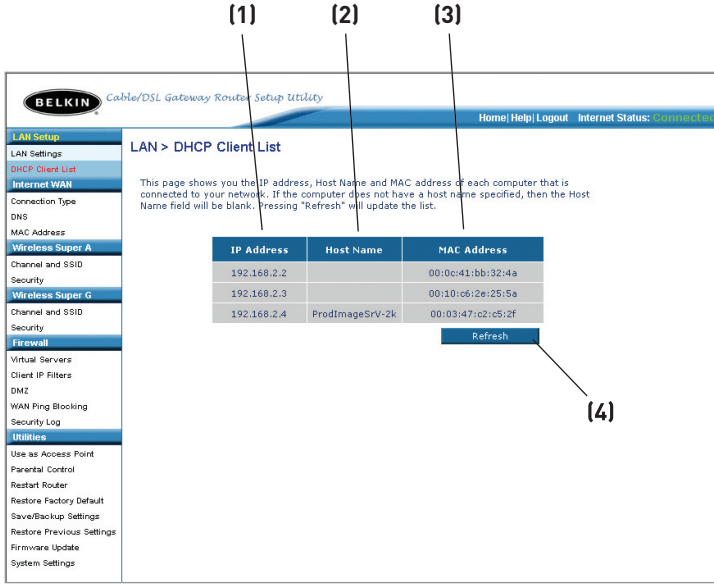
Viewing the DHCP Client List Page

You can view a list of the computers (known as clients), which are connected to your network. You are able to view the IP address **(1)** of the computer, the host name **(2)** (if the computer has been assigned one), and the MAC address **(3)** of the computer's network interface card (NIC). Pressing the "Refresh" **(4)** button will update the list. If there have been any changes, the list will be updated.



Configuring the Wireless Network Settings

Your Belkin A+G Router is equipped with two wireless access points, one 802.11g and one 802.11a. Both access points run simultaneously (at the same time). Each has its own unique settings that can be adjusted independent of each other. This means that each will have its own SSID, Mode, Security, and Advanced settings. The following sections will tell you about making changes to these settings and more.

Disabling Wireless

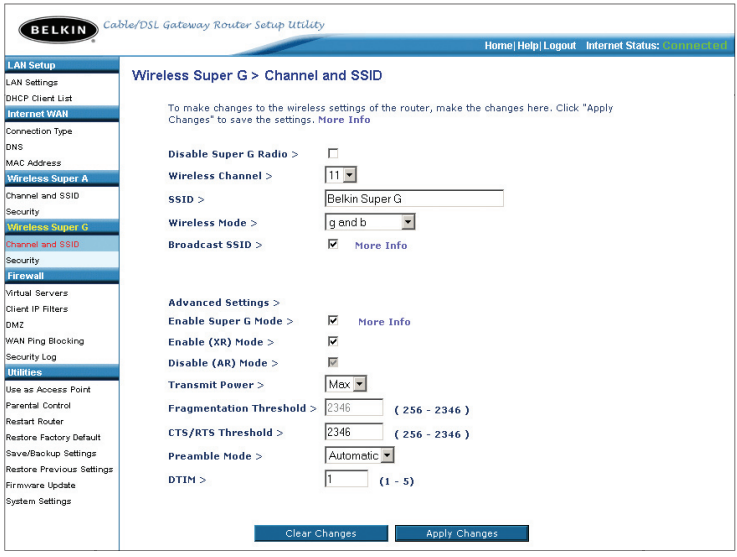
In some cases, you may not want your wireless network ON. To disable the radio, place a check mark next to “Disable Super A Radio” or “Disable Super G Radio” then click “Apply Changes”. Keep in mind that the Super A and Super G settings are on separate pages.

Changing the Wireless Channel

There are a number of operating channels you can choose from with both 802.11g and 802.11a. Each have different numbered channels, but both work the same way. The channel can be changed if needed. If there are other wireless networks operating in your area, your network should be set to operate on a channel that is different than the other wireless networks.

Changing the Channel

For best performance, your Router should use a channel that is at least five channels away from the other wireless networks in the area. For instance, if another network is operating on channel 11, then set your network to channel 6 or below. To change the channel, select the channel from the drop-down list. Click “Apply Changes”. The change is immediate. Keep in mind that Super A and Super G settings are on different pages.



