sent over the air between your computers. The WAP uses a form of encryption called WEP (Wired Equivalent Privacy). There are two levels of WEP encryption, 64-bit and 128-bit. As the numbers imply, 128-bit encryption is more secure than 64-bit encryption. However, using 128-bit encryption uses keys to scramble and unscramble the data that is being sent between the wireless equipped computers. The wireless network must use the same key to be able to communicate using encryption.

Select 64-bit from the drop-down menu. You will notice when using 64-bit encryption there are 4 keys labeled, "Key 1" through "Key 4". Only one key can be used at a time. Keys can be entered manually, but for ease of use, the software can generate keys using a "Passphrase" that you enter. This passphrase can be easily distributed to wireless equipped computer users in your network. For instance, creating a key using the passphrase

"Passphrase" generates four keys in 64-bit encryption mode and one key in 128-bit encryption mode. A user of a laptop needs only to enter the passphrase and the key number into their computer's wireless management software to be able to communicate while using encryption. All computers on the network must use the same encryption rate and passphrase. The passphrase can be changed as often as desired.

Setting 64-Bit Encryption

1. Select 64-bit from the drop-down menu.
2. Select "Create with Passphrase".
3. Enter a Passphrase and click "Apply".
4. Select the "Default Key ID" from the drop-down menu. These are labeled 1 – 4. Click "Apply".

64-bit encryption is now enabled.

Setting 128-bit Encryption

1. Select 128-bit from the drop-down menu.
2. Select "Create with Passphrase"
3. Enter a Passphrase and click "Apply"

128-bit encryption is now enabled.

Installing the Belkin SOHO Networking Software for Windows 98/Me

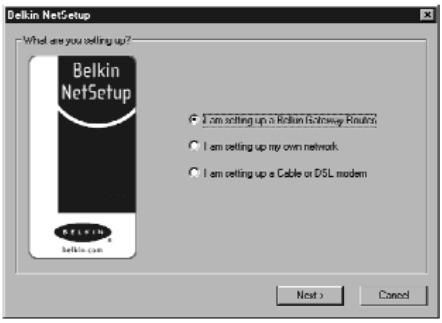
The Belkin SOHO Networking software provides a simple way to setup your Windows 98/Me computers for networking, file and printer sharing. If you are familiar with TCP/IP and know how to configure the file and printer sharing, it is not necessary to use the Belkin SOHO Networking software.

Now that your wireless network card/adapter drivers have been installed, you can configure the network. For each computer you connect to the network, you must assign a network address to be used by the other computers. Belkin has simplified this process by providing you with the Belkin SOHO Networking Software to configure your computers. Make sure that no other network adapters are installed in your computer before running the SOHO Networking Software.

1. Insert the SOHO Networking Software that came with your Belkin Wireless Notebook Network Card or Wireless Desktop Network Adapter into your CD-ROM.
2. Click Start, click Run, and type "D:\NetSetup." ("D" is usually the default drive letter for the CD-ROM drive, if necessary, adjust drive letter to reflect your designated CD-ROM drive letter.
3. Click OK and Windows will begin to install the program onto your PC. After the program is installed, Windows may ask you to restart your computer. Please do so.
4. Repeat these steps for each computer that you are connecting to your network.
5. Once you have installed the Belkin SOHO Networking Software on all of your computers, continue on to the next section.

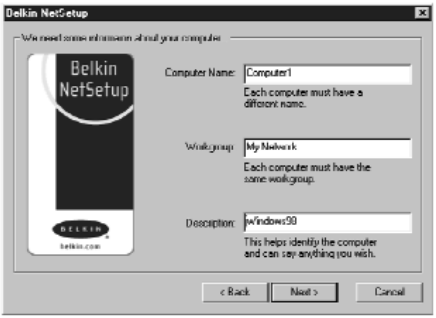
Configuring Your Windows 98/Me Computer Using Belkin NetSetup

1. Once your computer has restarted, click "Start", "Programs", highlight "Belkin SOHO Networking" and select "Belkin NetSetup" to launch this easy-to-use computer configurator. The following screen will appear:

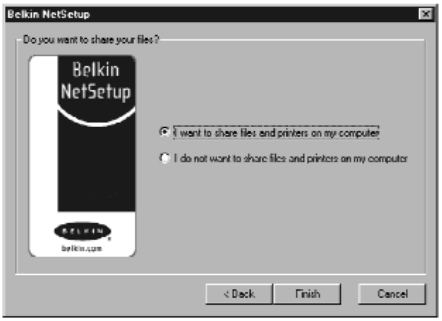


2. Select "I am setting up my own network" and click "Next". The following screen will appear. Select "I am setting up the first computer in my network" and click "Next".

