

If you are using Windows 2000, the instructions will start as shown in Figure 5-10.

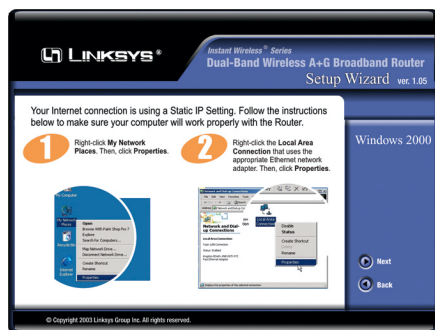


Figure 5-10

If you are using Windows XP, the instructions will start as shown in Figure 5-11. If you are using Windows XP in “Classic” mode, you can see these instructions in this mode by clicking the **Classic** button.

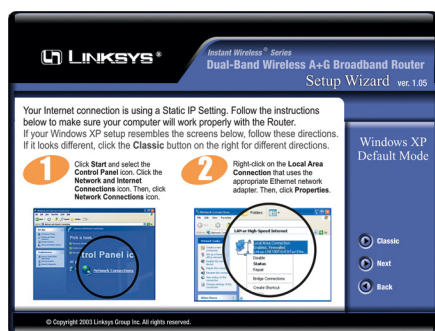


Figure 5-11

After configuring your PC, as shown in the first part of 5a, you will see a *Static IP Setup* screen. If you have a cable connection, you will see a screen similar to that shown in Figure 5-12. If you have a DSL connection, you will see a screen similar to that shown in Figure 5-13. Enter the information just as you do when logging onto your Internet connection, and click the **Next** button. Then, continue to step 6.

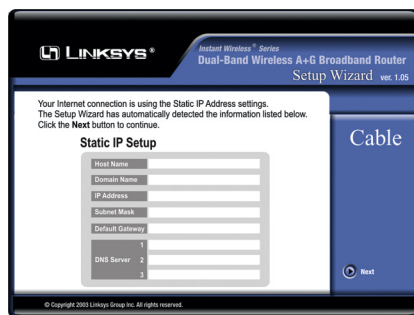


Figure 5-12

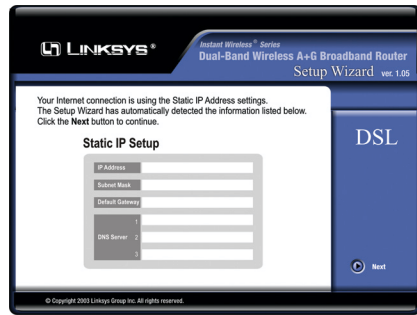


Figure 5-13

7b. When connecting to the Internet through a DHCP connection:

If you have a cable connection, you will see a screen similar to that shown in Figure 5-14. If you have a DSL connection, you will see a screen similar to that shown in Figure 5-15. Enter the information just as you do when logging onto your Internet connection, and click the **Next** button. Then, continue to step 6.

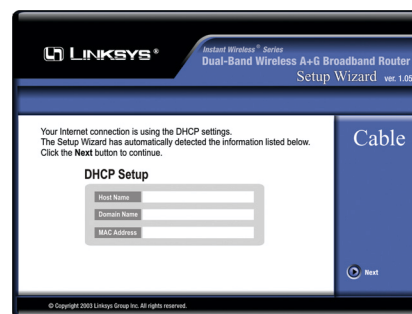


Figure 5-14

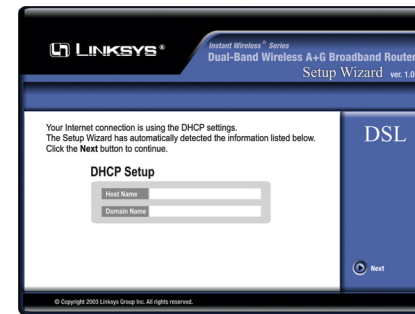


Figure 5-15

7c. When connecting to the Internet through a PPPoE connection:

PPPoE connections are only available with DSL Internet connections. If this is how you connect to the Internet, you will see a screen similar to that shown in Figure 5-16. Enter the information just as you do when logging onto your Internet connection, and click the **Next** button. Then, continue to step 6.