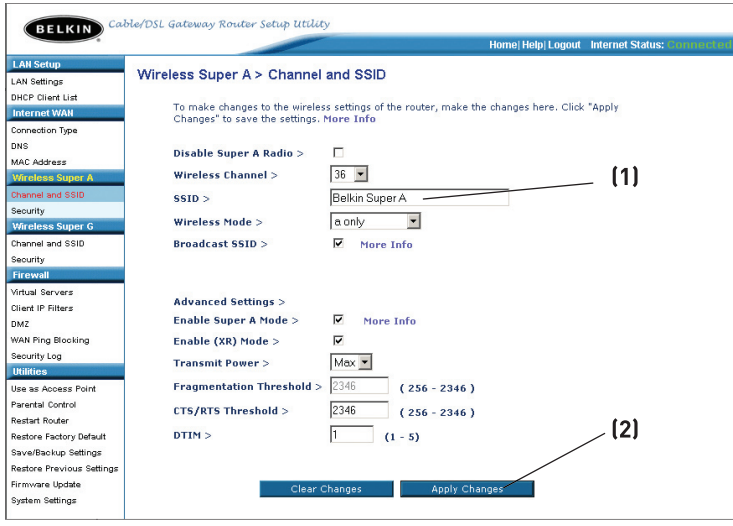
Changing the Wireless Network Name (SSID)

To identify your wireless network, a name called the SSID (Service Set Identifier) is used. The SSID is your network name. The default network name of the Routers access points are as follows:

802.11g AP: Belkin_Super_G

802.11a AP: Belkin_Super_A

You can change these to anything you choose, or you can leave them unchanged. Keep in mind, if you decide to change your wireless network name, and there are other wireless networks operating in your area, your network name needs to be different from other wireless networks that may be operating in your area. To change the SSID, type in the SSID that you want to use in the SSID field **(1)** and click "Apply Changes" **(2)**. The change is immediate. If you make a change to the SSID, your wireless-equipped computers may also need to be reconfigured to connect to your new network name. Refer to the documentation of your wireless network adapter for information on making this change.



Using the Broadcast SSID Feature

Note: This advanced feature should be employed by advanced users only. For security, you can choose not to broadcast your network's SSID. Doing so will keep your network name hidden from computers that are scanning for the presence of wireless networks. To turn off the broadcast of the SSID, remove the check mark from the box next to "Broadcast SSID", and then click "Apply Changes". The change is immediate. Each computer now needs to be set to connect to your specific SSID; an SSID of "ANY" will no longer be accepted. Refer to the documentation of your wireless network adapter for information on making this change.

Super G Wireless Mode

The Super G wireless mode of the Router is shipped from the factory in the "g and b" mode, meaning it will seamlessly interoperate with 802.11b and 802.11g devices. Setting the Router's wireless mode to b only will allow only 802.11b devices to connect to the network. Setting the wireless mode to "Auto 108Mbps" will allow the Router to jump into the 108Mbps mode when possible. In this mode the Router constantly monitors the radio waves looking for interference or other networks. If neither of these is detected, the Router will jump into 108Mbps mode and remain there unless interference or another network is detected. "108Mbps only" mode will lock the Router into the 108Mbps mode. This mode is only recommended if there are absolutely no other 802.11g networks or interference in the space where you are operating your network. Interference can greatly and adversely affect the performance of the Router when locked into 108Mbps mode. To change the wireless mode, select the mode you want from the drop-down menu and click "Apply Changes".

Super Mode

Enabling Super mode will allow you to take advantage of the dynamic 108Mbps capability, real-time hardware data compression, dynamic transmit optimization and standards-compliant bursting. Setting the wireless mode to "Auto 108Mbps" and enabling Super mode will allow the Router to jump into Super mode when possible. The Router constantly monitors the radio waves looking for interference or other networks. If neither of these is detected, the Router will jump into Super mode and remain there unless interference or another network is detected. The Super mode is turned OFF at the factory. To enable Super mode, check the check box and click "Apply Changes".

Super A Wireless Mode
The Super A wireless mode of the Router is shipped from the factory in the “a only” mode, meaning it will seamlessly interoperate with standard 802.11a devices. Setting the wireless mode to “Auto 108Mbps” will allow the Router to jump into the 108Mbps mode when possible. In this mode, the Router constantly monitors the radio waves looking for interference or other networks. If neither of these are detected, the Router will jump into 108Mbps mode and remain there unless interference or another network is detected. “108Mbps only” mode will lock the Router into the 108Mbps mode. This mode is only recommended if there are absolutely no other 802.11a networks or interference in the space where you are operating your network. Interference can greatly and adversely affect the performance of the Router when locked into 108Mbps mode. To change the wireless mode, select the mode you want from the drop-down menu and click “Apply Changes”.

