ASUS WL-520g Wireless Router

(For 802.11g/b Wireless Clients)



User's Manual

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1. Introduction

Overview

Thank you for purchasing the ASUS Wireless Router. The ASUS Wireless Router, WL-520g, complies with IEEE 802.11g and 802.11b standards. The 802.11g is as extension to 802.11b (used in majority of wireless LANs today) that broadens 802.11b's data rates to 54 Mbps within the 2.4 GHz band using OFDM (orthogonal frequency division multiplexing) technology. The 802.11g allows backward compatibility with 802.11b devices but only at 11 Mbps or lower, depending on the range and presence of obstructions. Wireless LANs are complementary extensions to existing wired LANs, offering complete mobility while maintaining continuous network connectivity to both corporate and home Intranets. They add a new level of convenience for LAN users. PC users stay connected to the network anywhere throughout a building without being bound by a LAN wires. This is accomplished through the use of Access Point functionality of ASUS Wireless Routers. ASUS Wireless Router with built-in Internet gateway capability, allows your family to share a broadband Modem and one ISP account simultaneously from different rooms without wires! ASUS Wireless products can keep you connected anywhere, any time.

System Requirements

To begin using the ASUS WL-520g Wireless Router, you must have the following minimum requirements:

- ADSL/Cable Modem and Broadband Internet Account.
- An Ethernet (10Base-T or 10/100Base-TX) adapter for wired client
- At least one 802.11g (54Mbps) or one 802.11b (11Mbps) wireless adapter for wireless mobile clients
- TCP/IP and an Internet browser installed

The Product Package

The Wireless Router comes with:

• Wireless Router

- Quick Start Guide
- Power adapter (5 Volts DC)
- Support CD (with User's Manual)
- RJ-45 Ethernet cable (straight-through)

Features

125 High Speed Mode

The WL-520g wireless router uses the 802.11g OFDM standard to allow fast 54Mbps wireless data transfers while remaining fully compatible with previous 802.11b devices. With "Afterburner" technology, WL-520g can boost wireless transfer speeds by 35% compared with standard 802.11g speeds. (Afterburner support is also required on client side.)

Wi-Fi Multimedia (WMM)

WMM enhances wireless transfers of multimedia contents, providing wireless network users an improved experience for sharing audio and video files. WMM is a profile of the upcoming IEEE 802.11e Quality of Service (QoS) extensions for 802.11 networks. QoS and multimedia support are critical to wireless home networks, which require video on demand, audio on demand, voice over IP and high-speed Internet access. (WMM support is also required on client side.)

Wi-Fi Protected Access 2 (WPA2TM)

WPA2 is the next-generation Wi-Fi security standard, combining the most powerful authentication and encryption techniques, such as the Advanced Encryption Standard (AES) to provide government grade security to protect wireless networks from unauthorized use. WPA2 is designed to be backward compatible with the original WPA standard, and therefore, WPA2 also supports TKIP, AES, WPA, WPA-PSK and 802.1x authenticated WPA networks. WEP, ACL and SPI firewall are also included to make sure information doesn't fall into the wrong hands.

ASUS EZSetup Wizard

Adopting a unique push button design, ASUS' Wireless Router Series greatly streamlines the setup process for beginners. Just press the button located on the back of the device and use the simple ASUS EZSetup Wizard utility. The routers will automatically register various wireless-capable devices onto the network and activate security standards.

Parental Control / Children Protection

With specific keywords in URL setting within a pre-defined time interval, this home wireless router will do web based filtering parental control to filter/block adult content from newsgroups or websites. It is a router-based filter, not PC-based, so you just make settings one time to keep all household internet devices protected.

The ASUS Wireless Family

The ASUS Wireless family contains a several wireless network solutions for 802.11g & 802.11b wireless local area networks in the home or office.

Access Point or Client



The ASUS WLAN 802.11g Access Point (WL-300g) creates a wireless network using the IEEE 802.11g and 802.11b wireless standards.



The ASUS 3 in 1 **Pocket Access Point** (WL-330g) creates a wireless network using the IEEE 802.11g/b wireless standards.

Access Point & Router



The ASUS WLAN Gateway (WL-500g) creates a The ASUS WLAN 802.11g Pocket Router (WLwireless network using the IEEE 802.11g/b wireless 530g) creates a wireless network using the IEEE standards and allows sharing a single Internet 802.11g and 802.11b wireless standards and allows connection.



sharing a single Internet connection.

Compact Flash (CF) Client

PCMCIA Client



The ASUS WLAN PC Card (WL-107g) is a wireless LAN adapter that fits into a PCMCIA Type II slot in a Notebook PC and creates a wireless network using the IEEE 802.11g/b wireless standards.