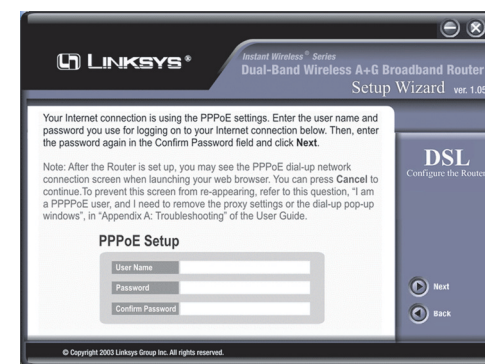


Figure 5-16

8. As shown in Figure 5-17, the *Basic Settings* screen for your 2.4GHz/54g (802.11g-draft) wireless products will appear. Enter the Network Mode, SSID, and the channel at which the network broadcasts its wireless signal. Then, click the **Next** button to continue.

Network Mode. Since Wireless-G products are backwards compatible with 802.11b products, this mode is provided in the event you wish to incorporate 802.11b products into your Wireless-G wireless network. If you are using both Wireless-G and 802.11b products in your network, select **Mixed** mode. You may experience reduced networking speeds in Mixed mode, as the speed must compensate for both types. If you are only using Wireless-G products in your network, select **G-Only** mode.

SSID. The SSID is the unique name shared among all points in a wireless network. The SSID must be identical for all points in the wireless network. It is case sensitive and must not exceed 32 characters, which may be any keyboard character. The default SSID, **linksys-g**, should be changed for greater security. Make sure this setting is the same for all points in your wireless network.

Channel. Select the appropriate channel from the list provided to correspond with your network settings, between 1 and 11 (in North America). All points in your wireless network must use the same channel in order to function correctly.

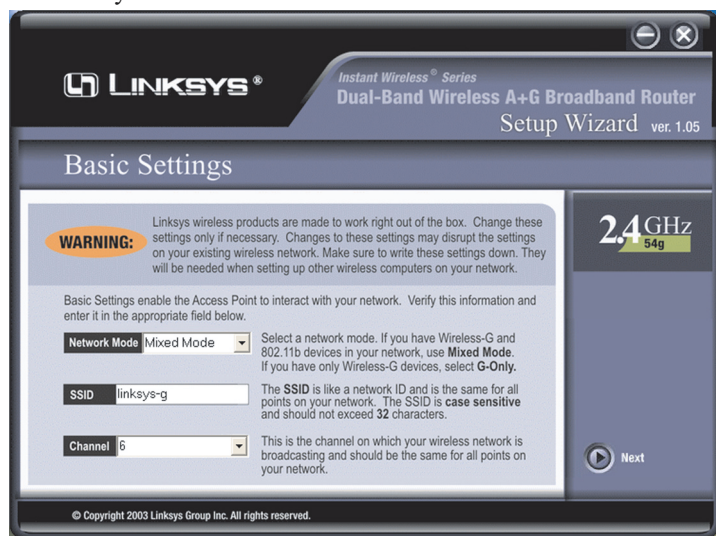


Figure 5-17

9. As shown in Figure 5-18, the *Basic Settings* screen for your 5 GHz/802.11a wireless products will appear. Enter your wireless network's SSID and select the channel at which the network broadcasts its wireless signal. Then, click the **Next** button to continue.

SSID. The SSID is the unique name shared among all points in a wireless network. The SSID must be identical for all points in the wireless network. It is case sensitive and must not exceed 32 characters, which may be any keyboard character. The default SSID, **linksys-a**, should be changed for greater security. Make sure this setting is the same for all points in your wireless network.

Channel. Select the appropriate channel from the list provided to correspond with your network settings, between 36 and 64. All points in your wireless network must use the same channel in order to function correctly.

