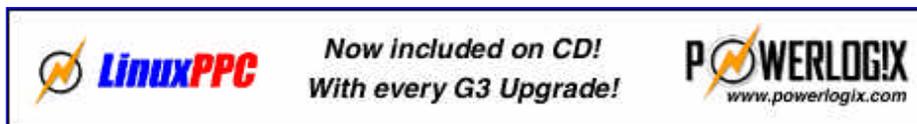


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## Using the AirPort without an AirPort-ready Mac

*MRP Feature by Eric Belsley, December 9, 1999*

As Apple isn't officially supporting the use of the AirPort Base Station (henceforth, "AirPort") without an AirPort card-equipped Mac in tow, I thought a guide might be in order. Further below are specific instructions for those using [Lucent WaveLAN](#) and [Farallon SkyLINE](#) PC cards.

There are other ways to do some of the steps outlined below; however, when given a choice, I've opted for the most foolproof method—even if it is a bit longer, or seemingly a bit too careful. Good luck!

### Finding the AirPort Base Station

1. Get **TomeViewer**; it is available, for example, from the [MRP Software Mirror](#). Apple often stores the files that accompany an installer in an archive format they call **Tomes**. **TomeViewer** enables users to extract individual files from Apple Tomes without running the installer. This is important, because the AirPort software installer won't run except upon an AirPort-ready Mac.
2. Insert the AirPort CD, and drop the file **AirPort Tome** from the CD's **Software Installers:AirPort** folder onto **TomeViewer**. Select the file **AirPort Utility** by single-clicking its line in the **TomeViewer** window that results, and then press **command-e** to expand that file to the folder of your choosing.
3. With its power cord still out, connect the AirPort to your setup Mac via Ethernet. For example, you can connect the AirPort's Ethernet port to an Ethernet port on the setup Mac via a crossover Ethernet cable; you could also connect both the AirPort's Ethernet port and an Ethernet port on the setup Mac (via straight Ethernet cables) to (non-uplink) ports belonging to the same Ethernet hub.
4. Not only do the AirPort and the setup Mac need to be on the same Ethernet network, they need to be on the same TCP/IP network. For all practical purposes, that means that the IP address of the relevant Ethernet port of the setup Mac, and the IP address of the Ethernet port of the AirPort, must share the first three bytes. For example, if the relevant Ethernet port of your setup Mac has IP address 192.168.10.3, the AirPort must have an address of the form 192.168.10.x to be seen by the setup Mac via TCP/IP. [This assumes the standard class C subnet mask of 255.255.255.0.] The AirPort comes with a default IP address of 192.42.249.13 and subnet mask 255.255.255.0; if its Internet sharing capabilities are also turned on, it will also answer at the IP address 10.0.1.1 with the same subnet mask. To insure that your setup Mac will be able to find the AirPort:
  - a. Quit all open applications that might be using TCP/IP (especially Internet applications).
  - b. Open the TCP/IP control panel on the setup Mac.
  - c. Press **command-k** to get to the configuration dialog.
  - d. Select one of your current configurations and press the **Duplicate...** button. Give the copy the name **AirPort Setup** (or whatever you want).
  - e. Press the **Make Active** button.
  - f. Select the Ethernet port you're using on the setup Mac to configure the AirPort

- (**Ethernet Built-in** unless you've installed a PCI Ethernet host adapter card) in the **AirPort Setup** TCP/IP configuration's **Connect via** field.
- g. Make its **IP address: 192.42.249.14**
  - h. Make its **Subnet mask: 255.255.255.0**
  - i. Close the **AirPort Setup's** TCP/IP configuration window, pressing **Save** when prompted.
5. Plug the power cord into the AirPort; it's lights should blink and ultimately, the middle (power) light should stay on.
  6. Wait 60 seconds (being anal retentive, here).
  7. Open the AirPort utility on the setup Mac; the **Select Base Station** window should appear, and if your AirPort Base Station shipped with its hardware reset defaults, it will appear at the top of the list. Its **Name** should be the **Ethernet ID** (noted on the bottom of your AirPort Base Station) with each pair of characters separated by a hyphen. Its **IP address** should be **192.42.249.13**.

If this is what you see, select your AirPort Base Station (by single-clicking its **Name**) and then press the **Configure** button while pressing the **option key**. You will get a password dialog; the default hardware reset password is **public** (case sensitive). After hitting return (or pressing the **OK** button) you should see the three-paned **Configure <Base Station Name> Base Station** window. Skip to step 9.