The ASUS 802.11b Wireless CF Card (WL-110) is a IEEE 802.11b wireless LAN adapter that fits into a Compact Flash Type II slot in a Portable Digital Assistant (PDA).

PCI Client



The ASUS WLAN PCI Card (WL-138g) is a wireless LAN adapter that fits into a standard PCI slot in a desktop PC and creates a wireless network using the IEEE 802.11g/b wireless standards.

USB Access Point or Client USB Client



The ASUS USB Wireless LAN Adapter (WL-160g) creates a wireless network using the IEEE 802.11g/b wireless standards and connects to any computer using USB2.0 connectivity.



The **ASUS USB Wireless LAN Adapter (WL-167g)** is thumb-sized and creates a wireless network using the IEEE 802.11g/b wireless standards and connects to any computer using USB2.0 connectivity.

Access Point & File Server



The ASUS WLAN 802.11g Access Point (WL-HDD) creates a wireless network using the IEEE 802.11g and 802.11b wireless standards. Also serves as a file server (wireless network attached storage).

(The illustrations are not to scale.)

Network Topology

The settings that you need to perform will vary depending on the role that your ASUS Wireless Router will play.

Network Backbone

No software setting is necessary in the ASUS Wireless Router.



In this topology, the wireless router connects your wired and wireless devices together to form a local area network (LAN), as shown. To connect a computer (or other device) to the ASUS Wireless Router, you need a network cable (UTP-Cat5) with one end connected to one of the LAN ports on the back of the ASUS Wireless Router and the other in the 10/100 LAN port on that device. For wireless connections, wireless mobile clients must comply with the IEEE 802.11b standard.

Chapter 1 - Introduction



In this topology, the wireless router is not only a backbone of your LAN but also an agent to your Internet Service Provider (ISP). You may use an ADSL or Cable modem to communicate with your ISP. Connect the LAN port on the modem with the WAN port at the back of the ASUS Wireless Router using a network cable as shown above.

Note: You also need to make sure that other connections on the ADSL or Cable modem are correct.

Agent to Another Network

In this topology, the wireless router is an agent between your LAN and another network. Use a network cable with one end connected to the WAN port on the wireless router and the other to the other network as shown above. **1. Introduction**

LED Indicators

The LEDs on the front of the ASUS Wireless Router display the status of the ASUS Wireless Router.



PWR (Power)

Off No power On System ready Flashing-slow Firmware upgrade failed Flashing-quick EZsetup processing

Note: If the setup button is pushed without running the EZsetup wizard utility, the PWR indicator will flash and Internet connections will pause for a short period but will then return to normal operation without changes.

AIR (Wireless Network)

| Off | No power |
|----------|---|
| On | Wireless system ready |
| Flashing | Transmitting or receiving data (wireless) |

WAN (Wide Area Network)

| Off | No power |
|-----|----------|
|-----|----------|

| On | Has p | ohysical | connection | to an | Ethernet | network | |
|----|-------|----------|------------|-------|----------|---------|--|
| | | | | - | | | |

Flashing Transmitting or receiving data (through Ethernet wire)

LAN 1-4 (Local Area Network)

| Off | No power |
|----------|--|
| On | Has physical connection to an Ethernet network |
| Flashing | Transmitting or receiving data (through Ethernet wire) |

2. Installation Procedure

Follow these steps to install the ASUS Wireless Router.

- 1. Determine the best location for the ASUS Wireless Router. Keep in mind the following considerations:
 - The length of the Ethernet cable that connects the ASUS Wireless Router to the network must not exceed 100 meters.
 - Try to place the ASUS Wireless Router on a flat, sturdy surface as far from the ground as possible, such as on top of a desk or bookcase, keeping clear of obstructions and away from direct sunlight.
 - Try to centrally locate the ASUS Wireless Router so that it will provide coverage to all of the wireless mobile devices in the area. Orientating the antenna vertically should provide the best reception.
 - Use only the power supply that came with this unit. Other power supplies may fit but the voltage and power may not be compatible.
- 2. Wall mounting or vertical standing is also possible.

Important: It is the responsibility of the installer and users of the ASUS Wireless Router to guarantee that the antenna is operated at least 20 centimeters from any person. This is necessary to insure that the product is operated in accordance with the RF Guidelines for Human Exposure which have been adopted by the Federal Communications Commission.

Wall Mounting Option

Out of the box, the ASUS Wireless Router is designed to sit on a raised flat surface like a file cabinet or book shelf. The unit may also be converted for mounting to a wall or ceiling.

Follow these steps to mount the ASUS Wireless Router to a wall:

- 1. Look on the underside for the mounting hooks.
- 2. Mark two upper holes in a flat surface using the provided hole template.
- 3. Tighten two screws until only 1/4" is showing.
- 4. Latch the upper two hooks of the ASUS Wireless Router onto the screws.