Enable XR Mode
XR mode allows for extension of the operating range of the Router. By allowing devices to connect at lower than 1Mbps rates when the signal is weak (when the device is far from the Router), the connection can be maintained at much greater distances than normal. The Router ships from the factory with the XR mode ON. Unchecking the check box and clicking “Apply Changes” will disable the XR mode.

Disable AR Mode
AR mode, or Adaptive Radio mode, works only when the Router is in “Auto 108Mbps” wireless mode. AR uses a method by which the Router constantly monitors the radio waves looking for interference or other networks. If neither of these are detected, the Router will jump into 108Mbps mode and remain there unless interference or another network is detected. “108Mbps only” mode will lock the Router into the 108Mbps mode. Disabling the AR mode is generally not recommended unless there are absolutely no other networks or interference in the space where you are operating your network. Interference can greatly and adversely affect the performance of the Router in 108Mbps mode. AR mode is turned on at the factory. Checking the check box and clicking “Apply Changes” will disable the AR mode.

Transmit Power
The Super A+G technology used in your Router has great capabilities to reach farther than standard 802.11g or 802.11a technology. In some cases, the coverage area of the Router may exceed the area that you intend to cover. If so, you can reduce the power output of

the Router, effectively reducing the coverage area. If you are in a small space such as an apartment, you can reduce the coverage area to eliminate the possibility of neighbors using your network or the possibility of your network interfering with a neighboring network. The Transmit Power setting has been set to “Max” (Maximum) at the factory. To change the Transmit Power setting, select the power setting you want from the drop-down menu and click “Apply Changes”.

Changing the Wireless Security Settings

Your Router is equipped with the latest security standard called WPA (Wi-Fi® Protected Access). It also supports the legacy security standard called WEP (Wired Equivalent Privacy). Also included is 802.1x authentication using a server. By default, wireless security is disabled. To enable security, you will need to determine which standard you want to use. To access the security settings, click “Security” under each wireless (Super G and Super A) heading. Please note, security for Super A and Super G are separate. The security settings can be set the same or differently depending on what you want. To fully secure your wireless network, you will need to secure both the Super A and the Super G network.

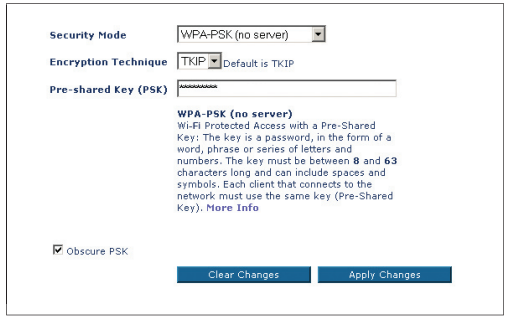
Setting WPA-PSK (No Server) Security

Note: To use WPA security, your clients must be capable of supporting WPA. If you are not sure, contact the manufacturer of your wireless card.

WPA-PSK uses what is known as a pre-shared key (PSK) as the security key. A pre-shared key is basically a password that is between eight and 40 characters long. It can be a combination of letters, numbers, or characters. Each client uses the same key to access the network. Typically this is the model that will be used in a home environment. It is recommended by the Wi-Fi Alliance that your key be at least 20 characters long and use a mixture of letters, numbers, and special characters (such as !,",(,)). Try to make it easy to remember, like "tH15is@600d9@ssW0rD" (thisisagoodpassword).

Note: These directions work for both Super A and Super G security.

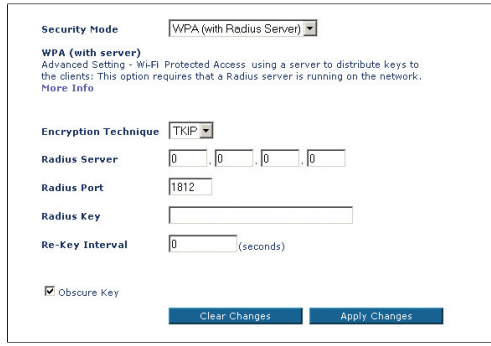
1. From the "Security Mode" drop-down menu, select "WPA-PSK (no server)".
2. For "Encryption Technique", select TKIP or AES. This setting will have to be identical on the clients that you set up.
3. Enter your pre-shared key. This can be from eight to 40 characters and can be letters, numbers, or symbols. This same key must be used on all of the clients that you set up.
4. Click "Apply Changes" to finish. You must now set all clients to match these settings.