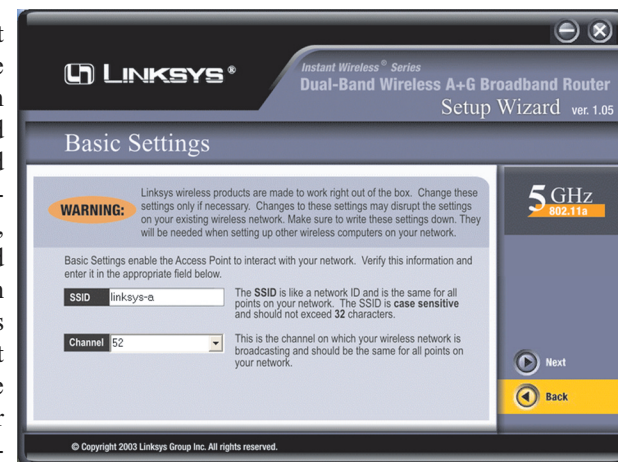


Figure 5-18

10. At this point, the configuration performed with the Setup Wizard is complete, as shown in Figure 5-19. You can register the Router online by clicking the **Register Online** button. To configure any other Access Points in your network, you can run this Setup Wizard again. Click the **Exit** button to exit the Setup Wizard.



Figure 5-19

Chapter 6: Configuring the Router's Basic Settings with the Web-Based Utility

This chapter will show you how to configure the Router to function in your network and gain access to the Internet through your Internet Service Provider (ISP). Detailed description of the Router's web-based utility can be found in "Chapter 7: The Router's Web-based Utility."

The instructions from your ISP tell you how to set up your PC for Internet access. Because you are now using the Router to share Internet access among several computers, you will use the setup information to configure the Router instead of your PC. You only need to configure the Router once using the first computer you set up.

1. Open your web browser. Enter **http://192.168.1.1** (the Router's default IP address) in the web browser's *Address* field, as shown in Figure 6-1, and press the **Enter** key.



Figure 6-1

2. An *Enter Network Password* window, shown in Figure 6-2, will appear. Windows XP users will see a *Connect to 192.168.1.1* window, shown in Figure 6-3. Leave the *User Name* field empty, and enter **admin** in lower-case letters in the *Password* field (**admin** is the default password). Then, click the **OK** button.

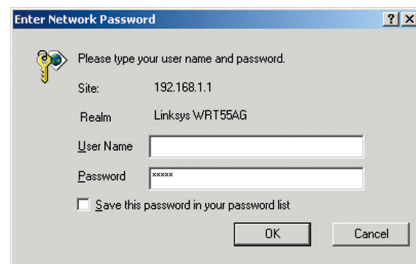


Figure 6-2

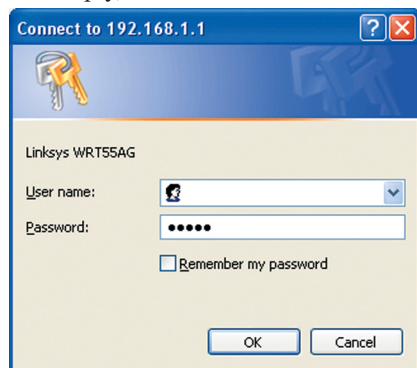


Figure 6-3

3. The web-based utility will appear with the Setup tab selected. Based on the setup instructions from your ISP, you may need to provide the Host Name and Domain Name (usually cable ISPs require them). These fields allow you to provide a host name and domain name for the Router and are usually left blank.

The values for the Router's LAN IP Address and Subnet Mask are shown on the *Setup* screen. The default values are 192.168.1.1 for the IP Address and 255.255.255.0 for the Subnet Mask.

4. The Router supports four connection types: Automatic Configuration - DHCP (obtain an IP automatically), Static IP, PPPoE, and PPTP. These types are listed in the drop-down menu for the Configuration Type setting. Each *Setup* screen and available features will differ depending on what kind of connection type you select. Proceed to the instructions for the connection type you are using, and then continue to step 5.