Note: Readjust the screws if you cannot latch the ASUS Wireless Router onto the screws or if it is too loose.

Connections

Connect your ADSL Modem and Wireless Router as shown in the illustration. A LAN cable must be connected between the LAN port on the ADSL and the WAN port on the Wireless Router.



Connect the Wireless Router to your computer through the LAN port.



Warning: Use the ASUS Wireless Router only with the power adapter supplied in the product package. Using another power supply may damage the ASUS Wireless Router.

3. Software Configuration

Configuring the ASUS Wireless Router

The ASUS Wireless Router can be configured to meet various usage scenarios. Some of the factory default settings may suit your usage; however, others may need changing. Prior to using the ASUS Wireless Router, you must check the basic settings to guarantee it will work in your environment. Configuring the ASUS Wireless Router is done through a web browser. You need a Notebook PC or desktop PC connected to the ASUS Wireless Router (either directly or through a hub) and running a web browser as a configuration terminal. The connection can be wired or wireless. For the wireless connection, you need an IEEE 802.11g/b compatible device, e.g. ASUS WLAN Card, installed in your Notebook PC. You should also disable WEP and set the SSID to "default" for your wireless LAN device. If you want to configure the ASUS Wireless Router or want to access the Internet through the ASUS Wireless Router, TCP/IP settings must be correct. Normally, the TCP/IP setting should be on the IP subnet of the ASUS Wireless Router.

Note: Before rebooting your computer, the ASUS Wireless Router should be switched ON and in ready state.

Connecting to the ASUS Wireless Router

Wired Connection

One RJ-45 cable is supplied with the ASUS Wireless Router. Auto crossover function is designed into the ASUS Wireless Router so you can use either a straight-through or a crossover Ethernet cable. Plug one end of the cable into the WAN port on the rear of the ASUS Wireless Router and the other end into the Ethernet port of your ADSL or Cable modem.

Wireless-Connection

Refer to your wireless adapter user's manual on associating with the ASUS Wireless Router. The default SSID of the ASUS Wireless Router is "default" (lower case), encryption is disabled and open system authentication is used.

Setting IP address for Wired or Wireless Connection

Get IP Automatically

The ASUS Wireless Router incorporates a DHCP server so the easiest method is to set your PC to get its IP address automatically and reboot your computer. So the correct IP address, gateway, DNS (Domain Name System Server) can be obtained from the ASUS Wireless Router.

Note: Before rebooting your PC, the ASUS Wireless Router should be switched ON and in ready state.

Setting IP Manually

If you want to set your IP address manually, the following default settings of the ASUS Wireless Router should be known:

- IP address 192.168.1.1
- Subnet Mask 255.255.255.0.

If you set your computer's IP manually, it needs to be on the same segment. For example:

• IP address 192.168.1.xxx (xxx can be any number between 2 and 254 that is not used by another device)



- Gateway 192.168.1.1 (this is the ASUS Wireless Router)
- DNS 192.168.1.1 (ASUS Wireless Router IP address or your own).

| Internet | Protocol (TCP/IP) Properties | \times |
|--------------------------------|---|----------|
| General | Alternate Configuration | |
| You car this cap the app | an get IP settings assigned automatically if your network supports pability. Otherwise, you need to ask your network administrator for propriate IP settings. | |
| 📀 O E | btain an IP address automatically | |
| OUs | se the following IP address: | |
| IP ac | ddress: | |
| Subr | net mask: | |
| Defa | ault gateway: | |
| 📀 OE | btain DNS server address automatically | |
| OUs | se the following DNS server addresses: | |
| Prefe | erred DNS server: | |
| Alterr | mate DNS server: | |
| | Advanced | |
| | OK Cance | |

| Internet Protocol (TCP/IP) Prope | rties 🛛 🛛 🔀 |
|---|--|
| General | |
| You can get IP settings assigned autor this capability. Otherwise, you need to a the appropriate IP settings. | natically if your network supports isk your network administrator for |
| 🔘 Obtain an IP address automatically | , |
| 💿 Use the following IP address: — | |
| IP address: | 192.168.1.8 |
| Subnet mask: | 255 . 255 . 255 . 0 |
| Default gateway: | 192.168.1.1 |
| Obtain DNS server address autom | atically |
| Our of the following DNS server add ■ Our of the following DNS server add | resses: |
| Preferred DNS server: | 192.168.1.1 |
| Alternate DNS server: | · · · |
| | Advanced |
| | OK Cancel |

Installing the ASUS Wireless Router Utilities

Follow these steps to install the ASUS Wireless Router Utilities in Microsoft Windows. Insert the support CD provided with the ASUS Wireless Router and the menu will appear. (Double-click **setup.exe** if your autorun has been disabled.)