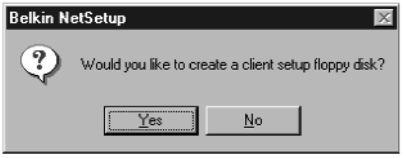
3. You will need to enter some information into the next screen that appears:
4. In the "Computer Name" field, type a name for the computer such as "Computer 1". The name must be different for each computer that belongs to the same network/workgroup.
5. In the "Workgroup" field, type a workgroup name such as "My Network". The workgroup name must be same for each network or workgroup.



6. Use description field to further identify the computer. Type in a description such as "Windows 98". This can be anything you want and does not have to be different from or the same as the description of any other computer on the network. You may also leave this field blank. Click Next and the following screen will appear:



7. If you want to share files and printers on this computer, select "I want to share files and printers on my computer" and click "Finish." The following screen will appear:



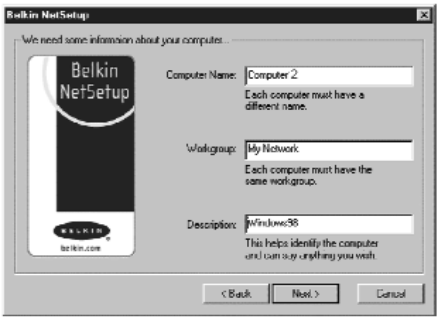
8. NetSetup now needs to know if you want to create a client setup floppy disk. If you have more computers that you need to set up to work with the wireless network, click "Yes". This will save some setup files to a disk, simplifying setup of subsequent computers. If you are not going to set up any more computers, click No and move to step 11.
9. If you clicked Yes, you will be prompted to insert a floppy disk into the PC's floppy disk drive. Label a floppy disk "Belkin Networking" and insert it into the floppy disk drive. Click OK.
10. After the client setup disk has been created, you will be prompted to restart your computer. So, please restart your computer.

Configuring Additional Computers Using Belkin NetSetup Software

Now that the first computer has been configured we are ready to configure the other PCs on your network.

1. You should now be working with the next computer. Click Start, Programs, Belkin SOHO Networking, and then Belkin NetSetup to launch the easy-to-use computer configurator the following screen will appear:
2. Select "I am adding this computer to my network". Click "Next".

3. Windows will now prompt you to insert the newly created client setup disk into the PC's floppy drive. Insert the disk you labeled "Belkin Networking" into the floppy drive and click OK. The following screen will appear:
4. In the "Computer Name" field, type a name for the computer such as "Computer 2". Remember, the name must be different from that of the other computers on the network.
5. The "Workgroup" field should be filled in with the workgroup name you entered on the previous computer. Do not change this setting.



6. Type in a description such as "Windows 98". This can be anything you want and does not have to be different from or the same as the description of any other computer on the network. You may also leave this field blank.

7. When finished filling in the fields, click "Next". The following screen will appear:

8. If you want to share files and printers on this computer, select "I want to share files and printers on my computer" and click "Finish". If not, select "I do not want to share files and printers on my computer" and click "Finish".

9. You must now restart the computer.

10. Your PC is now configured. Repeat these steps for the rest of the computers on your network.

Sharing Files and Peripherals

To enable file sharing and access between network computers to hard drives, floppy drives, or CD-ROM drives, you must set sharing settings for each PC in the network.

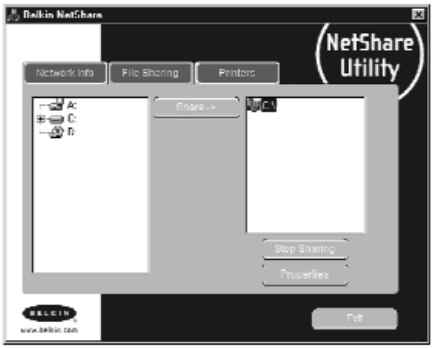
Belkin has simplified the sharing of files, peripherals, and internet connections by providing you with the Belkin NetShare Utility to set up your sharing options.