IMPORTANT: If you have previously enabled any **Internet-sharing proxy server software** on any of your PCs, you must disable it now.

Some examples of Internet-sharing software are Internet LanBridge, Wingate, ICS, and Sygate. To disable your Internet-sharing software:

- If you are running Netscape Navigator, click **Edit, Preferences, Advanced, and Proxies**. Click **Direct Connection to the Internet**.
- If you are running Internet Explorer 5.x or higher, click **Tools, Settings, Control Panel, Internet Options, Connections, and LAN Settings**. Remove checkmarks from all three boxes. Click the **OK** button to continue.

You must also disable any **Internet log-on software** (such as Ivasion Winpoet or Enternet 300) and any **firewall software** (such as ZoneAlarm and Watchdog) on all of your PCs.



Note: For added security, you should change the password through the *Password* screen of the web-based utility.

Automatic Configuration - DHCP

If you are connecting through DHCP or a dynamic IP address from your ISP, perform these steps:

- Keep the default setting, **Automatic Configuration - DHCP**, as the Configuration Type, shown in Figure 6-4.
- Click the **Apply** button to save the setting, or click the **Cancel** button to clear the setting and start over. When you are finished, proceed to step 5.

The screenshot shows the Linksys Setup screen. Under the 'Internet' section, 'Connection Type' is set to 'Automatic Configuration - DHCP'. The 'LAN' and 'Wireless' sections show default settings for IP addresses, MAC addresses, and wireless modes.

Figure 6-4

Static (or Fixed) IP Address

If you are connecting through a static or fixed IP address from your ISP, perform these steps:

- Select **Static IP** as the Configuration Type, shown in Figure 6-5.
- Enter the **Internet IP Address**.
- Enter the **Subnet Mask**.
- Enter the **Default Gateway**.
- Enter the **DNS** in the 1, 2, and/or 3 fields. You need to enter at least one DNS address.
- Click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 5.

The screenshot shows the Linksys Setup screen. Under the 'Internet' section, 'Connection Type' is set to 'Static IP'. Fields for 'Internet IP Address', 'Subnet Mask', 'Default Gateway', and 'DNS (Required)' are visible. The 'LAN' and 'Wireless' sections show default settings.

Figure 6-5

PPPoE

If your DSL provider says that you are connecting through PPPoE (you use a user name and password to access the Internet), perform these steps:

- Select **PPPoE** as the Configuration Type, shown in Figure 6-6.
- Enter the **User Name**.
- Enter the **Password**.
- Click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 5.

The screenshot shows the Linksys Setup screen. Under the 'Internet' section, 'Connection Type' is set to 'PPPoE'. Fields for 'User Name' and 'Password' are visible. The 'LAN' and 'Wireless' sections show default settings.

Figure 6-6



Important: If you enable PPPoE, remember to remove any PPPoE applications already installed on any of your PCs.

PPTP

PPTP is a service used in Europe only. If you are using a PPTP connection, check with your ISP for the necessary setup information.

After you have entered your setup information, click the **Apply** button to save the settings, or click the **Cancel** button to clear the settings and start over. When you are finished, proceed to step 5.

The screenshot shows the Linksys Setup screen. Under the 'Internet' section, 'Connection Type' is set to 'PPTP'. Fields for 'Internet IP Address', 'Subnet Mask', 'Default Gateway', and 'User Name' are visible. The 'LAN' and 'Wireless' sections show default settings.

Figure 6-7

5. To configure the Router for your wireless network(s), perform these steps:

- A. To enable 5GHz, 802.11a wireless networking, make sure the 5GHz, 802.11a **Enable** radio button is selected. Then click the **Change 5GHz Settings** button, and customize the SSID, Channel, and WEP encryption settings as needed. Then click the **Apply** button to save your changes. For more information, refer to “Chapter 7: The Router’s Web-based Utility.”



Important: Operation within the 5150 to 5250GHz band is restricted to indoor use only.