Welcome





- (1) Select a language and click **Install ASUS Wireless Router Utilities**.
- (2) Click **Next** after reading the welcome screen.



(3) Click **Yes** after reading the license agreement.



(5) Click **Next** to accept the default program folder or enter another.

- Choose Destination Location

 Setup will install ASUS Wireless Router Utilities in the following folder.

 To install to this folder, click Next.

 To install to a different folder, click Browse and select another folder.

 You can choose not to install ASUS Wireless Router Utilities by clicking Cancel to exit Setup.

 Destination Folder

 C:\...\ASUS\Wireless Router Utilities

 Beack

 Next>
- (4) Click **Next** to accept the default destination folder or enter another.



(6) Click Finish when setup is complete.

Using the Wireless Router for the First Time

1. ASUS Wireless Router Utilities

Run Device Discovery from "ASUS Utility" in Windows Start Programs.

| Administrative Tools | • | | | |
|--------------------------|---|-------------------------|---|--|
| 📾 ASUS Utility | × | 🛅 Dual Band Homegateway | × | |
| Codec Configuration | • | 🛅 Dual Band WLAN Card | • | |
| 🛅 Games | ► | 🗃 Wireless Router | × | Device Discovery |
| 📷 Microsoft Office Tools | • | × | | 💩 Firmware Restoration |
| 📷 Startup | ► | | | 👉 Printer Setup Wizard |
| × | | | | 📷 Uninstall ASUS Wireless Router Utilities |

2. Connect to the ASUS WLAN Web Manager

Run the ASUS WLAN **Device Discovery** from the **Start** menu and click **Config** when the device is found.

| 🔋 Device Discovery | Proxy Settings | ? 🗙 |
|--|--|-----|
| Device SSID IP Address Subnet Mask Printer | Servers | |
| ≪EVL500g detault 1921681.1 255.255.255.0 | HTTP: proxy.asus.com.tw : 80 | |
| | Secure: proxy.asus.com.tw : 80 | |
| | FTP: proxy.asus.com.tw : 80 | |
| | Gopher: proxy.asus.com.tw : 80 | |
| 🛓 Config 💦 🔰 Search 🗐 Exit | Use the same proxy server for all protocols | |
| Number of found device(s): 1 | Do not use proxy server for addresses beginning with | h: |
| | 192.168.1.1 | < > |
| Add 192.168.1.1 in the Exceptions box if you are using a proxy server (Microsoft [®] Internet Explorer). | Use semicolons (;) to separate entries. | cel |

If your computer's IP is not on the same subnet as the ASUS Wireless Router (192.168.1.X), you will be asked to change it. The IP address can be any number from 2 to 254 that is not used by another device. Gateway is not required.

Note: Using a proxy server (Microsoft[®] Internet Explorer) for your LAN requires that you set an exception for the ASUS Wireless Router or else connection will fail.

Enter Address or Name Manually

You can also open your PC's web browser and enter the name or the default IP address of the ASUS Wireless Router:

http://my.router or http://my.WL-520g or http://192.168.1.1

User Name & Password

Once connected, a window will ask for the "User name" and "Password" in order to log in. The factory default values are "**admin**" and "**admin**".

Note: If you cannot find any the ASUS Wireless Routers due to a problem in the IP settings, push and hold the "Restore" button over five seconds to restore factory default settings.



Home Page

After logging in, you will see the ASUS Wireless Router home page.



IMPORTANT: After entering information on any page, click the "Apply", "Save", or "Finished" button. If you click any other link, you will be directed to another page and lose your new settings.

3. Set your own password

| 🚔 System Setup | System Setup - Change Password | |
|------------------------------------|--------------------------------|------------|
| 📓 Change Password | New Password: | |
| Setting Management Factory Default | Retype New Password | Save Clear |

4. Use Quick Setup



Commonly used features

Setting up a server in your LAN

1. Select Virtual Server under "NAT Setting"



NAT Setting - Virtual Server

- 2. (1) Enable Virtual Server
 - (2) Choose Application (e.g. FTP)
 - (3) Enter data in the fields
 Port Range: Port connected to WAN
 Local IP: IP address of the FTP Server
 Local Port: Oort of the FTP Server
 Protocol: Protocol Type
 - (4) Click Add button to add settings
 - (5) Click Finish button
- 3. Click Save&Restart".

| Enable Virtual | Server? | | (r Yes | C No |
|----------------|---------------|------------|----------|--------------------|
| Virtual Se | rver List | | | Add Del |
| Well-Known Ap | oplications: | FTP | • | |
| Port Range | Local IP | Local Port | Protocol | Description |
| 28:21 | 192.168.1.100 | 21 | TCP . | FTP Server (20:21) |

| Save&Restart will sa | ve all setting you have changed to WLS20g and restart it. Please click |
|----------------------|--|
| SaveRestart buttor | to continue. |
| | Com Bostad |