1. From the Start menu, click Programs and select Belkin NetShare Utility to set up your sharing options. The following screen will appear:
2. The Network Info tab allows you to change the name of the computer and the workgroup. Verify that the computer name and workgroup match what you entered in the Belkin NetSetup Software.

3. You can click the Browse Your Network button as a shortcut to your Network Neighborhood or My Network Places.

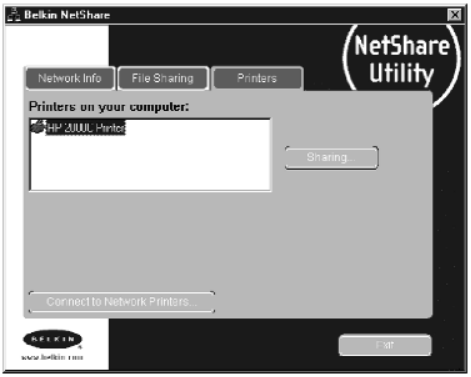
4. If you double-click on the Entire Network icon, all network resources available to you will be accessible.

5. If you press the File Sharing tab the following screen will appear:
6. This screen will show you all the PC drives available for sharing with the entire network. To make a drive accessible to all PCs in your network, highlight the drive in the left-hand column and select Share.
7. To stop sharing highlight the drive in the right hand column and click Stop Sharing. The drive(s) will appear in the left hand column.



8. For advanced sharing options click on the Properties button and the following screen will appear:
9. On this screen you can share files on your computer as read only or read/write files. In addition, you can set passwords so only authorized users can change these settings.

10. Click on the Printers tab and the following screen will appear:



11. This screen will list all printers connected to your PC. Highlighting the printer you would like to share (or not share) and select the Sharing button the following screen will appear:

12. Select the preferred sharing option for this printer.

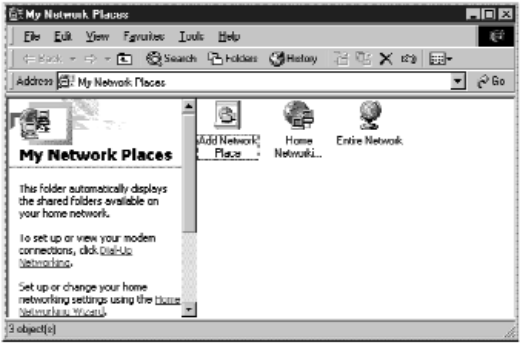
13. Clicking on Connect to Network Printers will allow you to locate shared printers on your network. Once you have located the printer you want to share over the network, NetShare will automatically install printers from the host computer.

Accessing Resources on Other Computers

1. From the Start menu, go to Programs and select Belkin NetShare Utility. The following screen will appear:

2. Select Browse Your Network. The following screen will appear:

3. Double-click on the Entire Network icon and your workgroup will appear. Click on your workgroup and all resources available to you will be listed.

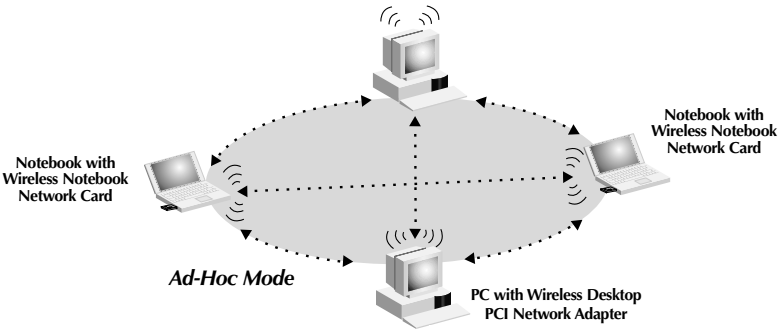


OR

1. To access resources available on other computers, click on the Network Neighborhood or My Network Places icon on your desktop.
2. Double-click on the computer that you wish to access.
3. You can now access all network files that are available to you.

Glossary of Wireless Networking Terms

Ad-Hoc An Ad-Hoc wireless LAN is a group of computers each with LAN adapters, connected as an independent wireless LAN.



Backbone The core infrastructure of a network. The portion of the network that transports information from one central location to another central location where it is unloaded onto a local system.