- B. To enable 2.4GHz, Wireless-G wireless networking, make sure the 2.4GHz, 802.11g **Enable** radio button is selected. Then click the **Change 2.4GHz Settings** button, and customize the SSID, Channel, and WEP encryption settings as needed. Then click the **Apply** button to save your changes. For more information, refer to “Chapter 7: The Router’s Web-based Utility.”

6. If you haven’t already done so, click the **Apply** button to save your Setup settings. Close the web browser.

7. Restart your computers so that they can obtain the Router’s new settings.

If you need more details or advanced setting information, please refer to “Chapter 7: The Router’s Web-based Utility” or the Linksys support website at support.linksys.com.



Figure 6-8

Test the setup by opening your web browser from any computer and entering <http://www.linksys.com/registration>, as shown in Figure 6-8.

Congratulations! You’ve successfully configured the Router.

If you are unable to reach our website, you may want to review what you did in this section or refer to “Appendix A: Troubleshooting.”

Proceed to “Chapter 7: The Router’s Web-based Utility” for more details and advanced settings information.

Chapter 7: The Router’s Web-based Utility

Overview

Use the Router’s web-based utility to administer it. This chapter will describe each web page in the Utility and each page’s key functions. The utility can be accessed via your web browser through use of a computer connected to the Router.

The *Setup*, *Security*, *System*, *DHCP*, *SNMP*, *Status*, and *Help* screens are available for basic setup. For advanced setup, click the **Advanced** tab to access these screens: *Advanced Wireless*, *Internet Filter*, *Port Forwarding*, *Routing*, and *DDNS*.

How to Access the Web-based Utility

To access the web-based utility, launch Internet Explorer or Netscape Navigator, and enter the Router’s default IP address, **192.168.1.1**, in the *Address* field, as shown in Figure 7-1. Then press **Enter**.



Figure 7-1

A password request page, shown in Figure 7-2 will pop up. (Windows XP users will see a *Connect to 192.168.1.1* window, shown in Figure 7-3). Leave the *User Name* field blank, and enter **admin** (the default password) in the *Password* field. Then click the **OK** button.

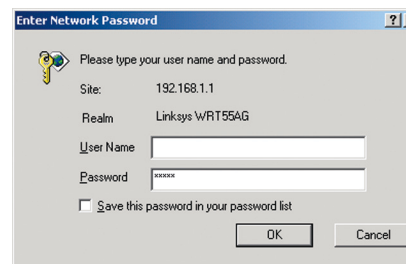


Figure 7-2

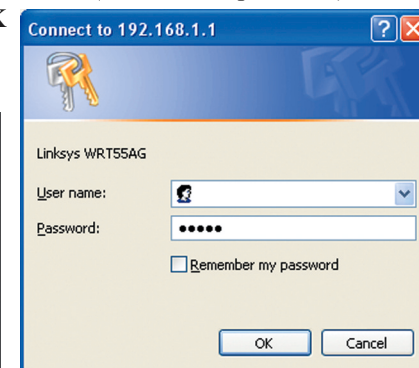


Figure 7-3



Note: For added security, you should always change the password through the Password screen of the web-based utility.

To apply any of the settings you change on a page, click the **Apply** button. To cancel any changes you've entered on any page, click the **Cancel** button. To get additional information about any screen's features, click the **Help** button.

Setup

The *Setup* screen is the first screen you see when you access the web-based utility. If you have already installed and set up the Router, you have already seen this screen and properly configured all of the screen's values.

Firmware Version This shows the version and date of the firmware you are using. Future versions of the Router's firmware will be posted and available for download on the Linksys website at www.linksys.com.

Time Zone Select your local time zone from this pull-down menu. The Router will show the correct time for your area.

Host Name and Domain Name These fields allow you to supply a host and domain name for the Router. Some ISPs, usually cable ISPs, require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, leaving these fields blank will work.

Configuration Type The Router supports four connection types: Automatic Configuration - DHCP, Static IP, PPPoE, and PPTP. Each *Setup* screen and available features will differ depending on what kind of connection type you select.