Setting up as switching Hub and pure AP (no IP sharing NAT)

| 1. | Connect the LAN port from a DSL or Cable modem to one of the LAN ports on the wireless router. | DSL or Cable Modem | |
|----|--|---|--|
| 2. | Select DHCP Server under "IP Config" | IP Config WAN & LAN DHCP Server Route Miscellaneous | |
| 3. | Turn OFF the "DHCP Server" function | IP Config - DHCP Server WLS20g supports up to 253 IP addresses for your loo machine can be assigned manually by the network a WLS20g if the DHCP server is enabled. Enable the DHCP Server? Domain Name: IP Pool Starting Address: IP Pool Ending Address: Lease Time: Default Gateway: | cal network. The IP address of a local dministrator or obtained automatically from Cyce CND 192.168.1.2 192.168.1.254 86400 |
| 4. | Click Finish. | Restore | Αφρίγ |
| 5. | Click Save&Restart". | Save & Restart Save&Restart will save all setting you have changed SaveRestart button to continue. | to WL520g and restart it. Please click |

Setting up net meeting, MSN, on-line gaming, and remote control programs

1. Open My Network Places from My Network Places Windows "start". Windows Messenger 🐶 <u>C</u>ontrol Panel Set Program Access and Defaults Tour Windows XP 😂 Printers and Faxes Files and Settings Transfer Wizard Help and Support 🔎 <u>S</u>earch 7 Run... All <u>P</u>rograms 🌔 🔎 Log Off 🛛 🚺 Tyrn Off Computer 🛃 start 2. Click View network connections. 😼 My Network Places File Edit View Favorites Tools Help 🕒 Back 🔹 🕑 👻 🏂 🔎 Search 😥 Folders 🛛 🔯 🏂 🗙 ddress 🥞 My Network Places 🗸 🄁 Go Network Tasks \$ 🧭 Add a network place View network connections
 Set up a home or office network Set up a wireless network for a home 3. Right-click Local Area Connection 🛸 Network Connections and select "Properties". File Edit View Favorites Tools Advanced Help 🔇 Back 🔹 🕥 🕤 🏂 🔎 Search 💫 Folders 🕼 🎲 🗙 🖌 ᠫ Co ddress 🔕 Network Connections LAN or High-Speed Internet Network Tasks 2 Create a new connection 1394 Set up a home or small office network office network
 Change Windows
 Firewall settings Disable Status Repair Disable this network Bridge Connections Repair this connection D Create Shortcut Rename this connection View status of this connection Rename 4. Double-click Internet Protocol (TCP/IP) **?**× Local Area Connection Properties General Authentication Advanced Connect using: 🕮 Marvell Yukon Gigabit Ethernet 10/1 Configure... This connection uses the following items: Client for Microsoft Networks ☑ ■ File and Printer Sharing for Microsoft Networks
 ☑ ■ QoS Packet Scheduler Internet Protocol (TCP/IP) ~ 8

ASUS Wireless Router

Setting up net meeting, MSN, on-line gaming, and remote control programs (Cont.)

| 5. | Enter TCP/IP settings as shown here. | Internet | Protocol (TCP/IP) Pro | perties ? 🔀 |
|----|--|--|--|---|
| | | General | | |
| | | You ca this cap the app | an get IP settings assigned au pability. Otherwise, you need propriate IP settings. | utomatically if your network supports to ask your network administrator for |
| | | 00 | btain an IP address automati | ically |
| | | U | se the following IP address: | |
| | | IPa | ddress: | 192.168.1.100 |
| | | Sub | net mask: | 255.255.255.0 |
| | | Defa | ault gateway: | 192.168.1.1 |
| | | 00 | btain DNS server address au | utomatically |
| | | - O U | se the following DNS server | addresses: |
| | | Pref | erred DNS server: | 192.168.1.1 |
| | | Alter | mate DNS server: | |
| | | | | Advanced |
| | | | | OK Cancel |
| 6. | Choose "Virtual DMZ" from "NAT Setting" in WL-520g settings | | NAT Setting Port Trigger Virtual Serv Virtual DM2 | r /er Z |
| | | Save & Pe | start | |
| δ. | Click Save&Restart". | Save&Restart SaveRestart | will save all setting you have chability button to continue. | anged to WL520g and restart it. Please click |
| 7. | Enter the IP address and click Finish. | NAT Setti | ng - Virtual DMZ | |
| | | Virtual DMZ a be redirected uncertained in | flows you to expose one compute to the computer you set. It is us ncoming ports. Please use it caref | er to Internet, so that all the inbounds packets will seful while you run some applications that use fully. |
| | | IP Address of | Exposed Station: | 192.168.1.100 |
| | | F | Restore | Finish Apply |
| | | Restore: | Clear the above settings and restore | the settings in effect. |
| | | Finish: | Confirm all settings and restart WL5. | 20g now. |
| | | Apply: | Confirm above settings and continue | |