If you don't see your Base Station in the **Select Base Station** window, or it doesn't accept the password **public** you will need to do a hardware reset of the Base Station, described below. Either your AirPort didn't ship configured with the hardware reset defaults, or possibly, a DHCP server has access to the Ethernet network you are using to configure the AirPort, and the Base Station came configured to grab its TCP/IP data via DHCP. To prevent the latter from happening again, make sure that no software/hardware TCP/IP router has access to the Ethernet network you are using to configure your AirPort. Also, disconnect any cable/DSL modem which uses DHCP from the Ethernet network you are using to configure the AirPort.

#### 8. How to perform a hardware reset (if required):

- i. Get a paper clip.
- ii. Put the AirPort CD in the setup Mac.
- iii. Take the power cord out of the AirPort (let it sit for at least 15 seconds or so before you attempt a reset).
- iv. When you plug the power cord back in, all three lights on the AirPort will glow for a few seconds; to perform the hardware reset, you must push a paper clip into the tiny hole on the bottom of the AirPort (not one of the three holes for the wall base) while the three amber lights are still glowing. So get the paper clip ready to go, and push it in just after pushing the power cord back in. If you feel like you screwed up and pushed the paper clip in too late, go back to step 3.
- v. Wait 60 seconds or so; this should be more than enough, but it takes the Base Station a bit to come back online after being reset.
- vi. Open the AirPort Utility (or click the **Re-scan** button in the **Select Base Station** window if it is already open); it should now see your Base Station in the **Select Base Station** window as described above. If not, go back to step iii. If you think that you may have jumped the gun, click the "Re-scan" button before heading back to step iii.
- vii. With the AirPort Utility's **Select Base Station Window** frontmost, select the **Open Configuration File...** item of the **File** menu, and then navigate to (and then open) the **AirPort Base Station Software** file in the **Base Station Extras** folder on the AirPort CD.
- viii. A three-paned window entitled **AirPort Base Station Software** will appear; with it frontmost, select the **Upload Software...** item from the **Base Station** menu.
- ix. A dialog prompting you for the Base Station IP address and password should appear. The IP address shown should be **192.42.249.13** (if not, change it) and remember that the password is **public** (case-sensitive).
- x. If all goes well, you should see a progress bar, the right two lights flashing on the AirPort, and ultimately a dialog saying that the update was successful.

- xi. Wait 60 seconds for the unit to reset (again, this is a bit longer than it need be).
- xii. Now **option-click** the **Configure** button of the **Select Base Station** window (after selecting your Base Station) as described above. You will get a password dialog; remember that the default hardware reset password is **public** (case sensitive). After hitting return (or pressing the **OK** button) you should see the three-paned **Configure <Base Station Name> Base Station** window.

## Configuring the AirPort

- **AirPort tab:** In the Identity section, you can name your AirPort (so it isn't just a hyphenated form of its Ethernet ID) and change the password required to configure the AirPort from **public**. Set the AirPort to **Configure TCP/IP**:
  - **Using DHCP**, if you are ultimately going to connect a cable/DSL modem, which gets its settings via DHCP from your ISP, directly to the AirPort; or if you want to use the AirPort as an Ethernet-to-wireless bridge by connecting it to an Ethernet hub on your LAN, and you're using a DHCP server (software/hardware) to configure the TCP/IP settings of the devices on your LAN.
  - **Manually**, if you are ultimately going to connect a cable/DSL modem, which has static TCP/IP settings from your ISP, directly to the AirPort; or if you want to use the AirPort as an Ethernet-to-wireless bridge by connecting it to an Ethernet hub on your LAN and you aren't running a DHCP server. In the latter case, be sure to give it an IP address and subnet mask that matches the TCP/IP network of which you want the AirPort to be part.
  - **N.B.:** If you need to give your cable/DSL provider a MAC address for you AirPort, use the "Ethernet ID" on the bottom of the AirPort Base Station, not the "AirPort ID." Some cable modem companies track the MAC address of the device to which the cable modem is dedicated. Further, the cable modem stores that MAC address in its RAM. You'll need to unplug your cable modem for at least two minutes to clear that MAC address from its RAM, and then make sure that the first device it sees on the network when you power it back up is the AirPort. Turn off all other computers, printers, etc.
  - **Using PPP** if you are ultimately going to use the AirPort's V.90 modem to connect to your ISP. Notice that you still have to fill your Domain Name Servers in by hand. You enter your dialup connection information in the **Internet tab** portion of the **Configure <Base Station Name> Base Station** window, as described below.
- **Network tab:** Since this report is assuming that you don't have an AirPort card-equipped Mac, I'll assume that your configuring this to use the card with a PowerBook G3 using Lucent's WaveLAN Turbo, or Farallon's SkyLINE PC Card. In either case, you must leave the **Enable Encryption** box unchecked.
- **Internet tab:** If your Internet connection is going directly to the AirPort, you will want to check the **Share Internet Connection** box, and the **Share a Single IP address (using DHCP & NAT)** radio button. Select **Connect Using Ethernet** if you're sharing a cable/DSL modem. Select **Connect Using Modem** (and fill in your ISP's access number(s) and authentication data) if you will use the AirPort's internal 56 Kbps modem to connect.