Base Station In mobile telecommunications, a base station is the central radio transmitter/receiver that maintains communications with the mobile radiotelephone sets within its range. In cellular and personal communications applications, each cell or micro-cell has its own base station; each base station in turn is interconnected with other cells or bases.

BSS BSS stands for Basic Service Set. A Basic Service Set is comprised of a WAP and all the LAN PCs that are associated with it.

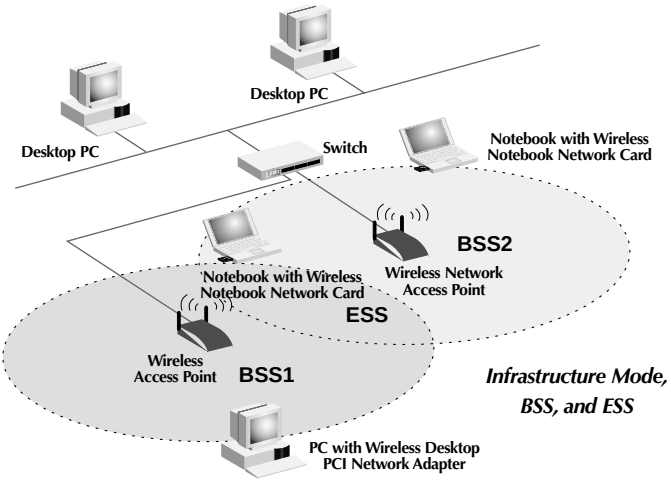
ESS ESS (ESS-ID, SSID) stands for Extended Service Set. More than one BSS is configured to become an Extended Service Set. LAN mobile users can roam between different BSSes in an ESS (ESS-ID, SSID).

Ethernet A popular local area data communications network, which accepts transmission from computers and terminals. Ethernet operates on a 10 or 100Mbps base band transmission rate, using an unshielded, twisted-pair cable.

Glossary of Wireless Networking Terms

Infrastructure An integrated wireless and wired LAN is called an Infrastructure configuration.

Roaming A wireless LAN mobile user moves around an ESS and maintains a continuous connection to the Infrastructure network.



RTS Threshold Transmitters contending for the medium may not be aware of each other. RTS/CTS mechanisms can solve this "Hidden Node Problem". If the packet size is smaller than the preset RTS Threshold size, the RTS/CTS mechanism will not be enabled.

WEP Wired Equivalent Privacy is based on the use of 64-bit or 28-bit keys and the popular RC4 encryption algorithm. Wireless devices without a valid WEP key will be excluded from network traffic.

Wireless Access Point (WAP) An internetworking device that seamlessly connects wired and wireless networks.

Glossary of Wired Networking Terms

DHCP Dynamic Host Configuration Protocol. This protocol automatically configures the TCP/IP settings of every computer on your home network.

DNS Server Address DNS stands for Domain Name System, which allows Internet host computers to have a domain name (such as belkin.com) and one or more IP addresses (such as 192.34.45.8). A DNS server keeps a database of host computers and their respective domain names and IP addresses, so that when a domain name is requested (as in typing "belkin.com" into your Internet browser), the user is sent to the proper IP address. The DNS server address used by the computer on your home network is the location of the DNS server your ISP has assigned.

DSL Modem DSL stands for Digital Subscriber Line. A DSL modem uses your existing phone lines to transmit data at high speeds.

Ethernet A standard for computer networks. Ethernet networks are connected by special cables and switches, and move data around 100Mbps.

IP Address IP stands for Internet Protocol. An IP address consists of a series of four numbers, separated by periods, that identify a single, unique Internet computer host. Example: 192.34.45.8.

ISP Internet Service Provider. An ISP is a business that provides connectivity to the Internet for individuals and other businesses or organizations.

ISP Gateway Address (see ISP for definition). The ISP Gateway Address is an IP address for the Internet router located at the ISP's office. This address is required only when using a cable or DSL modem.

LAN Local Area Network. A LAN is a group of computers and devices connected together in a relatively small area (such as a house or an office). Your home network is considered a LAN.