Setting up DDNS

- 1. Choose "Miscellaneous" from IP Config directory
- 2. If you do not have Dynamic-DNC, enable the DDNS Client. Then, choose one server from 2 and click **Free Trial** to apply for a new Dynamic-BNC.
- 3. After clicking **Free Trail**, this web page will open.
- 4. Read

3. Utilities

➡ IP Config
 ➡ WAN & LAN
 ➡ DHCP Server
 ➡ Route
 ➡ Miscellaneous

| Dynamic-DNS (DDNS) allows you to exp though you have no static IP address. You can click Free Trial below to start | ort your server to Internet with an unique name, even Currently, serveral DDNS clients are embedded in WL520g with a free trial account. |
|--|--|
| Enable the DDNS Client? | eres C No 1 |
| Server: | WWW.DYNDNS.ORG |
| User Name or E-mail Address: | |



- 4. Read the policy and select "I have read...".
- 5. Enter the user name you want (e.g.WL-520g)
- 6. Enter an e-mail address for a activation letter.
- 7. Enter the password of your account
- 8. Click Create Account.
- You will see this message telling you that your account has been created. You then receive a letter by e-mail to activate the account.
- 10. Open your e-mail to find the activation letter and open it.
- 11. Click the confirmation link to activate your account.

Username

Create Account

omplete the form unt. If you do no

Last Modified: May 4, 2004

| Osemane | |
|--|---|
| Your usemame will be used to login to y | our account and make changes. |
| Username: | 5 (WL520g |
| E-mail Address | |
| The e-mail address you enter must be w keep this address current and accounts Read more about our privacy policy | aid. Instructions to activate your account will be sent to the e-mail address provided. You must with invalid e-mail addresses will be removed with no warning. We do not sell our list to anyone 6 |
| E-mail Address: | WL520g@asus.com |
| Confirm E-mail Address: | WL520g@asus.com |
| Password | |
| The password you enter will be used to | access your account. It must be more than 5 characters and cannot be your username. |
| Password: | 7 [|
| Confirm Password | |
| | 8 Create Account Reset Form |

Account Created Your account WL520, has been created. Directions for activating your account have been sent to WL520g@asus.com. To complete registration, please follow the directions that you will receive. You must complete these steps within 48 hours to complete your registration.

You should receive the confirmation e-mail within a few minutes. Please make certain that your spam filtering allows messages from support@dyndms org to be delivered. If you have not received this e-mail within an hour or so, request a password reset.

Following the instructions in the password reset e-mail will also confirm your new account. If you don't receive the password reset e-mail either, you should check with your e-mail provider to determine why you are not receiving these messages.

Your DynDNS.org user account WL520g' has been created. You must visit the confirmation address below within 48 hours of the time this e-mail was sent to complete the account creation process.

Our basic service offerings are free, but they are supported by our premium services. See http://www.dyndns.org/services/ for a full listing of all of our available services.

To confirm your account, please go to the address below:

https://www.dyndns.org/account/confirm/_UO1yO2Re3qweybX-SFXIA

Setting up DDNS (Cont.)

- 12. Press the "login" to login your account The account Confirmed 10 The account WL 520g" has been confirmed You can now Compare a start using your account

ay wish to subscribe to - this list is used for notifications of new iling list you ortant syste ndns.org.

- 13. Enter your "Username" and "Password" that you used to apply for the account and click Login.



14. After you login, you will see this Logged In message.

You are currently logged in as: WL520g (Logout)

15. Select Services tab.

| B /IBING. | About Services Account Support D | Developers News |
|---------------------|---|---|
| Custom DNS | DNS Services | Mail Services |
| Secondary DNS | Outra Dilotti | 11-10 P 100 |
| Mailiop | Custom DNS*** | маннор- Васкир МХ |
| Domain Registration | Custom DNS service is a full DNS solution for newly | Make sure you always ge |
| Network Monitoring | purchased domains or domains you already own. A | is offline for extended pe |
| MyWebHop | web-based interface provides complete control over | MX service. We'll queue |
| Dynamic DNS | resource records and your entire domain including | with no limits on how mus |
| Static DNS | support for dynamic IPs and automated updates. | the second second second second |
| WebHop | | MailHop ^{5M} Forward |
| Pricing | Secondary DNS ⁶⁴⁶ | Set up user-based redire |
| | Secondary DNS service provides a secondary DNS | name without running you |
| | server for your domain, so that you have a backup it/when your primary goes down, and to share the load of answering DNS queries. | MailHop Forwarding ser with our spam scanning all addresses on your do |