Note: You can verify that the Internet configuration settings are correct by successfully connecting to the Internet.

Automatic Configuration - DHCP

By default, the Router's Configuration Type is set to Automatic Configuration - DHCP, as shown in Figure 7-4, and it should be kept only if your ISP supports DHCP or you are connecting through a dynamic IP address.

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

The screenshot shows the Linksys Setup screen with the following configuration details:

- Setup Tab:** Active. Other tabs include Security, System, DHCP, SNMP, Status, Help, and Advanced.
- Setup Description:** The Setup screen lets you configure the basic Internet, LAN, and wireless settings. For further information, please see the User Guide or click the Help button.
- Firmware Version:** 1.05, Feb. 18, 2003
- Time Zone:** (GMT-08:00) Pacific Time (USA & Canada). A checkbox for "Automatically adjust clock for daylight saving changes." is checked.
- Internet Section:**
 - MAC Address:** 00:11:22:33:44:56
 - Host Name:** (empty field)
 - Domain Name:** (empty field)
 - Connection Type:** Automatic Configuration - DHCP (selected). A note says: "Select the type of connection you have to the Internet."
- LAN Section:**
 - MAC Address:** 00:11:22:33:44:55
 - IP Address:** 192.168.1.1 (This is the IP address and Subnet Mask of the Router as it is seen by your local network.)
 - Subnet Mask:** 255.255.255.0
- Wireless Section:**
 - 5GHz 802.11a Wireless:**
 - MAC Address:** 00:90:4B:0A:C9:DC
 - Mode:** Enable
 - Channel:** 52 - 5.26GHz (Regulatory Domain: US)
 - SSID:** test-a
 - WEP:** Disable (selected). There is an "Edit WEP Settings" button.
 - 2.4GHz 802.11g Wireless:**
 - MAC Address:** 00:90:4B:21:BB:88
 - Mode:** Mixed
 - Channel:** 6 - 2.437GHz (Regulatory Domain: US)
 - SSID:** test-g
 - SSID Broadcast:** Enable
 - WEP:** Disable (selected). There is an "Edit WEP Settings" button.
- Buttons:** Apply, Cancel, Help.

Figure 7-4

Static IP

If you are required to use a permanent IP address to connect to the Internet, then select **Static IP**, as shown in Figure 7-5.

The screenshot shows the Linksys Setup page with the 'Internet' tab selected. Under 'Connection Type', 'Static IP' is chosen. The 'Internet IP Address' is set to 0.0.0.0, and the 'Subnet Mask' is 0.0.0.0. The 'Default Gateway' is also 0.0.0.0. The 'DNS (Required)' section has three fields, all set to 0.0.0.0. The 'LAN' section shows a 'Subnet Mask' of 255.255.255.0. The 'Wireless' section shows '5GHz' and '2.4GHz' options, both with 'WEP' set to 'Disable'.

Figure 7-5

Internet IP Address This is the Router's IP address, when seen from the WAN, or the Internet. Your ISP will provide you with the IP Address you need to specify here.

Subnet Mask This is the Router's Subnet Mask, as seen by external users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

Default Gateway Your ISP will provide you with the Default Gateway Address, which is the ISP server's IP address.

DNS Your ISP will provide you with at least one DNS (Domain Name System) Server IP Address.

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

PPPoE

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable **PPPoE**, as shown in Figure 7-6.

User Name and Password Enter the **User Name** and **Password** provided by your ISP.

The screenshot shows the Linksys Setup page with the 'Internet' tab selected. Under 'Connection Type', 'PPPoE' is chosen. The 'User Name' is 'linksys' and the 'Password' is '*****'. The 'Connect on Demand' section has 'Max Idle Time' set to 5 minutes and 'Keep Alive: Redial Period' set to 30 seconds. The 'LAN' section shows a 'Subnet Mask' of 255.255.255.0. The 'Wireless' section shows '5GHz' and '2.4GHz' options, both with 'WEP' set to 'Disable'.

