

CHANGE NOTICE

Firmware Version 1.01.08

The overall look and feel of this new firmware has changed. While graphically the User Interface has changed, functionally, the User Interface is the same.

NEW ADVANCED FEATURE DOCUMENTATION

Wireless Bridge

Your new firmware has the additional feature of wireless bridging.

Wireless bridging works with the following models only:

F5D7230-4 54g Wireless Cable/DSL Gateway Router

F5D7130 54g Wireless Network Access point

The following firmware version must be installed on the AP and the Router for proper operation:

F5D7230-4: Version 1.01.08 or higher

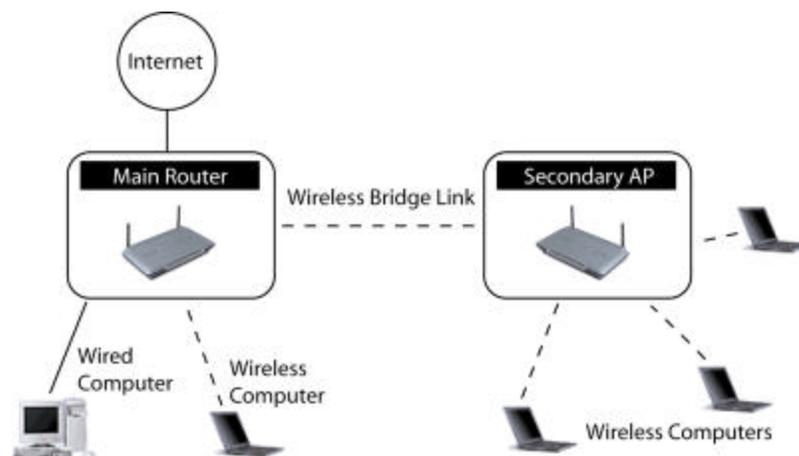
F5D7130: Version 1.01.08 or higher

What is a Wireless Bridge?

A wireless bridge is actually a "mode" in which your Wireless Router can directly connect to a secondary Wireless Access Point. Note that you can only bridge your 54g Wireless Router (Model F5D7230-4) to a Belkin 54g Wireless Access Point (model F5D7130). Bridging with other brands of Access Points is not supported at this time. You can use the bridge mode for extending the range of your wireless network, or adding an additional extension of your network in another area of your office or home without running cables.

Range Extension

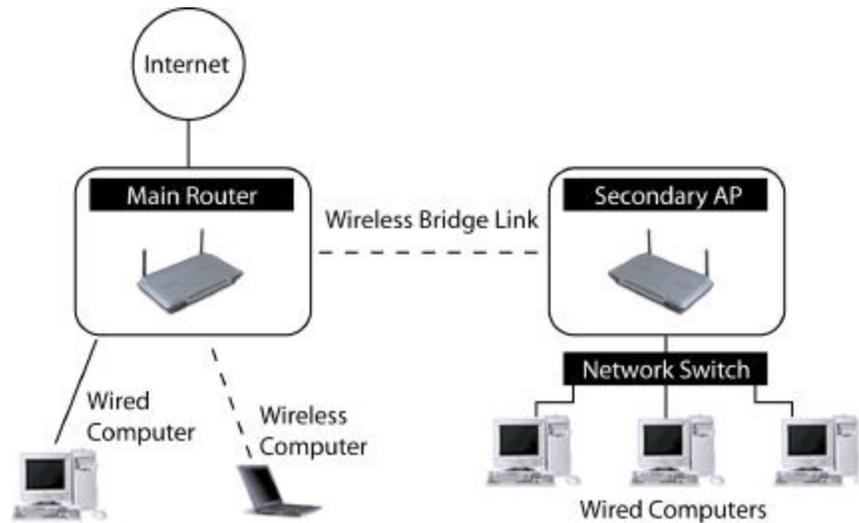
Range extension will extend the wireless coverage area in your home or office. The example below illustrates using bridging to extend the range of your wireless network. In this example, the Router is set up to connect to an Access Point located in another area. Laptops can roam, or move between the two wireless coverage areas.