Setting WPA (with server) Security

If your network uses a radius server to distribute keys to the clients, use this setting.

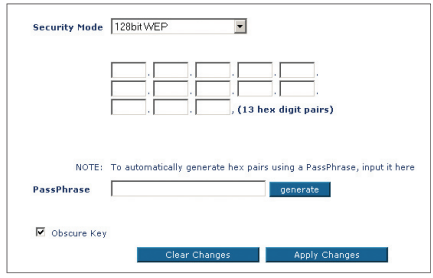
1. From the “Security Mode” drop-down menu, select “WPA (with server)”.
2. For “Encryption Technique”, select TKIP or AES. This setting will have to be identical on the clients that you set up.
3. Enter the IP address of the radius server into the “Radius Server” fields.
4. Enter the radius key into the “Radius Key” field.
5. Enter the key interval. Key interval is how often the keys are distributed (in packets).
6. Click “Apply Changes” to finish. You must now set all clients to match these settings.



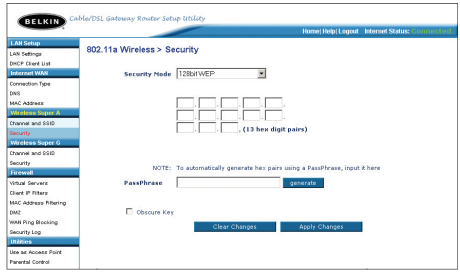
Setting WEP Encryption (64-bit, 128-bit)

Note to Mac users: The passphrase option will not operate with Apple® AirPort®. To configure encryption for your Mac computer, set the encryption using the manual method described in the next section.

1. Select “128-bit WEP” or “64-bit WEP” from the drop-down menu.



2. After selecting your WEP encryption mode, you can enter your WEP key manually by typing in the hex WEP key manually, or you can type in a passphrase in the “Passphrase” field and click “Generate” to create a WEP key from the passphrase. Click “Apply Changes” to finish. You must now set all of your clients to match these settings. Note on passphrases: The passphrase generation technique works with all Belkin wireless clients. It is not guaranteed to work with other brands of wireless clients. If you are using a mix of Belkin and other products, it is recommended that you use a hex key. For more information on hex keys, see page 51 in this User Manual.



3. Encryption in the Router is now set. Each of your computers on your wireless network will now need to be configured with the same passphrase. Refer to the documentation of your wireless network adapter for information on making this change.

Using a Hexadecimal Key for WEP Encryption

A hexadecimal key is a mixture of numbers and letters from A–F and 0–9. 64-bit keys are five two-digit numbers. 128-bit keys are 13 two-digit numbers. 64-bit keys are five two-digit numbers.

For instance:

AF 0F 4B C3 D4 = 64-bit key

C3 03 0F AF 0F 4B B2 C3 D4 4B C3 D4 E7 = 128-bit key

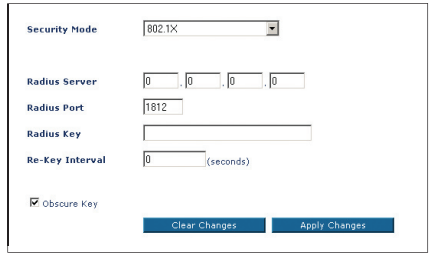
In the boxes below, make up your key by writing in two characters between A–F and 0–9. You will use this key to program the encryption settings on your Router and your wireless computers.

Example:	AF	1F	4B	C3	D4								
64-bit:													
128-bit:													

Note to Mac users: Original Apple AirPort products support 64-bit encryption only. Apple AirPort 2 products can support 64-bit or 128-bit encryption. Apple AirPort Extreme uses up to 128-bit encryption. Please check your product to see which version you are using. If you cannot configure your network with 128-bit encryption, try 64-bit encryption.

Using 802.1x Authentication

1. From the “Security Mode” drop-down menu, select “802.1x”.
2. Enter the IP address of the radius server into the “Radius Server” fields.
3. Enter the port that the radius server is listening on.
4. Enter the radius key into the “Radius Key” field.
5. Enter the re-key interval. Re-key interval is how often the keys are distributed (in seconds).
6. Click “Apply Changes” to finish. You must now set all clients to match these settings.