16. Click Add Host next to Dynamic DNS to add your own DDNS.

| WL520g | | | Billing History - Logo |
|------------|------------------------------|------------------------|------------------------|
| Account Se | ettings | | |
| E-mail | WL520g@asus.com | Password | |
| | Edit Prefs | | Delete Account |
| | Change Username | | |
| Your Hosts | & Zones | | |
| Custom DN | S (Add Zone) | Secondary DNS (Add | Zone) |
| Domain Reg | gistration (Register Domain) | MailHop (Add MailHop) | |
| Dynamic DN | VS Add Hest) 13 | Static DNIS (Add Host) | R |
| Wahllon /A | fol Moverfi | SAANahHon /Add Hour | |

17. Enter the "Hostname" and the Add Host.

| Hostname: | WL520g dyndns.org |
|------------------------|---|
| | For your own domain (eg: yourname.com), use Custom DNS. |
| IP Address: | 61.230.200.133 |
| Enable Wildcard: | |
| Mail Exchanger (option | nal): 15 🗆 Backup MX? |
| | Add Host Reset Form |
| | |

18. You will see this message when your Hostname Created Hostname is successfully created. The hostname you have requested has been created. The informatio

Hostname: (wl520g.dyndns.org) IP Address: 61.230.200.133 N Wildcard: Mail Exchanger. None Backup MX: N

Setting up DDNS (Cont.)

19. Enter your account data. The user name password is the account you created when applying for DDNS. Then click **Finish**.

| DDNS Setting | | |
|--|--|---------------------------------------|
| Dynamic-DNS (DDNS) allows you to exp though you have no static IP address. You can click Free Trial below to start | ort your server to Internet with an ur Currently, serveral DDNS clients are e with a free trial account. | nique name, even mbedded in WL520g |
| Enable the DDNS Client? | € Yes C No | |
| Server: | WWW.DYNDNS.ORG | Free Tria |
| User Name or E-mail Address: | 16 WL520g | |
| Password or DDNS Key: | | |
| Host Name: | wi520g.dyndns.org | |
| Enable wildcard? | C Yes @ No | |
| Update Manually: | Update | |
| | 17 | |
| Restore | Finish | Apply |

- 20. Click Save&Restart. Save & Restart Save&Restart will save all setting you have changed to WLS20g and restart it. Please click SaveRestart button to continue. Save&Restart 21. Verify the DDNS is working. Click 🦳 <u>R</u>un.. All Programs Windows start and select Run... 🚺 Turn Off Computer 🤎 Log Off 🛃 start 22. Type in **cmd** and click OK to open the **?**× Run DOS console. Type the name of a program, folder, document, or Internet resource, and Windows will open it for you. 1 cmd Open: ¥ ок 💦 Cancel Browse...
 - 23. Type **ping wl-520g.dyndns.org** (use your hostname). If you can see a reply from the hostname, the DDNS is working correctly.

| licros (C) Co | oft Windows XP [Version 5.1.2600] pyright 1985-2001 Microsoft Corp. | |
|------------------|--|--|
| ::\Doc | uments and Settings\Doc>ping w1520g.dyndns.org | |
| | | |
| Pinging | w1520g.dyndns.org [192.168.123.21] with 32 bytes of data: | |
| Pinging Renlu | ul520g.dyndns.org [192.168.123.21] with 32 bytes of data: | |

3. Utilities

Setting up WDS

- 1. Choose Bridge under "Wireless".
- 2. Select AP mode as WDS Only. If you want to use both AP and WDS, you can choose Hybrid mode.
- 3. If you selected WDS or Hybrid mode, you will see a message telling you to choose a fixed channel for WDS.



Wireless - Bridge

AP Mode: Chan

1

Wireless - Bridge

| Channel: | AP Only WDS Only |
|---|---------------------|
| AD-1-0-1-0-1-11-0 | Inyond |
| Microsoft Internet Explorer | × |
| Contraction of the second s | |

Wireless bridge (also known as Wireless Distribution System or WDS) function allows you to connect to one or many APs through wireless.