If your AirPort is getting its TCP/IP data via DHCP you will need to manually enter your ISPs domain name server's IP addresses in the TCP/IP control panel of each client served by the AirPort's DHCP server.

If your AirPort is connected to a hub and you want it to use it as a hardware TCP/IP router to share your Internet connection among wired and wireless components, check the **Share Internet Connection** box, the **Share a Single IP address (using DHCP & NAT)** radio button, and if you additionally want it to configure wired computers via DHCP, check the **Use DHCP to also provide IP addresses on Ethernet** box. However, don't check this box if your cable/DSL modem gets its settings via DHCP—you can screw up a part of your ISPs cable/DSL modem network. You may even lose your account—no kidding.

If your AirPort is connected to a hub, and you want to use it only as an Ethernet-to-wireless bridge (for example, if you are running another software/hardware TCP/IP router on the same network) don't check the **Share Internet Connection** box.

There are other configurations; for example, you could have the AirPort serve as a router/DHCP server for only the wireless portion of your network, while it is just a member of your wired LAN, configured via DHCP or manually. In this case, you'd set the AirPort's TCP/IP data so it behaves appropriately on the wired LAN, and then check the **Share Internet Connection** box, and the **Share a Single IP address (using DHCP & NAT)** radio button, but not the **Use DHCP to also provide IP addresses on Ethernet** box.

Note: Enabling the shared connection activates a logical second TCP/IP network on the AirPort's Ethernet Interface at 10.0.1.1.

### Lucent WaveLAN Turbo Silver/Gold 11 Mbps IEEE 802.11b Wireless PC Card:

To use the Lucent card with a PowerBook G3:

1. Get the (latest) [WaveLAN 4.02 Install Disk](#) from Lucent; for a PowerBook G3 Series, you want to make sure that the (PCI) driver (not the (PPC) or (68K)) gets installed. The version that ships with the current Lucent CD tries to install the wrong driver under Mac OS 9.
2. Install the drivers with the PC Card out; restart.
3. Insert the PC Card in the bottom slot (although both slots take Type II cards like the WaveLAN, Lucent says that using the bottom is more reliable).
4. Set the AppleTalk contro panel to **WaveLAN/IEEE**
5. Open the TCP/IP control panel; set its **Connect via** field to **WaveLAN/IEEE**. If you are using the AirPort as a DHCP server (if you checked the **Share Internet Connection** box in the **AirPort Utility**), or you didn't check the **Share Internet Connection** box, but there is another DHCP server on your LAN to which the AirPort is acting like a bridge, then set the **Configure** field to **Using DHCP Server**. If you are using the AirPort only as a bridge, but aren't using DHCP to configure clients on your LAN, enter the TCP/IP data manually. Remember to enter the IP address of your ISP's domain name server by hand if the AirPort is being configured via DHCP, and you are using it as a DHCP server and TCP/IP router for your wireless network.
6. Open the **WaveLAN@Setup** control panel; now close it—there's nothing for you here. Well, you do have to make sure that your **WaveLAN Network Name** is **ANY**; otherwise, the WaveLAN card looks for a specific wireless network of the entered name. However, if I customized my **WaveLAN Network Name**, and matched it to the network name I entered in the **AirPort Utility** (or as described by Farallon for the SkyLINE, see below), it wouldn't work. I had to use the promiscuous **ANY**, which looks for the strongest access point the PC Card can find and attaches. I've spoken to Lucent's WaveLAN technical support, and they are looking into the problem. Finally, leave the Ad-Hoc Demo Mode unchecked when using the WaveLAN PC Card with an AirPort Base Station (it could be useful, however, for peer-to-peer communication).

### Farallon card:

Farallon has posted a [FAQ](#) (PDF format) for using the SkyLINE with the AirPort.

The Farallon FAQ notes that you must turn encryption off and that it identifies the AirPort Network to which it wants to connect by prepending the last six characters of the **AirPort ID** to the **AirPort Base Station Name**. So, if your **AirPort ID** is **0060F1E3221D** and your **AirPort Base Station Name** is **MyAirPortBS**, then you must enter the network name (SSID) **E3221DMyAirPortBS** in the Farallon SkyLINE setup.



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