Using the Access Point Mode

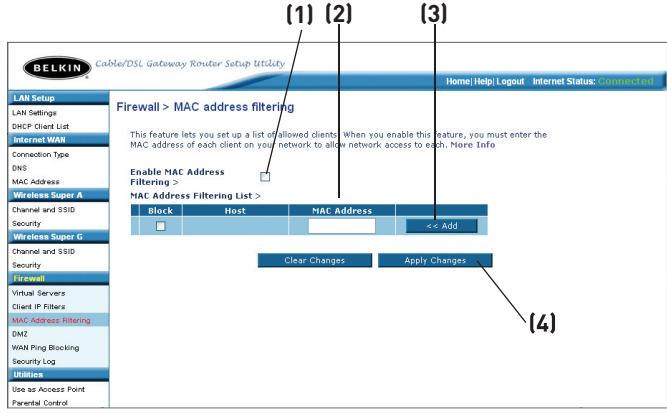
Note: This advanced feature should be employed by advanced users only. The Router can be configured to work as a wireless network access point. Using this mode will defeat the NAT IP sharing feature and DHCP server. In AP mode, the Router will need to be configured with an IP address that is in the same subnet as the rest of the network that you will bridge to. The default IP address is 192.168.2.254 and subnet mask is 255.255.255.0. These can be customized for your needs.

1. Enable the AP mode my selecting “Enable” in the “Use as Access Point only” page. When you select this option, you will be able to change the IP settings.
2. Set your IP settings to match your network. Click “Apply Changes”.
3. Connect a cable from the WAN port on the Router to your existing network.

The Router is now acting as an A+G access point. To access the Router’s Advanced User Interface again, type the IP address you specified into your browser’s navigation bar. You can set the encryption settings, MAC address filtering, SSID, and channel normally.

Setting MAC Address Filtering

The MAC address filter is a powerful security feature that allows you to specify which computers are allowed on the wireless network. **Note:** This list applies only to wireless computers. This list can be configured so any computer attempting to access the wireless network that is not specified in the filter list will be denied access. When you enable this feature, you must enter the MAC address of each client (computer) to which you want to allow network access. The “Block” feature lets you turn on and off access to the network easily for any computer without having to add and remove the computer’s MAC address from the list.



Setting up an Allow Access List

1. Check the “Enable MAC Address Filtering” box **(1)** to begin setting up a list of computers allowed to connect to the wireless network.

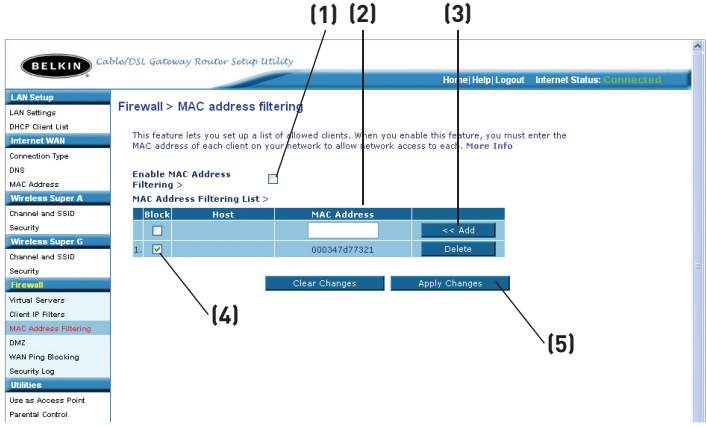
2. Next, in the “MAC Address” field that is blank **(2)**, type in the MAC address of the wireless computer you want to be able to access the wireless network, then click “<<Add” **(3)**.

3. Continue to do this until all of the computers you want to add have been entered.

4. Click “Apply Changes” **(4)** to finish.

Setting up a Block Access List

The “Block” list lets you specify computers that you DO NOT want to access the network. Any computer in the list will not be allowed access to the wireless network. All others will.



1. Check the “Enable MAC Address Filtering” box **(1)** to begin setting up a list of computers to be denied access to the wireless network.
2. Next, in the “MAC Address” field that is blank **(2)**, type in the MAC address of the wireless computer you want to block access to the wireless network, then click “<<Add” **(3)**.
3. Continue to do this until all of the computers you want to deny access to have been entered.
4. Check the “Block” box **(4)** next to the MAC address you would like blocked from the network.
5. Click “Apply Changes” **(5)** to finish.