MAC Address MAC stands for Media Access Control. A MAC address is the

	hardware address of a device connected to a network. A MAC address is unique (different) for every device.
NAT	Network Address Translation. This process allows all of the computers on your home network to use one IP address. Using the NAT capability of the Belkin 4-Port Cable/DSL Gateway Router, you can access the Internet from any computer on your home network without having to purchase more IP addresses from your ISP.
PPPoE	Point-to-Point Protocol over Ethernet. Point-to-Point Protocol is a method of secure data transmission originally created for dial-up connections; PPPoE is for Ethernet connections.
SPI	Stateful Packet Inspection. SPI is the type of corporate-grade Internet security provided by your Belkin 4-Port Cable/DSL Gateway Router. Using SPI, the gateway acts as a "firewall," protecting your network from computer hackers.
Subnet Mask	A subnet mask, which may be a part of the TCP/IP information provided by your ISP, is a set of four numbers configured like an IP address. It is used to create IP address numbers used only within a particular network (as opposed to valid IP address numbers recognized by the Internet, which must be assigned by InterNIC).
TCP/IP	Transmission Control Protocol/Internet Protocol. This is the standard protocol for data transmission over the Internet.
WAN	Wide Area Network. A network that connects computers located in geographically separate areas (i.e., different buildings, cities, countries). The Internet is a wide area network.

FCC Statement

DECLARATION OF CONFORMITY WITH FCC RULES FOR ELECTROMAGNETIC COMPATIBILITY

We, Belkin Components, of 501 West Walnut Street, Compton, CA 90220, declare under our sole responsibility that the product,

F5D6020
F5D6000

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

Caution: Exposure to Radio Frequency Radiation.

The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such manner that the potential for human contact 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 (8inches) 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. If not installed and used in accordance with the instructions, it may 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.

Modifications

The FCC requires the user to be notified that any changes or modifications to this device that are not expressly approved by Belkin Components may void the users authority to operate the equipment.

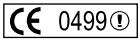
Canada- Industry Canada (IC)

The wireless radio of this device complies with RSS 139 & RSS 210 Industry Canada. This Class B digital complies with Canadian ICES-003.

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

Europe-European Union Notice

Radio products with the CE 0499 or CE alert marking comply with the R&TTE Directive (1995/5/EC) issued by the Commission of the European Community.



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

- EN 60950 (IEC60950) – Product Safety
- EN 300 328 Technical requirement for radio equipment
- ETS 300 826 General EMC requirements for radio equipment.

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

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

- EN 55022 (CISPR 22) – Electromagnetic Interference
- EN 55024 (IEC61000-4-2,3,4,5,6,8,11)- Electromagnetic Immunity
- EN 61000-3-2 (IEC610000-3-2) - Power Line Harmonics
- EN 61000-3-3 (IEC610000) – Power Line Flicker
- EN 60950 (IEC60950) – Product Safety

Products that contain the radio transmitter are labeled with CE 0499 or CE alert marking and may also carry the CE logo.

Belkin Components Limited Lifetime Product Warranty

Belkin Components warrants this product against defects in materials and workmanship for its lifetime. If a defect is discovered, Belkin will, at its option, repair or replace the product at no charge provided it is returned during the warranty period, with transportation charges prepaid, to the authorized Belkin dealer from whom you purchased the product. Proof of purchase may be required.

This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication; if the product has been modified without the written permission of Belkin; or if any Belkin serial number has been removed or defaced.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE IN LIEU OF ALL OTHERS, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED. BELKIN SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

No Belkin dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

BELKIN IS NOT RESPONSIBLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO, LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE TO OR REPROGRAMMING, OR REPRODUCING ANY PROGRAM OR DATA STORED IN, OR USED WITH, BELKIN PRODUCTS.

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

Belkin Components

501 West Walnut Street
Compton • CA • 90220 • USA
Tel: 310.898.1100
Fax: 310.898.1111

Belkin Components, Ltd.

Unit 13 • Gatelodge Close • Round Spinney
Northampton • Northants • NN3 8RX • United Kingdom
Tel: +44 (0) 1604678300
Fax: +44 (0) 1604678330

Belkin Components B.V.

Starparc Building • Boeing Avenue 333
1119 PH Schiphol-Rijk • The Netherlands
Tel: +31 (0) 20 654 7300
Fax: +31 (0) 20 654 7349

Belkin Components, Ltd.

7 Bowen Cresent • West Gosford
NSW 2250 • Australia
Tel: +61 (2) 4372 8600
Fax: +61 (2) 4325 4277

P73851-A

150000005700E R02