Figure 7-6

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. If you wish to activate Connect on Demand, click the radio button. In the *Max Idle Time* field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

Keep Alive Option: Redial Period If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, click the radio button next to **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.



Important: For ADSL users, if you enable PPPoE, remember to remove any PPPoE applications that are already installed on any of your PCs.

PPTP

Point to Point Tunneling Protocol (PPTP), selected in the screen shown in Figure 7-7, is a service that applies to connections in Europe only.

The screenshot shows the Linksys Setup page with the following settings:

- Setup** tab selected. Sub-tabs: Setup, Security, System, DHCP, SNMP, Status, Help, Advanced.
- Firmware Version:** 1.05, Feb. 18, 2003
- Time Zone:** (GMT-08:00) Pacific Time (USA & Canada). Checkmark for "Automatically adjust clock for daylight saving changes."
- Internet** section:
 - MAC Address: 00:11:22:33:44:56
 - Host Name: (empty)
 - Domain Name: (empty)
 - Connection Type: PPTP (selected). Note: "Select the type of connection you have to the Internet."
 - Internet IP Address: 0.0.0.0
 - Subnet Mask: 0.0.0.0
 - Default Gateway: 0.0.0.0
 - User Name: (empty)
 - Password: (empty)
 - Radio buttons: ☒ Connect on Demand: Max Idle Time 5 Min. ☐ Keep Alive: Redial Period 30 Sec.
- LAN** section:
 - MAC Address: 00:11:22:33:44:55
 - IP Address: 192.168.1.1 (Note: "This is the IP address and Subnet Mask of")
 - Subnet Mask: 255.255.255.0 (Note: "the Router as it is seen by your local network.")
- Wireless** section:
 - MAC Address: 00:50:4B:8A:C9:DC
 - Mode: Enable
 - Channel: 52 - 5.26GHz (Regulatory Domain: US)
 - SSID: test-a
 - WEP: ☐ Enable ☒ Disable (Edit WEP Settings button)
 - MAC Address: 00:50:4B:21:8B:88
 - Mode: Mixed
 - Channel: 6 - 2.437GHz (Regulatory Domain: US)
 - SSID: test-g SSID Broadcast: Enable
 - WEP: ☐ Enable ☒ Disable (Edit WEP Settings button)

Buttons at the bottom: Apply, Cancel, Help.

Figure 7-7

Specify Internet IP Address This is the Router's IP address, when seen from the Internet. Your ISP will provide you with the IP Address you need to specify here.

Subnet Mask This is the Router's Subnet Mask, as seen by external users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

Default Gateway Your ISP will provide you with the Default Gateway Address.

User Name and Password Enter the **User Name** and **Password** provided by your ISP.

Connect on Demand: Max Idle Time You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. If you wish to activate Connect on Demand, click the radio button. In the *Max Idle Time* field, enter the number of minutes you want to have elapsed before your Internet connection terminates.

Keep Alive Option: Redial Period If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, click the radio button next to **Keep Alive**. To use this option, click the radio button next to **Keep Alive**. In the *Redial Period* field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

To apply any of the settings you change on this page, click the **Apply** button. To cancel any changes you've entered on this page, click the **Cancel** button. To get more information about the features, click the **Help** button.

LAN

IP Address and LAN Subnet Mask The values for the Router's IP Address and Subnet Mask are shown here. The default values are 192.168.1.1 for the LAN IP Address and 255.255.255.0 for the Subnet Mask.

WIRELESS

5GHz, 802.11a Wireless To enable 5GHz, 802.11a wireless networking, make sure the **Enable** radio button is selected. Click the **Change 5GHz Settings** button to customize the 802.11a configuration (see Figure 7-8).

2.4GHz Wireless-G To enable 2.4GHz, Wireless-G wireless networking, make sure the **Enable** radio button is selected. Click the **Change 2.4GHz Settings** button to customize the 802.11b configuration (see Figure 7-10).