AP Only



4. Select a fixed channel for WDS

| Wireless bridge (connect to one of | also known as Wireless Distri or many APs through wireless | bution System or WI | DS) function all | ows you to |
|--|---|---------------------|------------------|------------|
| AP Mode: | | WDS Only | - | |
| Channel: | | | | |
| Connect to APs in | Remote Bridge List? | 2 | , | |
| Allow anonymous | ? | 4 | , | |
| Remote Brid | lge List | 6 7 | Add | Del |
| | MAC Address | 9 | | |

- 5. Select Yes or No to "Connect to APs in Remote Bridge List" to connect to other APs which are connected by the APs in you list.
- 6. If you want to "Allow anonymous" login in your local area network, you can select "Yes".
- Wireless bridge (also known as Wireless Distribution System or WDS) function allows you to connect to one or many APs through wireless. AP Mode: WDS Only Channel ٠ Connect to APs in Remote Bridge List? € Yes C N Allow anonymous? CYes @N
- 7. Enter the MAC address of the APs you want to connect to.
- 8. Click Add after you key in the "MAC address"



10. Click Save&Restart.

9. Click Finish.

| ave&Restart will sav | e all setting you have changed to WLS20g and restart it. Please click to continue |
|----------------------|---|
| averestart batton | to continue. |
| | Save&Restart |



Troubleshooting

The ASUS Wireless Router is designed to be very easy to install and operate. However, if you experience difficulties, use the information in this chapter to help diagnose and solve problems. If you cannot resolve a problem, contact Technical Support, as listed on the front of this manual.

Common Problems and Solutions

Problem

ASUS Wireless Router does not power up:

Solution

- Check for faulty the ASUS Wireless Router power supply by measuring the output voltage with an electrical test meter.
- Check failed AC supply (power outlet)

Problem

Cannot communicate with the ASUS Wireless Router through a wired network connection.

Solution

- Verify network configuration by ensuring that there are no duplicate IP addresses. Power down the device in question and ping the assigned IP address of the device. Ensure no other device responds to that address.
- Check that the cables used have proper pin outs and connectors or use another LAN cable.

Problem

The ASUS Wireless Router Web Manager still cannot find or connect to the ASUS Wireless Router after verifying the IP address and LAN cable, changes cannot be made, or password is lost.

Solution

In case the ASUS Wireless Router is inaccessible, you can restore the ASUS Wireless Router's factory default settings. Use a straightened paper clip to press the button located in the hole labeled "Restore" on the back of the ASUS Wireless Router and keep it depressed over 5 seconds. The LEDs

will flash when reset is successful.



Reset to Defaults

The following are factory default values. These values will be present when you first receive your the ASUS Wireless Router, if you push the reset button on the back of the ASUS Wireless Router over 5 seconds, or if you click the "Restore" button on the "Factory Default" page under "Advanced Setup".

| Name | Default Value | |
|--------------|---------------|--|
| User Name | admin | |
| Password | admin | |
| Enable DHCP | Yes | |
| IP Address | 192.168.1.1 | |
| Subnet Mask | 255.255.255.0 | |
| DNS Server 1 | 192.168.1.1 | |
| DNS Server 2 | (blank) | |
| SSID | default | |
| Domain Name | (blank) | |

Problem

My 802.11b PC Card will not associate with the ASUS Wireless Router.

Solution

Follow these steps:

- 1. Try to bring the devices closer together; the PC Card may be out of range of the ASUS Wireless Router.
- 2. Confirm that the ASUS Wireless Router and PC Card have the same SSID.
- 3. Confirm that the ASUS Wireless Router and PC Card have the same Encryption settings, if enabled.
- 4. Confirm that the ASUS Wireless Router's Air and Link LEDs are solid green.
- 5. Confirm that the authorization table includes or excludes the MAC address of the WLAN PC card if "Wireless Access Control" is enabled.

Problem

The throughput seems slow.

Solution

To achieve maximum throughput, verify that your antennas are well-placed, not behind metal, and do not have too many obstacles between them. If you move the client closer to the ASUS Wireless Router and throughput increases, you may want to consider adding a second the ASUS Wireless Router and implementing roaming.

- Check antenna, connectors and cabling.
- Verify network traffic does not exceed 37% of bandwidth.
- Check to see that the wired network does not exceed 10 broadcast messages per second.
- Verify wired network topology and configuration.

Problem

I cannot find the ASUS Wireless Routers using the ASUS Wireless Router Discovery.

Solution

To configure the ASUS Wireless Router through a wireless LAN card, your computer must be in the same subnet of the ASUS Wireless Router. You cannot find the ASUS Wireless Routers with subnet different from your computer within the same gateway. You must change your computer to the same subnet as the ASUS Wireless Router. The factory default subnet of the ASUS Wireless Router is "192.168.1.1".

In Windows NT/2000/XP, you must log in with Administrator privileges so that all functions of the ASUS Wireless Router Manager can function correctly. If you do not log in as a member of the Administrator group, you cannot change IP settings but can still run the Discovery utility if the original IP setting is correct.

Problem

How do I upgrade the firmware on the ASUS Wireless Router?

Solution

Periodically, a new Flash Code is available for ASUS Wireless Routers on the Web site at **http://www.asus.com**. Update the ASUS Wireless Router s Flash Code using the Firmware Upgrade option on the System Setup menu of the Web manager.

Appendix