Adding another network segment wirelessly

Bridging an Access Point to your wireless router will also allow you to add another network segment without running wires to the area where the new segment is located. Connecting a

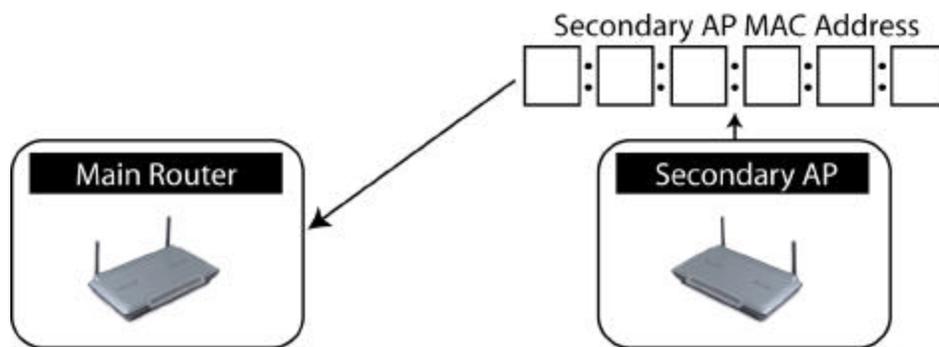
network switch or hub to the Access Point's RJ45 jack will allow a number of computers connected to the switch access to the rest of the network.



Setting up a Bridge between your wireless Router and a secondary Access Point

Bridging your router to a secondary AP requires that you access the Router's Advanced Setup utility and enter the MAC address of the AP in the appropriate area. There are also a few other requirements. Make sure you follow the steps below carefully.

1. Set your Access Point to the same channel as the router. By default the router and AP channels are set to channel 11 at the factory. If you have never changed the channel, you don't need to do anything.
2. Find the AP MAC address on the bottom label of the AP. There are two MAC addresses on the bottom label. You will need the MAC address named "WLAN MAC Address". The MAC address starts with 0030BD and is followed by 6 other numbers or letters. (0030BD-XXXXXX). Write the MAC address below. Go to the next step.



Enter the Secondary AP's MAC address into the Router

3. Place your secondary AP within range of your wireless router and near the area where you want to extend the range or add the network segment. Typically, indoor range should be between 50 and 150 feet.

4. Connect power to your AP. Make sure the AP is on and proceed to the next step.
5. From a computer already connected to your router, access the Advanced Setup Utility by opening your browser. In the address bar, type in "192.168.2.1" do not type in "www" or <http://> before the number. **Note: if you have changed your router's IP address, use that IP address.**
6. You will see the router's user interface in the browser window. Click "Wireless Bridge" (1) on the left-hand side of the screen. You will see the following screen.

The screenshot shows the Belkin Cable/DSL Gateway Router Setup Utility interface. On the left, a navigation menu lists various settings, with 'Wireless Bridge' highlighted in blue and circled in pink, labeled with a pink (1). The main content area is titled 'Wireless > Wireless bridge' and contains the following text: 'Wireless Bridging or Wireless Distribution System (WDS) is used to connect Wireless Routers and Access points together to extend a network.' Below this are three checkboxes:

- Enable Wireless Bridging. (enabling this feature allows other Access Points to connect to this Access Point.) **Default is enabled**
- Enable ONLY specific Access Points to connect. (Enter Wireless MAC Address of AP to connect to. If this item is not checked, any AP can connect. Note: when connecting APs, at least one needs to call out the MAC address of the other. Hint: the MAC Address can be found using a site survey on a wireless client card.) This checkbox and its label are circled in pink and labeled with a pink (2).
- Disable ability for Wireless CLIENTS to connect. (This feature should only be used when the AP is used exclusively to connect wirelessly to other APs.)

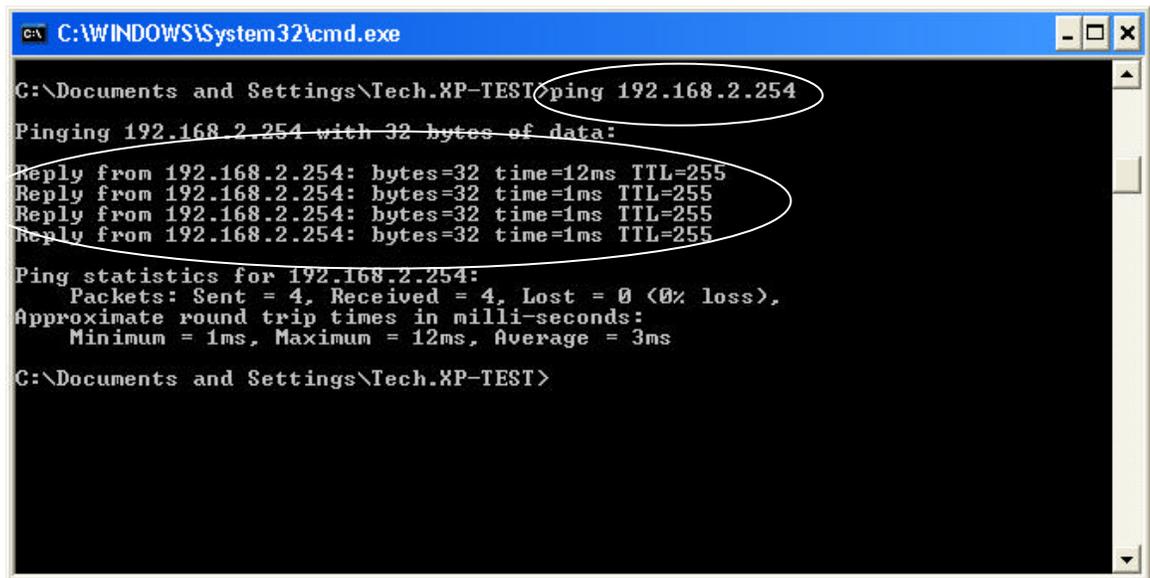
 Below the checkboxes are four rows of MAC address input fields labeled AP1, AP2, AP3, and AP4. The AP1 field is circled in pink and labeled with a pink (3). At the bottom of the page are two buttons: 'Clear Changes' and 'Apply Changes'.

7. Check the box that says "Enable ONLY specific Access Points to connect" (2)
8. In the field named AP1, (3) type in the MAC address of your secondary AP. When you have typed in the address, click "Apply Changes".
9. Bridging is now setup.

Testing the Wireless Bridge

You can test to see if your wireless bridge is working by doing a simple PING test. You will need a computer with Windows 98, 98SE, Me, 2000, NT, or XP. If you are running Mac OS, you will need to acquire a PING utility. If you are using any other OS, you may need a PING utility or there may be one built in. The following directions are for Windows OS, but the same method can be used on other operating systems with a PING utility.

1. Open a Command window. click Start then Run. In Windows 98, 98SE, Me type the word "Command" in the Run field. For Windows 2000, NT or XP type "CMD". This will open a Command window on the desktop.
2. In the command window type "PING 192.168.2.254" This is the IP address of the secondary Access Point. If you changed the IP address of the Access Point, then use that IP address.



```
C:\WINDOWS\System32\cmd.exe
C:\Documents and Settings\Tech.XP-TEST>ping 192.168.2.254
Pinging 192.168.2.254 with 32 bytes of data:
Reply from 192.168.2.254: bytes=32 time=12ms TTL=255
Reply from 192.168.2.254: bytes=32 time=1ms TTL=255
Reply from 192.168.2.254: bytes=32 time=1ms TTL=255
Reply from 192.168.2.254: bytes=32 time=1ms TTL=255
Ping statistics for 192.168.2.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 12ms, Average = 3ms
C:\Documents and Settings\Tech.XP-TEST>
```

3. If everything is working fine, you will see "Reply from 192.168.2.254: bytes=32 time=12ms TTL=255" four times on the screen. The test is complete.